TESTED AND PROVED—PAGE 1

YOJANA



The man who bought the wrong one

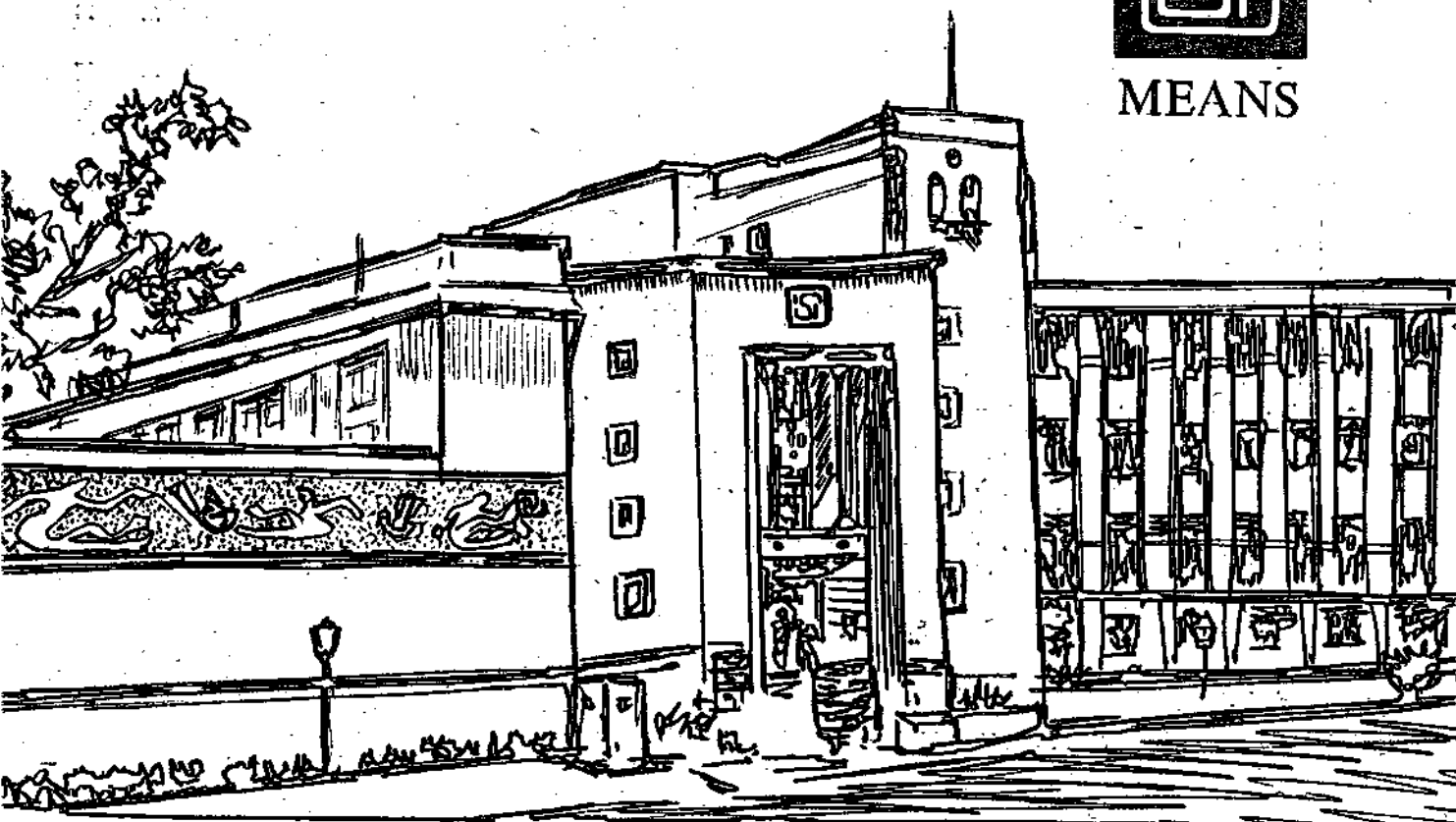


Mother, I hope he is up to our standards!

Progress of Standards Movement

Pages 2—4

WHAT ISI MEANS



SEVENTH YEAR 17 SEPTEMBER 1, 1963 25 NAYE PAISE

OVER TO YOU

Door-to-Door Approach to Promote Savings

THERE are many people who are willing to contribute to some savings scheme or the other provided they do not have to take the trouble of going to various offices to make the deposits. Response would be encouraging if some easy and inexpensive method was evolved for collecting money directly from the people. For instance, I would not have made the savings I am doing at present if an LIC agent had not been persuaded to collect money from my house for the savings scheme. Receipts for the money paid come in due course of time. The agent visists me on the first day of each month. He has earned our confidence and has since been rendering this service to many people in this locality. The scheme which has proved successful has also helped people in saving more.

Here is an example worth emulating. The Government should examine how similar schemes can be extended to other parts of the country and how far the services of LIC agents or other persons can be requisitioned in this connection.

Bhilai — *R. M. AGARWALA*

SWADESHI BREEDS OF DOGS

IN spite of our having attained Independence 16 years ago, no efforts appear to have been made for establishing the claims of Indian breeds of dogs. The Kennel Club of India and the newly-formed Indian National Kennel Club have registered some Indian breeds, but they still display only dogs of foreign origin in their shows. The kennel clubs registering the foreign breeds of dogs have to be affiliated with foreign clubs. They cannot work independently even in an independent nation like ours. It is, therefore, considered necessary to have an independent institution which will work entirely for the Indian breeds of dogs with the object of rejuvenating the existing breeds, standardising them and bringing them to the forefront of the canine world.

The following proposals may be considered in this connection:

1. The association or club should have its registered office at Bombay. The name can be decided later.
2. The object will be, among other things, (a) to foster, encourage and promote the Indian breeds of dogs and to standardise them; the institution may also register dogs of Pakistani and Tibetan breeds; (b) to impart training to serve the purpose of sports, security, hunting, police and patrol work, (c) to supply good specimens to homes, individuals and kennel clubs with a view to getting the records of their performance, (d) to save the foreign exchange involved in importing dogs, particularly of the fancy breeds, and to minimise the expenses incurred in maintaining them, (e) to encourage dog lovers to buy such dogs as suit their pockets, (f) to improve the standards of our national breeds and make them popular in other countries also, and (g) to lay down the standard of each breed and set up district-wise branches of the institution for obtaining full details of the breeds existing in each district.
3. Any person above the age of 18 years can be a member, irrespective of nationality, colour, caste or creed.
4. A managing committee can be formed consisting of one president; four vice-presidents, one honorary general secretary, four honorary secretaries, one honorary treasurer and twelve members.

It is hoped that the proposals mentioned above will invite further suggestions from different parts of India. The scheme when finalised will be redrafted with the help of experts and published in newspapers. The Government will also be approached for help.

It will, of course, be difficult to set up this institution for Indian breeds of dogs since the rich dog lovers have a preference for foreign breeds. But in the interest of the nation we have to take up the task.

Bombay-78 — *S. J. R. SUVARNA PRAKASH RAO*

ABOUT YOJANA

Yojana seeks to carry the message of the Plan to all sections of the people and to promote a more earnest discussion of problems of social and economic development.

It is issued every other Sunday in two separate editions, English and Hindi.

The Advisory Board of the journal consists of Dr. B. Gopala Reddi (Chairman), Mr. T. N. Singh, Mr. Shriman Narayan, Mr. C. R. Pattabhi Raman, Mr. Nawab Singh and Mr. T. P. Singh.

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COVER : The cartoons are by courtesy of ISI and the sketch of Manak Bhavan is by R. Sarangan

WHY NOT TRUCKS?

SOME State Governments ply their own buses for carrying passengers. In most cases this is not profitable. Please ask the State Governments to carry goods instead. Let them run lorries and trucks which will yield more profit. By doing so, the State Governments will also be in a position to locate the bottlenecks. For instance, they will be able to find out where the goods are delayed creating artificial scarcity and causing the consequent rise in prices of all commodities.

Tanjore — *R. V. IYER*

YOJANA

Vol. VII. No. 17 Fortnightly Journal Published on behalf of the Planning Commission BHADRA 10, 1885

TESTED AND PROVED

In the life of a nation, as in the life of an individual, there will only be three or four occasions when a conscious choice can be made. Such an occasion arose in India—we had indeed striven for it for decades—in 1947 when we achieved freedom and set about determining the kind of political system we must give ourselves. We chose democracy, and the parliamentary way of life. There was no reason to think we would have chosen any alternative path, for our whole recent history had predisposed us towards the method of peaceful, non-violent, constitutional change.

The same moulding forces that made us seek political democracy made us work for economic democracy. Use of wealth and all means of production for the good of all, and equality of opportunity to develop one's potentialities—these are the two major premises of economic democracy, of socialism.

The only way to bring about economic democracy after ages of denial and inequality, India decided, was through planning. Planning consists in using all available resources in a scientific manner and going step by step towards the goal. The aims of planning are clear and simple: to build strength, to build wealth, to build justice and to bring down inequalities.

This combination of parliamentary democracy and planning makes the Indian experiment a unique one. The world had associated democracy with economic indifference and planning with totalitarianism. India has shown that such equation is wrong and that the best virtues of democracy and planning can be combined.

And the last dozen years have proved that democratic socialism and the Indian synthesis are viable and valid.

But in choosing revolution by consent, in choosing the democratic way of doing things, we have also chosen gradualism. We build, no doubt, and we build steadily, but we build slower than a totalitarian society can by suppressing public opinion. By cherishing open discussion and the right of people to call the executive to constitutional account, we deliberately deny ourselves an advantage that dictatorship has—that of subjecting the needs of today to the needs of tomorrow. Democratic planning has at every stage to balance national strength with individual welfare.

There have been references recently to the persistence of poverty, to "three-fifths of the population" having an incredibly low income and the top tenth cornering a third of the nation's income. To anyone aware of the true size of the demons we have to contend with, as the Prime Minister put it, this is not news. It is a known fact that there are several million unemployed in the country. What does unemployment mean? That the man has *no* income, let alone an income of three annas or eight annas or fifteen annas.

One of the interesting findings of scholars who have studied the distribution of national income is that in most countries of the world the poorest ten per cent together earn only about 3 per cent of the national income. This is true of Britain, of India and the U.S.A. The trouble with India is that the total national income itself is very small compared to its large population. If the life of the poorest has to be improved in a country of pervasive poverty, it cannot be done merely by transferring income from one group to another. The whole national income itself has to be raised, and raised fast.

There is no denying that our growth has not been speedy enough. But part of the reason again is the clear and deliberate choice we ourselves made. Economic freedom means that we have to advance towards a self-reliant economy and it involves building up our own basic industries. While basic industries are built up, there is no immediate addition to the national income from the large investments made. But unless we build them up, there is no military strength for us, no chance of freedom from dependence on foreign countries and not even the ability to provide our people with a wide range of goods.

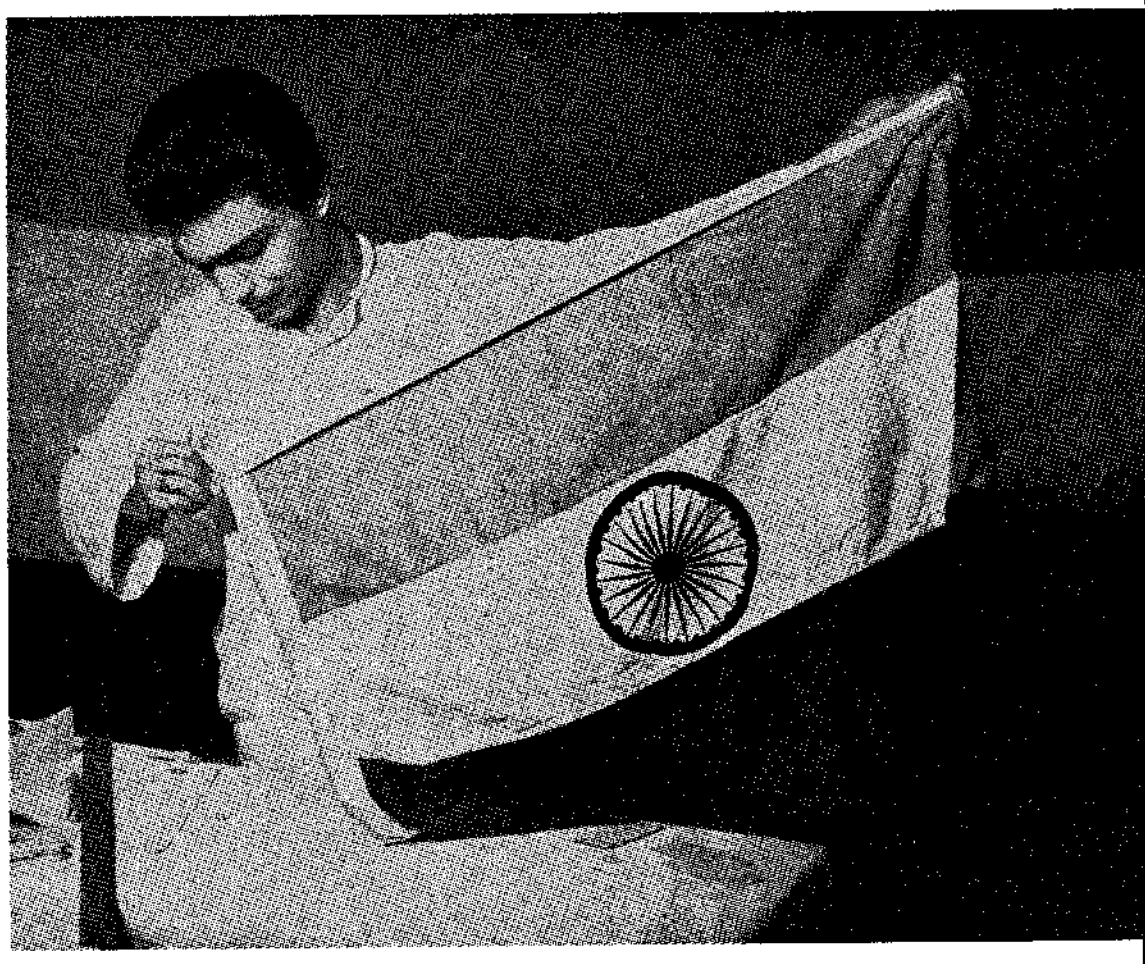
In clamouring for speed, therefore, let us not forget the nature of the choice we have made. There may be quicker ways of achieving growth, but they would involve abandonment of democratic socialism. Freedom, national and personal, is a rare gift. We can know its true value only in its absence. We as a nation do not need to be reminded about it. Choosing another way would also be to sign away the very right to choose. But there is no reason at all to think that democratic socialism has not served us well. It has been tested and proved adequate. The last twelve years have been years of achievement. The progress of India is impressive and heartening. We ought to be proud of it.

NEXT FORTNIGHT

The Special Issue of YOJANA which had been announced for September 15 has been put off by a month. It will be published on OCTOBER 13, 1963 (Please see Page 13 for details).

Next fortnight we shall bring you PROFILE OF A DISTRICT, a special report on the striking progress made by Ahmednagar District of Maharashtra in various walks of life. Also in the next issue: "Building Materials", "Pepper" and the regular YOJANA features.

THE MEN WHO PUT Q INTO THINGS



A report by the Editor on the

STANDARDS MOVEMENT

THE Indian Standards Institution was born in 1947, the same year that the tricolour went up on the Red Fort. This coincidence of the big with the not so big has some significance. A flag, as we all know, is called a standard. The hoisting of the tricolour meant we had a distinctive personality, a voice and a stance of our own. The birth of the Standards Institution meant that we would have distinctive norms and tests for the things we made and did.

Over the last sixteen years standardisation work has steadily progressed in our country. ISI has prepared and published 2,400 standards to date and issued 560 licences for the use of the ISI seal on 200 products.

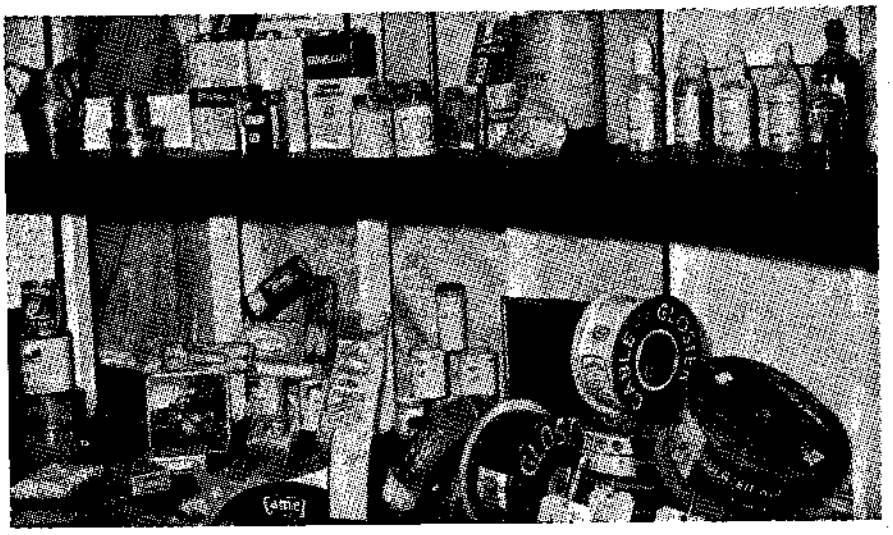
But let us linger a little more on the interesting link between the nation's standard and the Standards Institution.

We all know that our flag consists of horizontal strips of three colours —saffron, white and green, with a blue wheel in the middle. But how many flags did we not see in the early years in which the "deep saffron" was more often a faded orange, and the wheel was a smudge of blue? But this no longer happens. The flags used by Government or released by the Khadi shops conform strictly to specifications. The chakra is no longer a crude cartwheel but the wheel of Dharma visualised by Asoka's master craftsmen. The green is the right green and the saffron the same shade of the sacred colour as figured on the flag adopted by the Constituent Assembly on July 22, 1947.

This welcome development is due to ISI having taken a hand. If you have a near look at our flags, you will notice the little ISI seal on them.

As in the realm of symbol and sentiment so in the solid fields of industry and trade ISI has brought in many benefits.

Standards, it has been said, are to industry and commerce what culture and social manners are to society. Indeed they are much more. Absence of good manners may merely irritate, or even amuse as happens in meetings and assemblies.



Some of the 200 products licensed to use the ISI seal

But absence of standards may mean positive danger. A weak girder may bring down a bridge. A poor cable might blow up a power system. A brick must bear the required load; a bicycle frame must stand jolts and shocks besides carrying the requisite weight; an umbrella must withstand rain and an insulator must insulate.

Everything, in sum, must do what is expected of it, and it must do it well over a stretch of time. That is quality. To put quality in and see that everything gives assured performance most economically is the aim of the standards movement.

A hundred times more things figure in our daily life than did in our great-grandfather's time, for a technological revolution has come upon us. Technology rests on standards. There have to be samples, models and graphs to define, designate and specify the features and functions of things. There have to be formulae and written-down codes for the making of products. There have to be units of measurement—for weights and distances and energy, and tests of accuracy and excellence. There have to be bases of comparison of processes and uses. There have to be simple rules for efficiency and economy. All these are denoted by the word standard. Standards therefore serve producers, dealers and consumers of all kinds of goods. They are the point where experts prove their value to laymen.

AFTERNOON IN MANAK BHAVAN

II

Wanting to know at first hand how exactly the standards movement is organised in our country I spent an afternoon at Manak Bhavan seeing, talking and listening.

'Manak' is the Sanskrit-Hindi word for measure or criterion, and the headquarters of the Indian Standards Institution, or Bharatiya Manak Sanstha as it is also called, is on the bustling Mathura Road in the capital. Across the street is an impressive array of news-paper offices and all around are educational and professional institutions and a few government offices. A good setting for an organisation that wants to influence the public.

The exterior of Manak Bhavan leaves one in two minds on whether to call it beautiful or ugly; it is neither faceless nor grandiose, fortunately, but is somewhat self-conscious. But the interior is an excellent contrast. It exudes briskness. There are no loungers. The corridors have no 'peons' or benches or floor stains or bits of paper. ("We want the messengers to be with the other employees, you see. We don't keep them beyond the threshold.") The tidiness of the rooms where work goes on is even more impressive. First of all, there are no partitions. Everybody sits with everybody else seeing others and being seen by them at work. A table for each, without any class distinctions in regard to the fixtures. No partitions, I said, but there are two. One is where visitors are taken aside, so as not to disturb work; the other is where the head of the division sits; but even he is in full view of his colleagues, the panels being of glass.

I was happy that our own Delhi had an office which had departed from the purdah habit and was as modern as the offices elsewhere. An acquaintance had told me to expect the best-run office in the capital and first impressions of the sections at work, of the library and of the museum confirmed him.

The museum—nothing musty or antique about it—provides a quick view of the need, scope, functioning and achievement of the standards movement through diagrams, charts, panels, drawings and cartoons. The light touch in having cartoons is proof that the ISI people take their business really seriously. Also on view is a range of goods which have been given ISI certification—cables and wires and aluminium vessels; baby foods, biscuits and waterproofing material; electric motors, tea-chests and brass tubes; soaps, bicycle parts and cement.



An ISI inspector selects market sample of a battery for testing

The display brings out the basic benefits that standards confer:

(1) that they provide a basis for comparison;
(2) that they assure performance;
(3) that they promote safety;
(4) that they facilitate interchangeability of parts;
(5) that they reduce needless variety; and
(6) that they bring about a saving of money.

Each of these is illustrated in a concrete manner. Take interchangeability. If bulb-holders are made in different sizes, one can imagine how difficult the buying of bulbs will become. Once in the United States a fire could not be brought under control because the fire brigade which came from the next town could not fit its hoses to the hydrants of the affected town.

Then take the point about reduction of variety. Do you know how many categories of sugar are made in our country? Until a few years ago there were as many as 34 categories, with very minor differences in the size of crystals and the shade of whiteness. Ideally three varieties are more than ample as in most countries of the world. Through its efforts ISI has been able to bring down the number from 34 to 16. By limiting the varieties, the manufacturer can concentrate on output and bring down costs. And dealers will find that indenting, book-keeping and packaging become easier.

The charts in the museum also give an idea, in capsule form, of how ISI works. ISI is an autonomous organisation. About half its revenue comes from the Government of India and the rest from members' subscription, sale of publications and licences granted to manufacturers. The expenditure last year was Rs 35 lakh. The members, consisting of manufacturers and users, commercial houses, exporters and importers, scientific and research organisations, Government departments and individuals, number nearly 2,700. A general council and an executive committee consisting of representatives of various interests control its policy and operation.

The actual work is carried on through several divisions—the Agricultural and Food Products Division, the Building Division, the Chemical Division, the Electrotechnical Division, the Mechanical Engineering Division, the Structural and Metals Division and the Textile Division—each of which is guided by a division council. Besides there are four advisory committees—the Certification Marks Committee, the Implementation of Standards Committee, the Industrial Safety Committee and the Women's Advisory Committee. There are four branch offices—in Bombay, Calcutta, Kanpur and Madras. The chief executive is designated as the director.

To meet Dr Lal C. Verman, Director of ISI, is to meet a coiled spring. He unmistakably is a man with an idea: one who lives it, breathes it and dreams it.

A CHAT WITH DR. VERMAN

III

"*Dr Verman*", I began, "*We hear so much about the role of quality control in exports. What is ISI doing to see that our exports conform to standards and there are no complaints?*"

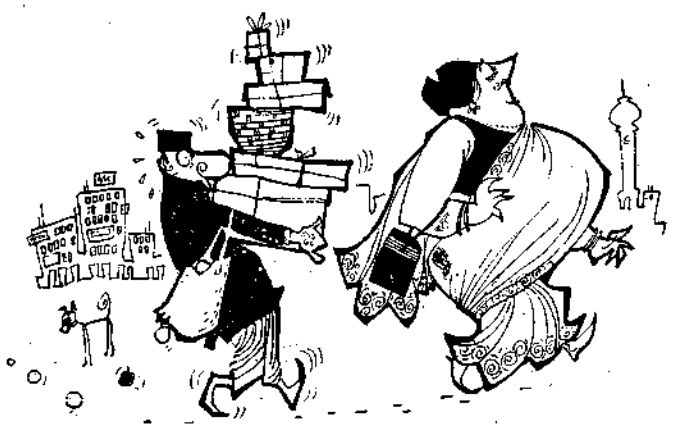
"Now, now, let me put one thing straight. Every time there is a complaint, our people tend to take it for granted that we are cheats. Often it is the overseas importer that is trying to diddle us. You know how it is in international trade.... Now to your question proper. The enforcement of quality in our exports is the work of the Ministry of International Trade, which has a special Quality Control Directorate. I headed a committee set up in 1961 to report on how this job should be handled."

"*And where does ISI itself come in?*"

"It comes in one stage earlier. I'll give you an example. Take jute. To promote exports of jute products which, as you know, are facing keen competition, we prepared several standards, compressing many years' work in a short time. These will certainly help in enforcing strict conformity. And jute reminds me of its companion in exports, tea. Until very recently it was being said India couldn't make plywood, and a large amount of money was being spent to import the tea-chests in which to export our tea! ISI stepped in and formulated standards as a result of which tea-chests are produced within the country which are as good as the best made elsewhere. The import of tea-chests has entirely stopped."

"*Turning from exports to internal trade, do you think the standards movement has brought about a big change in our industry and trade?*"

"Certainly. ISI itself is the joint product of the Government and industry. Industrialists and traders are very enthusiastic about the movement, judging from the demands that pour in for formulating new standards and the pace at which their adoption is spreading. Standards are a great aid in awarding contracts, purchasing materials and in carrying out tests. So a large number of our people are anxious to produce quality stuff, although they are hindered to some extent because of lack of technicians and raw materials of the right type. Anyway industry and trade are united in supporting us. Unlike U.S.A., where there are nearly 500 standards organisations, one or more for each industry, we have a single national organisation which enjoys everybody's backing and confidence."



"*I guess that is one of the advantages of starting late. But may I ask an elementary question. Who deter-*

(*Continued on page 22*)

Fight Against Corruption

A CONSTRUCTIVE APPROACH

By SHRIMAN NARAYAN

It is quite evident that efficiency and integrity of administration is of crucial importance for the preservation of the democracy on sound lines. The people under a democratic set-up are generally prone to tolerate many things for the sake of their social and political freedom, but they are not prepared to tolerate corruption and inefficiency in the administrative structure. Every effort should, therefore, be made to streamline the administrative apparatus in India with a sense of urgency. Otherwise, it would be very difficult to fulfil the various targets under the Five Year Plans, and thus establish social and economic democracy on a lasting basis.

DON'T EXAGGERATE

To begin with, I would like to point out that in many cases routine "tipping", which is very common in foreign countries including the Soviet Union, is mistaken for bribery and corruption in India. There is also an unfortunate tendency in the general public to exaggerate the extent of corruption in administration. It is true that there is considerable "tipping" at the lower levels of administration in most of the Government departments. But, so far as I am aware, the higher categories of Civil Servants in India are, by and large, free from this evil. I have no intention of underrating the extent of corruption in the Services in an attempt to whitewash the current malpractices. We must boldly face these problems and find practical and constructive solutions. Merely a negative and destructive approach to them does not make for a healthy public life under democracy.

SPEED UP WORK

A close and careful study of the problems of corruption in the Indian administration reveals that procedural delays play a very important role in this matter. Recently, the Government of India and the Planning Commission have taken a number of steps to reduce delays of various kinds and simplify the existing cumbersome procedures. Even so, there is still considerable room for further improvement and every nerve must be strained to streamline the administrative machinery to the maximum extent. Avoidance of unnecessary procedural delays would be instrumental in reducing bribery and corruption in a sizable measure.

DON'T OVER-LEGISLATE

It is also quite true that enactment of hasty and ill-drafted legislation which is incapable of being implemented smoothly through the existing administrative apparatus is largely responsible for corruption. For instance, the Anti-Dowry Act and the Gold Control Order are meant to be important social and economic reforms and their basic principles are, undoubtedly, sound and desirable. But from the administrative point of view we cannot claim adequate success for these governmental measures. In consequence, these reforms have resulted in the growth of corruption in administration during recent months. They are being practised more in breach than in observance. We should, therefore, be extremely careful in introducing legislative measures which would be beyond the capacity of our administrative structure to execute with reasonable chances of success.

There may be many other desirable steps which we would like to take for improving the existing society in India from the social, educational and economic points of view. But it would be much better to have recourse to well-organised educative propaganda before thinking of introducing legislation in Parliament or State Legislatures. An attempt to heap legislation upon legislation on an already weak and inefficient administration would, surely, not be an act of wisdom on our part.

BE READY TO TAKE ACTION

In order to root out corruption from the Services, it is also essential to streamline procedures for taking disciplinary action, including dismissal and prosecution. Of late, the Indian Parliament has amended the existing rules in this regard and I do hope that this will produce healthy results. If there is reasonable suspicion that a particular Government servant has been indulging in corrupt practices, it should be quite open to the Government to get rid of him speedily through a summary procedure. The current procedures in this respect are too complicated and the authorities find it extremely difficult to terminate the services of a person whom almost everybody regards as corrupt and inefficient. As soon as these rules are simplified, the Government should not hesitate to take prompt and strong action, particularly, at the higher levels.

—EVEN AGAINST THE HIGHEST

In order to create a favourable atmosphere for a clean and efficient administration in the country, the Government shoud not fail to take equally strong action against Ministers both at the Centre and in the States. Caesar's wife must be above all suspicion and the Government should be ready to institute judicial enquiries at the highest levels. Any lurking suspicion about the integrity of senior leaders in power is highly injurious to the continuance of sound democratic traditions. Instituting enquiries by the Party in power does not now find favour with the public. It would, therefore, be desirable to set up *ad hoc* Commissions of Enquiry in particular cases from time to time.

Above all, corruption in public life can be eradicated only if the people in general are able to raise their moral standards. If the people are able to develop sufficient strength of character and thereby resist corrupt practices with resolute determination, this evil could be done away with soon. In this work of public education, voluntary organisations like the Bharat Sevak Samaj can play a very important part.

Reorientation of our educational system in schools and colleges is also imperative. The Union and the State Governments have already decided to implement the recommendations of the Sri Prakasa Committee on Moral Education. I do hope that the recommendations of this Committee will be introduced in all our educational institutions without any further delay. Unless the rising generations are able to imbibe basic ethical principles in their personal and public life and develop a strong character in the right sense of the term, it would be impossible to pull out corruption from the very roots.

The problem of corruption and bribery is, indeed, a complicated one. Let us, therefore, try to study it very carefully and in a constructive fashion. Too much talk about corruption without suggesting definite steps in that direction leads to an unhealthy atmosphere of frustration and bitterness which helps no one.

SUCCESS STORY

He Wouldn't Take a No

and today Ram Narain shows friends how new seed brings plenty

THE one becoming many is the essence of both the mythological and scientific explanations of creation. This has been proved again in the field of Ram Narain, a farmer of the village Dugari in the Bundi district of Rajasthan.

The story began six years ago.

Ram Narain went to see the fair of Tejaji in his village. Passing through the thronging crowds of men and women in colourful costume, his attention was suddenly drawn by an agricultural show put up by the State Agricultural Department. Ram Narain glanced at the improved implements and other exhibits. A bagful of wheat roused his curiosity. He asked the fieldman in charge: "Do you only demonstrate these seeds? Or do you also distribute them to the people?"

"If I start giving away, hundreds of such bags will be empty within no time," was the curt reply.

Ram Narain retorted in a hurt tone, "I don't want a single grain as gift or donation. You may charge whatever price you like, but you will have to give me some grains from this bag."

The fieldman gave a flat refusal and Ram Narain returned disappointed at the officiousness of the man who turned down his request.

But Ram Narain would not rest without obtaining the seed. Four days he passed in restlessness. On the fifth day he, along with a few friends, went to the fair again. Now he was determined to have the seed of his choice.

When the fieldman saw him, he smiled rather meaningfully and said, "I know, you have come again for the seed. But I tell you, even if I give you, you will not be able to grow it."

Ram Narain took these remarks seriously. Then the fieldman enquired from the friends whether Ram Narain was really interested in the improved seeds. On the recommendation of the friends Ram Narain got only one sample grain.

Ram Narain carried the hard-won seed in a cigarette packet to his field. Now, where to sow it? He pondered again and again and selected a suitable place. He dug a few inches of soil, mixed fertiliser with it and sowed the seed. After a few days the seed sprouted and grew into a plant. He watered it every fortnight and in course of time as many as 31 ears of wheat were hanging on the plant.

'As you sow so shall you reap,' goes the old saying. Ram Narain reaped the bounty, threshed the awns and the yield was six chhataks of wheat of a high quality. His heart danced with joy. He preserved the entire seeds for a second experiment.

Next year he sowed the entire yield. This time he used chemical fertiliser which helped the plants grow rapidly. Water was given every fortnight. After four and a half months the plants grew six feet high. Out of curiosity people came to see the plants which were soon laden with ears. This year the yield multiplied thirteen-fold; it was over five seers.

The experiment convinced Ram Narain that improved seeds could work wonders. Next year he again sowed the entire yield, nourished the plants still better, and, to the surprise of his friends, the yield again increased twelve times; it was one and a half maunds.

Then Ram Narain decided to help his fellow farmers. He wanted to distribute to them his treasure of improved seeds. But his plot of land was too small to yield enough seeds for distribution. However, he sowed about 1.2 acres of land with 30 seers of seed, manured and watered it well. And this time the produce was over nineteen maunds, that is, twenty-five times that of the seed.

"Give us a handful of your improved seeds. Let us benefit by your experience," said the farmers who came from far and near to see his wonder crop.

Ram Narain has now distributed the seed to 16 cultivators from a dozen villages.

MANOHAR PRABHAKAR

NEW PRESSES

New printing presses, including one for Parliament work, are being set up by the Union Government at a cost of Rs. 6.38 crore. These will increase the annual printing capacity for the Government presses from .9 lakh pages to 12.61 lakh pages by the end of the Third Plan.

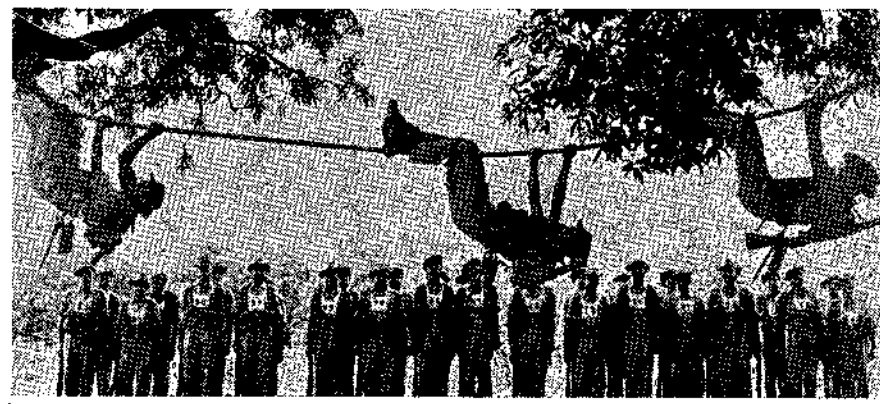
INDEPENDENCE DAY START TO SCHEME

NCC FOR ALL

The oath was administered in Hindi by Maj.-Gen. Virendra Singh, Director-General of N.C.C. To hear it was a stirring experience, which was shared by thousands of people who watched the ceremony.

The oath was also taken by 1,200,000 N.C.C. cadets in more than 2,000 cities and towns all over the country. It marked the inauguration of compulsory N.C.C. training for all able-bodied students in colleges and universities.





THERE was a lull in the rains as if to assure one that there would be a bright sky for Independence Day. On a rostrum raised at Delhi University stood the Prime Minister and in front of him a vast rally of N.C.C. boys and girls.

The cadets stood to attention. They were in their uniform—trim, smart and alert. The pink hackles on their caps provided a sharp contrast from the afternoon sky. And all at once from 14,000 throats went up a solemn vow: "I promise that I will honestly and faithfully serve my country and abide by the rules and regulations of the National Cadet Corps and that I will, to the best of my ability, attend all parades and camps which I am required to attend by my Commanding Officer".

The NCC cadets are officered by college teachers. Over the years that NCC has been in existence more and more professors have turned soldiers. As in the most foreign countries a time will soon come in India when every academic person, teacher or student, has donned khaki and known the elements of defence.

The NCC Officers Training School at Kamptee near Nagpur has trained 4,500 college teachers in the last six years. One tenth of them are women. The school has also held refresher courses for 2,600 officers.

Picture at left shows a section of the great rally in Delhi on August 14 when 14,000 NCC cadets took the oath. Picture above shows teachers being put through exercises.

PLANS AND PROSPECTS OF SOCIAL WELFARE IN INDIA 1951-61

Gives a systematic review of work already done or in progress in this field and indicates the future plans and prospects.

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Fuller Use of Natural Resources 3

SOAP from RICE

BY USING THE BRAN OIL

SEPARATING the grain from the chaff, we say. But in separating the husk of paddy from the rice grain, especially in the mills, we lose a good deal of rice bran which is indeed a rich substance.

The value of rice bran has long been known. That is why it is fed to cattle. But rice bran is capable of being put to even better use, without in any way affecting the fodder supply.

The outer bran layers are rich in oil. Bran itself forms roughly between 6 to 10 per cent of unpolished rice, and a fifth of bran consists of oil. The inner layers of bran contain vitamins of the Vitamin B complex and important proteins—amino acids such as cystine, lysine, histidine, tryptophane, arginine, etc.

In order to suggest the best ways of recovering these valuable substances, the Government of India set up a committee on rice bran oil industry in 1960. The committee estimated that about 1.8 million tons of rice bran were *theoretically* available for the industry.

The quantity of bran recovered from rice varies according to the quality of raw rice used and also depends on the degree of polishing. Between 6 and 8.5 per cent of bran is obtained under the present conditions of rice milling. The committee took the lower figure of recovery to arrive at the figure of 1.8 million tons.

But not all this quantity would be *actually* available, since it would be difficult to collect the bran obtained when rice was hand-pounded (and hand-pounding accounted for nearly half the country's paddy). The quantity of rice bran which could be made available for oil extraction was calculated in 1960-61 as shown in the table alongside:

	Million tons
1. Total production of rice in 1960-61	33.700
2. Less 10% used for sowing ...	3.370
	30.330
3. Less 50% produced by hand-pounding (the collection of bran from which source is uneconomic) ...	15.165
4. Total quantity of rice produced in mills ...	15.165
5. Production of bran on the basis of minimum 6% recovery on 4 above, approximately.	900,000 tons

As compared to this availability, the total installed capacity of the rice bran oil industry, existing and licensed, now requires only 100,000 tons of bran. In addition, about 42,000 tons were exported in 1961-62, earning Rs 72.37 lakh.

The production target for rice set by the Third Plan is 45 million tons. According to projection of the National Council of Applied Economic Research, the production of rice will be 47 million tons in 1970-71 and 58 million tons in 1975-76. With increased production and better methods of dehusking, the availability of bran will also increase. The estimate of 900,000 tons' availability, it might be reiterated, rested on the 1960-61 production level of 33.7 million tons of rice.

AT present rice bran is being used chiefly as cattle-feed. But because of the high percentage of free fatty acids, it tends to cause diarrhoea in cattle. It has been found, indeed, that rice bran from which oil has been removed is free from bad odour and is more acceptable to cattle. However, some oil in the bran is essential to make it suitable as cattle and poultry feed. As a preliminary to the popularisation of de-oiled rice bran as cattle and poultry feed, research work is needed in the preparation of nutritious compound cattle feeds and poultry feeds, using de-oiled rice bran.

Rice bran, immediately after its separation from rice, begins to decompose owing to the presence of an enzyme called 'lipase'. The free fatty acids in the oil are below 3 per cent to begin with, but increase at a rate which may be as high as 1 per cent per hour during the first few hours and at a slower rate thereafter when stored under humid conditions and at normal atmospheric temperatures.

An important factor which affects the quality of rice bran is the method of dehusking paddy. In the sheller system the bran and husk come off separately and thus yield bran of good quality, while in the huller system the bran and husk are mixed up.

Rice is milled in hullers in West Bengal, Assam, Bihar and Uttar Pradesh and in shellers in Maharashtra, Andhra Pradesh, Mysore, Madras and Punjab. When the proportion of husk is high, such bran has a high silica content when de-oiled. This is not good for export, as foreign purchasers want de-oiled rice bran with low silica content.

THE possibility of extracting oil from rice bran was first explored in India by the Central Food Technological Research Institute, Mysore, which also set up a pilot plant.

The first unit to take up commercial extraction of rice bran was Messrs Ulhas Oil and Chemical Industries (Private) Ltd., Kalyan. At present four units, each with a capacity for processing 50 tons of rice bran per day, are registered.

(*Continued on page 24*)

SURVEY PROVES IMPACT

Radio Spurs Farmers

R. K. AMIN, Vallabh Vidyapeeth

FOLLOWING the recommendations of the evaluation report of the Tata Institute of Social Sciences, Bombay, on the experimental project of All India Radio, Poona, a scheme of Radio Rural Forums was introduced by the Gujarat State in November, 1959. There were about 36 Rural Forums to begin with. This number rose to 56 on January 26, 1960. In November 1960, some 120 more forums were added.

The Economics Department of Sardar Vallabhbhai Vidyapeeth undertook an evaluation of this scheme on behalf of All India Radio, Ahmedabad-Baroda, in September 1961. Besides examining the organisational and structural problems of the scheme it was necessary to find out what impact a radio broadcast can have on the villages in so far as the work of rural regeneration is concerned.

To this end, out of 27 *talukas* or *tehsils* in which these forums were functioning, six *talukas* were selected, two each from North, South and Central Gujarat. Backward, average and progressive areas were all represented in this sample. From each selected *tehsil* three villages were chosen for study—two with radio rural forums and one without such a forum. Within the forum villages, two groups of persons were selected—members of forums and non-members.

From the 12 forum villages which were thus invstigated, about 95 members (eight from each village) and 60 non-members (five from each village) were interviewed. Over and above this, 30 persons from non-forum villages were also interviewed. They were asked various questions pertaining to village uplift which were discussed in the programmes specially prepared by AIR for the forums. The non-forum villages selected from the vicinity of forum villages were more or less similar to forum villages in all respects except for the existence of the radio rural forum.

In order to find out the level of their understanding of village problems, several questions were asked to forum members, non-forum members of forum villages and persons of non-forum villages. An attempt was also made to find out the sources through which they obtained knowledge about these problems. In what follows an attempt is made to present the results on this aspect of the Survey.

THE first group of questions asked of all these persons was regarding the causes of malaria. "Lack of cleanliness" or "mosquitoes" were the usual replies received from these persons. Nearly 88 per cent of the forum members knew at least something about the causes of malaria as against only 40 per cent of the non-members of forum villages and persons from non-forum villages. If we apply the test of having "fairly good knowledge" of the cause of malaria only about 30 per cent of the forum members and 20 per cent of the remaining groups satisfy the test.

A related question regarding the remedies for malaria was put to these persons. About 20 to 25 per cent from each group had at least some knowledge of the remedies. Nearly 25 per cent of the forum members did not know anything about the remedies, while in the remaining two groups these percentages were higher—46 for non-members of forum villages and 53 for persons of non-forum villages. About 60 per cent of the forum members knew about cleanliness, D.D.T. or use of quinine. In the remaining two groups, knowledge about any one of these remedies was found only in about 30 to 35 per cent.

RATS are a great nuisance in villages. They not only spread disease, but also destroy a good deal of food grains. The second set of questions put to these three groups of persons, therefore, was about the rat menace. It was especially necessary to find out whether they were aware of the danger from rats and whether they knew how to destroy them.

About 98 per cent or almost all of the forum members knew that rats spread disease germs, while 23 per cent of the non-members from forum villages and about 20 per cent of the persons of non-forum villages did not know it. As regards the knowledge of remedies and willingness to put this knowledge to practice, it was found that about 88 per cent of the forum members were aware of the remedies but only 65 per cent of them tried to remove the nuisance of rats. On the other hand, about 70 per cent of the non-members of forum villages knew about the remedies but only 55 per cent of them tried to put the knowledge to practice. The persons from non-forum villages seemed to be very much backward in this regard: about 65 per cent of them knew about the remedies but only about one-third of them tried to make use of this knowledge.

What were the reasons behind this type of attitude? It was found that idleness was the reason with a majority of them. Three persons revealed that their inaction was due to religious beliefs and two others pleaded pity for the rats!

THE Third group of questions related to milk production. Some of the questions asked were : What do they know about the ways in which milk production can be increased? To what extent do they use this knowledge to increase milk production? If they do not take any measures, what prevents them from taking any of these measures? How many of them were aware of the fact that along with agriculture, dairying could be an important source of income?

From the answers to these questions it was found that about 70 per cent of the forum members had a very good understanding of the ways of increasing milk production. The percentage for the remaining two groups was only about 50. The question on action showed good results for forum members; about 90 per cent of them had adopted one or the other remedy, whereas only 70 per cent of the remaining two groups were using such devices. Only 3 per cent from the forum members made no efforts in spite of their knowledge of various measures; compared to this about 30 per cent of the remaining two groups did not make any attempt to increase milk production. As to the reasons for not taking any measures, one forum member, three non-members of forum villages, and two non-forum members frankly admitted their inability to give good feed to their cattle.

But the measures being taken cannot be considered adequate. The figures of the level of milk production furnished are low and thus do not show that the people are doing enough about it. Indeed many of the persons do not seem to know that along with farming, development of dairying will yield a good income.

THE next group of questions related to the use of cow-dung and preparation of manures. The interviewees were asked: Do they use cow-dung mainly for manure or for fuel? Do they prepare manure by the traditional method or do they know composting? If they follow the new method, from which source did they obtain the information?

It was found that cow-dung was utilised for both purposes in all the three groups, although a fairly large proportion of forum members (85 per cent) used it only for manure. One of the forum members even had a cow-dung gas plant.

The findings about the method of preparing manure are interesting. About 25 per cent of the forum members, 57 per cent of non-members in forum villages and 87 per cent of persons in non-forum villages still keep to the old method. About 72 per cent of the forum-members have already adopted new method of preparing compost manuring while only about 13 per cent of the persons from the non-forum villages and 40 per cent of the non-members from forum villages have adopted the new method.

As to the source from where they learnt the composting method, about 55 per cent of the forum members said they received information from radio. Five per cent of non-members from forum villages and nine from the non-forum villages had heard it from radio. Most of the persons from the remaining two groups who had adopted composting had learnt it from officials of the C.D. blocks, and there were quite a few forum members who had learnt the new method from the radio as well as from the officers of the community block.

ONE more group of questions was put during the inquiry and it related to improvement in livestock. One question was: Do they know that livestock breeding can be improved through artificial insemination? Surprisingly, 83 per cent of the forum members knew about this fact; they also

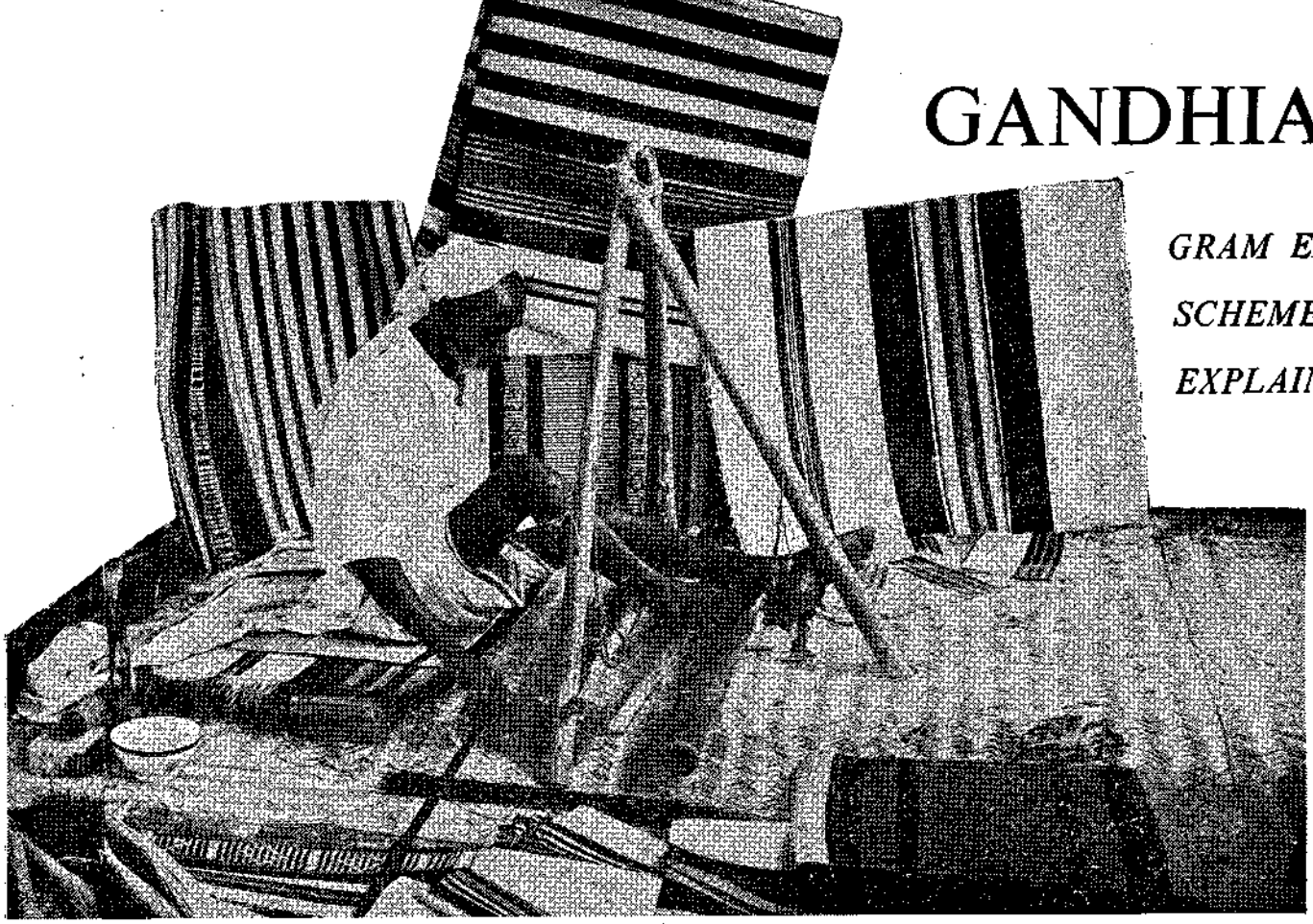
(*Continued on page 24*)

GANDHIAN

GRAM EKA

SCHEME

EXPLAINED



CLEAN, COMRADELY, SELF-RELIANT

The model village, as envisaged by Gandhiji and Vinobaji, has the following attributes:

1. **SANITATION:**
   - —has a programme of complete sanitation.
   - —is kept clean.
   - —pays attention to the cleanliness of lanes and drains.
   - —encourages compost latrines and urinals.
   - —makes compost out of excrement.
   - —provides a clean well for drinking water for all communities.
   - —has also a scheme for ensuring water supply.
2. **HEALTH:**
   - —does not crave for modern type hospitals.
   - —trains young men and women for first aid and simple methods of cure.
   - —has a plot of land in the village reserved for growing herbs and medicinal plants.
   - —sees to it that children have enough milk, butter, fruit and vegetables.
   - —rids the village of the evils of drink, opium, smoking, etc.
3. **HOUSING:**
   - —builds well-ventilated residences, sunbathed and built out of local material.
   - —provides playing grounds for children and adults.
   - —provides backyards for kitchen garden and cattle.
4. **EDUCATION:**
   - —has a primary and middle school in which education is imparted through the medium of work.
   - —plans for the education of every child in the village.
5. **ECONOMIC LIFE:**
   - —believes in Swadeshi and *Swavalamban* as the fullest expression of Ahimsa.
   - —does not encourage buying of consumer goods from outside.
   - —plans for self-sufficiency in respect of food and clothing.
   - —arranges to convert the raw material produced in the village into finished goods by employing local labour.
   - —encourages local talent for the improvement of tools and implements.
   - —makes Khadi the centre of all industries and life,
   - —organises a grain bank and a co-operative store.
6. **LAND AND AGRICULTURE:**
   - —arranges for proper distribution of land.
   - —provides assistance for cultivation.
   - —plans for improved production.
   - —arranges to grow its grain, fruit and vegetables.
   - —uses improved agricultural tools and implements, manure, seeds, etc.
   - —plans to grow food requirements for at least two years.
   - —makes agriculture the foundation of all rural progress.
   - —has a co-operative dairy.
   - —provides for a common pasture for cattle.
7. **VILLAGE ORGANISATION:**
   - —has a *grama-sabha* of all persons above 21 years of age.
   - —chooses a working committee by universal consent.
   - —decides issues through *sarva sammati* and not by counting votes.
   - —selects a samiti of good people to resolve all disputes.
   - —takes the *grama sankalp*
8. **VILLAGE PLANNING:**
   - —will plan in terms of the actual conditions, needs and capacity of the people of the village.
   - —will consider all problems relating to land distribution, cottage industries, implements and equipment, employment and use of manpower, voluntary service, education of children, health problems, cultural activities, watch and ward, liabilities, basic needs in the matter of food, clothing and housing, selection of priorities, in short the *rakshan*, *sikshan* and *poshan* of the village.
9. **CULTURAL:**
   - —organises social education for the community.
   - —has a community hall, a *dharmasala* and a community theatre.
   - —has a common place of worship—temple, mosque, church.

IDEAL OF A GOOD VILLAGE

K. S. ACHARLU

For Gandhiji Independence was not just the end but also the means. His objective was that on the attainment of freedom efforts should be made to establish a social order in which there would be no poverty, no have-nots, no exploitation of any kind, and as far as possible, the least interference with individual freedom.

At that time the concept of non-violent social order was only a vision and practical steps had to be thought of to put the idea to the test in economic, social and political fields. The national Government on whose shoulders lay the responsibility of social reconstruction, proceeded to realise this objective through the Five Year Plans and the Community Development Projects. At the same time, Government constituted the Khadi and Village Industries Commission, consisting of eminent leaders who had deep faith in the Gandhian approach to life. Under their guidance Khadi and other village industries were organised in most parts of the country with a view ultimately to bringing about improvement in the socio-economic development of the rural communities.

In spite of these combined efforts, experience and research studies reveal that there is considerable overlapping, waste and absence of co-ordination among the various agencies in planning and organisation. They also show that, in the absence, of active participation by the people in the developmental plans, whatever is achieved by outside direction fails to produce in the people the expected urge for a social revolution.

Such a social revolution has necessarily to be agro-industrial in nature and is attained through an integrated programme of socio-economic development inspired by the ideals of social security and social justice, related to the fundamental needs in food, clothing, shelter, health and education for all, and capable of evoking in the people a sense of collective responsibility and co-operation.

These ideas were discussed and finalised in what is known as the Pusa Resolution (June 27-29, 1959). According to it, the Constructive Programme for the establishment of the new society should be planned with the entire life of the village as the focus. It is not to be thought of in terms simply of providing employment or additional income to a few sections of the rural population, but should be centred on the basic needs and problems of the village.

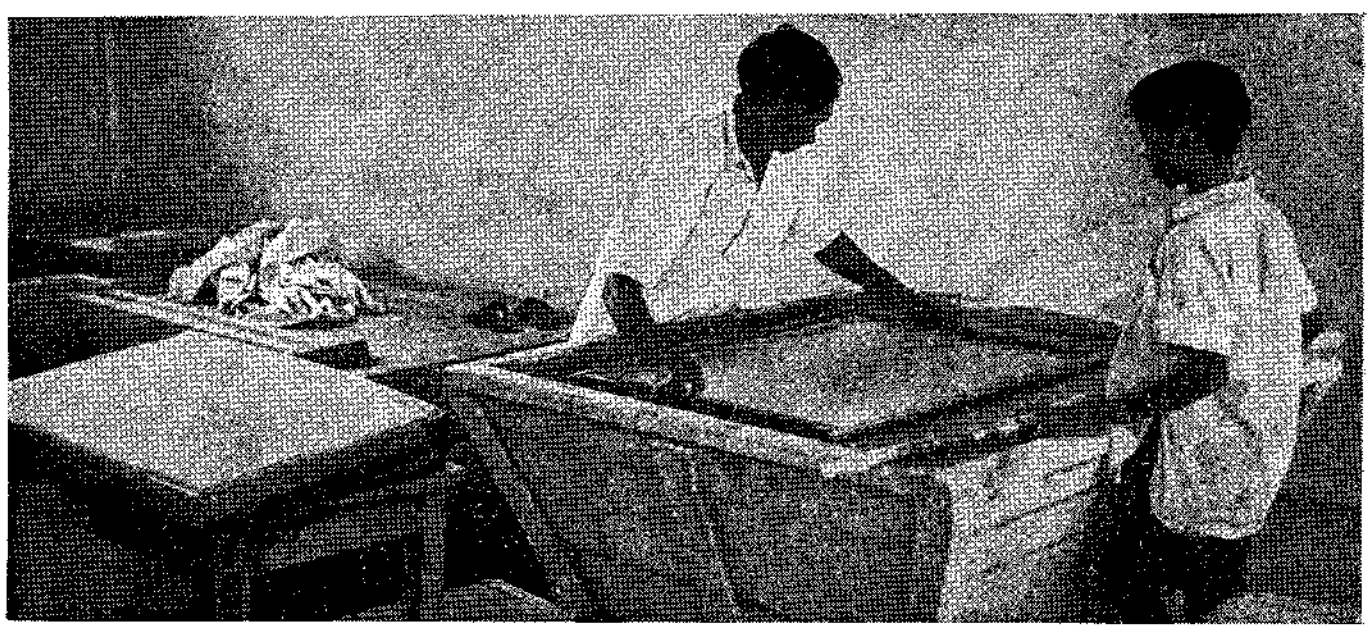
This means a great deal of preparation and planning. The rural people themselves have to realise the importance of *swavalamban*, self-reliance. Legislation cannot impart this consciousness. Nor can ordinary schooling. It cannot be imposed from above. It comes through new education and inner growth. This new attitude, or Naya Morh, is to be the polestar in all the developmental plans taken up by the Khadi and Village Industries Commission. The Naya Morh implies three steps :

(1) The rural community is to be educated in the concept of social justice for all, and in the art of undertaking responsibility for its own economic, social and cultural well-being.

(2) The rural community will prepare a plan to provide the fundamental needs of living and take steps to implement it with the help of agencies and

OPP : A mat-weaver of Pattamadai, Madras

BELOW: Paper-making on village industry basis



workers.

(3) Integrated development includes promotion of schemes pertaining to agriculture, animal husbandry, health, education, cultural activities, besides those of Khadi and village industries.

To give effect to this idea on a mass scale, the Khadi and Village Industries Commission developed the Gram Ekai Scheme. According to the scheme intensive development of the areas along lines of Naya Morh is undertaken in small manageable units of about 5,000 population, designated Ekai (which merely means unit).



A rope-maker

Fortunately, Government had, about the same time, decided that if democracy was to survive it must go the way of decentralisation on the model of the republics of old, and that the way to obtain people's participation in the schemes of development is the establishment of Panchayati Raj. So the Panchayats in the Ekai became the basic factors in this scheme, while the over-all planning agency was the Panchayat Samiti.

The education of the people (Lok Siksha) and the agency through which it should be effected are matters of the greatest importance to the Gram Ekai movement. It is evident that education for Naya Morh cannot be conceived in terms of syllabuses, academic work and examination. It has to be an entirely new type of education revolving round community participation. The chief person entrusted with this responsible task is the village worker or Gram Sahayak, on whose character and capacity, knowledge, skill and attitudes towards life, depend the success or failure of the Ekai scheme.

The Gram Sahayak has to be a person rooted in the soil, living in the village as a member of the village family. From the very beginning, in his actions, speech and attitudes he should rise above considerations of caste, religion, sex or sect. When tension and social aggressions face him, he should learn to solve them by proper understanding and mutual goodwill and not by undue haste and hatred. The most essential qualification of the Gram Sahayak for his calling is the ability to reach the heart of the people. In the words of Gandhiji, "Enough if he knows the art of living, is humble, has *shraddha*, and the attitude of service." He should also be intellectually capable of giving guidance to the villagers on various aspects of life, especially in regard to opportunities for economic improvement. The Gram Sahayak should also have experience of agriculture and at least a few of the village industries.

Quotation Box

Why officials alone? Even politicians have a great attraction for Delhi.

—Mr Lal Bahadur Shastri, laying the foundation stone of Mysore House in New Delhi.

The Prime Minister is a servant of the House, and the servant should know how to behave towards the Master.

—Dr. Ram Manohar Lohia, M.P.

Dr. Lohia is new to the House and needs to be taught what could be said in Parliament and what could not.

—The Prime Minister

Panchayati Raj seeks to create a Government of the people, for the people, by the people and *with* the people.

—Mr S. K. Dey

The Governor's post now is a meaningless post.

—Mrs Vijayalakshmi Pandit, Governor of Maharashtra

Independent upstairs flat with modern amenities for Brahmins only. Rent Rs 200. Contact owner...

To let: First floor (Residence Brahmins only)...garage, running water, etc. Available from 1.9.1963—Rent Rs 255. Enquire premises between 7-9 a.m.

—Advertisements in "The Hindu"

Wanted life partner for a landlord and business man, Delhi, age 40. Partner should be expert in H.H. poor also widow will be preferred.

—An advertisement in "The Hindustan Times"

It is worthwhile considering the suggestion made that the Planning Commission be wound up after submitting the Plan, and another formed before the commencement of the next Plan. In fact, a small Cabinet committee can look after all the problems during the intervening period without creating ministerial differences.

—"Sentinel" in "Swarajya"

The Planning Commission can only make plans but their implementation lies with the millions of this country. A few people working in offices cannot implement the plans.

—The Prime Minister in his Independence Day speech

Part at least of the agitation against the Compulsory Deposit Scheme is due (or so the brand image experts and the depth psychologists say) not so much to the Scheme itself as to its name. If instead of using the term denoting compulsion the authorities had called it the national deposit scheme, or some such, everything would have been right as rain.

—"The Times of India"

Should we deny help to India, the largest free power in Asia, as she seeks to strengthen herself against communist China?

—President Kennedy

HAMARA

HINDUSTAN

Skilled Worker

"Thief, catch the thief".

My landlord has the voice of a bullfrog, and I woke up with a jerk. I was sure it couldn't be in our flat—since I shared the folk belief that burglars don't venture into homes which have infants and asthmatic elders.

I peeped out of the verandah. There was a knot of my neighbours across the street and I ran down with what clothes I had on me.

To none of the people in the group was the event a surprise. The day before five or six houses in the next block had been burgled and a couple of days earlier the block next to it. We had been expecting our turn.

Being a late arrival, I had to piece together what had happened. A burglar had crept into the first-floor flat in the house opposite. He had jumped in from the ledge, unmindful of the fact that the street lamp shone upon him. The occupant of the flat was sleeping in the verandah, but not actually asleep. He at once pounced on the burglar and grabbed his shirt. In a swift move, the burglar jerked himself free and jumped from the first floor.

There were marks of blood on the ground. The fellow must have hurt himself in the fall, but had still made good his escape.

Someone had telephoned the police and the "flying squad" came in leisurely flapping its wings. There were three or four very sleepy policemen who evidently didn't treat their khaki with any affection. They set about making philosophical remarks about the impermanence of things. I was a little impatient and asked them if they were going to register a case or not. That seemed to impress one of them as a reasonable, harmless request. He explained they had come without their head constable. The driver was sent to bring him.

Meanwhile our knot had grown into a slightly larger group and there was more animation in the conversation. "They can't guarantee our safety, and they want compulsory deposits," said one man and the others showed instant approval of the wisdom of his remark. Another man chimed in with a satirical remark on the Kamaraj plan. Yet another man said, "If Russia has a K, and America another K, and England has a Miss K, we have our own K". That brought out a round of laugh and a liberal sprinkling of the favourite Delhi interjection—'By God' and 'yaar'.....

Going back from office in the evening I learnt that the burglar had rested and nursed his wound in the porch of a house hardly fifty feet from where we were standing—and had walked away with a radio.

T.S. NAGARAJAN

SPECIAL NUMBER

A Special Number of YOJANA will be published on October 13, 1963.

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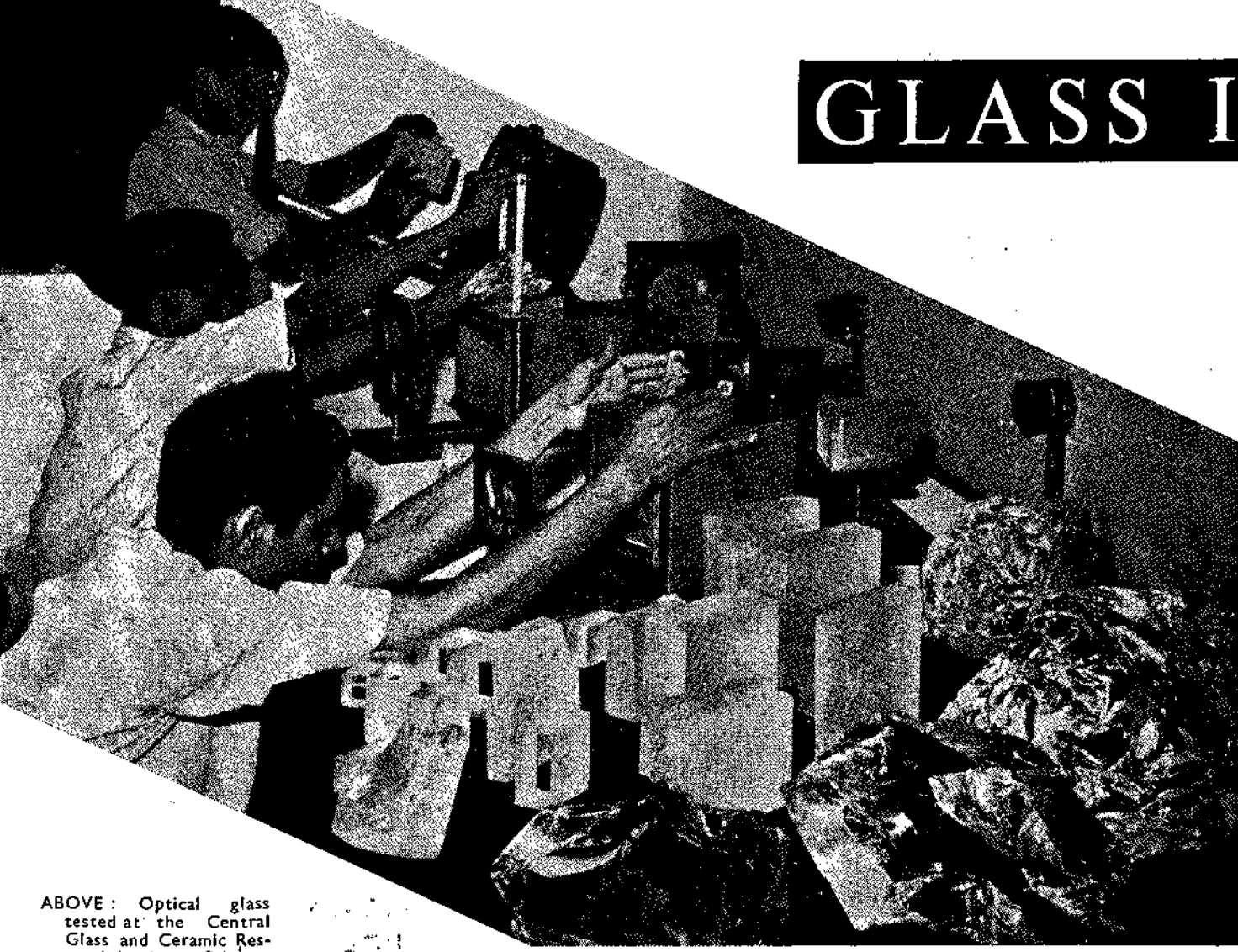
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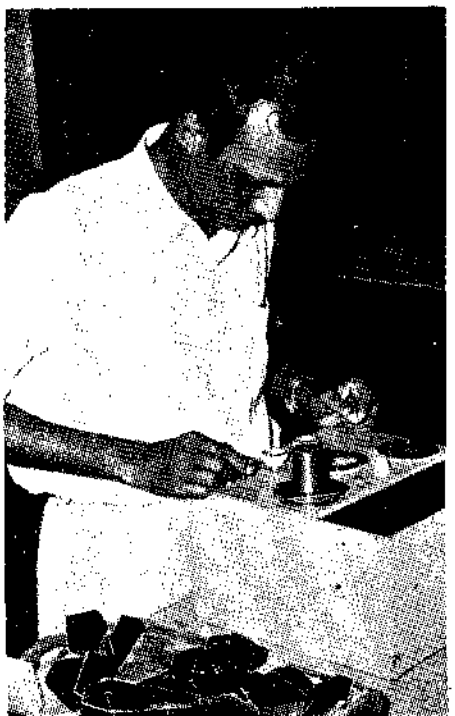
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GLASS I



ABOVE : Optical glass tested at the Central Glass and Ceramic Research Institute, Calcutta

BELOW : Mica being graded



It is said that once, while the famed psychologist Adler was talking to a group of persons on the emergence of anxiety as the most common and deadly malady of mankind, a student stood up to ask him what in his opinion was the most prevalent thing, next to anxiety, in an industrial society. The psychologist paused for a moment, then looked round and said, "glass". For, in the room the group was sitting there was glass in various forms, to serve various purposes. There were windows which had glass panes, electric bulbs of glass, glass tumblers, a wireless set having glass valves and then also the wrist watch with a glass front.

The extent glass has come to be used in the world today is really astonishing. Walk along the road and you will see glass



RIGHT : A bottle press

N INDIA

Most Advanced Processes Evolved within Country

on all sides—traffic lights, street lights, and so on; sit in a park and you will see neon signs glaring at you; or when you are settling for a quiet dinner in a corner of a restaurant, the clinking of glasses reminds you of the presence of glass there too. And if you are myopic or long-sighted, glasses in the form of spectacles are your unfailing companion.



By S.P. AMBASTA

We do not know when and how man first learnt to make glass. From the accounts of ancient Egypt, Babylon and China it appears that glass was known to man from the earliest times. Some archaeologists and historians describe Egypt as the original home of glass, although bangles have been used in India even in pre-historic time. What is certain is that the manufacture of glass was known to man in the early days of civilisation.

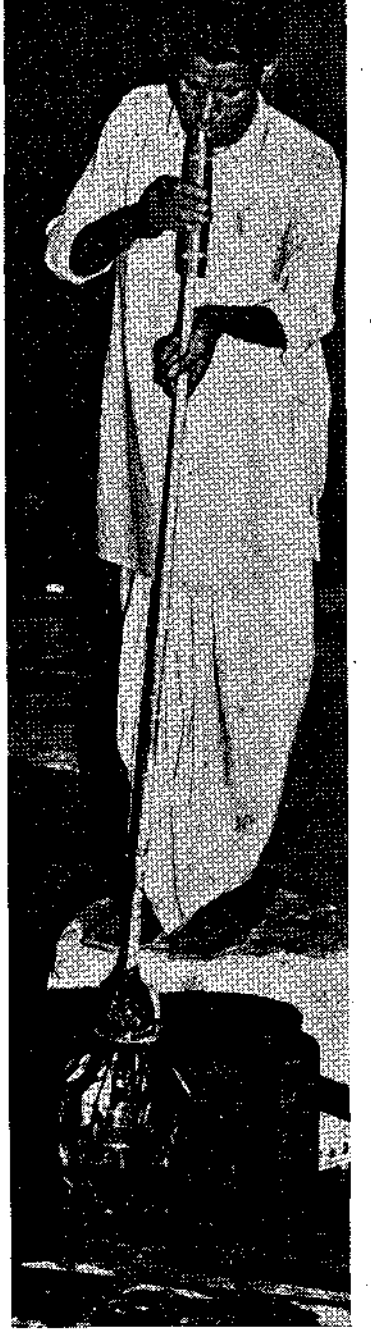


Reading temperature of glass melting furnace, U.P. Industries Department

Glass was perhaps first accidentally produced by the fusion of soda and sand in an open fire. Specimens of glass found in some Egyptian tombs suggest that it was being made there 3,500 years ago. Glassware was made often for decoration. Later the art of glass-making reached Greece and Rome where the trade flourished for several centuries. An interesting thing to know is that transparent glass was unknown those days.

The technique of glass manufacture has improved greatly with the advance of civilisation and man has found several new uses for glass. Glass technology has made amazing progress in the Western countries, especially in Germany and Czechoslovakia. Glass scientists have reduced the weight of glass without impairing its strength. Some years ago the average weight of a jar containing 1 lb. of sugar was 9¼ oz. but today it is only 6¼ oz.

Another great achievement has been the production of fibre glass. It is used for heat and sound insulation and during the last war Germans used blankets made of glass fibre in their giant bombers for insulation against heat and sound. Fibre glass is now being used for controlling sound in motion pictures and radios. Soft, smooth and lustrous fibres are being made of glass.



Craftsman blows a glass jar

Glass is also being increasingly used by architects in the multi-storeyed buildings where glass blocks with hollow interiors are used to provide light. We are now familiar with fluorescent lamps which consist of glass tubes or cylinders coated inside with a fluores-

cent chemical and containing glass and mercury vapour.

So numerous are the uses of glass today that it is now one of the most ubiquitous substances one can imagine.

Glass Industry in India

GLASS manufacture forms an important industry in India. The number of registered glass factories in 1959 was 123 with an aggregate capacity of 392,284 tons per year. This figure does not include an annual output of 35,000 tons for the bangle industry. Most of the glass factories are located in West Bengal, Maharashtra and U.P. The total capital investment in these 123 units is Rs. 12 crore whereas in 1960 it was only Rs. 3.4 crore. These factories produce glassware valued at Rs. 18 crore.

Export of Indian glass has also been on the increase. In 1949-50 India exported glass worth Rs 10 lakh whereas in 1960 the value of export rose to Rs 25 lakh. From 1960 the country began to produce coloured glass sheets, safety glasses for automobiles, aeroplanes and glass wool.

Very recently foam glass, fibre glass and optical glass have begun to be produced in India.

The glass industry provided employment to nearly 30,000 persons in 1960-61 as compared to 18,500 persons in 1955-56.

Raw Materials

ONE reason for the development of glassware industry in India is the availability of most of the raw materials within the country. Materials more commonly required for the manufacture of glass are sand, borax, soda ash and lime. With the exception of borax all the other raw materials are plentiful in the country. Sand, although available in plenty, is not of uniform quality. Nearly all the glass factories in North India and Bengal obtain their requirements of sand from Allahabad. Soda ash, which used to be imported, is now being produced in the country. This has given a great fillip to our glass industry.

How did this revolution in glass technology come about in our country? Did the manufacturers obtain know-how from foreign countries or did they obtain the services of foreign experts? To some extent both means were resorted to. Their contribution, however, could only be of a limited nature as very few firms could afford to obtain foreign know-how and experts at high costs. Moreover, production techniques of special types of glass such as optical glass are regarded as secrets by the advanced countries.

Research in India

THE progress India has made in glass technology in the last ten years is largely due to the researches conducted at the Central Glass and Ceramic Research Institute, Calcutta.

This Institute, now popularly known as CGCRI, is one among the chain of national laboratories built by the Government of India in the last decade under the supervision of the Council of Scientific and Industrial Research. It was opened in 1950. Its L-shaped, three-storey building consists of two main blocks. One houses the laboratory, the library, the museum and the offices. The other houses the unit for processing raw materials, furnaces and the workshop.

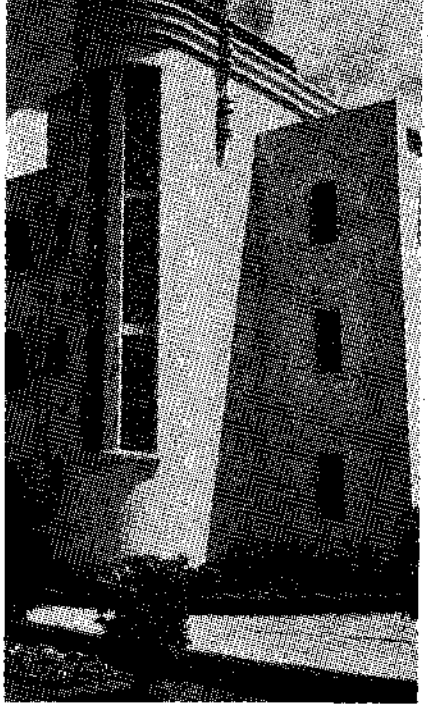
The main job of the Institute is to conduct research on glass and ceramic technology and help the manufacturers with improved processes and production techniques. The Institute works in co-operation with the glass and ceramic industry so that its research may have a direct bearing on the problems of the industry.

Optical Glass

AN outstanding achievement of the experts of the CGCRI is that they have made possible the manufacture of optical glass within India.

Optical glass is used in the manufacture of microscopes, telescopes, cameras and in defence equipment. It differs from other types of glass in two main ways. First, it has to be completely free from imperfections of which the most common are non-melted stones. Secondly, it should be absolutely devoid of chemical non-homogeneity which produces streaks called striae.

The elimination of striae is the most difficult problem in the manufacture of optical glass. CGCRI experts have made a major break through by evolving a process to manufacture good quality optical glass by using indigenous raw materials. These optical glasses are comparable in quality to those produced in Western countries. The Institute has also designed a pilot project for producing optical glass.



The Glass and Ceramic Research Institute, Calcutta

Mica Insulation

MICA, which is found in plenty in Bihar, has found new uses, thanks to the experts of the CGCRI. They have made heat insulating materials, road marking paints, exterior house paints, anti-corrosive paints and fire-resisting paints. A plant has been set up utilising CGCRI process for producing heat insulating materials from mica. These mica products can be used in all furnaces like cement kilns and iron and steel meltings.

A process for producing vitreous enamels without the use of borax or boron compounds which are imported has been developed at the Institute. A factory utilising this process has also been set up in Calcutta.

Experts of the Institute are trying to produce vitreous enamels without the use of cobalt oxide, tin oxide and antimony oxide which are imported. A process has been developed to apply white vitreous enamels directly on steel.

Scientists at the Institute have also made foam glass, fibre glass and efficient refractories by using indigenous materials.

BOILING POINT

WE are a highly political nation and two things that don't attract even a fraction of the attention they ought to are education and science. Professor Kabir has just made a suggestion that ought to be discussed by teachers, parents and students. But we are not a tranquil society and there are other things to be agitated about—prices, labour strikes, defence, rectitude in public life....

Professor Kabir's suggestion is that no boy or girl should be given a degree unless he or she has reached maturity. Left to him he wouldn't let anybody study at a college who is not 18.

Yojana has all along maintained that one of the troubles with our education is that students are hustled through college at too young an age, before their self-confidence is developed, before they have individuality enough to resist spoon-feeding and chalk out their own paths of interest, before they have a direct appreciation of the intricate interaction of emotion and reason. The bright boy banks on verbal memory, 'knows' without understanding a limited number of facts, does well at examinations, and quietly fades away in a civil service job. Ideas can be grappled with only after some grit and grain have been developed. But parents are still keen to see that their children jump from baby-food stage to a college class. Southern fathers are especially fond of boasting about their children doing S.S.L.C. at 12.

More and more universities have begun setting a qualifying age. It is 16 most often. But are we ready for a minimum of 18?

There is another difficulty. With psychologists drawing a distinction between the physical age and mental age, would it be right to go only by the age shown in the birth register? Mental age is still a hazy thing: it can never be as objective or final as the birth certificate. There are some early maturing species among boys as in wheat, and a lad of 15 may often have more discernment than a yokel of 20. As for girls, scientific documents say that the age of puberty is going down all over the world, possibly affecting ideas about emotional stability.

A generation ago Robert M. Hutchins rocked American education by admitting even 14-year-olds to master's degree classes in Chicago University, of which he became President at the age of 27. Prodigies are always to be found. A recent article reminded us that Roget, who invented that most useful help to scholars, the Thesaurus, took his M.D. at 14.

But prodigies are exceptions. If they were the rule, the world would be full of Mills, Macaulays and Adi Sankaras.

Since we have a special problem—that of jacking up intellectual levels—we should give a trial to the 18-year idea.

Honouring the Lion

TWO years from now will occur Lala Lajpat Rai's birth centenary. And a committee has been formed to draw up a plan for celebrating it.

Talking to the committee, Mr Nehru made a telling point—that the statues we set up for our great are ugly, that the pictures we release of them are garish, and that the commemorative biographies we write are dull and lifeless.

In the matter of biographies, Mahatma Gandhi is not so unlucky as our other great. Tendulkar, Pyarelal, B.R. Nanda and Ranjee Shahani have written lives which are no less readable than those of Sheean, Fischer and Reginald Reynolds. But Gandhiji has not been equally lucky in his sculptors. Will any *Yojana* reader tell us if there is a statue anywhere in India that does justice to Gandhiji?

Talent Search

AN unsung big change that has occurred over the last fifteen years is the tremendous expansion in the number of scholarships. People take it as a matter of routine and don't pinch themselves to be sure it is real.

Scholarships are given by the State and Union Governments under a score of schemes. Then they are given by the University Grants Commission and numerous foundations and organisations. Nobody knows for definite how many students hold scholarships in the country. The Education Chapter in the Third Plan says that in 1956-57 there were 880,000 scholarship-holders in addition to some 50 lakh who had free studentships and other concessions. By the end of the Second Plan one in every six students had a stipend or some other financial help.

But even this figure isn't the last word. We in our country have a gift for classifying and dividing instead of adding up. The Education Chapter deals with only 'general' education. The Technical Education chapter doesn't give any aggregates but says that by the end of the Third Plan 18 per cent of all students in technical colleges and polytechnics would be holding stipends and fee concessions. It also speaks of the new Rs 8 crore merit-and-means scheme.

Then turn to the chapter "Development of Backward Classes". It says that by the end of the Second Plan 900,000 students were receiving scholarships under the development programmes for scheduled castes. It doesn't give comparable figures for the scheduled and denotified tribes.

Somebody should compile all these figures in one place. He would be doing a service. This effort

(*Continued on Page 28*)

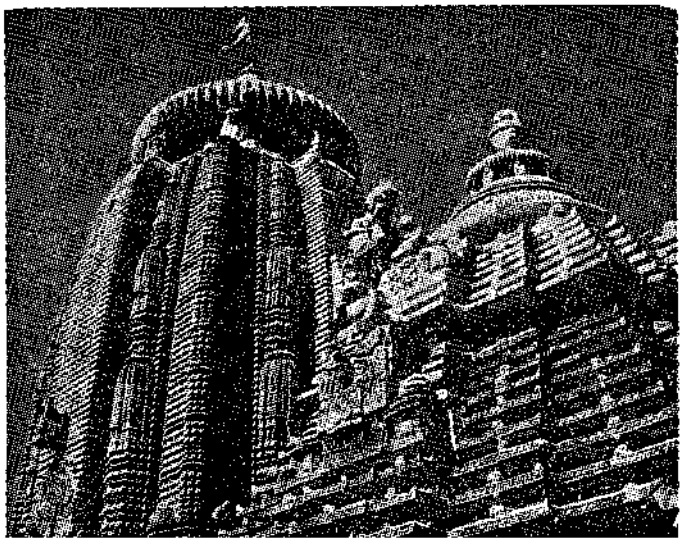


IGNORAMAN

Wants to Know

If there aren't some
even now who
value (tea) party work
above that of office

Books



Oriya Life & Letters

History of Oriya Literature by Dr Mayadhar Mansinha. Sahitya Akademi, New Delhi. 282 pages. Rs. 6.

V. Sitaramiah

DR Mayadhar Mansinha's *History of Oriya Literature* is a valuable contribution to our understanding of a sister literature of India. His knowledge of his State, its people and culture and his acumen and zest make him a discriminating as well as an enthusiastic expounder of the wealth of Oriya life and letters.

Orissa may be a small State in extent; but it is rich in history and artistic achievement. One like the present reviewer who knows what it is to be exposed to the thwarts and torments of political dismemberment knows the agony of an Oriya whose State lay divided among four or five administrations for over two centuries. But who knows that the edge to our affection may not be quite due to this factor in the situation making the language and literature dearer to us for it all? Possibly also, the loss substantively is not great since the period between the seventeenth and nineteenth centuries has been generally barren in the creative arts all over India and the advance elsewhere has been absorbed by a sort of condensation later.

We all have built on original heritage with material from the Vedic, Buddhist, epic, and Puranic literatures in Sanskrit, Prakrit and Pali and about assimilated the main ethos of all of them; for that has permeated all our attitudes and habits of thought, feeling and behaviour. Only Urdu—and perhaps, slightly, Punjabi and Sindhi—has drawn from Arabic and Persian sources and developed some difference in colour. Indian literature has almost the same features in the present as in the past, except for the local preferences and folklore. And the statement that Indian Literature is one though Indian literatures are many can be as much jibe as merit. Exposed to the same forces the reaction has been much the same all over: with classical elements stronger in the past and the English —or European ones—in the present.

What makes one happy to hear from Orissa is that the Adivasis like the Sabaras have contributed to its culture at the foundations. The thought that an unlettered Sudra like Sarala Dasa and a Bhima Boyi —yet, why make so much of it?—have added magnificently is a matter for joy. The establishment of the Jagannatha temple has been a composite product of the Buddhist, Tantric, Sabara and Vaishnava elements. One wishes that all the folklore, the songs and ballads of the people which Dr Mansinha speaks of were collected and printed soon, and that even in this book he had given us a few specimens of Oriya poetry in a short anthology at the end. Then we could have got a direct experience of its lilt and cadence. The sea, one sees, has played a godly part in the history of its people and if sea-songs are available they will be an invaluable addition to our wealth.

Vestigial Oriya records may take us back to the pre-Christian centuries but its literature seems to date more definitely from the thirteenth and fourteenth centuries. Dr Mansinha is justly proud of the Mahabharata of Sarala Dasa, the Ramayana of Balarama Dasa and the Bhagavata of Jagannatha Dasa as of the five "people's poets"; and of the later scholars who have edited the classics and supplied scholarly material on background and critical evaluation. The Koili and the Chautisa varieties of work are well described. The contribution of Badajena and the sorrows of his betrayal by his chieftain patron are pathetic. But true poet that he was he took it in his stride. The chronicle pieces and the lore connected with the temples at Bhuvaneswar, Konarak and Puri like the temples themselves are a treasure for all India. That prose comes in early enough and scores triumphs equal to verse is a refreshing point of information. One is, however, eager to read at least in translation the books dealing with the science of war and weaponry such as is indicated about Paika Kheda and with the techniques of dance and architecture on pages 161-2.

The modern period in Orissa began very much under the shadow of Bengali; but since all modern Indian literature has taken from the same Western impact the traits of the Orissan response are similar. Here the services of Fakirmohana Senapati and

PLANS EXPLAINED TO LAYMEN

Indian Plans : A Generalist Approach by *K.N. Bhattacharyya. Asia Publishing House. 195 pages. Rs. 15.00.*

Vinod Dubey

THIS book stems from the author's conviction that 'Planning is essentially a generalist problem'. The political leaders who lay down the policy aims, the administrators who help to implement the Plans, and the masses for whom the Plans are drawn up, are all "generalists" as opposed to "specialists". The author's dichotomy is therefore the traditional one, between "economists" and "laymen". The book is thus an attempt by an economist to explain the Indian plans to laymen. It has obviously grown out of Professor Bhattacharyya's lectures to I.A.S. trainees at the National Academy of Administration.

There are five parts of unequal length. The first, and shortest of these , deals with basic concepts, the second with "Sector Problems", the third with "Financial Implications", the fourth with "Socio-economic Objectives" and the last with "Long Term Objectives". The book is clearly written and Professor Bhattacharyya has attained his declared objective of reducing planning and its problems to common sense. There is a deliberate emphasis on general principles, Indian data being brought in chiefly to illustrate them. This fact makes the book useful also to the undergraduate.

There is one weakness, however, which struck this reviewer. There is a lack of unity. We seem to be reading a collection of unconnected essays on "Underdeveloped Economy", "Food Problem", "Community Development" and so on, each essay comprising a chapter. There is no distinct theme, no individual point of view, on which these essays could be strung together. This fact makes the volume somewhat unexciting reading.

The price of the book is high, but no blame attaches to Prof. Bhattacharyya for this.

his two friends, Radhanath Ray and Madhusudan Rao, are described as basic. We may take this opportunity to express our gratitude to the band of schoolmasters, educationists and editors who made the modern period and its efflorescence possible all over India: they inspired, laboured and led all the outburst of energy and expression which are our pride today; opening up new fields, themes and techniques, and above all, aiding in the discovery of the common man and the liberation of the individual. If a section of the younger writers err, crow and exhibit bad manners—the type is unmistakable—the fault is that of the milieu and of adolescence. Time will ripen all true talent. Calling names and being impatient with it only worsens the disease..... Then again, to try to hold up a piece of modern work against the perspective of Time and the whole literary tradition and achievement of a people is disproportionate..... Dr Mansinha's frequent characterisation of much of the modern as 'pseudo', 'little', 'so-called', 'ersatz', etc., could be avoided at least in a Sahitya Akademi book. He passes a type of peurility and caddishness in the writers he likes—for example Laksmipurana and Kedara Gowri—and is summary in his rejection of episodes like Dhruva and Prahlada. Anyone who is familiar with Valmiki will think twice before calling his poetry and vision of character, and, therefore, his Rama and Sita as 'goody-goody'. *Per contra*, praise of Vilanka Ramayana seems to be an enormity.

Normally the author is fresh and confident in the use of the English idiom; but his partiality for superlatives like 'most supreme' and 'super excellent' and his addiction to 'whole', 'entire' and 'all' hurts reading. He can sharply sum up and narrate tersely, but is prone to rhetoric of a gusty kind: phrases like 'In the whole range of Indian literature', 'Anywhere in India', etc., abound, and his preoccupation with 'deathless' and 'immortal' is a trifle loud. "Oriya is as musical as any other language" almost gives up the show. There is no such thing as "the Hindu Church".....The Ecclesiastes may not be "cheaply pessimistic". .....It is not comfortable to hear of the Biblical idiom of Jagannatha's Bhagavata. Indeed, comparisons with English obtrude narration occasionally cluttering it with Orissan Swinburnes, Hardys and Arnolds. At 46 Keats need not have been Keats at all! A prettiness like "this bonny (bonnie?) prince of a young man" take us to Scotland rather than hold us to India..... The Telugu Bharata did not take till the eighteenth century to complete; Yerrappa completed it in the fourteenth or at the latest in the fifteenth century. Higher criticism has a different connotation and had better be confined to it. If the labours of the Kalinga Bharati are unworthy let those worthies wither in their obscurantism and absurdity and be ignored. The paragraph on Nilakantha Dasa (pages 241-2) which contains:

> "Interspersed with matchless ballads and songs in the style of Tennyson's *Princess*, this kavya has the indelible stamp of a creative individuality. The lines flow on like a mountain cascade with Browningesque vigour and *Miltonic* grandeur, and the young poet throws about similes and metaphors of his own and a profusion of ideas, in a style of versification that is at once pliant and manly, expressive as well as recondite, vibrant in simple charm and magnificent in bejewelled aristocracy—all of which together combine to make it a grand work of art, in spite of occasional blemishes caused by careless construction and an apparent obscurantism born of sheer exuberance" touches the limit.

Yet, by and large, the Doctor's History is full, instructive and interesting. More, it is affectionate work. The range, the richness and the vitality of the Oriya literature, past and present, are considerable and earnest of a richer harvest in the years to come. May it soon be possible, however, for Oriya as for all Indian literatures to get over the period of imitation and parallelism and to strike out adventurously so as to make our work truely 'a creative advance into novelty' —one step beyond the merely Eastern or Western, more fruitfully representative of a people rooted in the remotest antiquity and determined quite to live and function with dignity and grace.

The Logic of Population Planning

Population and Planned Parenthood by Dr. S Chandrasekhar. Allen & Unwin Ltd., London. 114 pages. Rs 9.00.

K. P. Rungachary

More than sixty years ago, actually in 1898, Sigmund Freud wrote, "it cannot be denied that contraceptive measures become a necessity in married life at some time or other, and theoretically, it would be one of the greatest triumphs of mankind, one of the most tangible liberations from the bondage of nature to which we are subject, were it possible to raise the responsible act of procreation to the level of a voluntary and intentional act, and to free it from its entanglement with an indispensable satisfaction of a natural desire".

Note the words 'the responsible act of procreation'. Since then various methods have been discovered and made available to men and women to keep the begetting of progeny at a level of voluntary intention. It is possible now for men and women to live together and seek normal satisfaction of sexual desire without running the inevitable risk of having unwanted children. Yet one of the greatest problems facing mankind today is an uncontrolled increase of the species. We continue to behave in a most irresponsible manner in the performance of one of the most serious and responsible functions of our adult life, namely procreation.

It is far too late in the day to argue whether controlling the size of one's family is right or wrong. There may still be some in each country who for religious, conscientious or personal reasons may not approve of the use of any of contraceptive methods. The only alternative left for them is abstinence. Any other course would be antisocial. It is equally childish to waste time discussing whether we, as a nation or a world community, are really over-populated or not. Over-populated and under-populated are comparative terms. They have to be understood not only in relation to the productive capacity of the country or region, but also with reference to the levels of living the people aspire for. The important point to remember is that it is no longer possible to consider the question of population on a regional or national basis. Just as it is in the interests of the well-developed, advanced countries to see that others do not remain under-developed, so also it is necessary for all of us to see to it that the world population as a whole is controlled from exploding.

It is also essential we realise that the population problem has ceased to be merely an economic one. If we believe in a democratic, representative system of government, population is of political significance. If representation is to have any meaning the ratio between the electorate and the strength of the elected legislatures should be a reasonable one. If one M.P. or M.L.A. is to be chosen by a million adult voters, representation becomes a farce. In the same way, vaster and vaster legislatures will make discussion and debate ineffectual. Numbers affect even attitudes. As governments are forced to deal with larger and larger populations, their approach becomes directed to people in the mass, not as individuals. This is the tragic truth underlying Pearl Buck's conclusion that 'in all those countries where population is too abundant the cause of the individual is lost'. Similarly, excessive and ever-increasing populations pose social problems, from over-crowded homes to 'urbanisation planning', from the peculiar difficulties of maldistribution to those presented by 'remittance communities'. Even incidence of crime becomes an uncontrollable menace to social well-being. There is an increasing awareness of the need for eugenic control and this is closely related to population control. All these problems, let us remember, are increasing at a compound interest rate. As R. A. Piddington pointed out some years ago in his fascinating study, *The Limits of Mankind*, appropriately described as a philosophy of population, population increase has ceased to be a quantative problem. We have to approach it now as a kinetic one.

Every aspect of this complicated subject, demanding the immediate attention of not only governments but of individuals, is dealt with exhaustively, and what is even more important, readably, in a slim volume of 135 pages, *Population and Planned Parenthood in India*, by Dr S. Chandrasekhar. First published in 1955, this second edition has been revised and enlarged. Prime Minister Nehru has written a Foreword to this edition and Prof. Julian Huxley has contributed an Introduction.

Dr Chandrasekhar is one of the authorities on the subject of demography, well-known all over the world. Much of the book under review was prepared as the Presidential Address of the first All India Population and Family Planning Conference held in Bombay in 1951. The nature of

this genesis is reflected in the kind of book this is. Eminently readable, lucid and fluent, it has a tendency to be a little repetitive. But this in no way detracts from the even flow of the narration or the logic of the argument. Rather, it helps to hammer home the points made.

The book is addressed mainly to English-knowing, adult Indians. Subsequently, the book has been translated into all the four south Indian languages—Tamil, Telugu, Kannada and Malayalam. But the main difficulty in a country like India is that the vast majority of the people who really need to be told about family planning are not the people who can be contacted through books and other printed material. Even the radio and the film can help only to a small extent because the nature of the subject is such that it does not lend itself to easy, direct publicity through a medium of mass communication. What is needed is "ear to ear communication" on a person-to-person basis.

For the more educated persons who are interested in demographic research as a subject of study and for those who are themselves concerned with projecting the Family Planning programme to the public at large, the twelfth anniversary number of *Population Review*, the official journal of the Indian Institute for Population Studies, Madras, can be recommended as a more advanced companion to the book under review. It contains a large number of technical and general papers on the subject and will be of great interest to the serious student and social worker in the field.

This anniversary number would not have suffered in any way if the sections 'From the Press Cuttings' and 'Institute's Activities' and the bibliography of 'Prof Chandrasekhar's books and selected papers and articles on population and related subjects: 1937-1962' including some undergraduate essays, had been omitted. In fact, as it is, they tend to detract from the seriousness and objectivity of this special number of the magazine.

INDUSTRIAL MARCH

Industrial March, 1963. Edited by M.S. Kirloskar, Kirloskar Press, Swar Gate, Poona—2. 128 pages. Rs. 3.

Kirloskar is a name that has stood for industry in Maharashtra for the past half a century—from ploughs and pumps for agriculture to mother machines for industry. The name also stands for the most popular magazines in Marathi—*Kirloskar*, *Stree* and *Manohar*. It is then as it should be that the Kirloskar Press started an industrial journal.

Industrial March is an annual and its present number (1963) is the third. It bears the stamp of the long journalistic experience of the Kirloskar house. It shows planning and purpose. It is appropriate in the present circumstances that the industrial annual should emphatically say (to fellow industrialists), "Let us get ready for all-out defence production" (by S.R. Tikekar). It has tried to deal with some important industrial problems in the context of the present national emergency. There are two symposia—one on foreign collaboration and the other on bottlenecks in several industries in which authorities from different industries have participated. Two representatives of industry and labour (Mr. Bharat Ram and Mr. S.M. Joshi) have discussed "How to Achieve Industrial Peace."

VALUE IN ECONOMICS

Analytical Study of Value Theory by Kersi D. Doodha. Vora and Co. 168 pages. Rs. 8.00.

A.V.R. Char

A THOROUGH knowledge of the basic principles of the theory of value, which is the hard core of economics, is essential for a realistic appraisal and analysis of economic problems. Dr. Doodha's book, meant for the use of students working in graduate classes, is well organised and gives due attention to the main concepts. The author seems to have drawn well on his teaching experience.

As the title suggests, the book is intended not merely to explain the theory of value but to lay emphasis on analytical techniques. The chapters as well as the concepts discussed within each chapter, therefore, do not follow the established pattern of presentation; to that extent, the book has novelty all its own.

The first of the five chapters of the book deals with the definition and scope of economics. The scarcity definition given by Prof. Robins is preferred to the materialistic definition given by the classical economists and to that given by Marshall who, of course, stressed human behaviour. The discussion of the definition of economics leads to the fact that economics is a science, a systematised body of knowledge. There is mention of the nature of economic laws, positive and normative aspects of study, the various systems like stationary, static, dynamic and historical, and the concept of equilibrium. Since this is not supposed to be a textbook on methodology, none of the topics is discussed in detail. While introducing the concept of equilibrium, the author mentions stable and unstable equilibrium, but does not elaborate the concept of partial equilibrium analysis which is so fundamental to the understanding of the theory of value.

The second chapter is devoted to the theory of consumption. The first part dealing with utility analysis and the law of demand is treated in so swift a way that one feels that more examples should have been cited. The other part deals with concepts like marginal rates of substitution, income consumption curve, price consumption curve, income and price effects, etc. The concept of consumer surplus is indicated separately in an appendix.

The third chapter, dealing with the theory of production, deserves attention and approbation both because of the detailed treatment and for the manner in which a whole range of concepts is dealt with. Curiously, monopoly in its various forms is taken up first and perfect competition is discussed last. The student should profit particularly by the discussion on bilateral monopoly, duopoly and imperfect competition. To make the concepts clearer, a number of diagrams are given at appropriate places.

The fourth chapter, on the theory of exchange, deals mainly with the interaction of forces of supply and demand.

The next chapter, which deals with the theory of distribution, starts with Keynes's General Theory. The classical theories of rent, wages and interest are introduced afterwards. It would have been more helpful if the order had been reversed. Also Keynes's General Theory should have been dealt with in greater detail. So also, the portion on the theory of interest.

Three charts are also presented in the book. Chart I giving the major components of the theory of value as developed in the book and chart II giving details of market structure are helpful to students. Chart III, tracing the genealogy of economic thought, is interesting.

The book is helpful in understanding basic principles. Greater use could have been made of the mathematical technique, but even as it is, the volume can be recommended for students.

Useful Textbook

Indian Economy by G. C. Jangir. Atma Ram & Sons. 756+xii pages. Rs 14.

THIS useful addition to the textbooks on Indian economics consists of 36 chapters most of which cover the ground expected of textbooks.

The last two chapters, entitled "The Restrospect" and "Looking Ahead". In "The Retrospect" the author attempts an assessment of the economic progress achieved by India in the light of proclaimed objectives. He also compares India's performance with other developing countries on the basis of data given in U.N. World Economic Survey, 1961, in doing which he has come to some sweeping conclusions as when he says ". . . Yet the fact remains that India's performance has been almost the lowest in the world". It may be mentioned here that the performance of a developing country cannot be judged solely by the criterion of rate of growth. It is very necessary to see the nature of investments made. In the initial stages of development a developing country makes huge investments in socio-economic overheads. As a result, the growth in its national income may not be as impressive as that of a country which is not investing primarily in socio-economic overheads.

The final chapter, "Looking Ahead," is devoted to a discussion of long-term prospects for India. The importance of both development and defence has been emphasised. The author also reminds the advanced countries of the world that we need not only more aid but increased trade so as to be self-reliant.

The book has traced the developments in the Indian economy in the last fifteen years, making good use of the vast literature and seeing to it the study is up to date. This is not an easy task, and the author has acquainted himself creditably.

K.S.M.

PUBLICATION RECEIVED

Work, Wages and Well-being in an Indian Metropolis—Economic Survey of Bombay City by D. T. Lakdawala, J. C. Sandesara, V. N. Kothari and P. A. Nair. 863 pages. Rs. 36.50. Published by the University of Bombay.

CONSUMERS' COLUMN

by G. L. Malhotra

SEVEN ESSENTIALS FOR CO-OPERATIVE STORES

CONSUMER co-operation offers a full solution to the numerous problems faced by the consuming public today, such as prices, quality, assured supplies and correct measures. It is an activity organised by the consumers themselves, with the object of meeting their own requirements and promoting their own welfare. Theoretically, the chances of their failure should be very remote.

But the history of consumer co-operatives in India shows that they have worked well only during periods of scarcity and controls, and that under normal conditions they have not been able to compete with trade.

Why should this be so? As a student of management techniques, I have tried to analyse the causes. The factors which lead to the success or failure of consumer co-operatives can be summarised as under:

1. Management

Whatever their social and political objective, consumer co-operatives are, operationally, business enterprises. Business is a specialised vocation and when co-operators try to run a consumer store with no specialised knowledge, they often make a mess.

The managing committees should, therefore, confine themselves to policy making, fund collection and consumer education. The operational aspect should be left to specialists trained for the job. There should be a clear line of demarcation between the duties of the managing committee and the chief executive. Rule by committees is now outmoded. Purchase committees are a positive failure when they try to make actual purchases in the market. They can be useful only by giving advice.

2. Office-Bearers

Persons offer themselves for the positions of secretary and president mainly for the sake of prestige. They accept such positions in more than one place, and are unable to devote attention and time to any of the institutions. They have also not learnt to decentralise authority. This results in the need for repeated reference to them of even minute details. The drudgery soon tires honorary workers, and the result is that institutions suffer in spite of the goodness of the people.

Only those persons should be elected to office as are willing to do hard work. Pseudo-leadership is our chief ailment in India and should be discouraged.

3. Financial Resources

Whether it is the one-unit plan or primaries federating into a wholesale unit, finances are extremely important. Purchasing in bulk will reduce the procurement costs. Seasonal purchasing of agricultural commodities is very important. Reasonable facilities to finance such bulk purchases are essential. Purchasing should be done at the source of supply and at the lowest rates keeping quality in mind. Purchasing power can be increased by federating a large number of primaries or increasing the number of branches, thereby covering a larger number of consumers.

4. Store Administration

The wholesale unit or the central body in the one-unit plan should be responsible for creating a cadre of employees which can be trained to manage the stores. Retail pricing policy and quality should be centrally controlled. Customer convenience should receive the uppermost attention at all levels. Packaging, with this point of view, should be encouraged as it not only saves time at the counter but also ensures correct quality and weight. Proper display, price markings, facilities for delivery and courteous treatment are very necessary.

Standard stocks and regular replacements with adequate variety are the keynotes of a successful store.

5. Member Loyalty

Although consumer co-operatives have been formed by the efforts of the members themselves, their loyalty to the store declines when:

(i) prices are not attractive,
(ii) variety is absent,
(iii) quality is sub-standard,
(iv) service is poor.

All this happens when honorary work becomes a burden. The managing committees should promote member loyalty and concentrate on consumer education.

6. Training, Demonstration

No staff member should be put on a job unless he has been suitably trained for his duties. Staff training is perhaps the most important aspect in the operation of the wholesale or primary and even branch stores. It should be the chief executive's outstanding qualification to be able to train his staff.

It is far better to postpone opening of stores than starting them with inefficient hands and in an unplanned manner.

Training does not consist of mere lectures. It should be given on the job. For this purpose, a demonstration unit should be organised as a prelude to further expansion.

7. (a) Government's Role

The Government should obtain assistance from experienced commercial hands when formulating policies. There is a distinct procedural difference between the commercial and Government approach to problems in business. In business, the lines of authority and responsibility are designed to short-circuit procedures and executives are given more freedom to take decisions.

(b) Co-operative Rules

Rules often complicate problems instead of streamlining them. Inspection should be undertaken more with a view to helping rather than finding faults. What are the steps that should be taken now that we have

(*Continued on page 25*)

THE RECORD OF ISI

(*Continued from page 4*)

mines whether a product requires a standard? And how exactly is a standard made?

"Suggestions for standards can come from anybody—a manufacturer, a Government department or a member of the public. Each suggestion is referred to a large number of people to find out if they think it is essential to perpare a standard for that line of operation. If the general feeling is that it is worth-while, then a technical committee is set up to draw up a standard. This committee consists of representatives of manufacturers, technologists and consumers as also technical experts. A draft standard is prepared by this committee which is then circulated widely—within the country, to interested parties abroad and to standards institutions of other countries. Their comments are carefully considered and the draft is put into final shape and published."

"*A time-consuming process.*"

"Yes, it takes 72 months on an average to formulate a standard. Some take much less time and sometimes we are forced to hasten the process. But Sure though Slow is an excellent motto."

"*How many standards have been so far published, Dr Verman?*"

"In the last sixteen years, we have released nearly 2,400 standards and 2,000 more are in various stages of formulation. Right now there are as many as 1,154 technical committees with a membership of more than 13,000.

"*What is the criterion for taking up the making of a standard? Its economic importance? I think one of the subjects taken up is the standardisation of proof-reading marks. Is that so urgent?*"

"The decision, as I explained, is entirely the committee's. If people among whom a proposal is circulated feel it is essential, we go ahead. Much depends on the initiative of the sponsors of a proposal. Let me give an example. You know how in every iron and steel plant huge quantities of blast furnace slag pile up. Regular mountains of them. Until recently we were not putting it to use. But this slag can, through a simple process be converted into cement which is as good as Portland cement. Taking into account the special characteristics of our slag, we prepared a standard for slag cement, and now it is the starting point of a flourishing industry."

"*Tell me about the ISI seal, Dr Verman?*"

"The certification mark is one step beyond the standard. The standard itself, as I said, consists of the published document and it may be used by the manufacturer, trader or consumer, in the product he manufactures, deals in or buys. Certification is a different operation. It has been taken up by us because of the responsibility the standards movement owes to users and consumers. When manufacturers come forward to produce goods strictly conforming to ISI standards we permit them to use the ISI certification seal on licence. They pay for it and we take on ourselves the responsibility of maintaining control and give the third party guarantee."

"*How do you ensure they conform to it?*"

"We do it under a special law of the land, the ISI Certification Marks Act. Before we issue licence we ask the manufacturer to set up a testing laboratory. Besides regular inspection, we make surprise checks and purchases from the market and have the samples tested in our own and other laboratories. Our decision in these cases is final. If an article is defective, we make the manufacturer replace it. If the complaint persists, under the parliamentary enactment we have the right to pull up the manufacturer and even proceed against him."

"*You expect the public to buy only such goods as have the ISI mark. But do Governments go by ISI standards in all that they buy?*"

"I would say yes and no. Everything that the Government of India buys is expected to be in accordance with an Indian Standard if such a standard exists. But not everyone of the goods need necessarily have an ISI mark. The main buying agency of the Government, the Directorate-General of Supplies and Disposals, has its own Directorate of Inspection to satisfy itself as to the quality of goods. The Directorate-General is active both in standard making and standard enforcing. Certain State Governments have gone a step further than the Central Government and allow a 2 per cent margin in price for goods bearing the ISI mark."

"*There is a lot of public outcry against drugs being substandard. What is ISI doing about it?*"

"Drugs don't form part of our work. The inspection of drugs is the work of State Governments whose control does not seem to be as effective as may be desired. The Union Health Minister, as you recall, has promised new legislation in this regard. But many chemicals go into the making of drugs and in our standards there are clear specifications for such chemicals as are put to pharmaceutical uses."

"*What are ISI's future plans, Dr Verman?*"

"As I explained, our hands are full. Of the 3,300 subjects approved, we have published standards for about 2,400 subjects. And new subjects keep popping up all the time. In the Second Plan we had planned to publish 800 standards; we actually achieved 1018. In the first year of the Third Plan, we had before ourselves a target of 322 standards. The actual achievement was 326. For 1962-63 the target and achievement were 382 and 396 and it looks as though we will exceed the Third Plan mark well ahead of time. And it's not only in terms of exceeding the target we are thinking. The job of work is much larger than the targets. There is a whole big area in which we have still to initiate work—that of consumer organisation. And we are already drawing up our programme for the Fourth Plan period."

"*And one last question, as we newspapermen say: Are you satisfied with ISI's achievements?*"

"No; one big no".

That I thought was an attitude we ought to see more of in our offices—the belief that the good could be better. And that outlook is basic to the standards movement.

K. CHERIAN JACOB

Mr. K. Cherian Jacob is formerly of the Madras Agriculture Service and is the author of a book, "Madras Bananas." In sending us this article he says: "I am 75 years old, and I wish to see that India exports Gros Michel bananas before my death."

We Certainly Can Grow and Export GROS MICHEL BANANAS

HAVING read the article on export of bananas in *Yojana* of June 23, I am sending some of my thoughts and views in question-and-answer form:

Do we export green-skin bananas?

Yes, it is the 'Basrai' variety ('vamanakeli' or 'Pachcha Vazha' in Madras) which is exported to Persian Gulf ports. I think it is the same variety under the name 'Harachal' which is going to be exported to U.S.S.R. by the Maharashtra Co-operative Marketing Society, beginning from September 1963.

Do we grow "Gros Michel" variety in India?

It was introduced into India in 1945 from Trinidad, West Indies, by me while in service. About 100 stools were raised in the Central Farm, Coimbatore, to meet the demands for suckers received in response to an article published in *Indian Farming* by me. For want of enthusiasm on the part of the State to spread this variety, it is now found only in some agricultural research stations, for example those at Aaduthurai (in Thanjavur district), Trichur, Alwaye and Ambalavayal (Wynaad) and the Central Farm at Coimbatore. Some cultivators who have seen it in the research stations have been able to get one or two suckers with difficulty paying high prices. I understand that it thrives well in the Wynaad area of Kerala even without much attention. Some bunches produced there are even larger than those produced in the West Indies. It grows well wherever other varieties of bananas are grown; but the bunches and fruits being very large 'Gros Michel' needs pretty heavy manuring.

This variety could be successfully grown wherever 'Basrai' is grown. The return would be one and a half times more than that of 'Basrai'. Suckers of this could be had from Aaduthurai, Thanjavur district, Madras State, and from Ambalavayal through the Director of Agriculture, Trivandrum. It is a most economical variety, having very large bunches and fruits with very good taste and flavour. I would advise you to get a couple of bunches of 'Gros Michel' grown in Wynaad by aeroplane, cut the hands separately and allow them to ripen in airy place. When spots begin to appear, please send half a dozen fruits each to the Ministers, including the Prime Minister, the Secretaries and other big people of New Delhi and wait for their remarks. I dare say that every one of them without exception will ask for more.

What must we do to capture the European banana market?

For the last many years, U.S.A., Britain and the European Common Market countries are getting the 'Gros Michel' variety from West Indies and Costa Rica supplied by the well organised United Fruit Co, in their fleet of air-conditioned steamers. India cannot think of competing with this company. But there are many other countries on the northern coast of the Mediterranian Sea, Persian Gulf ports, Arabian Gulf ports etc., where 'Gros Michel' fruits are not imported. There is scope, therefore, for our 'Basrai' banana to be exported to those countries.

About the proposed export of Indian bananas to U.S.S.R. by the Maharashtra State Co-operative Marketing Society beginning from September 1963, I think (as I said earlier) it is the 'Basrai' variety under another local name 'Harachal' that is to be exported to Odessa on the Black Sea. If the U.S.S.R. has not yet imported 'Gros Michel', well and good, they will like it. But what I am aftraid is this: of late very many Russians are going to Cuba in the West Indies and have eaten the 'Gros Michel' banana there. The Russians who have eaten 'Gros Michel' fruit will not like our 'Basrai' fruit.

Even 'Basrai' variety is not Indian. It has been introduced into India from the Canary Islands. Why should we fight shy of 'Gros Michel'? Why not we go ahead by bringing pressure on the Vice-President of the Indian Council of Agricultural Research to open a nursery in the Jalgaon district of Maharashtra for the multiplication of 'Gros Michel' suckers for distribution to the growers of 'Basrai' in Maharashtra and Gujarat? The nursery should be capable of distributing thousands of suckers every year for five years. Suckers required in the other parts of India could also be supplied from there. If this is done the obstacle to export of 'Gros Michel' will be partially removed.

We are going to have two shipbuilding yards. Very soon we can build a few ships specially made for banana export. If sufficient 'Gros Michel' suckers are not available from Madras and Kerala States, I.C.A.R. could charter a cargo plane and arrange to get the suckers from the nearest country. I got suckers of 'Gros Michel' from Trinidad in the West Indies and also from Honolulu, where its local name is 'Blue Field'. I think it must be available in the Philippines also. French people are getting bananas both from the West Indies and Africa. If they are getting 'Gros Michel' also from Africa, then it would be cheaper for us to get suckers from there. We can get the necessary information through our Embassy in Paris. Out of a dozen that were sent to me both from Trinidad and Honolulu by ship, only four were in good condition. Importing them by air will ensure safe receipt.

Well, I almost forgot that 'Gros Michel' is grown in the other parts of the world also. I myself wrote about it in my book *Madras Bananas* (Government Press, Mount Road, Madras). In Ceylon it is known as 'Anamalu', in Burma as 'Thihmi We' and in Malaya as 'Pisangembun', 'Pisangbunga', 'Pisang hijay' and 'Pisang masak hitam'. So it is easy to get suckers from these countries. Since there are many budsports in

'Gros Michel', the right type should be selected. Newly cleared forest land with over 40 inches of rainfall will be the ideal for growing 'Gros Michel'.

About the three varieties of Indian bananas suggested by the Assistant Agricultural Commissioner, I offer my remarks:

1. '*Poovan*' would have been all right but for the poor taste and flavour. Even in India it is the poor man's banana. 'Basrai' is very much superior to this variety.

2. '*Rasthali*' fruits have good taste and flavour but the bunches and fruits are comparatively small. It is not economical to export bunches of less than 100 fruits in a bunch. Further, there is a tendency for the ripe fruits to drop off easily. Another factor of unsuitability is that when grown in places where silt from the rivers is deposited, the fruits grow stout at the expense of taste and flavour: often small lumps are present in the pulp.

3. '*Virupakshi*' (from which the Panchamritam in the Palni temple is prepared) is grown on an elevation between 4,000 and 5,000 feet. Level lands are not generally available at this elevation. When grown on the plains the fruits lose taste and flavour. Also the bunches do not have more than 65 fruit, and it will be unsuitable for the preparation of Panchamritam in the Palni temple.

RADIO FORUMS *From page 9*

understood what artificial insemination is; they received this information mainly from radio but many of them also knew this fact from veterinary doctors or through exhibitions. In the remaining two groups of persons, only about 25 per cent knew about artificial insemination and many non-members of forum villages knew about it through radio.

Despite such a high degree of knowledge about artificial insemination, very few—almost a negligible proportion—had adopted this method Was it due to non-availability of good bulls, to lack of knowledge about the place where this facility was available, or to inertia? The main reason seems to be lack of necessary facilities.

THE last group of questions was about cattle diseases. An attempt was made to find out the farmer's knowledge of the causes of various cattle diseases, their remedies and the sources from which they obtained the information. About 30 per cent of forum members had good knowledge about cattle diseases, while the percentages among non-members in forum villages and persons in non-forum villages were 18 and 17 respectively. There were also persons in all the three groups—8 per cent of forum members, 25 per cent of non-members of forum villages and a like proportion of non-forum villages—who did not know about the causes of cattle diseases.

About the remedies of cattle diseases, only 18 per cent of the forum members were ignorant, compared to 55-60 per cent of the remaining two groups. Most of the forum members were in favour of applying household remedies; those who did not know them were in favour of consulting doctors. Reluctance to use household remedies or consult a doctor was widespread in the other two groups. Some of them said they would leave the matter in the hands of fate.

IT may be noted that most of the questions are the day-to-day problems of our villagers. Rural development depends on the degree of awareness about them, and also on the willingness to implement remedial measures. It is apparent from the survey that there is a clear difference in the level of awareness (and the degree of willingness to try new methods) between members of radio rural forums and non-members whether of forum or non-forum villages. This is evidently due to the programmes put out on radio. But there is very little evidence to prove that forum members passed on their knowledge to their neighbours in the village.

Still one can see that the radio has proved to be a very powerful instrument in imparting general knowledge, creating awareness and explaining new techniques. Its effectiveness appears to be greater than that of the community development scheme or newspapers or films. It is essential that more and more reliance should be placed on this medium for rural development. Radio Rural Forums could do for India what Arther Young did for the agricultural revolution in U.K. in the eighteenth century. But for that great propagandist, who by his lecture tours did excellent extension work, the invention of Jethro Tull and Townshend would have remained in their private fields alone. England would not have become aware of them so quickly. In our country also there are brilliant records of individual achievement in farming, capable of comparison with those of any other country; but the averages in all spheres are low. To raise these averages we want an Indian Arther Young. The survey demonstrates that the radio rural forums can well achieve that task.

The Rangpur bridge over the Krishna in Andhra Pradesh is nearly complete. Being a part of the National Highway No. 7 it connects Hyderabad with Bangalore and fills an important gap in the road from Jammu and Kashmir to Kanya Kumari. It has cost Rs 38.56 lakh.

RICE BRAN OIL *From page 8*

The estimated production of oil was 1,700 ton in 1961. The offtake of the four units comes to 30,000 tons a year. Licensed capacity aggregates to a further 70,000 tons per annum.

Steps have been taken by the Government of India to develop indigenous fabrication of plants for extraction of rice bran oil. The capacities of these will be 25 tons per day and 50 tons per day and their capital cost would be around Rs 4 lakh and 6.5 lakh.

The pioneer in extraction of oil from rice bran is Japan. The oil is used there in the manufacture of margarine, resin and soap. Of the de-oiled bran 90 per cent is used in Japan as cattle-feed and the rest as fertiliser, especially for tobacco and onion plantings. In the United States, rice bran oil is made into salad oil.

In our country the rice bran has a higher content of free fatty acid and so it is more suitable for industry than for cooking purposes. Experiments carried out so far show that rice bran oil produces a harder soap than groundnut oil, but with further investigation it should not be difficult to render it suitable for making quality soaps. As more experience is gained edible rice bran oil may also be produced.

Rice bran occupies much space because of its fluffy nature. But storage space can be consumed and transport made easy by compressing it. Preventive measures are also required to see that there is no insect infestation.

IN order to conserve and utilise this resource economically, it is proposed to promote location of plants within a radius of 50 miles from places where rice mills are concentrated, so that no difficulties arise in regard to transport. Also since shellers are better than hullers, rice mills will be persuaded to change over to shellers, without raising the total capacity. Technological laboratories will also be called upon to pursue further work on the refining, bleaching, deodorisation and hydrogenation of rice bran oil.

Kundah Tunnel Complete

THE boring of the seven-mile-long tunnel of the Kundah project has been completed. It will now be lined with cement.

Built for the third power-house of the Kundah project, it is the longest power project tunnel in the country. It is 18 feet wide and will carry 1,800 cusecs of water initially into two generators (which will be ready in a year's time) to produce 120 mW of power.

The work, which cost Rs 2.5 crore, was started in November 1961.

Two power-houses of the Kundah project, built with Canadian collaboration, have already been generating 180 mW of power.

FIFTH BHAKRA UNIT

Letters have been exchanged with the U.S.S.R. for the supply of the fifth hydro-electricity generating unit of 120 mW capacity for installation at the Bhakra Right Bank Power House, thus raising the capacity of the powerhouse to 600 mW.

Aeronautics India to Make Migs

A NEW company, named the Aeronautics India Limited, has been set up in the public sector for manufacturing MIG supersonic planes and other types of aircraft.

The company has an authorised capital of Rs 25 crore. All factories to be set up for the manufacture of air frames, aero-engines, under-carriages and other components of MIG aircraft will be administered by the company.

21,000 STATE BUSES

A Central Association of State Transport Undertakings has been formed.

It will devise measures to improve the services and to review the extent to which the objectives of nationalisation have been achieved. There are now 26 State Transport undertakings with a fleet of more than 21,000. Eleven years ago there were 18 undertakings with only 7,000 vehicles.



SNIPPETS

THE production of jute goods, which was 11.12 lakh tons in 1959, rose to 12.35 lakh tons in 1962 and is running at the rate of 12.80 lakh tons this year. In 1959, the export of jute goods was worth Rs 110 crore; in 1962, it increased to Rs 151 crore and in the first six months of this year it was worth Rs 82.5 crore...The demonstration farms at Sirsa in Punjab and Coimbatore in Madras have yielded a record crop of cotton. The average yield per acre at Sirsa was 1,600 pounds and at Coimbatore, 1,400 pounds...The Government will give a subsidy of 6 nP. per kilogram on the sale of ghani oil from July 15 to enable the producers to compete with the oil mills...Inter-State movement of sugar has been banned...The National Dairy Research Institute, Karnal, has developed a new test for determining the fat content of milk products accurately...The total storage capacity with the Union Government is 30.55 lakh tons, of which 16.47 lakh tons is owned by Government and the rest rented out...An agreement has been signed with the Swedish Government providing for Swedish assistance of Rs 3.33 lakh for the biophysics departments of the All-India Institute of Medical Sciences, New Delhi, and the Saha Institute of Nuclear Physics, Calcutta...There were 1,403 scientists and technologists in the Scientists Pool by the end of February 1963. Permanent jobs had been found for 196 persons from the pool...A new station of All India Radio was opened at Imphal, the capital of Manipur Territory, on August 15...Jewellery, gold and precious stones valued at Rs 9.83 crore were exported last year. The export of jewellery is expected to be valued at Rs 20 crore for the next two years...The enrolment of students in the universities and colleges was 11.55 lakh in 1961-62, marking 11 per cent increase over the previous year. There were 51 universities and 1,783 colleges in the country...

15 LAKH VISITORS

The Indian Exhibition in Moscow closed on August 18 after 28 days in which 15 lakh people saw it. Orders worth Rs 11 crore were received within the first fortnight. The State Trading Corporation signed agreements for the supply of textiles to the U.S.S.R. and Yugoslavia.

TROPICAL METEOROLOGY

The United Nations will help India to establish an Institute of Tropical Meteorology at Poona.

130,000 HOUSES

Over 1.5 lakh houses had been sanctioned for industrial workers up to the end of March last. Of these, 1,30,000 houses have been completed. The Central assistance amounted to Rs 53.16 crore including Rs 24.68 crore as subsidy and Rs 27.52 crore as loans.

An expenditure of Rs. 9.39 crore was incurred on the slum clearance scheme in the first two years of the Third Plan.

CONSUMERS' COLUMN *from page 21*

held consumer co-operatives up as the solution to the price spiral? I recommend the following steps:

I. It will be advisable to have a quick appraisal of how the Centrally-sponsored scheme is working. A committee of experts drawn from the Government and commerce might be asked to do this within a month and their recommendations should be carefully examined and the work revised where necessary.

II. Until this is done and further steps are decided, the pressure to expand consumer co-operatives should be relaxed.

III. A blueprint may be prepared on the most suitable organisational setup and training procedures.

IV. The present wholesale store in Delhi may be converted into a demonstrational training centre to undertake wholesale procurement, processing, packaging and distribution. It should be run under the charge of an experienced commercial executive.

V. Whether it is the primary setup or the branch-store type, continuity and regularity of supplies should be assured. Pricing policy should be centralised.

VI. More emphasis should be laid on the consumer development and the operation of stores through committee discontinued.

VII. A special cadre for consumer co-operatives be developed.

Steel Target for Fourth Plan—C.D. Conference—Co-op Farming

PRODUCTION targets of 18 million tonnes for ingot steel, 4 million tonnes for foundry iron and about a million tonnes for tool alloy and special steels for the Fourth Plan are recommended by the Steering Group in the Ministry of Steel and Heavy Industries (Iron and Steel). The targets are proposed to be recommended to the Government for consideration. Sub-committees of the Steering Group also considered the question of raw materials and made certain suggestions which are to be discussed further.

In assessing the demand for steel in 1970-71 the Steering Group took into consideration "Reappraisal of Steel Demand" by the National Council of Applied Economic Research as well as the studies made by the Perspective Planning Division of the Planning Commission, M. N. Dastur and Company and the U.S. Steel Techno-Economic Survey Team.

The achievement of an estimated production target of 18 million tonnes, it was felt, would involve setting up of a capacity for 20-21 million tonnes. In other words, two new steelworks would have to be set up besides the one proposed at Bokaro, and also further expansion of the existing five steelworks.

RECOMMENDATIONS for increasing the organisational efficiency of the agencies responsible for various programmes of reconstruction in the field were made by the Conference of State Ministers of Community Development and Panchayati Raj which recently concluded its three-day session in New Delhi. The salient features of the Village Volunteer Force scheme were also reviewed and, to co-ordinate this scheme with other developmental programmes in the field, a committee at the field level was also set up with Dr Ram Subhag Singh, Union Minister for Agriculture, as Chairman. The committee will study the scope and content of the Village Volunteer Force and Defence Labour Bank scheme and its co-ordination with rural works programme with special reference to their role in productive activities. The Conference recommended that like Andhra Pradesh, Mysore and Rajasthan other States also should earmark funds for the rehabilitation of the weaker sections of the community.

As regards Panchayati Raj, it was decided that Gram Sabhas should hold meetings at least twice a year and also plan and review the programme, especially of the village production plan and the progress of the Village Volunteer Force and the Defence Labour Bank. The Conference felt that for encouraging the Panchayati Raj bodies to raise their own resources and maintain completed works, incentives and deterrants were necessary. Matching grants were suggested as incentives and for this purpose the general adoption of a non-lapsable fund on the lines of the District Gram Encouragement Fund in Gujarat was recommended.

The conference reaffirmed the principle that all development expenditure and schemes which can be handled at the Block level should be routed and implemented through the Block agency or the corresponding Panchayati Raj body. Necessary scrutiny of the State budgets should be made accordingly.

ACCORDING to a recommendation made by the National Co-operative Farming Advisory Board, a committee has been set up by the Union Ministry of Community Development and Co-operation for making a systematic evaluation of the progress of co-operative farming societies in pilot project areas.

The committee will examine, among other things, the question of base-line survey regarding economic conditions of the members of co-operative farming societies. It is expected to report on the achievements and difficulties of the programme and suggest measures for solving problems. It will also undertake such other measures as are relevant to the assessment of the progress and evaluation of co-operative farms in pilot project areas.

The committee will consist of seven members with Prof. D. R. Gadgil as chairman. The members are Prof. A. M. Khusro, Institute of Economic Growth; Mr. Ameer Raza, Joint Secretary, Ministry of Food and Agriculture; Sardar Gurbax Singh; Prof. J. P. Bhattacharjee, Director, Programme Evaluation Organisation, Planning Commission; and Mr. S. C. Choudhury of the Ministry of Food and Agriculture. Mr M. P. Bhargava, Co-operation Commissioner, Ministry of Community Development and Co-operation, will be member-secretary.

FORTNIGHT IN YOJANA BHAVAN

His Excellency Dr Abdirashid Ali Shermarke, Prime Minister of the Somali Republic, accompanied by the members of his party, visited Yojana Bhavan on August 13.

Interested in the Indian method of planning, Dr Shermarke wanted to know how our Plans were financed and also how co-operation was maintained between the Planning Commission, Central and State Governments, industry and other organisations.

The process was explained to him by Professor V.K.R.V. Rao, Member, Planning Commission, who pointed out that in the preparation of Plans advantage was also taken of expert knowledge even from outside the Government. The approach was flexible and the schemes were subject to constant revision in the light of the latest situation and technological advance, he added. In the course of discussion Dr Shermarke explained the main features of his country's economy and requested for technical assistance from India. He presented a copy of the First Five Year Plan of his country to Professor Rao and asked for the Planning Commission's comments.

Professor Rao offered all assistance from the Planning Commission and said that both the countries could learn a lot from each other.

Among those who took part in the discussion were Professor M.S. Thacker, Member, Planning Commission, and Mr C.R. Pattabhi Raman, Deputy Minister for Labour, Employment and Planning.

Mr Tarlok Singh, Member, Planning Commission, who went to Geneva to attend the concluding session of the U. N. Expert Group on Planning and Economic Development, has come back. The members of the American Political Science Association who are now in India met him on August 20 and had talks with him on our five year plans.

V. R. M. DESAI

Continuing The Debate

on

CHIT FUNDS

Do They Help Savings or Consumption ?

THE urban dweller, when he saves, can invest his funds in many ways —in life insurance, bank deposits, small savings, shares and stocks, provident fund, gold and other ornaments, immovable property or semi-durable goods. The rural people have their own traditional forms of saving or hoarding, amongst which chit funds or *nidhis* are the most important.

Chit funds commonly known as *kuri* are in vogue in the southern States of Kerala, Madras, Mysore and Andhra Pradesh. Kerala is the birthplace of *chitties*. The Travancore Banking Enquiry Committee 1930 found the *chitty* the most popular institution both for investment and credit.

The traditional chit funds have become modern with facilities of registration under the Indian Companies Act, 1913 as private limited companies. The legal definition of the chit fund is: "a transaction by which one or more persons called the foreman or foremen enter into an agreement with a number of persons that every one of the contracting parties shall subscribe a certain amount of money or quantity of grain by periodical instalments for a certain definite period and that each, in turn, as determined by lot or auction or in such other manner as may be provided for in the articles of the agreement, shall be entitled to the prize amount."

The principle of the chit fund is that members of a group contribute towards a common fund which is given to the members by rotation. The advantages are twofold. First an individual can save through subscribing small amounts over a period of time. Secondly, he will receive his savings in lump sum, which will enable him to use them to greater effect. This is also one way of acquiring a lump sum of money without paying fixed interest. Dr V. Krishnan observes: "In this tract (Tambreparam area of Tirunelveli district, Madras State) the chit funds meet some unforeseen expenditure and the provision of a form of saving where people are rarely strong-minded enough to keep intact their own savings without frittering them away. Even among the well-to-do classes this method of finding a lump sum has been popular both as a method of saving and as a method of a loan on easy terms to meet extraordinary and special expenses."

Villagers contribute to chit fund for mutual benefit. They are a rough and ready way of self help to bind people to each other with a tie of self-interest.

The main forms of chit funds are:

1. *The Lottery Chit:* A number of persons agree that each should subscribe a certain amount of money (the share amount for each being determined beforehand) by periodical instalments and each in his turn, as determined by lot, should take the whole of the subscription from each instalment. These types are known as *narukku chitty* and *laela chitty* in Malabar.

2. *The Auction Chit:* This is a universal type of chit. The prize money decided by the foreman is auctioned and the best bidder (one who comes forward to take the lowest amount) is given the prize money. Accepted the lowest sum, he acknowledges receipt for the full amount. In many areas landowners, big tenants and traders go in for this kind of chit fund on a long-term basis, that is, for durations of two to six years. Short-term chits of weekly or fortnightly duration are subscribed by petty shopkeepers, traders and ryots.

3. *The Sahaya Chit:* As the word indicates, this form of chit is intended to help a friend, a relative or a person known to the subscribers in case of need. Therefore its object is different from that of the other forms—not to find capital or profit, but purely for benefit. The terms and rules are also more liberal.

Registered chit funds are auction chits. In them the holder is bound to subscribe regularly for monthly instalments. The chit amounts of each class will be separately put up for auction. As many lots will be put up for auction as there are multiples in each class.

An example of chit funds of different periods and for different amounts is given:

Class	Subscription (per month) Rs	Members	Period (Months)	Chit value Rs	Fixed discount Rs	Prize amount at auction (if at par) Rs
Short-term						
A	200	25	25	5,000	500	4,500
B	100	25	25	2,500	250	2,000
C	50	25	25	1,250	125	1,125
D	25	25	25	625	62	563
E	20	25	25	500	50	450
F	15	25	25	375	37	338
G	10	25	25	250	25	225
Long-term						
A	100	50	50	5,000	500	4,500
B	50	50	50	2,500	250	2,250
C	20	50	50	1,000	100	900
D	50	56	56	2,800	280	2,520

The company as the foreman subscribes for one chit in each lot in all the classes and is entitled to receive, without auction, the full amount of the first instalment of the chit fund.

Out of the chit amount of Rs 1,000, Rs 2,500, Rs 5,000 per lot, a sum of Rs 100, Rs 250, Rs 500 is deducted as permanent discount, out of which Rs 50, Rs 125, Rs 250 will be distributed as dividend at the next instalment immediately following the one at which the auction takes place.

The auction is for a period of 10 minutes and the chit will be confirmed in the name of subscriber or subscribers who bid for the highest amount of discount. In the interest of the subscribers and with a view to avoiding unhealthy competitions during auctions, the maximum limit for bidding has been fixed at Rs 350, Rs 875 and Rs 1,750 including the fixed discount respectively. Out of total discount at each auction in each lot, the company sets aside a certain amount towards its commission and the balance is distributed lump sum after furnishing security of immovable property or two securities of Government employees drawing a basic salary of not less than Rs 250 per month for a chit value of Rs 1,000, not less than Rs 300 per month for the chit value of Rs 2,500, and not less than Rs 500, a month for the chit value of Rs 5,000 or insurance policies in force with sufficient surrender value to cover the entire amount of future liability are also accepted. People who wish to invest in the chit and do not participate in the auctions and claim dividend are paid a net interest at the rate of 6 per cent per annum on the cash subscription.

In case of registered chit funds the promoting company is a gainer. It gets the first instalment without auction and a fixed discount of 5 per cent and dividend on discount and also from the permanent discount. The net earnings of the company without carrying any risk and involving any capital are shown in the following table for a lot of 25 for a period of 25 months when bids are for 75 per cent of the price amount.

Class	Subscription per month	Chit value	Fixed discount company share at 5 per cent	Dividend from fixed discount	Dividend from the discount at prize money commission	Total earnings
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
A	200	5,000	250	10	280 34	574
B	100	2,500	125	5	140 17	287
C	50	1,250	63	2.5	70 9	144.5
D	20	500	25	1	28 4	58

From the table it is clear that the company earns at the rate of 11.60 per cent per month per lot. Let us suppose that it subscribes to 20 lots of chit funds classesd A; it will get Rs 1 lakh as first instalment without auction and also collects Rs 6,888 by way of commission, dividend and fixed discount, by only paying Rs 24,000 during the year of commencement. Besides, it can use the prize money for a maximum period of 30 days in each auction and lot, as the prize amount will be paid to the successful bidder after 30 days from the auction date held in advance. As for others they get dividends at 22 per cent on the capital, besides the prize money in case of need. If he has got the prize money at 75 per cent the total amount received by him will be Rs 4,475 as against his subscription of Rs 5,000; thus he loses nearly Rs 525. The only benefit is that he obtains a credit of Rs 3,375 in lump sum without any difficulty. The company as foreman can invest the funds constructively.

Besides chit funds, a few chit companies have also introduced recurring deposit schemes with a view to promoting savings and encouraging investments yielding attractive rates of interest among the people in the middle and lower income groups. They are for a duration of 12, 24, 36 and 80 months. Recurring deposits are received in multiples of Rs 5, the minimum amount acceptable being Rs 5 and maximum being Rs 250 per month. As with banking companies, the chit money is also paid into these accounts. They also maintain a chit savings account for the convenience of chit subscribers, which may not be operated upon except for chit remittances. Thus the chit organisation is growing and competing with the banks in India. An official of a chit company informed me that his company is at present transacting a business of Rs 15 to Rs 25 crore a year.

The traditional chit funds have enabled people to save for self-improvement. Many charitable institutions like hospitals and schools have been started and laid on a sound financial basis by means of these funds. Ryots often organise chits to raise easy agricultural credit to improve their production.

A survey shows that about 50 per cent of the marriages in a region of South India are financed by means of these funds. Dr V. Krishnan observes: "Many instances of individuals having been helped in this way with initial capital for business can be cited in this tract (Ambasamudram)".

To a villager to whom the formal openings for investment like banks, post office savings, national savings certificates, life insurance and provident fund are closed because of their rigid rules and cumbersome procedures, chit funds prove to be a wholly beneficial institution in the nature of social insurance.

SIDE TRACK

(*Continued from page 17*)

tangibly to promote equality of opportunity ought to be more widely appreciated.

Apart from promoting egalitarianism, scholarships promote talent; and the individual as well as the nation benefits.

Besides the general scholarships, there are special schemes to hunt talent, especially in science. The pioneering scheme is the Jagadis Bose National Science Talent Search. The scheme is the kind of memorial that Acharya Jagadis Chandra Bose would have approved. It is in its third year. Its aim is to spot the cream of science at the school leaving stage—irrespective of class, religion or the financial status of guardians. Ten scholars are chosen after tests and interviews and they are given scholarships of Rs 75 a month for the first three years and Rs 150 a month for the next two years. The scholars are on their own, but an induction programme takes care that they receive the necessary extra-curricular guidance. The West Bengal Government met the costs of the scheme in its first two years and ten leading business houses are sponsoring the third year's awards. The Union Ministry of Scientific Research and Cultural Affairs supports the induction programme.

The JB-NSTS, as it is called, has been so successful in West Bengal that the Government of India has started a science talent scheme for the State of Delhi. It is run by the National Council of Educational Research and Training, and the names of the first batch of 17 scholars from Delhi have been announced. They will get Rs 50 a month for the first year and Rs 75 monthly for two more years. The scheme will gradually be extended to other States and Union Territories.

YOU ASK US WE TELL YOU

Questions from readers on planning and development will be answered on this page. It might be noted that the purpose of this service is to provide information. Trade queries will not be entertained.

REGULATED MARKETS

G. K. SHRIVASTAVA, Jabalpur

What is a regulated market? What is the number of such markets in the country?

ANSWER: A regulated market is a centre of wholesale sale and purchase where marketing practices are governed by regulations made by the State Government. Intermediaries are done away with and the producer sells his goods direct to the purchaser. (Thereby he saves about Rs 3 to Rs 5 on goods worth Rs 100.) He is assured of competitive prices, correct weights and measures and prompt payment. Sheds, rest houses, marketing information and such other amenities are provided in the marketing yard. The market is managed by a market committee set up under State legislation.

Regulated markets at present cover the various agricultural commodities. All the States, except Assam, Uttar Pradesh, West Bengal and Kerala have already enforced Agricultural Produce Markets Acts under which the regulated markets are established. In the four States mentioned, the legislation is in different stages of adoption. At present there are more than 1,000 regulated markets in the country. Of them, the largest number, about 300, are in Maharashtra, followed by Gujarat (about 170), Mysore (about 150) and Punjab (about 140).

Communications in Goa

N. B. MANGESHKAR, Bombay-7

After their liberation from the Portuguese rule, the territories of Goa, Daman and Diu require special effort of the Government for the development of their communications, particularly with the rest of the country. Is the Government paying any attention to this?

ANSWER: Goa, Daman and Diu have been declared as a Union Territory so that the special problems of their development should receive due attention of the Union Government. A development plan for the Territory has already been formulated and improvement of road communications is an integral part of the Plan.

At present there are 1,730 kilometres of roads in the Territory. Of these, 730 kilometres are Government roads of which 50 per cent have black-topped surface.

All the 10 major bridges and 30 minor bridges destroyed or demaged by the Portuguese during the Goa operations have been rebuilt at a total cost of Rs 69 lakh. Another bridge will be constructed across the Mandavi river at Panjim at a cost of Rs 86 lakh. Bridges over the Damanganga and the creek at Tad are also under construction.

Besides, work is in progress on the following roads: (1) Assonora to Banda, (2) Ponda to Borim, (3) Borim to Margao, (4) Quepem to Curchorem to Sanguem, (5) Mokem to Colem and (6) Darbandora to Sanvordem.

Institute of Education

PRABHAT CHAUDHURI, Burdwan

I learn that the Government has set up a National Institute of Education. When was it established and what does it do?

ANSWER: The National Institute of Education was set up by the Government of India at Delhi in September 1961.

The Institute has three main functions: (1) to conduct educational research, (2) to train personnel for advanced instruction, and (3) to carry on extension and field services.

The following institutions working in the field of education have been amalgamated with the Institute: The Central Institute of Education, the National Institute of Audio-Visual Education, the National Institute of Basic Education, the National Fundamental Education Centre, the Bureau of Textbook Research, the Bureau for Educational and Vocational Guidance and the Directorate of Extention Programmes for Secondary Education. The Institute mobilises the resources and facilities of all these institutes and evolves an integrated programme for implementation.

The training programme of this Institute is intended to serve as a model for teachers' training in other institutions. It also supplies trained key personnel to the training colleges, research institutions and educational administration. Trainees are drawn from all parts of the country. Instruction is given for M.Ed. and Ph. D. degrees.

The extension services of the Institute cover all the activities undertaken by the Directorate of Extension Programmes for Secondary Education. These include assistance in developing experimental projects, organising in-service programme for teachers and arranging consultant services for the State Governments. They carry to the schools the improved techniques and practices in education and utilise the experiences of schools for research and training programme.

Raw Silk

S. D. BORA, Agartala

What is the production of raw silk in India? What is the total area under mulberry?

ANSWER: The production of raw silk amounted to 1,781 tonnes in 1962. It has been rising steadily during the past few years. It was 1,528 tonnes in 1958.

Plantations of mulberry are being increased. There were 25.38 lakh trees in 1961, including 22.50 lakh in Jammu and Kashmir. The area under plantation of mulberry bushes has been increased to 85,518 hectares in 1962 from 74,206 hectares in 1958. Most of the new plantations (76,000 hectares) lie in Mysore State.

The Third Plan provides Rs 5.53 crore for the development of raw silk industry.

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PRIDE OF PLACE

Bangles of Firozabad

THE bangle, the *bindi* and the sari—these symbolise the Indian woman.

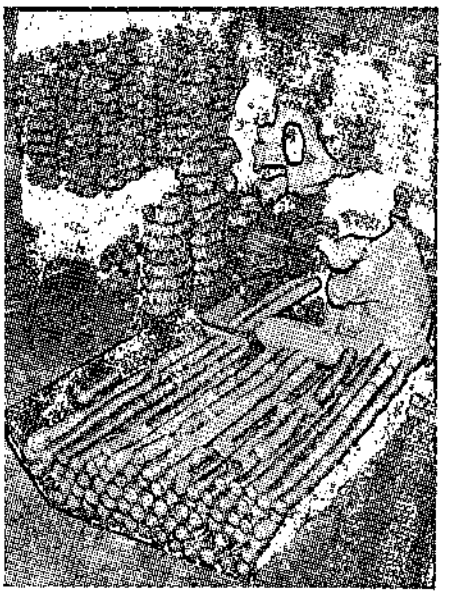
The manufacture of glass was known in ancient India and glass was one of the materials of which ornaments were made. Specimens of beautiful cut-glass *hukka* bowls preserved in different museums abroad prove that glass was also extensively used in the Mughal times.

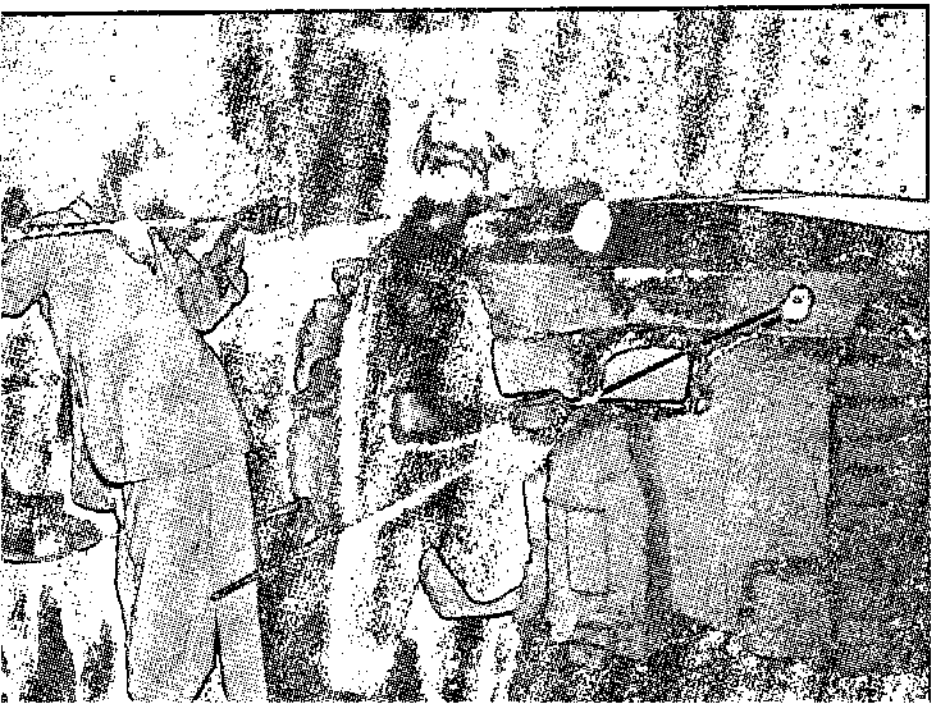
Among the articles produced from glass in India bangles occupy an important place. The principal centres of manufacture are Firozabad in Uttar Pradesh, and Hyderabad and Papanaidupet in the Chittoor district of Andhra Pradesh.

Bangles are usually made from broken glassware which is remelted. The process is complicated. Broken pieces of glass are crushed and kept on a ledge in a furnace. When the glass begins to melt a small lump of the molten glass is kept on the hook of a long iron rod called *ankri*. The molten glass, which is wound round the *sinkh* or a pointed iron rod, takes the shape of a ring. It is then detached. In the second stage the crude glass ring is placed on another pointed iron rod in the furnace and coiled round and round till in the heat it becomes thinner but larger in size. Next it is passed on to the *kalbut* or an iron rod with a cone of clay fixed at the end and spun till the required size is reached. Bangles are cooled and taken out.

Despite the competition from plastic bangles and despite their fragile nature, glass bangles hold their own in popularity with the womenfolk who like them for their enchanting colours and ornamental designs.







ABOVE: Bangles being cleared after welding

RIGHT: Glass coils being cut to separate bangles from each other

BELOW: Melted glass being taken out of furnace

BHOPAL FULFILS RAILWAY ORDER

Heavy Electricals, Bhopal, has manufactured the first five sets of electric traction control equipment for electric trains of the Western and Central Railways. Already five sets of four traction motors have been supplied to the two Railways for their suburban services.

VAPORISING OIL

The Nunmati refinery has produced 'vaporising oil' which is used in agricultural and industrial tractors. The first consignment of 30 tons of this new product has been despatched from the refinery.

GUNS FROM FUND

A major portion, Rs 27.7 crore, of the National Defence Fund is to be spent on the purchase of defence equipment and Rs 35 lakh on providing amenities to troops and for the welfare of their families.

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YOJANA

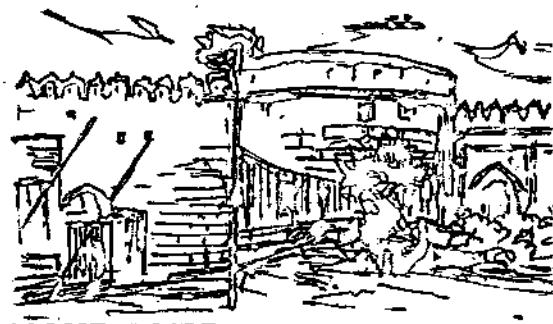
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ART OF THINKING

A NATION is known by the way its people think and act. In our case it is the lack of definite aims in life that happens to be the most powerful and single cause of our backwardness. We indulge in manufacturing and propagating prejudices against each other. Progress made by men and women of good intentions is not judged impartially. Nor do we follow their example.

The fact is that we have not yet developed the art of thinking. Among the agencies that can help us in developing our power of thinking are the press, the radio and the platform. To these may be added proper type of education and the elimination of arbitrariness from every aspect of life.

Bhilai R. M. AGARWALA

HAS A REVIEWER THE RIGHT ?

ALL that Mr Malhotra's admirers have been able to say in his defence so far, besides accusing me of malice, is that he is an eminent economist and a teacher of long standing. A book must stand on its own legs and not seek support from its author's reputation. One of the hazards of going into print is precisely this: considerable damage may be done to one's previous reputation. I would like to ask just this: Did I concoct or take out of context any *one* of the numerous quotations I gave from the book? If not, what right has anyone got to accuse me of malice and thus challenge my *bona fides* as a reviewer?

Incidentally, a reviewer is by no means obliged to pay glowing compliments to the author. A trenchant review that appeared in *The Economic Weekly* some time ago reduced a GOI-commissioned book by a historian of world repute to smithereens. But since the errors spotlighted were utterly indefensible, the author kept quiet and didn't issue any rejoinders.

New Delhi NARINDAR SINGH

BANANAS AND I.C.A.R. SCHEME

THE Indian Express (Madura edition) of August 1 published the following:

"Considering the new situations and problems which have arisen with regard to the banana trade and export, a co-ordinated scheme on an all-India basis is going to be drafted by experts with Kerala as one of the centres. The ICAR has sanctioned a scheme for banana research in Kerala."

The main object of this scheme, therefore, is to find an export market for the suitable banana varieties grown in India.

The only variety that would be liked and could be economically exported to any part of the world is 'Gros Michel' which is already grown in India to a limited extent. It could be successfully grown wherever the other banana varieties are grown. The next best variety which could be economically exported to all those countries where 'Gros Michel' banana is not imported is the 'Basrai' banana, extensively cultivated in the Jalgaon district of Maharashtra and Gujarat.

There is no other banana variety in India or anywhere else in the world that could be economically exported. As regards 'Rasthali', 'Virupakshi' and 'Poovan' I have given my views (*Yojana*, September 1). The 'Nendran' of Kerala known in European countries as 'French Plantain' is not a dessert banana and as such is not liked by foreigners.

Nothing is going to be gained by the scheme on bananas financed by ICAR having the station in Kerala.

The people of Kerala give a step-motherly treatment to all varieties of bananas from other parts. Once they plant the four or five feet tall young banana plants in the coconut topes at the beginning of the monsoon, nothing is done to them thereafter. But they give the utmost care in the cultivation of their variety, the 'Nendran' of Malabar known in Travancore as 'Yethan', planted in open places. This fruit in all the various dishes into which it is turned is a 'must' at their banquets and for their national 'Onam' festival.

On the other hand if 25 per cent of the ICAR scheme is spent in opening a nursery for the multiplication of suckers of 'Gros Michel' I dare say India could capture all the banana markets except North America, Great Britain and the European Common Market countries, which are now catered by the United Fruit Company.

Coimbatore K. CHERIAN JACOB

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Cover shows Lamani women outside their new homes at Mehekari in Ahmednagar district.

The feature on Utilisation of Furnace Slag will appear in the next issue.

YOJANA

VOL VII NO. 18 Fortnightly Journal Published on behalf of the Planning Commission BHADRA 24, 1885

THE LOGIC OF EXPORTS

"EXPORT or perish" is a slogan heard in all countries. The part that exports play in our present context, when we have to achieve a speedy growth of our economy and, at the same time, in defensive strength was brought out clearly earlier this month at the joint meeting of the Export and Import Advisory Councils.

The Minister for International Trade gave the meeting the glad news that our exports in the first seven months this year were Rs 427 crore, or Rs 56 crore more than in January-July last year. What was equally welcome, this increase in volume was also well spread out. There was a rise in our exports to all the different continents. There were also firm indications, Mr Manubhai Shah said, that the trade with some countries, for example those of Eastern Europe, would rise further. A trade agreement had just been completed with Soviet Russia by which our exports to that country would rise from the present Rs 35 crore to Rs 115 crore within the next three years.

All this, Mr Manubhai Shah was careful to point out, did not mean we could now sit back. It has to be remembered that the Third Plan export target is still to be reached. Indeed it would not be enough if we just touched that figure, for the target was drawn up before the new defence situation developed adding to the import requirements.

We export in order to earn the foreign currencies with which to buy the machinery and materials needed for our industrial and other needs. Could we not, it might be argued, import less and thus lighten the export burden? The fact is that however much we cut down the import of consumer goods and luxuries, our imports will keep rising because our industries are expanding; indeed we are purposefully planning for their fast expansion. Industrial expansion will require machinery and materials. The defence situation further limits the possibility of reducing imports. As Professor V.K.R.V. Rao told the joint meeting, import reduction is no substitute for export expansion.

We cannot also think in terms of making within our country *all* that we are importing and thus reduce imports. Import substitution, as this process is called, must go on, but it has its limits. There are many materials we do not have at all in our country. Again, in order to develop and maintain good relations with other countries, we have to keep buying goods from them. For example we cannot cut off the import of long-staple cotton from African countries. That would upset their economies, cause hardship to the people there and recoil on our political relationship with those countries. Indeed we cannot induce foreign countries to buy more of our goods unless we also bought their goods. So neither import reduction nor import substitution is an easy way out.

All this would show how imperative it is that we export more. Higher export depends on higher production. Our exports consist for the most part of products of agriculture—jute, tea, hides, textiles, sugar etc. In the coming years this pattern will continue. Mineral exports are also growing, but of late the world demand for iron ore and manganese has fluctuated. Export of engineering goods must grow very much more before it makes a big difference to the total export pattern. Therefore export performance will rest on how far we succeed in increasing our farm production. The surpluses for export must come from such increased production. Mr Swaran Singh and Mr. T.N. Singh rightly pointed out that we could not bank on securing these surpluses by curbing domestic consumption.

There are countries which have done it. But how far a people will forgo everyday goods, voluntarily or under Government regulation, depends on circumstances. Sacrifice is easier when a country is in an actual state of war, or when a very large part of their people know that their very incomes and livelihood depend on exports. Export-consciousness takes time to build up. We must make special efforts to build it up in our country.

SPRINGS OF GROWTH

IN this issue we present an extended report on the development of one of India's 300 districts. It is not a survey by a social scientist but the report of a professional newspaperman who sees, asks questions and writes down his findings. But even this non-specialist report throws some light on how the highly complicated process of economic and social development works.

It might be contended that Ahmednagar is not a typical district, but which district is? Like a thumb impression, every region has its own individuality, its own special mixture of advantages and disadvantages, pluses and minuses.

Ahmednagar has no mineral resources to speak of. It has too little water. Its land has not been a great yielder. This dearth of natural resources is not generally considered to be conducive to developmefit. Yet Ahmednagar shows unmistakable signs of going ahead.

As children we were taught by history books to regard people of inhospitable lands as hard-working and enterprising and inhabitants of the fertile plains as being lazy. Ahmednagar has a wealth of history, and its people are certainly hard-working. But challenge is not automatically converted into opportunity. A human element is involved. Leadership is required—leadership in thinking and organising. Development of the country as a whole had to wait until such a leadership had grown up amongst us. Ahmednagar has such leadership now, as in the past. It is not what Government has been able to do for Ahmednagar that really matters as much as what the people there have been able to do for themselves. It is no coincidence that co-operation, steady increase in agricultural production and industrial development have gone hand in hand there.

That is the lesson of Ahmednagar for other districts.

Larger Agricultural Production and Employment

through Planned Use

of Land and Labour

VILLAGE PLANS

TARLOK SINGH

A VILLAGE plan has to provide for (a) things which the people of the village can and should do themselves and (b) the services and other assistance which should be made available to them.

Village Agricultural Plan: The main resources of the village are land and labour. The core of the village plan has to be agriculture. For agriculture cultivators require certain technical guidance and assistance. Technical advice is needed, for instance, in the better use of water, improved seeds, fertiliser and manuring practices, plant protection, etc. Assistance is required for raising the productivity of land through soil conservation, irrigation, supply of fertiliser, etc.

For advice and assistance to be effective a number of conditions have to be fulfilled. The extension machinery, including block level extension officers and village level workers, must be adequate to the task entrusted to them. In practice, their quality varies a great deal and often they do not give the intensive attention needed for agriculture. Secondly, the total resources available to the block may not be sufficient for intensive work in all the villages. It is, therefore, necessary to make a selection of villages in which concentrated work will be done. At the same time, efforts should be made to obtain larger resources for the block. Thirdly, it is difficult to carry advice and assistance to every farmer individually. Cultivators in each village have, therefore, to be organised to function as a group, both for doing things and for receiving assistance and advice.

> The two essential organisations are the Village Panchayat and the Co-operative. There may be difficulties in making these organisations work efficiently, or in getting all the cultivators enrolled as members of the co-operative. But, under our conditions, organisation through the village Panchayat and the co-operative is absolutely indispensable for village planning.

An agricultural plan for a village should provide for two groups of measures. Firstly, those things which the people themselves can do have to be organised and facilitated. These would include minor irrigation, including sinking of wells and local irrigation schemes, soil conservation and contour bunding, digging of field channels for utilising irrigation from the larger schemes, digging and maintenance of village tanks, village fuel plantations, schemes for utilisation of local manurial resources, etc. These are works which require labour on the part of the people, usually functioning in groups, with some technical and financial assistance. For some works, specially irrigation from the larger projects, responsibility lies with the beneficiaries. If they fail, the village Panchayat must have the work carried out, the cost being charged to the beneficiaries.

The second group of schemes are those which involve assistance to individual cultivators. Of these, the most important is credit, both short and medium-term, e.g. for fertilisers, seeds, wells, etc. The second important aspect is making supplies available; notably fertilisers, improved seeds, insecticides, etc. For credit and supplies, it is necessary to ascertain in detail the requirements of individual cultivators and to meet these to the greatest extent possible. This does not require production plans for individual farmers in the sense of fixing targets of production. But it does require that an attempt will be made to ascertain the handicaps from which each cultivator suffers and to provide against these as far as possible. There are some handicaps such as small uneconomic holdings such as high rents or insecurity of tenure which can be overcome, provided the existing legislation concerning land reforms is implemented vigorously in co-operation with the village community and collusion and false entries are not permitted. While an agricultural plan for a village would not ordinarily specify targets of production, it should be based on a broad crop plan, indicating which lands and to what extent would go under different crops. It should also specify the works to be carried out on a group basis and those works which individual cultivators have agreed to carry out with necessary help from the Government and other agencies.

Amenities: Next to agriculture the most important task in the village plan is to ensure supply of drinking water and to provide for certain minimum amenities. The latter must include a village school, where boys and girls can receive primary education, and an approach road linking the village to the nearest road or railhead and to the nearest market.

Employment

THE question of employment at the village level is also extremely important, specially in those areas where there is heavy pressure of population. Development of rural industries is a long-term programme. Meanwhile, wherever there is considerable manpower, there must be a rural works programme which operates at the block and village levels, with initiative both for the Block Panchayat Samiti and the Village Panchayat.

Under this programme, depending upon the unutilised manpower available, additional works should be taken up and wage rates paid according to the season. These works are not intended to take labour away from normal agricultural operations, but to supplement existing employment opportunities. Works bearing on agricultural production, communications as well as amenities could be taken up, but it would be an advantage to give the first preference to productive activities and to communications as these would strengthen the local economy.

Area Plans Are Essential

ONE of the main lessons learnt over several years is that while there has to be an approach to every village, this must be part of a wider area approach. Taken in isolation it is difficult to make a success of village plans. For this the reasons are obvious. A principal limiting factor in development is the resources, both financial and material, which can be made available from outside. These resources have to be allocated at the State level for districts, at the district level for blocks and at the block level for villages. The available resources are never sufficient for the various needs to be met, and claims from different areas have to be dealt with on some acceptable criteria. Secondly, the needs ascertained at the village level have to be brought together into demands for blocks and districts before they can be processed at the State level. Thus, for the successful implementation of village plans there must also be block plans and district plans.

From this it does not follow that all the resources for district, block and village plans have to come from outside. In fact, the aim must be to generate the maximum resources possible from within the area itself and to undertake those activities in particular which will attract local manpower and make for the better utilisation of local resources.

Other Conditions

INTENSIVE village planning, both for agriculture and for amenities, calls for much larger resources than are available at present under the Five Year Plans. Therefore, it is inevitable that there should be a measure of concentration in some areas, and specially in those areas which have a large agricultural potential.

Finally, village and area plans cannot be undertaken through the official machinery alone. A great deal of local leadership and initiative are called for. Therefore, non-official leaders and institutions through which the people can function have a role of critical importance. Even Panchayati Raj institutions by themselves are not enough, because inevitably they have their own problems and conflicts. Co-operative institutions, voluntary bodies and other representative organisations have to be drawn fully into the effort of preparing and implementing village plans, both in themselves and as part of block and district plans.

In all local planning the major emphasis must be on resource development, on development of skills and on improvements in technology. The combined effect of these is to raise the general level of productivity. Various processes of development are closely inter-connected. All of them require detailed, intensive and continuing attention. Different activities should be regarded as supplementing one another. Frequently, progress in one direction depends on equal progress being made in others.

While there have been attempts over many years to work out and implement village plans, many of them have been incomplete and the measure of success has varied a great deal. This is partly because the tasks are difficult in themselves and extension personnel may lack both in experience and in resources. Also unless the people in the village are organised to co-operate with one another in various specific tasks and to receive and utilise the assistance that may be available, many possible opportunities for expanding production and employment and increasing general welfare are not availed of. The benefits are, therefore, not well spread and are often confined only to a small proportion of the population. In each area precise experience and methods must be developed in some villages and these should serve as the base for more rapid expansion.

SPECIAL NUMBER

A Special Number of YOJANA will be published on October 13, 1963.

The theme will be PLAN IMPLEMENTATION.

Eminent scholars and administrators will examine various aspects of this important question.

The 64-page issue will be priced 50 naye paise.

AMONG THE CONTRIBUTORS :

Chandulal Trivedi, P. C. Mahalanobis, Tarlok Singh, K. Santhanam, G. L. Mehta, Bharat Ram, Samuel Mathai, Amarnath Vidyalankar, B. N. Datar, J. P. Bhattacharjee, Jagdish Bhagwati, S. Chandrasekhar and G. P. Jain.

Letters from many more awaited.

A for AHMEDNAGAR

M. K. PARDHY after two weeks' intensive tour reports how, spurred by challenge, a district has made the best use of new opportunities.

A in Agricultural Production
A in Co-operation
A in Processing Industries
A in Contour Bunding
A in Enterprise of Its People



AHMEDNAGAR is rich in history. Its famous fort brings memories of Chand Bibi, who defied Mughal might. It recalls other freedom fighters—Vallabhbhai Patel, Abul Kalam Azad and Jawaharlal Nehru—who spent long months there as prisoners one score years ago. They were not the first to be jailed there. A century and a half earlier the statesman Nana Phadnavis had suffered a similar fate.

Taking its name from Sardar Ahmed Nizamshah, Ahmednagar was a separate kingdom for a hundred and fifty years before Shahjehan subdued it a generation after its heroic dowager had defied Akbar's armies. The great Shivaji's father, Shahaji, had served the kingdom. It was near here that Aurangzeb died.

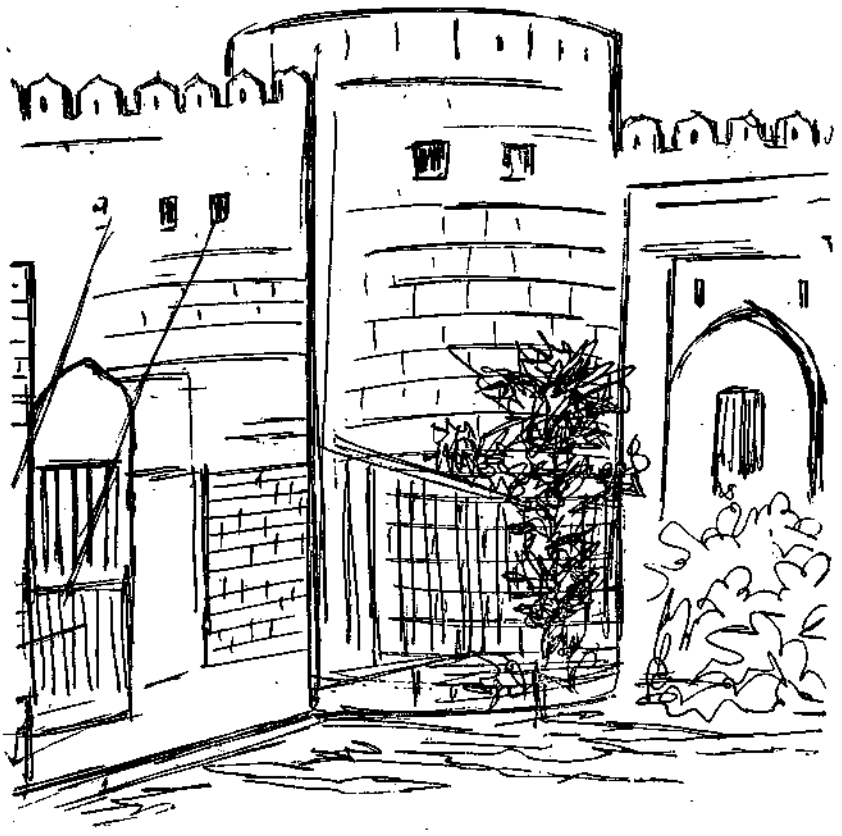
MEN OF NAGAR





VIKHE PATIL, builder of Pravara, the first co-operative sugar factory in the country and BABURAO GOPINATH DHOLE, the man who rose from a coolie to the head of a municipality. **See pages 24 and 12**

PROFILE OF A DISTRICT



Nagar, as it is called in Maharashtra, is rich in religious associations. It was at Nevase that the saint Dnyaneshwar lived in the thirteenth century and wrote the *Bhavartha-Deepika*, known in every Marathi home as the *Dnyaneshwari*. The celebrated encounter between this youthful prodigy and Hathayogi Changdev Vateshwar took place here. Vateshwar rode a tiger to show off his prowess; Dnyaneshwar answered by calling on a mud wall to gallop. Besides Nevase and Puntambe there is another hallowed place, Shirdi of Sai Baba, which has lately become a pilgrimage centre.

Ahmednagar has been the home of a remarkable mediaeval experiment. In the sixteenth century Malik Amber introduced here the ryotwari system under which land revenue was collected directly from the tenants doing away with intermediaries—thus anticipating by four centuries what has been happening elsewhere in India now.

All this adds up to a proud past. But Ahmednagar has reason to be equally proud of the present. Its achievements in the last decade and a half in agriculture, in co-operation, in self-reliance, in land use, have been so notable that I went there to find out the secret of how a stretch of land not blessed by nature with water or mineral wealth has been able to do so much with so little.

I spent fifteen days in the district touring, seeing, talking, probing, lietsning. Here is an account of what I found.

Home of 18 lakh People

Ahmednagar is the second largest district in Maharashtra State. Its total area is 6,586 square miles.

The district is divided into 13 *tehsils*—Akola, Sangamner, Kopargaon, Shrirampur, Nevase, Shevgaon, Rahuri, Pathardi, Ahmednagar, Parner, Shrigonde, Karjat and Jamkhed.

There are 1,332 villages and 13 towns.

The total population in 1961 was 17,75,961, which means there are 286 persons to the square mile. Eighty-five per cent of the people live in villages and 73 per cent live on agriculture.

The value of agricultural produce was about Rs 40 crore in 1959-60 or Rs 128 per acre.

Last Year Only 8 Inches of Rain

A LARGE part of the district is a tableland below the Western Ghats (or Sahyadri), and consists of bare brown hills and sandy streams. Most of these streams remain dry practically throughout the year, and have water only when there are heavy rains in the upper reaches. There are no big rivers. The Mula and the Pravara, two small rivers, can be called the fatelines of the district. They are both tributaries of the Godavari which for a short distance forms the border of the district. Four other small rivers flow through the district, the Kukdi, the Ghod and the Bhima in the south and the Sina on the east.

The western edge of the district, which is part of the Sahyadri, has a very heavy rainfall. The highest peak of the Sahyadri, Kalsubai (5,427 feet), is located here. But, strangely, the rainfall drops down from 200 inches to a mere 20 inches within a distance of 20 miles eastwards. The average rainfall in the district is supposed to be 25 inches; but rains are actually not very regular. There is a cycle of drought every three or four years. In the past five years, the rainfall was 27 inches in 1958, 17 inches in 1959, 25 inches in 1960,



WOMEN working on groundnut patch in a terraced field at Rajur

18 inches in 1961 and only 8 inches last year (1962).

To dig wells is of little avail. There are few areas with subsoil streams or springs. A well yields water only at a depth of 40 to 50 feet; and even that only during the rainy season. In summer the wells are mostly dry and there are years of drought when even in rainy season they do not have enough water.

In certain areas, such as in the Shrirampur *tehsil*, the problem is one of seepage of subsoil water which makes the top soil so damp as to be useless for cultivation.

How acute the scarcity of rain is may be judged from the fact that the average land revenue per acre in the district is less than a rupee (about 75 naye paise). The total amount of land revenue is Rs 25 lakh for 32 lakh acres under cultivation. Just a score of years back, the Government used to invite farmers to cultivate stretches of land at will and the farmers hesitated as the toil would be unremunerative.

With the soil itself there is little that is wrong. It may not be as fertile as the black alluvial soil. But it is rich in natural minerals which make it yield a good crop even with a little rain. The grey and brown soils are suitable for sugarcane, groundnut, cotton, *jowar*, millets and fruits.

But the problem is to find water. So oppressive is the problem that wherever you go you will hear people talk of water and water alone. They almost feel that every problem will be automatically solved if only they could get water.

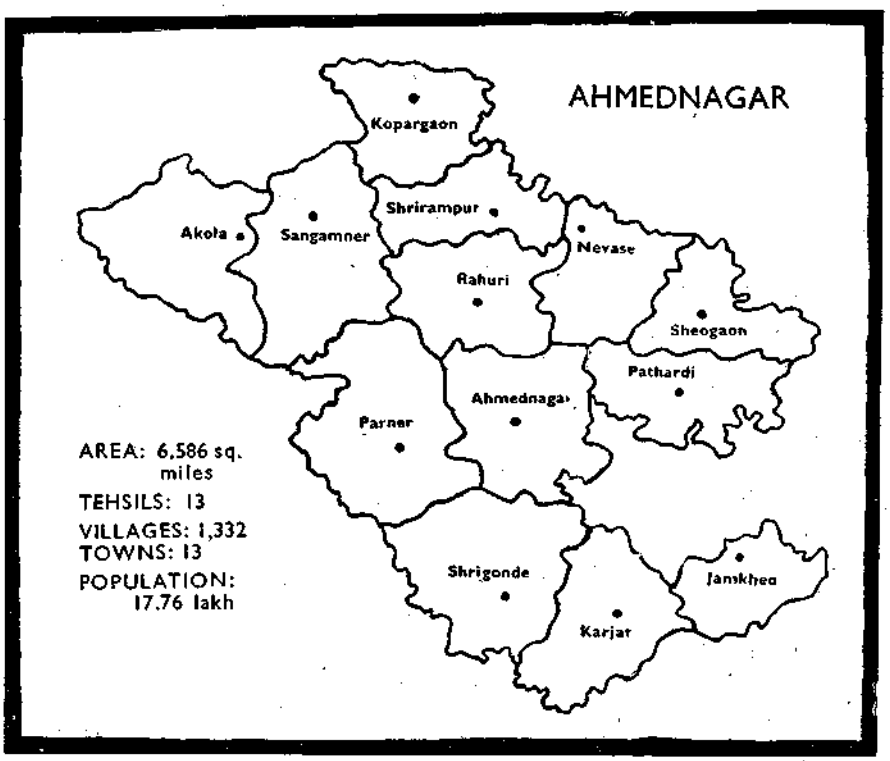
I was in Ahmednagar in the third week of July. The monsoon had been overdue six weeks. The fields had been ploughed and tilled, and many had been sown. The people had almost given up hopes for the year when the long awaited rains came suddenly on July 24. It rained only for two or three days intermittently but even this short spell of rain put cheer into the people. "We don't mind if it does not rain for the rest of the season," some said, "Mother soil is sure to yield our crops now." The more ambitious said, "Just one or two more showers after a month or so, and we shall grow enough for the year and to see us through the next year if it happens to be a lean year." This optimism comes from having lived for centuries in uncertainty without losing heart and trying to make the best of their lot. They work with zeal and vigour even if there are no showers and their enthusiasm is doubled when there are enough rains.



Search for Water

THE people's search for water has led to three developments—(1) the best use of the surface water, (2) exploring underground water by digging wells, and (3) the best use of land through soil conservation measures.

In the use of surface water, the first thoughts go naturally towards the Godavari. It is still a young river as it flows past the district. It was harnessed for irrigation some fifty years back by digging a canal at Madhyameshwar on the northern border. It irrigates about 82,500 acres of land in the Kopargaon *tehsil*.



TWO IRRIGATION PROJECTS COMING UP

Next to be harnessed was the Pravara. A dam, 1,663 feet long and 270 feet high, was built at Bhandardara in Akola *tehsil* near the river's source in 1926. It irrigates 43,000 acres of land in the Shrirampur *tehsil* and parts of the Sangamner and Rahuri *tehsils*.

These two irrigation projects are mainly responsible for the prosperity of Kopargaon and Shrirampur. This area has been fast advancing agriculturally and industrially during the past 25 years. All the wealth and exuberance of the district are concentrated in these two *tehsils*. Shrirampur, which was a small village barely a generation ago, today bursts with growing trade and industries.

NEW IRRIGATION PROJECTS

Two more irrigation projects are coming up. One of them is the Ghod project which has started irrigating about 20,000 acres since 1958. A 8,338-foot-long earthen dam has been built on the Ghod river at Chinchani in the Poona district. Work started in 1954 and will be completed in 1965 at a cost of Rs 5 crore. Work is in progress on the spillway. Its two canals will ultimately irrigate 44,800 acres of land in the Ahmednagar district and 17,600 acres of land in the Poona district. This project will be a boon to the southern *tehsils* of Shrigonde and Karjat which have faced scarcity almost incessantly.

The other project under construction is on the Mula. A two-mile-long earthen dam is being built at Baregaon-Nandur. Work on it began in 1960 and will be completed in two stages at a cost of Rs 15 crore. The first stage will be completed and irrigation started in 1968. Its two canals will irrigate 2.37 lakh acres of land in the Rahuri, Shrirampur, Nevase, Sheogaon and Pathardi *tehsils* which are now scarcity areas.

A notable feature of these two projects is that the problem of compensation and rehabilitation is negligible as both the works are situated mostly in hilly and fallow areas. The Mula project, for instance, will submerge only 11 villages.

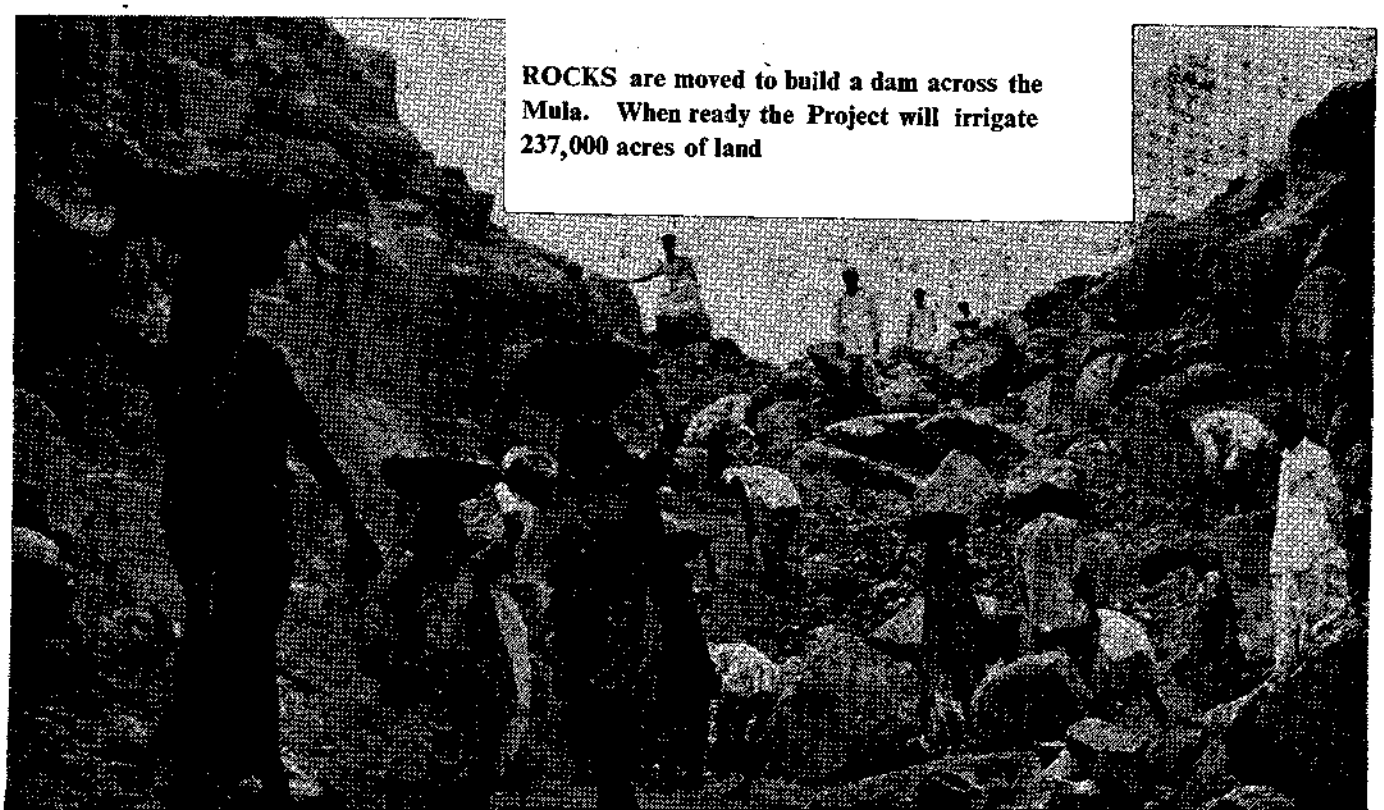
When these two projects are ready the central and southern parts of the district will wear the smile as do the Kopargaon and Shrirampur *tehsils* of the north.

LIFT IRRIGATION

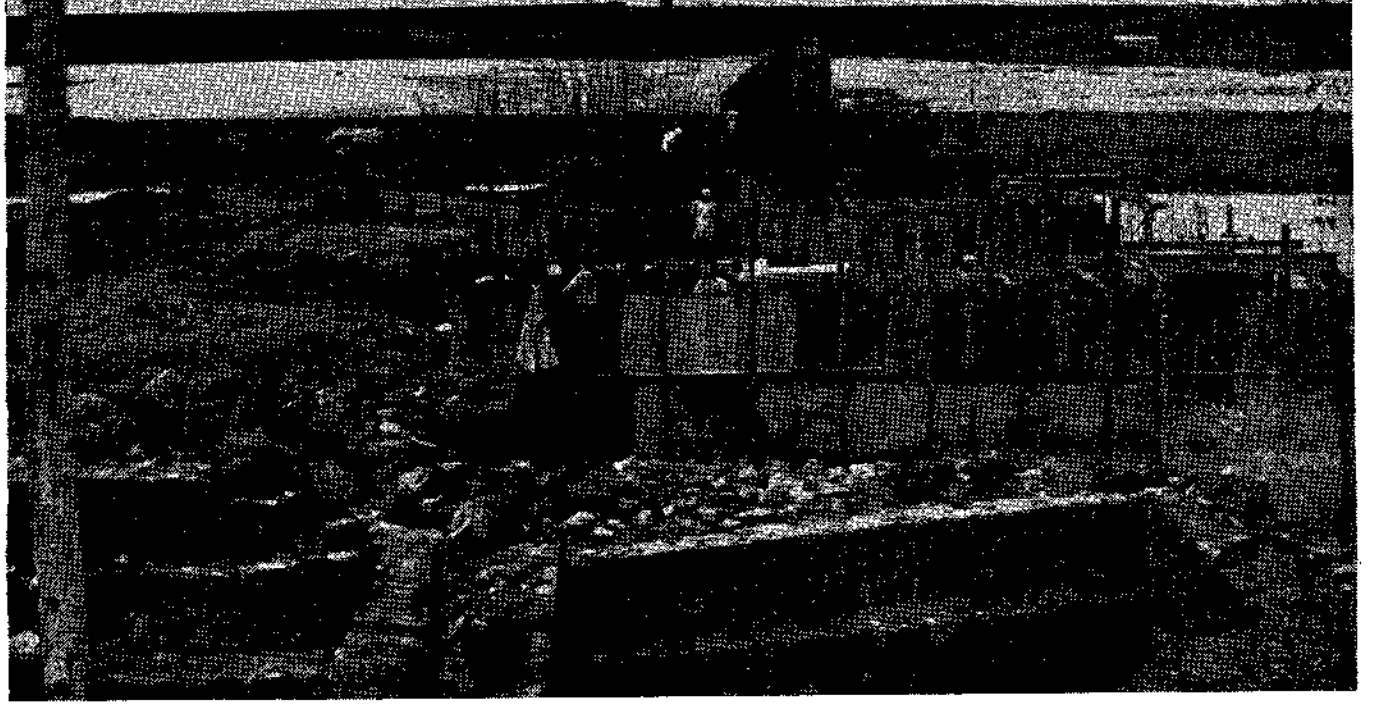
Besides the direct benefits, a canal network also confers indirect benefits on the surrounding region: the level of the underground water rises and the stock of water in wells increases. *During the past fifteen years, the number of wells in the district increased to 68,487 in 1962-63 from about 35,000 in 1950 and the area under well irrigation almost doubled to 2.35 lakh acres in this period.* There are 7,600 pumping sets on the wells. The Government has introduced various schemes for helping the farmers to dig wells and instal pumping sets. In addition to the loans and subsidies, blasting and boring equipment is also made available.

The enterprising farmers have not failed to take advantage of the small hill streams that flow in some parts of the district. A small bund is erected at a suitable place on each stream and the water lifted for use. One stream can thus help a number of farmers.

In several parts, wells have to be dug deep by blasting hard rock. Thus the building cost of a well goes far beyond the means of an ordinary farmer. A number of farmers therefore come together to dig a well and use it jointly. This joint ownership ensures the judicious and economic use of water. Besides, water is



ROCKS are moved to build a dam across the Mula. When ready the Project will irrigate 237,000 acres of land



lifted from rivers and so far seven co-operative societies have been registered for this purpose. There are also a few tanks which supply water to about 12,000 acres of land.

All these resources together irrigate, at present, 4 lakh acres of land including 1.46 lakh acres by canals. This is only 12 per cent of the 32 lakh acres of cultivated land. Besides 3.75 lakh acres are fallow land in the district. Soil conservation measures have become necessary to develop the unirrigated land.

CHANGING PATTERN

The change in the cropping pattern will be evident from the following table:

Crop	1950-51	1962-63
	(Area in acres)	
Cotton (Deviraj)	—	71,200
,, (Deshi)	1,340	39,200
Sugarcane	47,526	88,063
Groundnut	23,121	77,331
Jowar	14,75,277	15,92,271
Bajri	7,11,176	8,09,000
Wheat	1,30,920	1,00,000
Pulses	2,49,266	2,95,886
Oilseeds	1,83,099	2,39,575
Rice	18,939	25,572
Total cultivation	29,30733	32,35,270

The table shows a marked rise in the money crops like cotton, sugarcane, groundnut and oilseeds. It also indicates that the increase in the irrigated crops like sugarcane and cotton is much higher than the dry crops like Jowar and Bajri.

SPILLWAY of Ghod Dam which is under construction at Chinchani. Although the dam is in Poona district, it will mainly benefit Ahmednagar farmers

CONTOUR BUNDING

Among the soil conservation measures, bunding, which is a device for levelling the fields, has become the most effective in the Ahmednagar district. *Perhaps no other district can compete with Ahmednagar in the extent and the rapidity of bunding.*

The scheme of contour bunding the fields was introduced in 1942, but it had not made much headway until 1952. Most of the work was done only during the Second Plan period. Schemes of nala bunding and terracing were also started under the Second Plan. *So far about 5.22 lakh acres of land have been bunded out of a total of 15 lakh acres bundable in the district.* The more remarkable work is done in the scarcity areas of the Sangamner, Pathardi, Jamkhed Karjat, Parner and Shrigonde *tehsils.*

Contour bunding is undertaken on undulating land. A contour bund is erected at an elevation at which the largest stretch of land would come to a level. A field with varying levels might require more than one bund. The advantage of bunding is that it makes the agricultural operations easier and distributes the water and fertility of the soil evenly at the level. It also helps the soil to retain the water longer, thus adding to the income from crops. *The per acre yield has increased by about* 25 *per cent in the bunded fields.*

The Government has introduced a scheme to help the farmers in bunding. It undertakes the work and recovers the cost from the farmers in easy instalments. The cost comes to about Rs. 60 per acre.

In order to level uneven lands bulldozers are lent to farmers at nominal charge. Bulldozers are also used for reclaiming the fallow lands.

NALA BUNDING

Nala bunding is another form of bunding which is adopted for making the foothill lands cultivable. Of course, this method has a limited scope. Only those *nalas* (hill streams) are bunded which have a good catchment area. Springing to life only in the rainy season, they wash off the silt of the soil and make deep ravines in the land. To check the damage, they are bunded at suitable places in the basin of the hills. The bunding is done in such a way that the flow is directed along the desired course and the water is stored at the desired points without interrupting the run-off.

Nala bunding is not intended to ensure a perennial flow or a permanent storage. Yet it achieves a great deal. First of all the water is held in the land for a longer time, as a result of which it percolates and spreads in a wide area, serving as natural, subsoil irrigation. Secondly the subsoil level of the water is raised in the surrounding area and also farther away in the lower reaches. Thirdly, over a stretch of time the

FINE RECORD IN DRY FARMING TECHNIQUES

low lying fields and the ravines are filled up and the land is levelled naturally. Fourthly, fertility of soil is increassed immensely through the silt deposited by the enclosed flow. Finally, as the *nala* bunding is done near the hills, hilly wasteland becomes culturable.

Nala bunding was practised at places by individual farmers in the past. But in 1958 a comprehensive scheme was drawn up for the district. The bunds on one *nala* can serve hundreds of acres of land.

Mr D. G. Rajmane, Sub-Divisional Soil Conservation Officer at Sangamner, is enthusiastic about the project. At present he is busy in the *nala* bunding at Konchi. Logic and plain arithmetic, he says, ought to convince a sceptic about the efficacy and economic benefits of *nala* bunding. According to him, there are two lakh acres of cultivable land in the Sangamner *tehsil*. An additional 10,000 acres can be reclaimed by *nala* bunding. This works out to 5 per cent of additional land for cultivation. Further, the land thus reclaimed will be so fertile that it will easily yield double what normal land does. Thus the gain will be 10 per cent increase in the present crops. Already 1,000 acres of barren land have thus been reclaimed in Sangamner.

What would be the long-term effects of *nala* bunding? Would not the subsoil water level rise to such an extent in the lower reaches that the lands might become waterlogged, creating a serious threat to their cultivation? Mr Rajmane has a ready answer. The scarcity of water in the area is so acute that for generations to come there will be no danger of excessive water. And supposing, for the sake of argument, such an eventuality does take place, it would not be a big problem. It could be turned into an opportunity for digging more wells, which would irrigate the land better and also automatically regulate the level of subsoil water. This is what happened in the Shrirampur *tehsil* and today the area is the rich and advanced part of the district.

Mr Rajmane spoke as a practical scientist, but what he said was corroborated by an elderly farmer who was tending his goats at some distance, oblivious of the discussion among the 'Sahib log'. With the native wisdom of an experienced ryot, he said that the land reclaimed by *nala* bunding would continue to give good crops for years to come without any manual manuring, because it would water and manure naturally through the run-off flow. About the likelihood of waterlogging in the long run he replied allegorically: "Uh! The insect that emits a tiny speck of light in the night does not shine in the day".

TERRACING

Terracing also is a kind of bunding. It is adopted on the slopes of hills. A portion of the slope is sliced off at the higher end and raised at the lower end to form a stretch of even level and then a bund of earth is raised around it to preserve the soil from erosion. Another stretch is similarly formed at a lower elevation on the slope. Thus the slope looks like a staircase of fairly wide steps.

The terracing programme is limited in Ahmednagar district to the paddy growing area in the Akola *tehsil*. The programme was launched in 1958 and so far 800 acres of land have been terraced. The cost of terracing works out at Rs 400 to Rs 500 per acre.

The slopes of the hills were mostly barren. Poor farmers who cultivated them could hardly grow enough for subsistence. After terracing, the same plot which hardly fetched Rs 25 for the produce now yields crops worth Rs 250 to Rs 300.

All these measures take care of the water that is available on the surface or under the ground. They do not contribute to *increasing* the water resources. They are no solution to scanty and erratic rains. But there is a way to attract more rain. And this is done through afforestation and tree-planting.

Five lakh acres are said to be 'under forests' in the district. But excepting the forests in the rain-fed Akola *tehsil*, the so-called forests are mostly wasteland with mean shrubs. Under the afforestation scheme, trees were planted in an



TWO WOMEN at a paddy nursery at Shendi, Akola *tehsil*. Note the cape of leaves they wear for protection from rain which is heavy in the region.

area of 1,827 acres and pastures developed in an additional 3,000 acres during the Second Plan period. On several brown bushy hills young trees are now growing. They will soon develop into a thick cover of forest which will coax the clouds to shed their bounty on lands and farmers that greatly deserve it.



Quick to Learn New Ways

It is said that the Indian farmer is slow in adopting new ideas and practices in agriculture. But this is not true of the farmer of the Ahmednagar district. He is alert, inquisitive and industrious. He leaves no opportunity to learn and to practise. All that the district has achieved in the recent past by way of improvement in agriculture is a testimony to his progressive attitude and industry. Centuries of scarcity conditions have not depressed him; on the other hand, his urge to progress has sharpened to the extent of making him restless and discontented. In his zeal to defy and redeem the curse of nature, he complains and grumbles against the Government, against all those from whom he expects help, and against himself for his own shortcomings. And all along he strives to achieve better results.

For generations the farmer of this district has been growing dry crops for want of sufficient water. He has been trying to get regular and adequate supply of water by digging canals and wells, bunding *nalas* and fields and in whatever other way he can. Wherever he has succeeded, he has taken to new crops and new techniques. Wherever he has failed, he continues to make the best of the traditional crops with the help of new methods.

During the past fifteen years the acreage under irrigation has almost doubled and along with it has changed the cropping pattern. In 1950, the area under irrigation was about 2 lakh acres; today it is about 4 lakh acres.



BUDHA PATIL, an Adivasi farmer. Note the burning log he carries under his arm to light his tobacco pipe.

The major part of irrigated area, as we have seen, is in the northern part of the district—the Kopargaon and Shrirampur *tehsils* and parts of the Nevase and recently Shrigonde *tehsils* in the valleys of the Godavari, Pravara and Mula. The central and southern parts, comprising the Sangamner, Parner, Ahmednagar, Pathardi, Nevase, Sheogaon, Shrigonde, Karjat and Jamkhed *tehsils*, still remain dry and comparatively backward. Their dependence on the rains will decrease only when the Mula and Ghod projects are ready in the next few years.

HOME OF DANGI COW

The third natural division of the district is the Akola *tehsil* which, being a hilly tract of the Sahyadri, has heavy rains. It receives more than 50 inches, on the average, and above 200 inches in places. But like most hilly and forest areas, Akola has remained backward. Two main groups of Adivasis — Mahadev Kolis and Thakars—inhabit the region. They must be deemed Adivasis because of long stay in isolation in an economically undeveloped area, rather than for social customs.

Paddy and millets are the chief crops of this area which is referred to as Dangi (hilly). Akola is known for vegetables, particularly tomatoes. The Government has now introduced the Japanese method of rice cultivation. The total acreage under paddy cultivation is 21,000 of which 5,000 acres are suitable for the Japanese method. At present 1,700 acres are sown by this method.

Bhau Jayaram Pabalkar, a progressive farmer of Rajur, has shown excellent results through the Japanese method. He earns Rs 3,000 on a plot of $3\frac{3}{4}$ acres. He has been able to grow 100 maunds of rice per acre as against the average yield of 15 maunds.

The programme of terracing undertaken by the Government in this area is chiefly intended for the development of paddy cultivation. Special strains of paddy, suitable to the soil and the climatic conditions, are to be cultivated in these fields. However, other crops like groundnut and millets also grow well on the terraces.

The area is well known for cattle breeding. The Thakars are traditional breeders. A pair of bullocks fetches Rs 500 to Rs 1,500 and a cow is sold at Rs 200 to Rs 600. The breeders have organised themselves, with the help of some social workers and the Government, into the Dangi Goseva Sangh. The Sangh was registered in 1944 and today it has 200 members. It arranges the supply of pedigree animals and provides guidance to the breeders. It also holds annual cattle shows at which animals are sold in a large number.

DRY FARMING

The cropping pattern in the dry zone has not changed much during the Plans. However there is an increase both in the acreage under cultivation and per acre yield of all the important crops. This is the result of increased use of fertilisers, improved seeds and modern implements. The Government has introduced schemes for assistance to cultivators in dry farming. Improved seeds are distributed widely.

Jowar has been the main crop of this zone, and, for that matter, of the whole district. It is sown in 15 lakh acres of land. The yield per acre is 9 to 10 maunds on an average. Next comes Bajri which is sown in 8 lakh acres of land.

Wheat, gram, cotton, groundnut, safflower and other oilseeds are other traditional crops in the dry zone. Groundnut and cotton acreage has shown a marked increase recently.

CANE, COTTON, NUTS AND FRUITS BRING PLENTY

A scheme for the cultivation of Potatoes has been recently introduced. The soil is found to be specially suited for the crop in the Parner and Sangamner tehsils. A special method is being popularised in potato cultivation. The entire top soil in a stretch of land is collected in a third part to form a layer of one foot in thickness. Experimental cultivation has already started for the past few years.

DYNAMIC AGRICULTURE

Let us turn now to the irrigated zone and examine in detail the picture of dynamic agriculture it provides. The progress this region has made during the past score of years is astounding. It also provides proof of the statement that dynamic agriculture generates industry and, in turn, further benefits by it.

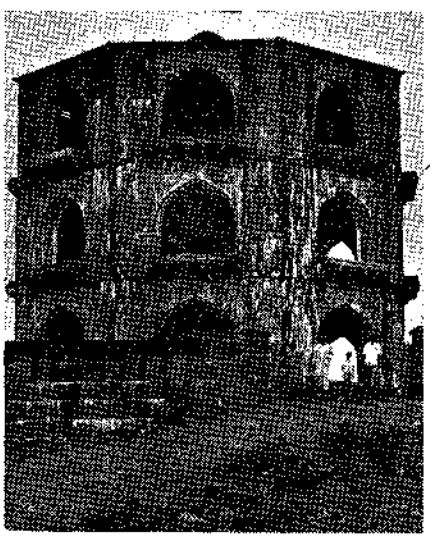
Situated in the valleys of the Godavari, the Pravara and the Mula, the zone has better resources of water compared to the southern areas. In fact excess of water had caused seepage and waterlogging and large tracts were lying fallow. The Government offered such lands to cultivators. Hundreds of farmer families immigrated from adjoining districts and settled on these lands. It is these enterprising farmers who changed the barren landscape into a scene of prosperity.

This prosperity was built through and rests on sugarcane. In 1950 the crop was sown in 48,527 acres, and at present in 88,000 acres. The increase is 81 per cent which, incidentally, corresponds to the increase in the irrigated area during this period. A farmer easily earns a thousand rupees a year from an acre of sugarcane. The average yield is 50 to 60 tons per acre but several cultivators grow about a hundred tons.

Another crop which has increased its acreage is groundnut—from 23,121 acres in 1950 to 88,924 acres in 1962.

On several fields we can see evidence of variety in cropping—if one plot is under sugarcane, another plot is kept ready for groundnut, a third grows cotton and yet another may be under green manure or lucerne grass. Next year the order of the plots may be changed. This rotation improves productivity of the land and facilitates economy in the use of resources. Double cropping is practised in an area of 1.75 acres.

The cultivators favour money crops, though they maintain that food grains are not neglected. The money crops, according to them, are grown not at the cost of the food crops but with the additional facilities made available. For instance, if an acre of land produces 10 maunds of Jowar without irrigation, it will be possible to produce the same quantity in half an acre with irrigation, and the remaining half acre could grow sugarcane or cotton or vegetables and fruits. It is also obvious from the fact that the total



TOMB of Salabat Khan, near Ahmednagar. It is wrongly called Chand Bibi's palace. It stands on a hill and is visible from ten miles.

production of food grains has not gone down during the past twelve years. On the contrary *it has increased*, although the production of money crops has been rising faster.

DEVIRAJ COTTON

After sugarcane and groundnut in popularity comes cotton. A new variety of cotton, Cambodia 170-CO2 is preferred. It is popularly known as Deviraj in the area. It is a long staple cotton (about 1.2 inches). This strain was experimented at the Surat research station (now in Gujarat) and is especially suited to the soil in Ahmednagar district. It is an irrigated crop but does not require as heavy a dose of water as sugarcane does. It also thrives well on 40 inches of rain. The Government has been encouraging the cultivation of Deviraj. 'Approved farmers' are given all technical assistance and guidance on their fields which also serve as demonstration and seed multiplication plots. Sale of the produce is assured. Research farms of the Government are making experiments to evolve a disease-resistant strain of Deviraj.

Deviraj requires careful husbanding and considerable operational expenditure. However, compared to sugarcane, the total expenditure is less and the income almost equal. No wonder Deviraj has been fast gaining adherents. The area under Deviraj is 91,000 acres this year; last year it was 71,000 acres, and in 1950 Deviraj did not exist. It was introduced only in 1957.

There were also 39,000 acres of land under other varieties of cotton last year. These included Virnar (staple less than an inch) and the inferior short staple variety known as Deshi. In 1950, only 1,340 acres of land grew cotton.

GRAPES AND BANANAS

Irrigation facilities have given an impetus to horticultre. New orchards are coming up, mainly of bananas and grapes, and vegetable crops like tomatoes, brinjals, *bhindi*, chillies and onions have been multiplying. There were 200 acres under grapes and 900 under bananas in 1960. The grapes are becoming so popular that during the past three years hundreds of more acres have been brought under plantation in the Kopargaon and Shrirampur *tehsils*. Mr Datta Deshmukh and Mr. G.N. Date (Shrirampur) are the pioneers of grape cultivation.

Guava, pomegranate, mango and citrus fruits like *mosambi* and limes have been grown for a long time. Some 7,000 acres of land are under these fruits. But most of the plantations have now outgrown their life and new plantations are not coming up. The citrus fruit orchards, in particular, are in a stage of ruin. With the increasing facilities of irrigation, the fruit gardening has good future. The saline tract near Kolhar is suited to pomegranate. But the plants take years of care before yielding fruit and the cultivators cannot afford to wait long for recovering their investment. If proper incentives are

given, different kinds of fruits can grow in this area.

The Government has introduced several schemes to develop the agriculture in the district. Six research stations and *taluka* seed farms have been set up and special officers appointed for the important crops. Competitions for the various crops are held at *tehsil*, district and State levels annually. Campaigns are organised from time to time.

The farmer in the Ahmednagar district has proved that given the necessary facilities he can produce the maximum with the most economical use of the resources. The rate of canal water is heavy, but he does not mind it. He wants more water so that he can produce much more. He finds well irrigation exorbitant—it works out to Rs 400 per acre per year. Canal water costs about a half for sugarcane and a fourth for seasonal irrigation. He claims that the yield he produces is larger than in the adjoining States although the water rate he pays is much higher than in those States.

PROGRESSIVE FARMERS

Some farmers have earned a reputation for their outstanding work. The Tekavade farm at Pravaranagar, for instance, is a model of modern farming. Prime Minister Nehru visited it during his recent visit to the district. Mr Champalal Rathi's farm at Sangamner is another instance. And there are many others who have made lakhs of rupees on agriculture.

Mr Wamanrao Todmal of Jeur, ten miles from Ahmednagar, is an exemplary farmer. Wamanrao was a Deputy Inspector in the Education Department. In 1942, he left the job and took to farming on 100 acres of land. His field is situated at the foot of a hill. It was all covered with rocks and boulders when he started agriculture. The first ten years were a period of strenuous toil. but he worked on, along with his sons. He adopted soil conservation methods and dug wells even in the rocky soil. Gradually the hard soil became soft and the income rose to Rs 10,000 in 1952. In the next ten years the income increased four times to Rs 40,000. Apart from other crops, he grows vegetables and fodder grass. One of his three sons looks after the marketing of the produce. Another helps him on the farm and the youngest goes to school. He has nine pairs of bullocks.

Success Story

PORTER, FARMER CHAIRMAN

Mr Baburao Gopinath Dhole of Sangamner is another example of sturdy enterprise.

In 1935 Baburao was a coolie earning five annas a day. He had only a quarter of an acre of ancestral land. Two years later he took a neighbour's field for cultivation on lease for Rs 150 per year. With the income he earned on the crop, he bought a pair of bullocks and a cart for Rs 225. The bullocks helped him on the field. He would also rent out his bullock cart for transport at one rupee a day. In 1940, he bought a pair of superior bullocks for Rs 400 and a cart for Rs 150 and started his transport business at Ahmednagar.

In 1942, he grew sugarcane in a plot of one acre and made *gur*. In half an acre he sowed potatoes. That year he earned Rs 1,500. Two years later, he produced four cartloads of *gur* and earned Rs 2,000 on one acre.

In 1957, Baburao owned 27 acres of land. Besides he had 17 acres on lease. He sowed cotton, Bajri, sugarcane, fodder grass, and also raised a plantation of grapes in a plot of one acre.

He won the second prize in the State competition for *gur* production for 1961-62. He produced 15,115 pounds (about 180 maunds) of *gur* per acre. His expenditure per acre was Rs 1,662.

In 1960 Baburao became the president of the Sangamner municipality where he had served as a coolie 25 years ago. But Baburao has remained unaffected. His natural dignity needs no sophistication. He is not a farmer in ironed clothes. He looks a farmer and is contented to remain a farmer. What he earns, he spends for the maintenance of his family and his farm. His greatest pleasure is to work in the field.



From Successful *Into Industrial Age*

A region or nation that is agriculturally backward cannot hope to be industrially advanced. Indeed the first stages of industrialisation everywhere are based on agriculture. Our Plans also aim at bringing about "an agro-industrial society."

Ahmednagar does not yet qualify to be called an industrial district. Until recently the only industries it had were the traditional crafts and trades, such as weaving, oil-pressing, carpentry, smithy, brick-making and tanning. Modern industries in the district are of recent origin—they have all been started in the last 20 years, and they are the natural outgrowth of agricultural enterprise. In a district of hardy farmers this means that the growth of purely capitalist interests is precluded. Growth of industries in Ahmednagar has gone hand in hand with the expansion of the co-operative sector. This pattern of development is not likely to change significantly for generations to come, especially because the district has no known mineral resources.

The chief industry in the district is sugar manufacture—modernised version of the traditional custom of the cane-grower to make *gur* on his own field. There are a dozen sugar factories in the district—50 per cent of the sugar factories in Maharashtra. Six of them are co-operatives, including one which is expected to go into production next month. The Pravara factory, the first co-operative venture in the country's sugar industry, is among them.

Each of these sugar factories has, on an average, a crushing capacity of 1,000 to 1,200 tons of cane per day and produces about 20,000 to 25,000 tons of sugar every season. The percentage of sugar recovery is 11—12, which is the highest in the country.

There are also 113 organised *gur* manufacturing units in the district.

Repairs and spare parts are a day-to-day need of sugar factories. In 1960, the Pravara sugar factory set up a workshop under the management of a separate co-operative society. Besides carrying out repairs, the workshop has opened a foundry to cast spare parts, and has found them to be astonishingly cheaper than the imported ones. Agricultural implements and spares of pumping sets are also being manufactured on experimental basis.

The by-products of the sugar industry are bagasse and molasses. Bagasse is at present consumed as fuel in the factories. It is a raw material for making paper and two paper mills are contemplated in the district. The molasses are used to make power alcohol. There are three distilleries in the district. Two are small and one at Chitali, owned by the Government of India, is claimed to be the largest in Asia. The Chitali distillery has been producing 10,000 gallons per day as there is a good demand for power alcohol. It consumes about 60,000 tons of molasses a year. Roughly one ton of sugarcane produces one bag of sugar and one maund of molasses that, in turn, produces two gallons of alcohol.

Among the processing units based on cotton are 32 cotton ginning and pressing factories. More of these factories are coming up in the co-operative sector. Three spinning mills are proposed to be started at Shrirampur, Kopargaon and Rahuri. Besides, there are about 5,000 handlooms and 500 powerlooms. Saris are a speciality of Ahmednagar.

Among ancillary industries are two units for manufacturing cement pipes, ten iron foundries, two chemical fertiliser mixers, a brush factory, 17 saw mills, 50 steel workshops and some units making stationery, soap, bonemeal etc.

One of the big industries is a company making Ayurvedic medicines. It also makes some allopathic drugs including vitamin tablets, and has recently begun producing wax from sisal bran.

In all there are about 500 industrial units, big and small, employing about 25,000 workers. But the industries proposed and to be proposed form a much larger number. A cement factory has been licensed in the Parner *tehsil*. Kopargaon has planned a co-operative industrial estate with several new industries including an ice factory and fruit processing units.

Two important factors ensure a quicker industrial growth of the district. First, power shortage which is a limiting factor now will end when power from the Koyna project will be extended to the district. Secondly, lakhs of acres of additional land will be brought under irrigation in the next few years on account of the Ghod and the Mula projects. However, big industries are out of question as the district lacks iron and coal, and even water.

Farming to Industries



Green Swords & Jobs

SISAL fibre is a growing industry in the district. Sisal, or agave, is a kind of cactus. The plant looks like a huge lotus of hundred green swords. It grows on any land.

Sisal yields a fibre. Every year fibre worth Rs 35 to Rs 40 lakh is exported from the district to Calcutta. There it is mixed with jute to produce ropes and jute goods. The prices of sisal fibre, which was once a waste product from the waste lands, are constantly rising.

Before the eyes of business fell on this commodity, sisal was the exclusive source of sustenance of the Mang community. Sisal, being a thorny bush, is planted on the boundaries and bunds of fields for fencing. The plants were useless to the farmer; so the Mangs were allowed to cut the swordlike leaves, so much so that it became their prerogative by custom. Now the farmers are realising the commercial value



of the plant and they deny the free use of leaves to the Mangs.

The Mangs have been traditional rope-makers. But now they are losing the trade and have to make a living by processing fibre for the farmers or business men on daily wages.

The processing is simple. The leaves are soaked in a pool of water till they rot and disintegrate. The leaves are then taken out and threshed on the ground. The fleshy pulp is separated from the fibre. The fibre is then twined to make the ropes.

Another traditional use of the fibre is for making cloth for packing like jute gunnies. The cloth strips are mostly used for wrapping raw cotton.

> The rural industries project started at Sangamner by the Planning Commission, in its series of 46 such projects all over the country, includes the development of sisal fibre industry in the district. Experiments are being made to prepare gunny bags and cloth from the fibre on a village industry basis.

Recently another use has been found for the sisal fibre—to make decorative articles of household utility (see cover iii). The American Marathi Mission at Ahmednagar has been running a sisal centre for the past 25 years.

The National Chemical Laboratory, Poona, has succeeded in making a kind of fine wax from sisal bran. This wax can substitute carnauba wax (which is now imported) in making boot polish and carbon papers. It can also be used as lubricant for delicate machinery.

Sisal fibre has a thin coating of a chemical called cutides. In the process

(*Continued on page 23*)

PEPPER and other SPICES

PEPPER, cardamom, ginger, turmeric, fennel, fenugreek, cumin seed, coriander, cassia, garlic, celery, tejpat, chillies, cloves, mace, nutmeg, cinnamon.

Fragrant names. The nostrils twitch and the mouth waters.

Except the last four we export all these spices. We have traded in spices for centuries (barring chillies, which was an immigrant to our land). When Caesar ruled in Rome our spices went there along with pearls and peacocks. The spice trade it was which brought Europe's ships to our coasts and cost us our freedom.

The world is less spice-minded today. A dietetic revolution has occurred in the prosperous countries where bland food and fruit juices and vitamins are all the vogue.

Yet spices are coming back to fashion. Last year the spice importers in U.S. were able to tell the public, on the authority of the highest research organisations, that spices did no harm to the body, and were indeed beneficial. Over a large part of the world, however, spices had never lost favour, even temporarily.

For who can after all be content with mere salt ? The tongue craves for pungency and aroma.

So our spices (and curry powder) will continue to go out—although the violent price fluctuation in world trade in these commodities may hurt our growers one year and help them the next.

Our exports face stiff competition from Indonesia and Sarawak. In fact they have always competed with us, for are they not the Spice Islands which attracted Western seamen and traders as much as our own land?

Pepper production in those countries suffered a set-back during the Second World War because of economic disorganisation. During that period our exports spurted, but as Indonesia and Sarawak recovered, our trade was affected.





Among Indian spices the are pepper, cardamon The total value of ex including pepper in 196

FROM A KERALA PLANTATION

Top : GIRL with bunches of pepper

Left : MAN runs up a supporting pole to examine pepper vine

Right : CLOSE look at pepper heap

Pictures from
FILMS DIVISION
and PHOTO DIVISION



ncipal items of export chillies and ginger. t of Indian spices 3 was Rs 13.9 crore.

TRADE TEAM TELLS HOW TO BEAT FOREIGN RIVALS

As regards spices other than pepper, particularly cardamom, chillies and ginger, the trade is less vulnerable to overseas competition. The export of these commodities in 1962-63 was Rs 7.3 crore as against Rs 3.4 crore in 1950-51.

To expand our exports and to see that the trade is not subject to too many fluctuations, a Spices Export Promotion Council has been formed. This Council sent a trade delegation last winter to West Asia and Europe.

The delegation studied the market situation for import of Indian spices in the countries visited and explained to the traders there the steps we have taken to ensure quality control. Its report, released some time ago, makes a series of recommendations on what Indian manufacturers and exporters should do to build up a bigger market. Here are the main points :

(1) Foreigners prefer white pepper which has a stronger flavour. White peppers are prepared from ripe fruits. India can also begin marketing white pepper.

(2) Indian cardamoms are better in quality. Yet there is demand for green cardamoms produced in Ceylon. Steps may be taken to grow green cardamoms in India. China and Jamaica produce ginger of better quality. India can also grow better quality of ginger and peel and dry it in a better way.



PEPPER is cleaned before packing.



(3) There is demand for Indian curry powder but it is costlier than foreign brands. The cost has to be reduced. What is more, spices used in the powder should be milled as finely as is done in foreign countries. Manufacturers should instal latest plants for this purpose.

(4) Indian cooks can be sent abroad for giving cooking demonstrations in important centres, hotels and restaurants.



FACTS FROM FIGURES

A STOCK term of abuse for economics is to call it 'the dismal science'. Carlyle used it nearly a century ago. But the description suits one branch of the subject very well, the economics of underdevelopment. Nothing can be more dismal than poverty, and it is through this science that it can be attacked.

But the understanding of economics still seems to be very limited in our country despite nearly a decade and a half of planning. We are a highly politics-minded people. Our educated people and our newspapers don't show the same instinct for economics as they do for politics. Underdevelopment itself must be one of the reasons.

Nevertheless the ignorance of basic economics and of the use of elementary statistics is astounding even among those who are expected to know better. The countrywide debate on income levels reveals this kind of unfamiliarity on all sides. *Eastern Economist* has pointed out how the leading newspapers of the country have failed to put on their thinking cap.

In national debates both sides—or all sides if, as in our country, there are many more than two sides to any question—have to honour and abide by certain conventions. Just as the Constitution, the courts, the Speaker's gavel and the traffic constable's whistle are respected, the basic collection of statistical data in the nation's possession must be taken on trust. Its insufficiencies may be pointed out and every nerve strained to remove the imperfections, but its honesty should be beyond question.

But so unfamiliar are we with social mathematics that the mere mention of a percentage often makes us dumb, as *mantras* are supposed to have done in Puranic times. Many so-called 'facts' are often non-facts. Most figures are fancy. The duty of checking up, of reading the qualifications along with tables, and of not separating a formulation from its context is not exercised. As *Eastern Economist* has observed, "Persons who are ill-informed are generally very sure of their facts, and the more ill-informed a man is the more convinced he is that he has the facts."



IGNORAMAN

Wants to Know

If a statistical match
can be played
between hockey players
and footballers

OTY-3

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Consumer

CONSUMERS' COLUMN

by G. L. Malhotra

Co-operatives

Do They Influence the Price Line?

IN the conditions existing in the country, particularly in view of the National Emergency, the usefulness of consumer co-operatives cannot be underrated. Prices of essential consumer commodities have risen and their effect is being severely felt by all, in particular the middle and the lower-middle income groups.

One of the chief objectives which consumer co-operatives can serve is to hold the price line and also supply essential consumer commodities of an unquestionable quality. The Central Government-sponsored scheme was introduced in India in the middle of November last year. Under this scheme, which was to cost approximately Rs 10 crore by way of subsidies, matching contributions to share capitals etc., 4,000 primary stores and 200 wholesale stores had to be organised within a period of two years.

More than half the number of wholesale stores and primary stores have, it would appear from Governmental reports, already been brought into existence. A mid-Plan appraisal is required to find out if the progress of the consumer co-operatives has made any impact on the price line or on the quality line. To find out the position the Non-Official Price Intelligence Service of the Bharat Sevak Samaj had a small survey carried out in the first week of August 1963.

PRICES NOT 'FAIR'

For the purpose of this survey, five consumer co-operative stores were selected at random, keeping in view, however, that no two stores were too close to each other. An experienced investigator was sent round to collect the selling rates of some of the essential consumer commodities from these stores. To make a fair comparison, five private retail stores were also selected, one from the neighbourhood of each co-operative studied.

The Central Government Employees' Store at Raisina Road (near 'P' Block) and the retail prices prevailing in Shradhananda Municipal Market, Delhi, were also included. This was considered necessary to find out to what extent a big undertaking like the Central Government Employees' Consumer Co-operative Stores could influence the price line.

It was generally observed that the selling prices at the consumer co-operatives were not distinctively lower than those in retail stores. In a number of items the prices of the former were higher. Even where they were equal to the private retail shops' prices, it meant that consumer co-operatives had not been able to ensure fair prices for consumers.

BUYING TECHNIQUES

This important finding brought out by our Survey ought to set us thinking. The prime need of the nation is to check price rises, but even a programme of Rs 10 crore may not be able to produce noticeable results in a short period if certain other steps are not taken. A closer analysis of the working of some of these consumer co-operative stores reveals that their purchasing techniques need a good deal of improvement. The purchasing power of a primary store is small and as such, purchases have to be made from the local wholesale market which, as is evident, puts the primary consumer co-operative store on the same level as an ordinary retailer. Competitive prices can be obtained only when purchases are done in bulk and the quantity is large enough to be used as a bargaining factor.

The object of organising wholesale stores to feed the primary stores should have been to purchase the commodities in bulk from the sources of supply and then distribute them at competitive rates to the primaries. Either this has not been done or, if it has been, the purchasing techniques and other factors affecting the purchases need a closer study. Warehousing plays an extremely important part in proper storage and preservation of such wholesale purchases.

It is apparent from the figures collected in the survey that the consumer has not been benefited to any appreciable extent by the organisation of consumer co-operatives. In what way the implementation of this Scheme can make an improvement is a subject which should be taken in hand *now* before it is too late. Consumer co-operatives are a commercial enterprise organised by the consumers and for the consumers. If consumer loyalty has to be achieved and the consumer co-operatives develop into an attractive organisation for the consumer, his interest has to be kept first and foremost in view. Such stores should have a large variety of commodities, properly processed and packaged and made available at fair prices.

A quick appraisal of the scheme at this stage is most essential and the Government will be well advised to undertake this with the help of knowledgeable persons drawn from the trade. Association of non-official element will make the enquiry really useful.

Mr. Malhotra is Director of Non-Official Price Intelligence Service, Bharat Sevak Samaj.

Indian Bull

THE Irish are said to create what are called bulls. The best-ridden Irish bull is the confession of a man from Cork who said: "I heard my sister give birth to a child. I don't know if it is a boy or girl, so I don't know whether I am an uncle or an aunt."

Experts tell us the connection between bulls and Ireland is recent; but many Irishmen love to circulate bulls, just as Sikhs love to retell Sikh jokes. Making fun of oneself is a rare quality, of which we need more in India.

An Indian bull we recently came across is from a political leader who said: "The ruling Party should organise disciplined demonstrations in favour of its policies and thus show to the Oppositionists that slogan-shouting leads nowhere."

Books

DOES HINDU TRADITION BLOCK OUR GROWTH? *The answer is not as simple as some scholars say*

Hindu Culture, Economic Development and Economic Planning in India—by K. William Kapp. Asia Publishing House. 228 pages. Rs. 20.

M.S.A. Rao

THIS volume is a collection of ten essays many of which were published earlier elsewhere. The author divides the essays into three parts: I—Hindu Culture and Economic Change, II—Development Projects: Problems of Evaluation, and III—Economic Planning: Problems and Criteria. Four essays fall under Part I. They are: Hindu Culture and Economic Development. The Hindu Social System, The Retardation of Economic Development, and Economic Development, National Planning and Public Administration. Three essays—River Valley Projects: Their Direct Effects, River Valley Projects: Problems of Evaluation and Social Costs, and The Transition from a Bullock to a Tractor Economy in India—are included in Part II. The other three essays included in Part III are: Frederich List's Contribution to the Theory of Economic Development, Social Costs and Social Benefits, and Economic Planning and Freedom.

It has increasingly become a fashion to relate culture to economic development in under-developed countries. Following Max Weber who established a relationship between religion and economic action in general and the Protestant ethic and the spirit of capitalism in particular, many scholars have turned their attention to under-developed countries with a view to seeking a relationship between the traditional culture and social system on the one hand and economic development on the other. A general image is being built where the traditional culture is seen as a hindrance to the occurrence of economic development. It is implicitly assumed that the Western model of economic development provides the only one which is universal. Certain features like free-class system, nuclear family organisation and non-inhibitive religion are considered to be pre-requisites of economic development. Absence of the former would necessarily mean the absence of the latter. Often those societies or cultures which do not possess the pre-requisites of economic development are dubbed as traditional. The present attempt of Professor William Kapp to relate Hindu culture and economic development is no exception to the general line of thinking indicated above.

Before commenting upon specific instances, it should be noted that firstly, the characterisation of societies or cultures as traditional is incorrect. All societies are traditional in so far as they have a tradition. Secondly, 'pre-industrial' (as used by the author on page 3) societies are not the only ones which erect barriers against technical progress; but resistance to change is to be observed at all levels of technical advancement in all environments.

Hinduism is a catholic religion including many diverse strands in it. Even the meaning of basic ideological concepts such as God, time, *karma*, *dharma*, *moksha* and the world-view are relative to one or the other of the six systems of Indian philosophy. The author seems to have chosen the meaning of these concepts as interpreted by a particular system of thought. Following this, one gets a particular set of deductions which are seen as incompatible with positive economic action. But, on the contrary, if one selected the interpretation of the basic concepts of Hinduism according to another system of thought, one would get a series of deductions which would seem favourable to economic development. To quote one example. When the world is conceived as an *illusion*, less favourable propositions of positive economic action seem to follow. But when the world is conceived as a *reality* according to another system of Indian philosophy, it seems likely that actions which are more favourable for economic development would follow. Hence the point to be emphasised in this connection is that at the abstract ideological level, relationship with economic activity is largely a question of interpretation which is highly complex. Thus it is hazardous to deduce from basic ideological concepts elements which are either favourable or unfavourable to economic development.

Perhaps it is easier to seek a more definite relationship between different aspects of social structure and economic development. But here only intensive empirical studies should be our guide. The author feels that caste and kinship not only limit social relations and loyalties but also divide the groups into factions. In such a faction society, people will react sharply and unfavourably to any new idea or change (see page 50). The author concludes that "caste, social status by descent, segregation and hierarchy give rise to modes of reaction and general climate of suspicion which makes most forms of social action difficult if not impossible. Indeed feelings of solidarity with other groups which are a prerequisite for any effective concerted social action are not likely to arise under such conditions." (page 51). The author seems to be too much impressed by the negative aspects of factions, caste and joint family. A few observations are necessary to clear these misconceptions.

It should be noted that different loyalties of caste, kinship, faction, village and region bring about a balance in power relations. No society has a full degree of unified solidarity. The principle of solidarity in a highly segmented social system, such as the Indian, is derived from other sources as well including balanced opposition of segments and cross-cutting alliances. Under particular situations the gap between factions or divisions within one social unit is closed up and it emerges as a solitary group against another. As regards the response of groups to developmental programmes, it is quite well known that dominant castes all over India have not only favourably reacted to them but also are struggling to gain control over them. In the industrial situation, joint family is found quite helpful in many ways—pooling of resources such as finance, technical knowledge and managerial skill, and safeguarding trade secrets and property interests. Thus, the traditional aspects of social structure seem to exhibit a fair degree of resilience by assuming new roles under changing conditions. Outside India, the Japanese case of economic development provides an example where many traditional elements of social structure are not found incompatible with economic development.

The fourth essay on 'Economic Development, National Planning and Public Administration' included in Part I—Hindu Culture and Economic Change, is somewhat remotely connected with the other three essays discussed above.

The reviewer feels less competent to review Parts II and III of the book.

On the whole, it is heartening to see that, in recent years, many economists have increasingly become conscious of the role of social factors in economic development. Professor K. William Kapp's attempt is a welcome addition to this field of investigation. However, one would wish their interests, instead of stopping at the level of platitudes and impressions, would deepen further in search of closer and specific relationship between economic activity and other aspects of social structure.

PUBLICATIONS RECEIVED

Social Costs of Business Enterprise by K. William Kapp. 311 pages. Rs. 20.00. Published by Asia Publishing House, Bombay.

National Income of India—Economic Research and Training Foundation, Indian Merchants Chamber, Bombay. 271 pages. Rs. 15.00.

Approach to Statistical Quality Control. Publication of Indian Statistical Institute, New Delhi.

Industrial India Annual 1963. 204 pages. Rs. 7.50. Published by A. MacRae & Co., Bombay.

The Indian Journal of Public Administration—Special Number on Administrative Reforms since Independence. Rs. 3 or 7s. 6d. The Indian Institute of Public Administration, New Delhi.

The Indian Dog by W. V. Soman. 127 pages. Rs. 12.50. Published by Popular Prakashan, Bombay.

Agriculture for Students

Agriculture in India Vol.I: General—by L.S.S. Kumar, Lt.-Col. A.C. Aggarwala, H.R. Arakeri, M.G. Kamath, E. N. Moore and R. L. Donahue. Asia Publishing House. Pages xxiv+252 Rs. 14.

H. Y. Mohan Ram

THERE is an urgent need for good and inexpensive textbooks for our students. The bulk of books available in the market are hardly worth even the value of the paper used. Dependence on foreign books has led to much ignorance of things in our own environment. It is obligatory for the talented teachers to compile books of quality. A centralised organisation should be entrusted with this task. There can be learning only when there is good reading material.

Agriculture in India, Vol. I General is the first of a series of three volumes being prepared by an Indo-American team of authors. The fruit of three years' labour, the book is intended for use by the students of Multipurpose Higher Secondary Schools. The reputation of the authors, wide publicity and an attractive cover lead one to expect much from it. But, compiled by several specialists, the contents are disjointed and the style is varied. Only portions of the text are well written.

The importance of farmers' co-operatives, farmers' forums and farm youth clubs is outlined in Chapter 3. The various agricultural services which were non-existent some ten or fifteen years ago but are found today are listed in the next chapter. To make farming a paying business the authors rightly emphasise the maintenance of a layout sketch, accounts and records. The unnecessarily lengthy chapter devoted to plant forms (42 pages) could have been shortened by crisp editing. Familiarity with plant forms is, no doubt, necessary. But the relationship between internal structure and functions has not been meaningfully brought out. The account on the physiological processes like absorption, respiration, transpiration and photosynthesis have been duplicated to some extent in Chapters 7 and 8. The effects of light, temperature and hormones in vegetative growth, flowering and fruit development, considered to be of vital importance in modern agriculture, find no mention anywhere.

The chapter 'Chemistry in Agriculture' is somewhat repetitive but well written. Hints on restoring soil fertility, reclamation of alkali soils by gypsum and the cultivation of *dhaincha* (*Sesbania aculeata*) and selection of crops tolerant to alkali are good features.

The maps showing the distribution of rainfall could have been simplified. Chapters 10 and 11, on soil conservation and weed control respectively, are commendable for brevity and clarity. Methods of soil erosion, extent of damage and methods of control are treated well. The types of ploughs used in India, the necessity of cultivation and the recommended methods of inter-cultivation are described. Weeds compete with the crop for water, nutrients, light, space and also harbour fungal and insect pests. The loss due to weeds is many times greater than the total loss due to pests and spoilage during storage. The various practices of preventing and controlling weeds are described. The special problems involved in the eradication of *lavala* (nut grass) and dub grass are discussed.

Perhaps the most useful part of the book is the one on fertilisers. Besides listing the elements essential for plants it enumerates the kinds of fertilisers available in India for nitrogen, phosphorus and potassium nutrition. The relative increases in yield (per acre) obtained by using the various organic and inorganic sources of nitrogen in crops like rice, wheat, *bajra* and *ragi* are mentioned. Also useful is the information on the methods and time of application of the fertilisers. Although India has a larger volume of water than any other major country in the world, its distribution is limited. Only 19 per cent of India's river waters are being used for irrigation. An illustrated account of the practices of lifting water, the relative advantages of the different irrigational and drainage systems forms the last chapter.

The inclusion of conversion factors is useful for reference. In addition to a glossary for chapters 6 and 7, there is a separate "glossary of India and technical words with their scientific names and English equivalents". The Latin names of some plants are incorrect. For example, bitter-gourd should be *Momordica charantia*, whereas it has been named *Benincasa hispida* (Petha). Manila hemp should be *Musa textilis* and not *Ravenala Sp.* Walnut belongs to the genus *Juglans*; the glossary lists it as *Aleurites moluccana*. Besides these there are numerous spelling mistakes. In books intended to be texts, extreme care should be exercised lest mistakes should perpetuate themselves among students.

The Indian equivalents of plants are provided and the name of the language is mentioned in parenthesis. Two examples will illustrate the illogical way it has been done. Coffee: Kafi (Punjabi); Cinchona: quinine, Sinkona (Punjabi).

There are 105 drawings and 79 photographic plates in a book of 252 pages. While illustrations should enhance the quality of a book, indiscriminate dumping has produced a negative effect. The photographs (mostly by Roy L. Donahue) are fairly good but some of the line drawings (Figs. 2,8,24, 48,57) are amateurish.

The source of each picture is mentioned and one wonders why the authors were 'courteous' in lending illustrations to their own book! Some illustrations have been redrawn and it is doubtful if the originals were as bad. Every chapter concludes with a summary, a few references and some questions. Most of the questions are direct and simple. "What are the forms into which plants are modified and why" is a question which appears on page 80. The latter half of the question can have only a teleological answer!

With better choice of illustrative matter and more careful editing and proof reading the quality of this book would have greatly improved. It is hoped that the publishers will revise it before bringing out a second impression.

QUOTATION BOX

Mr K. Kamaraj, Chief Minister of Madras and author of the plan for resignation of Congress ministers, is known in his younger days to have tamed a temple elephant which had got out of control.

—From a report in "New Statesman", London.

He is not a brilliant man, in the sense in which we consider a Madrasi or a Bengali to be brilliant.

—From an article on Mr Kamaraj in "Mainstream"

Mr. Nehru does not know the difference between the "lowest level of income" and average income.

—Dr Ram Manohar Lohia, M.P.

The questioner explained that studies on animals like apes showed the jaws of the female were made in such a way as to suggest that women acquired the faculty of speech first... "There is no basis for such a conclusion," Prof Collinder, Swedish linguist, said (in reply).

—Report of a Delhi meeting in "The Hindustan Times"

It is good that at long last the necessity of responsible leaders among the masses has dawned upon the Congress leadership.

—Acharya Vinoba Bhave.

Private enterprise is a fine thing but where it cannot possibly do the job it is perfectly good economics for the State to step in. Not even private enterprise can flourish if the basic requirement of a functioning economy, steel, is inadequate.

—Editorial in "The New York Times" on Bokaro.

Mr (Lal Bahadur) Shastri said that he was unable to confirm or contradict whether any action had been taken against any cyclist for not having a lamp during the day, but it was generally assumed that cycles which were not fitted with lamps during the day were unlikely to have the requisite source of light after dark.

—A report in "The Hindustan Times"

The progress that was observed during the first two Plans has flattened out during the current Plan period.

—Mr H.V.R. Iengar

Ill fares the land, to hastening ills a prey,
When wealth accumulates and men decay.

So wailed Goldsmith. The citizen of India may vary the complaint and say:

Ill fares the land, to slackening ills a prey,
When files accumulate and men delay.

—Editorial in "The Hindu"

Quit India: 9th August, 1942
Quit Office: 9th August, 1963

—Heading of article by Mr K. K. Shah, General Secretary of the AICC in "AICC Economic Review"

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How Much Do the People Earn and Spend?

The Union Minister for Planning, Labour and Employment, Mr Gulzarilal Nanda, made the following statement in the Lok Sabha on August 26:

IN the course of the debate on the 'No-confidence Motion', Dr. Lohia stated that 60 per cent of the households in the country subsist on Rs 25 a month, in other words, 27 crore people are living on only 3 annas a day.

The only data available on the subject for the country as a whole are the information collected by the National Sample Survey on consumer expenditure in rural and urban areas. The 17th Round of the N.S.S., relating to the period September 1961 to July 1962, provides the latest available data on the subject. These data indicate that the poorest 10 per cent of the population have a monthly per capita average expenditure of Rs 8 in rural areas and Rs 10 in urban areas or a daily per capita expenditure of 4.3 annas in rural areas and 5.3 annas in urban areas. The figure of 3 annas per head per day given by Dr. Lohia is not even true of 5 per cent of the population or 2.2 crore of people, as against 27 crore to which Dr. Lohia referred. The 60 per cent of the population to which Dr. Lohia has referred have an estimated average per capita expenditure of 7.5 annas per day. It may be further pointed out that within this 60 per cent group itself, there is a wide range of variation between the consumption of the first 10 per cent and that of the sixth 10 per cent. The average expenditure of the sixth 10 per cent in the rural areas is 10 annas and in urban areas 14 annas per head per day. For the population as a whole, urban and rural, including all expenditure categories, the average consumer expenditure for 1961-62 has been estimated at 12 annas per head per day.

Details of expenditure data by decile groups, i.e., for the population arranged in 10 equal groups of 10 per cent each in ascending order of per capita expenditure, in both urban and rural areas, is contained in the statement that is now placed on the Table of the House.

Average per capita consumer expenditure per month (30 days) by fractile groups, based on 17th Round of National Sample Survey, September 1961-July 1962.

All India—Rural and Urban

Sl. No.	Fractile groups per cent of population	Average consumer expenditure (per month) (in Rs.)		Average expenditure in nP per day per capita for population included within the upper limit of the specified fractile group	
		Rural	Urban	Rural	Urban
0	1	2	3	4	5
1	0— 5	7.09	8.53	24	28
2	5—10	9.09	11.55	27	33
3	0—10	8.09	10.04	27	33
4	10—20	10.67	13.88	31	40
5	20—30	12.82	16.61	35	45
6	30—40	14.62	19.56	39	50
7	40—50	16.47	21.94	42	55
8	50—60	18.79	25.50	45	60
9	60—70	21.25	27.68	49	64
10	70—80	24.70	35.65	53	71
11	80—90	29.95	43.86	58	80
12	90—100	51.16	88.76	70	101
13	0—100	20.85	30.36	70	101

(Note: 1 anna=6.25 nP; or 19 nP=3 annas)

Explanatory notes on Statement on Consumer Expenditure Distribution

A. SOURCE AND COVERAGE OF DATA.

1. **Source of data:** The data on which the results are based were collected in the course of the 17th round of the National Sample Survey for the period September 1961 to August 1962, through trained investigators.

2. **Coverage of data:** Consumer expenditure comprises all expenditure incurred by the household exclusively on domestic account, including consumption out of home-grown produce, barter, gift, loan, etc. Consumption out of home-grown produce is evaluated at ex-farm rates.

B. PRESENTATION OF ESTIMATES

3. **Fractile groups:** The population has been arranged in ascending order of per capita consumer expenditure of the households. The fractile groups are formed from this ordered population in specified per cent of total population. The fractile group 0-10 represents the 10 per cent with lowest per capita expenditure and the fractile group 90-100 the top 10 per cent with the highest per capita expenditure.

4. **Per capita monthly consumer expenditure by fractile groups:** Columns (2) and (3) of the statement give the average consumption expenditure in rupees per capita per month for rural and urban India respectively for each fractile group specified in column (1).

5. **Per capita daily consumer expenditure by cumulative fractile groups:** Columns (4) and (5) give the average consumer expenditure in naye paise (nP) per capita per day for rural and urban India respectively for all the population included within the upper limit of the fractile group to which the figure pertains. For example, looking at the sixth 10 per cent i.e. row number 8 in the statement, the figure of 60 nP under column (5)

means that 60 per cent of the urban population, from the poorest upwards, have an *average* consumer expenditure of 60 nP; and 45 nP under column (4), the average for the poorest 60 per cent in rural areas. Figures under columns (4) and (5) against row 13 likewise show the average consumer expenditure per head per day for the whole population, inclusive of all expenditure classes, separately for rural and urban areas.

Backward Classes

THE problems of Backward Classes should be studied more intensively and an assessment made of the schemes working for their benefit. This was the view expressed by Professor V.K.R.V. Rao, Member, Planning Commission, at the first meeting of the Working Group of the Ministry of Home Affairs on the Welfare of the Backward Classes in the Fourth Plan held on August 24.

Professor Rao suggested some kind of 'built-in' provisions in the general sector which would enable the backward classes to take full advantage of the general development programmes. Though the members of the Scheduled Castes had made remarkable progress in the field of education during the last 12 years of planning, Professor Rao felt that it was not possible to find out how far it had increased their earning capacity. Stressing the need for further research on the working of the schemes Professor Rao said that a meeting of those connected with research and training would soon be called by the Planning Commission to expedite the work. Professor Rao emphasised the need to recruit and train a cadre of officers to devote themselves to this problem.

The Working Group is expected to submit an interim report by November indicating the broad objectives and programmes of the Welfare of Backward Classes for the Fourth Plan.

The Working Group has been set up by the Ministry of Home Affairs under the chairmanship of Mr L.P. Singh, Special Secretary. Among those who attended the meeting were Professor M.N. Srinivas of the University of Delhi, Dr B.H. Mehta of the Tata Institute of Social Sciences, Mr L.M. Shrikant of the Gandhi Smarak Nidhi, and Mr Jeevan Lal, Secretary, Harijan Sevak Sangh.



U.S. MAIZE FOR INDUSTRIAL USE

We are to get 110,000 tons of U.S. maize valued at $ 7.7 million (Rs 3.7 crore) under P.L. 480. An agreement was signed in New Delhi on September 4.

The grain will be used in the manufacture of starch required by textile and other industries.

Giant Coal Seam

A COAL seam, 131.56 metres thick (432 feet), has been discovered in the Singrauli coalfield area in Madhya Pradesh. It is the second largest in the world in thickness.

A thicker seam is reported from Manchuria, China.

Diesel Exports

Exports of diesel engines in the first five months of this year amounted to Rs 23,68,834. About 25 countries imported Indian diesel engines.

Mangalore Port

Work has started on the Mangalore Port Project. Land has been acquired. The first stage of dredging of the entrance channel will be undertaken during this year.

Rashtra Kalash

The Rashtra Kalash for the Kharif season 1960-61 has gone to West Bengal and that for the Rabi season to Uttar Pradesh. The Andaman and Nicobar Islands have won the Rashtrapati Kalash for 1960-61. West Bengal's agricultural production rose by 29 per cent and that of Uttar Pradesh by 23 per cent to qualify for the awards.

DURGAPUR GAS FOR CALCUTTA: GRID OPENED

Surplus coke oven gas from Durgapur is now available in Calcutta for industrial and domestic use.

A 108-mile-long gas grid was inaugurated on September 1. It will supply 3 million cubic feet of gas to Calcutta now, and the supply will rise to 15 million cft. next year.

The grid costs Rs 5 crore and has been built with help from the Yugoslav Government.

A project to manufacture some essential chemicals by utilising primary by-products of the coke oven plant at Durgapur is expected to go into production in about two and a half years' time.

The project, a joint venture of the West Bengal Government and two private enterprises, on completion, will save foreign exchange and help in the growth of a number of subsidiary industries.

Kidwai Prize

Dr H.C. Srivastava of the Central Food Technological Research Institute, Mysore, has been awarded the Kidwai Memorial Prize for 1960 and 1961. The Director of the Institute, Dr V. Subrahmanyan shares it with him.

Paradip : Work Starts

A contract has been signed between the Orissa Government and an American firm for supply, delivery and erection of an iron ore handling plant for the port of Paradip in Orissa.

Initially, the plant will have a capacity for loading two million tons of iron ore which would ultimately be increased to ten million tons.

The plant is expected to be commissioned within two years.

NEW RAILWAY LINE

A 14-mile-long railway line between Aruppukottai and Virudhunagar in Madras State has been inaugurated. It is a metre gauge line, and has been built at a cost of Rs 1 crore.

It is part of a 41-mile stretch which is to link Virudhunagar with Manamadurai.

Ahmednagar and Its Sugar Co-ops

(*Continued from Page 13*)

of threshing the leaves, the bran-like cutides fall out along with the fleshy stuff. This bran is boiled with solvents to obtain crude wax which is further processed and refined. As already mentioned, the Ayurvedic Pharmacy Limited, Ahmednagar, has taken up the production of this wax. The output now is 150 kilograms a day. It has also set up a plant in Calcutta to produce 100 kilograms a day.

During the British rule, the Government had made an effort to organise the sisal fibre industry. Plantations were raised in the Shrigonde and Parner *tehsils*, and a colony named Ghaypatwadi ('village of sisal') had sprung up near Shrigonde town. But the scheme was ultimately abandoned.

At current prices, sisal can fetch Rs 200 to Rs 300 per acre every year if properly organised. The plant takes about three to four years to mature and after that it continues to yield about 40 leaves every year for more than ten years. An acre of land can grow about 2,000 plants.



Strides in Co-operation

A resurgent society creates dynamic institutions to express its spirit. The co-operative institutions of Ahmednagar reflect the vigour of its people. Here, as elsewhere in India, the first co-operatives were formed fifty years ago, but the movement attained its present strength in the district only during the past ten years. Stimulated by the Government, the movement found a fertile ground among the energetic people of this district. Today it dominates the entire economic life of the people. But for co-operation, the people would not have been able to achieve what they have achieved in the past decade.

Every village in the district has been brought into the co-operative fold. Various types of co-operatives have been woven into a network to help agricultural operations from A to Z, from initial credit for developing the land up to the marketing of produce. The membership of primary credit co-operatives is around 1.5 lakh covering 80 per cent of the cultivators. All categories of co-operatives have been growing in number. As on March 1963, the total in the district stood at 1,480. These included 1,054 primary agricultural credit societies, 66 non-agricultural credit societies, 20 marketing societies, 4 grain banks, 27 dairy unions, 54 farming and irrigation societies, 29 forest labour societies, 46 housing societies, 111 industrial societies, 18 consumer stores, 12 processing units and 2 transport societies. The co-operative movement has entered even the fields of printing presses and petrol pumping stations.

SUGAR CO-OPERATIVES

The biggest and the most remarkable venture in the co-operative movement in the district is the Pravara sugar factory. It owes its birth to the economist, Professor D. R. Gadgil, who has initiated any number of co-operative activities in Poona and elsewhere, and its prime organiser is Mr Vitthal Ekanath Vikhe Patil who was honoured with Padmashri. The pioneering venture, fraught with difficulties and obstacles, received support also from Mr Vaikunthalal Mehta, then Finance Minister of Bombay State.

The co-operative was registered on the last day of 1948 and the first bag of sugar was filled on the last day of 1950. The initial capacity of 500 tons has been raised to 1,200 tons a day and there are plans to expand it further to 1,800 tons. The share capital has risen from Rs 6 lakh to 39.16 lakh, membership from 500 to 2,205 and sugarcane area from 800 to 4,500 acres. The society has repaid its debts years in advance and now it earns a net profit of Rs 4 lakh.

A colony named Pravaranagar has sprung up around the factory. It is situated at a distance of 12 miles from the nearest rail head at Shrirampur. Ninety miles of roads have been built in the factory area for facilitating transport.

The success of this factory led to the establishment of five more sugar factories in the district, 14 others in the State and 46 more in other parts of the country, and to the decision by the Government of Bombay in 1954 to license new sugar factories only in the co-operative sector.

DISTRICT BANK

If Pravara and other sugar factories are the highwater-marks of co-operation in the district, the working of the District Central Co-operative Bank gives a measure of the normal activity. The Bank was established in October 1957 and had the guidance of Mr M. K. Firodia.

Within these small number of years, the Bank has made such progress that today it is the biggest district co-operative bank in not only Maharashtra but the whole of India. It has a working capital of Rs 9 crore.

The progress of the bank during the past few years will be seen from the following table :

(Rs in lakh)

	June 1960	April 1962
Authorised capital	70.00	100.00
Paid-up capital	47.33	89.37
Funds	00.54	16.66
Deposits	208.39	356.19
Borrowings	257.00	413.00
Working capital.	513.00	875.12
Loans outstanding	430.51	701.45

The bank earned a net profit of Rs 12 lakh in the year ending June 1962.

Besides entirely financing the agricultural and marketing societies, the bank has financed two sugar factories and a number of ginning and pressing and other processing

units. This year it has introduced a scheme to finance the cultivation of Deviraj cotton to the extent of 1 lakh acres at the rate of Rs. 200 per acre. It has also begun organising a co-operative printing press with a capital of Rs 1.5 lakh.

The bank has 30 branches in the district. It has built a five-storey building at Ahmednagar at a cost of Rs 5 lakh.

Another important bank in the district is the District Co-operative Land Development Bank which gives long-term loans for wells, pumping sets and such other purposes. The bank began functioning in February 1961. In 16 months up to the end of June 1962, the bank had advanced loans of Rs 61.75 lakh, and in the next 12 months it gave Rs 74.68 lakh as loans. How intensive its work is can be gauged from the fact that in the three-month period February-April 1962, the bank distributed loans of Rs 55 lakh to 2,754 cultivators.

SALE PURCHASE BUSINESS

A look into the transactions of a sale-and-purchase society will give an idea of the marketing of agricultural produce. There are about 20 marketing societies including one at each *tehsil* place. They ensure fair price for the produce and supply the cultivator with all his major needs. They handle about a sixth of the total agricultural produce that is marketed in the district.

The Godavari-Pravara Canal Co-operative Sale-Purchase Union, Kopargaon, is one among these co-operatives. It was established in 1932. Its jurisdiction extends to three *tehsils*—Kopargaon, Shrirampur and Rahuri. It has its branches and depots at seven places. Its activities include the provision of warehouses to cultivators, paying advances on agricultural produce and supply of agriculturists' requirements such as manures, cement, implements, pumping sets, insecticides and sprayers, and household needs like food grains, cloth and oil. It deposits the produce of the farmer till he gets a fair price and meanwhile gives him advance money for his needs. At times, it purchases the produce from the farmers and sells it when market is favourable.

VIKHE PATIL—a dynamo

He Combines Service With Industry

Mr Vitthal Eknath Vikhe, popularly known as Vikhe Patil, is a sugarcane wizard. He is the pioneer of the Pravara Co-operative Sugar Factory, the first co-operative sugar factory in the country.

Vikhe Patil has a magnetic personality. Clad in a simple dress—dhoti, shirt and coat, with carelessly wound turban and worn-out chappals—he carries with him the clean air of informality and sincerity. He was educated only up to the primary standard but he has shrewdness enough to outwit any opponent in his tenacity to pursue his objective to fulfilment, and knowledge enough to keep many experts busy. In organising the Pravara factory, he had to give a hard fight to vested interests.

With his ingenuity and life-long experience as a farmer, he solved the problem of water-logged land by digging wells at strategic points. The lands now yield a rich harvest of sugarcane.

He bears his 62 years of work cheerfully. He is busy all the day, meeting visitors and looking after the entire affairs of the factory—and he knows every inch of it. He moves round all the day and seldom feels tired. He reads without glasses.

His thoughts are always for the welfare of the peasantry. The Agricultural School and the Pravara Agricultural and Industrial Development Co-operative Society's workshop, both offshoots of the sugar factory, are his creation.

He has two suggestions to offer government: the first is that school teachers, clerks and policemen should be exempted from the land tenancy act, and the second is that all Government effort in a *tehsil* should be pooled together instead of being split under different schemes.

In spite of the property he inherited and earned, Vikhe Patil is developing an attitude of detachment that is so prized in our culture. In a serious illness in 1945, he distributed all his property among the members of his family leaving only a little for his maintenance. He entertains guests in a well furnished modern guest house of the factory, but when by himself he likes to sit in the old tin-shed where he worked out his dream of the co-operative sugar factory with long years of patient effort. He does not like to sit in a chamber of the factory's big office and look officious though he wants everything to be done promptly and neatly.

In 1961, Vikhe Patil was awarded Padmashri in recognition of his service to the people.

Pravara Credits

The Pravara Co-operative Sugar Factory which leads the country in the co-operative sugar industry has several achievements to its credit.

1. It stopped the exploitation of cultivators by the private sugar factories.

2. It has created a confidence and a sense of ownership among the cultivators and has assured them fair income for their produce.

3. It set up a pattern of co-operative organisation worthy of emulation in the spirit of patriotism and welfare of the common cultivator.

4. It collects the following subscriptions from its members on every ton of sugarcane brought by them—Re 1 as deposit, Re 1 as small savings, Re 1 as workshop fund and 25 naye paise as education fund. Thus it contributes to the national effort in small savings—the total collection amounted to Rs 9.26 lakh on 30-6-1962; it has started an agricultural school; and it has set up a big workshop under the management of a separate co-operative.

5. Payment is made to the cultivator immediately on receipt of his sugarcane.

6. Members are given financial and technical help for improving the land and the yield.

7. It has brought large tracts of waterlogged land under cultivation by digging wells at strategic points to reduce the subsoil level of water.

In 1961-62 the Union handled the business of a total value of Rs 7.73 crore on which it earned an income of Rs 8.12 lakh. Net profit amounted to Rs 2.53 lakh and a dividend of 9 per cent was declared. In the total business the sale of the various goods amounted to Rs 1.79 crore. On marketing *gur*, cotton and food grains of the farmers it earned Rs 40,000 by way of commission. It advanced Rs 29 lakh on the goods deposited. It also supplied to the farmers engines, pumping sets and hardware valued at Rs 8 lakh.

The financial position of the Union was thus in June 1962:

	Rs in lakh
Authorised capital	3
Paid up capital	2.14
Reserve Fund	2.70
Other funds	6.25
Working capital	32.96

Down below the *tehsil* level come the societies in villages. Here is a brief introduction to the multi-purpose society of Kolhar in the Shrirampur *tehsil* which gives an idea of what kind of co-operative activity takes place at the village level.

The Kolhar Multipurpose Society was registered in June 1946. It covers 13 villages. It has 455 members. It advanced loans of Rs 9.26 lakh in 1962-63, as against Rs 1.61 lakh in 1955-56. The progress in the financial position of the society during the past eight years is shown in the statement below:

	(Rs in thousand) 1955-56	1962-63
Share capital	57	493
Deposits	03	12
Reserve fund	08	65
Other funds	—	102
Bank loans	142	777
Working capital	219	1562
Loans advanced	162	926
Profit earned	9	35

SOCIAL ASPECT

Co-operation is not only a means to an economic end. It is also a new arrangement of social relations, an arrangement which best reconciles group loyalty and individual personality. Inevitably it is an outstanding vehicle of social service. Co-operators like Prof D. R. Gadgil, Mr Vaikunthlal Mehta, Mr M.K. Firodia and Mr Vikhe Patil are primarily social workers. Following in their footsteps, Dr C. M. Mehta is doing his bit in a small field of Kopargaon. He has identified himself with the Taluka Development Board of Kopargaon, of which he is the vice-chairman.

The TDB, Kopargaon, as it is popularly called, was formed in 1936 as a non-official organisation to educate and guide the farmers in the modern ways of agriculture. In 1958, the State Government discontinued the scheme of TDB, but two TDBs were continued considering the valuable service rendered by them; Kopargaon was one of the two. The Board was also entrusted with sale-purchase activities. It has initiated several new ideas which now have taken firm root in the district—farmers' unions, farmers' rallies, cattle shows, dairy and cattle breeding farms, and agricultural and industrial exhibitions. It has supplied improved seeds and has started a tractor service. It has ploughed 5,000 acres for the farmers and levelled 2,000 acres in the *tehsil*. It has been advocating the setting up of a regional agricultural chemical laboratory.

The Board also distributes fertilisers, insecticides, iron and cement and undertakes spraying of crops. It organises the district cattle show and conducts demonstrations of crops on its farm. It has developed 50 acres of land for fruit gardening and usual crops. Besides it has tended a natural park on 200 acres of woods. Plantations of useful trees have been growing in the park area. The social outlook and educative purpose of the Board is evident in the arrangement of avenues in this park. Each avenue is named after saints and great men, their statues are erected and their teachings are displayed at vantage points.

FARMERS' UNIONS

Farmers' Unions are an integral institution in the organisation of our rural community. The Taluka Development Board of Kopargaon organised 25 farmers' unions on its own initiative some 25 years ago. At several other places, farmers voluntarily organised themselves into unions. In 1958, the State Government introduced a scheme of farmers' unions and now there are 1,294 farmers' unions covering all the 1,332 villages in the district. They have a membership of 1.79 lakh out of a total of 2.13 lakh farmers—81 per cent.

These farmers' unions are further federated into *tehsil* unions forming an apex union for the district.

The unions undertake crop protection operations and land development work including blasting and boring of rocks for wells. They distrubute cotton purity certificates to cotton growers. Some of the *tehsil* unions have built rest houses for farmers and their own buildings at the tehsil headquarters. They organise rallies of farmers.

Apart from acting as the representatives and safeguarding the interests of farmers, they foster a fellow feeling among the farmers and build up a strong and dynamic community life.



Service Unto the Last

Now to the problem of the backward class in the district. The western Akola *tehsil*, as we saw, consists mostly of Adivasis belonging to two communities, Mahadev Koli and Thakar. The people are so poor that their per capita annual income is only Rs 100. They till the unyielding hilly land or work in forests. The welfare of these people is looked after under a Sarvodaya scheme. With its headquarters at Rajur, the scheme covers 60 forest villages with a population of 40,000. Mr R.V. Patankar, a social worker in the Gandhian tradition, is the director of the scheme and he is assisted by Mr S.G. Shende and a band of Sarvodaya workers.

The Sarvodaya centre of Rajur was one of 25 such centres opened under a State-wide Sarvodaya scheme introduced in 1949. The activities under the scheme resembled those of Community Development. The centres were therefore later closed except four in the Adivasi areas of

the Ahmednagar, Thana, Jalgaon and Nasik districts.

The Rajur centre began work in January 1951. It opened 40 primary schools in the villages (which were handed over to the District Local Board in 1958), and dug 41 wells for the supply of drinking water in the villages. By Shramdan, 75 miles of approach roads have so far been built.

For the people in the forest area, the centre has organised different co-operative societies. The forest labourers' society at Shendi has 200 members engaged in felling trees. It also collects leaves of Godlimb ('Sweet Margosa') which are used as spices. Two societies have been organised for collecting myrobalan, a fruit that is widely used in Ayurveda and for tanning. One of these is at Mutkhel and the other is at Harishchandragarh.

Reference has been made earlier to the Dangi cattle bred in this area. There is a proposal to set up a dairy farm at Katalapur.

SATYA NIKETAN

Workers of the Rajur Sarvodaya centre organised an institution named Satya Niketan in 1952 for continuing their social work on a permanent basis. All schemes for Adivasis are worked through the Satya Niketan which manages the Sarvodaya centre at Rajur. It has built an Ashram colony and a nucleus of educational and industrial activities. All inmates, whether students or workers, adults or children, observe the Gandhian discipline, and the day in the Ashram starts with the congregational prayer at dawn.

Among the educational institutions is a residential high school with agricultural bias. A farm of eight acres is attached to it. It was opened in 1960. Another is a Balwadi (children's nursery). There are also three hostels for students, including one for girls. Adivasi boys and girls live here free of charge and learn not only their school lessons but also a new way of life. A young married girl in the hostel says she will not stop her education before matriculation and her boy husband, who is also a student elsewhere, encourages her. There are some 50 girls in the hostel.

The centre has four kinds of industrial units which not only train people but are intended to promote village industries in the region. The



hand-pounding unit processes 200 maunds of paddy and provides seasonal employment to a dozen women. Two *ghanis* extract edible oil from niger seeds which are a local crop. They crush 200 maunds of seeds every year. Spinning is done on Ambar Charkhas. There are also spinning centres at Kotul and some other places. Yarn valued at Rs 8,000 is spun on 91 Ambar Charkhas every year. Four centres produce Khadi and blankets valued at Rs 27,000 a year. Soap is made from the oil of Gulchai (Pisa) and Ratnajyoti (a kind of wild castor plant); the two plants grow in abundance in the local forests. The collection of these seeds fetches about Rs 5,000 every year to the Adivasis. The oil of neem seeds is also used in soap making. The annual production of soap is valued at Rs. 50,000.

There is also a hand-made paper unit which uses the locally available waste products such as paddy and other straws and gunny bag rags for its raw material.

The carpentry and smithy workshop produces furniture and other goods valued at Rs 60,000 every year. It manufactures bee-keep equipment of standard specifications.

The centre aspires to become a rural university with all facilities for students and teachers. During the twelve years of working, it has created a local leadership and it claims to have checked the exploitation of the people by interested political parties.

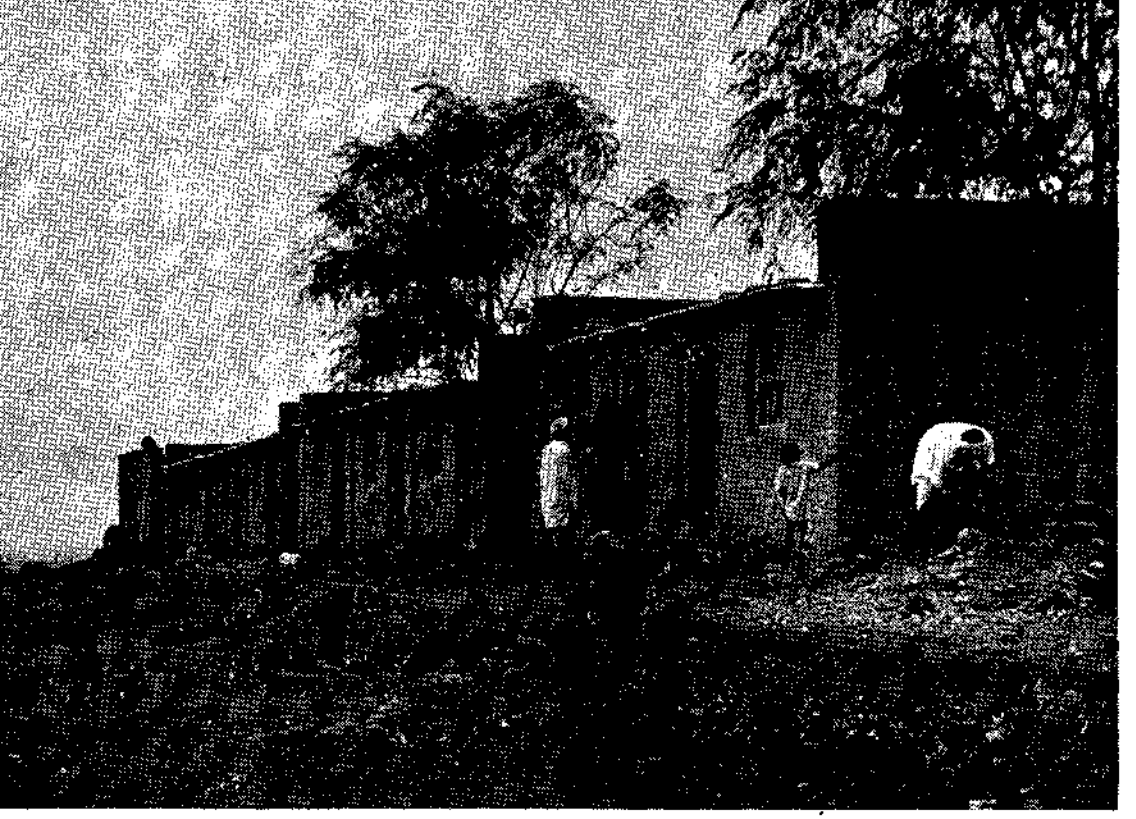
HOUSES FOR NOMADS

Another important activity for the welfare of the backward people is the programme of building housing colonies. Recently a colony has been built for the Lamans at Mehekari, seven miles from Ahmednagar.

Lamans are a 'denotified' nomadic tribe. They work as labourers and move in groups from place to place in search of work for eight months in a year. About 150 people were persuaded to make their home on hillside near the Mehekari village. The thatched, squalid huts in which they lived, have now been replaced by 25 houses newly built for them. Each house has cost Rs 750 and has two small rooms. The walls are of brick, and the roof is of corrugated iron sheets. The total cost of the colony is estimated at Rs. 32,000 including a well and a community centre which are under construction. The labour was provided by the Lamans themselves as their share of the cost. The colony has been set up under the State scheme for the resettlement of ex-criminal tribes. The Lamans of Mehekari have also been given some 60 acres of land for tilling at the foot of the hills.

The Vaidus are another nomadic tribe of the district. They also move in groups from village to village and earn their livelihood by selling medicinal herbs and other forest products. A group of 24 Vaidus in Sangamner *tehsil* have come together to form a co-operative housing society which was registered in February this year with a share capital of Rs 500. The Government has sanctioned Rs 23,000 as loan and Rs 11,500 as subsidy; fifty per cent of the money has already been distributed. The colony will have 23 houses on the land given by the Government. Construction is going on.

Another housing colony at Naygaon, about 20 miles from Shriram-



LAMAN Colony at Mehekari. These new houses have replaced the old huts (picture on the left page) in which the Lamans lived.

pur, represents the work being done to help the distressed. The low-lying village is frequently affected by the floods in the Godavari. It is to be moved to a higher elevation. The colony, in which 23 houses have already been built, is the first instalment of the shifting. Each house has four rooms with mud-plastered walls and costs Rs 3,500. The colony will be equipped with wells and other community amenities.



Family Planning Popular

ALONG with the modern ways of agriculture and economic growth, the people in the district are adopting new ideas of social life. The programme of family planning is gaining ground. Distribution of contraceptives has been increasing and vasectomy camps have been held from time to time.

The family planning centre at the General Hospital in Ahmednagar gives advice in 125 cases a month on an average. Women outnumber men among those who come for advice. The number of men undergoing vasectomy is ten every month.

The rural family planning clinic attached to the primary health centre at Jeur near Ahmednagar provides a good example of the work being done in this direction in rural areas. The centre has earned a merit certificate from the Union Government for outstanding work in 1960-61.

Field workers of the clinic go round from door to door doing propaganda and attend to cases in nearby villages. The clinic serves a selected area of 1,000 households. During the past three years (1961-63), 400 men have undergone vasectomy.

A VISION

As I moved on from Ahmednagar to Khandesh, I thought of fields of sugarcane, groundnut, Deviraj cotton and Jowar. I thought of sisal among the brown hills and rocks, of the new Bank building in Ahmednagar town, of the trim town of Shrirampur, of the park in Kopargaon and the vast orchards of Brahmangaon. I thought of the solid patriarchal face of Vikhe Patil, the frail figure of Dr Mehta, the concentration of the Mahadev Koli women as they worked in ankle deep slush in the paddy fields and the proud demeanour of Lamani women who posed for my camera in front of their newly built houses.

And through the mist of vapoury clouds come down to caress the earth, I saw a sturdy figure standing on a hill, tanned in complexion, looking at the crops below with eyes of deep content, his head high and his muscular arms taut.

Who was this? A warrior who fought for Shalivahana? A husbandman who had heard Dnyaneshwar discourse at Nevase? A Naik among Chand Bibi's soldiers?

Or was it only a big boulder on the hill?

SNIPPETS

A record in tunnel driving—616 feet in one month—was achieved by Hindustan Construction Company in the Rs 25-crore Sabarigiri project, Kerala. The tunnel will be 18,273 feet long..... The Ladakh Institute of Higher Education was opened in New Delhi on September 2. It is affiliated to the Banaras University and offers degree courses to students in border areas in Tibetan, Sanskrit and English..... A new trade agreement with Pakistan was signed on September at Karachi. It provides for supply of 130,000 tons of coal per month and 50,000 tons of stone boulders per year to pakistan from India. India will get jute and cotton.....

The total contributions to the National Defence Fund up to August 31 amounted to Rs 56.35 crore. In addition contributions in gold and gold ornaments amounted to 22,40,877 grammes approximately equal to 1,92,185 tolas..... A new Calcutta-London telex service has been inaugurated ..... An agreement was signed with the British Government on August 26 for a loan of £ 10 million (Rs 13.33 crore). The loan is part of the British share of the Aid India Club's commitments..... Heavy Electricals Limited will pay a stipend of Rs 400 per month to all graduate apprentices recruited in future. Hitherto the sum used to be Rs 250 in the first year and Rs 350 in the second year.

YOU ASK US WE TELL YOU

Questions from readers on planning and development will be answered on this page. It might be noted that the purpose of this service is to provide information. Trade queries will not be entertained.

Perspective Planning

K.N. JOSHI, Lucknow

What is Perspective Planning? What is its significance?

ANSWER: We in India are familiar with the Five Year Plans—so familiar in fact that we do not wait to ask: why Five Year Plans and not, say, three or seven or ten year Plans? It is of course true that the period for which we may suitably draw a development plan should be neither too short nor too long, but there is no sanctity about any fixed number of years. This line of thinking naturally leads us to the distinction between a short-term and long-term view of planning which is both real and vital.

The process of growth is a long-drawn affair. The ultimate goals of planning can be reached only over a number of years and the process initiated now for their attainment can be conceived only in conformity with them. In other words, we must have a perspective, a vision of the economic and social objectives to be realised, say, 20 or 25 years hence. Thus the perspective plan fixes the ultimate objectives over a long period whereas the five year plans are the phases of the long-term programmes through which we march to achieve the ultimate objectives.

Right from the beginning of the era of planning in India, thought was given to working out broad lines of growth over a generation or so. But no perspective plan as such had been drawn up. The Third Five Year Plan document, however, met this need. It has recommended the formulation of a 15-year perspective plan and work on such a plan is progressing.

Shadow Prices

S.L. LUTHRA, Panipat

What are "shadow" prices? Why are they used?

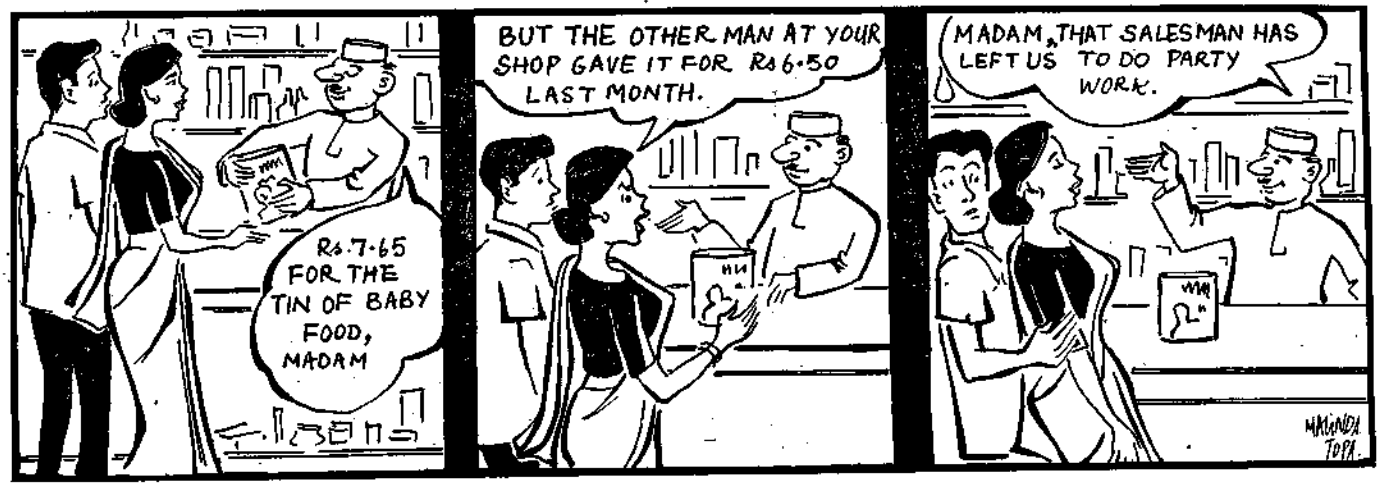
ANSWER: The prices we normally speak of are market prices at which commodities and services are actually bought and sold. It has been recognised for a long time by economists that these prices may not reflect the "real" prices of goods exchanged. In a market economy, the producers are interested in maximising profit and not in general welfare. So, generally, they charge a price which takes into account their private costs and not social costs. To the society, therefore, certain prices may be too high and certain others too low. Wherever the market prices do not adequately reflect the real scarcity of resources, there might be mis-utilisation of them. So to bring about proper utilisation of such resources, they should be calculated not at their market prices but at what have come to be called "shadow" or "accounting" prices.

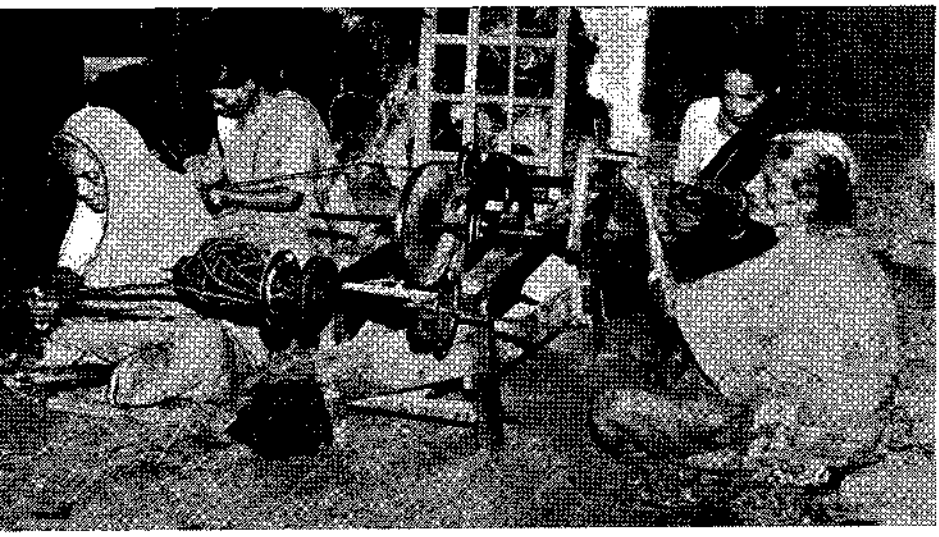
Let us illustrate the point. Considering both the over-all scarcity of capital and the Plan priorities laid down in India, it can be argued that a rate of interest at, say, 5 per cent for the use of funds should be regarded as too low, even though they be forthcoming in certain amounts and in certain directions. At this rate, certain projects may appear profitable on purely financial terms, though they may claim a low priority from the over-all social point of view. In other words, if market forces are allowed a free play, our priorities will get distorted. Accounting prices are therefore adopted to reflect the real social costs and priorities in the development programmes.

Lubricants Factory

The Government of India will set up a lubricants plant of 145,000 ton capacity in collaboration with Esso. It will be located in Bombay near the Esso refinery and will cost Rs 7.1 crore.

MR & MRS SHAMBU **BY MALINDA TOPA**





SISAL strands being made from fibre

BRIGHT SPOT

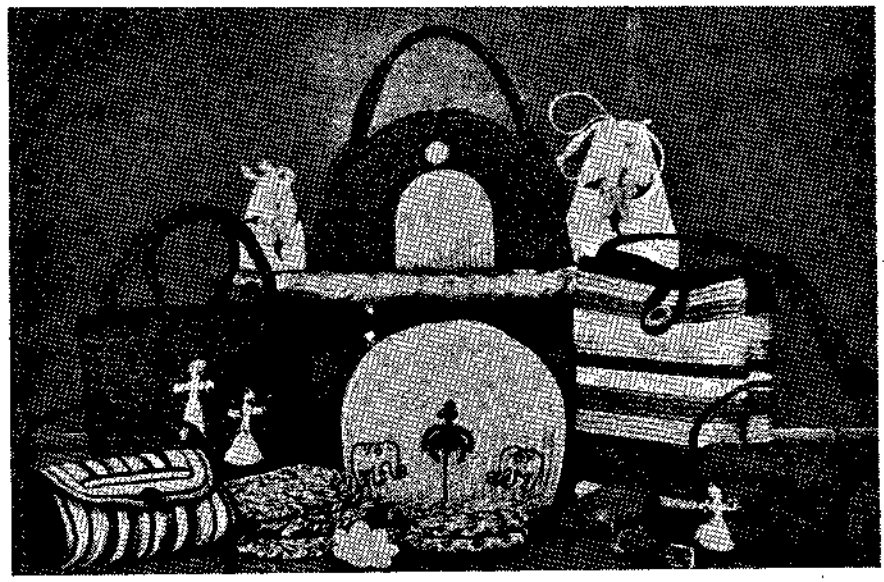
Savings Record

During the four months April-July, 1963, collections from small savings amounted to Rs. 25.44 crore net. This is an all-time record for the four-month period since the movement started 20 years ago.

ENGINEERING GOODS worth Rs. 8,849,772 were exported to African countries during January-May 1963. The figure was a million rupees more than in a like period last year.

PRIDE OF PLACE

SISAL ARTICLES



OF AHMEDNAGAR

FLOOR mats, ladies' handbags, baskets, sandals, seat mats and a variety of other fancy articles made of sisal fibre are a novelty from Ahmednagar. They come in attractive colours and artistic designs, and have a silky glow.

That the stiff, bristling cactus is transformed into such attractive articles is a tribute to the skill of Ahmednagar women. The idea has also been thought up of making handbags in mother and daughter pairs. When the mother buys a bag she will find a little one inside for daughter.



NEW products take shape

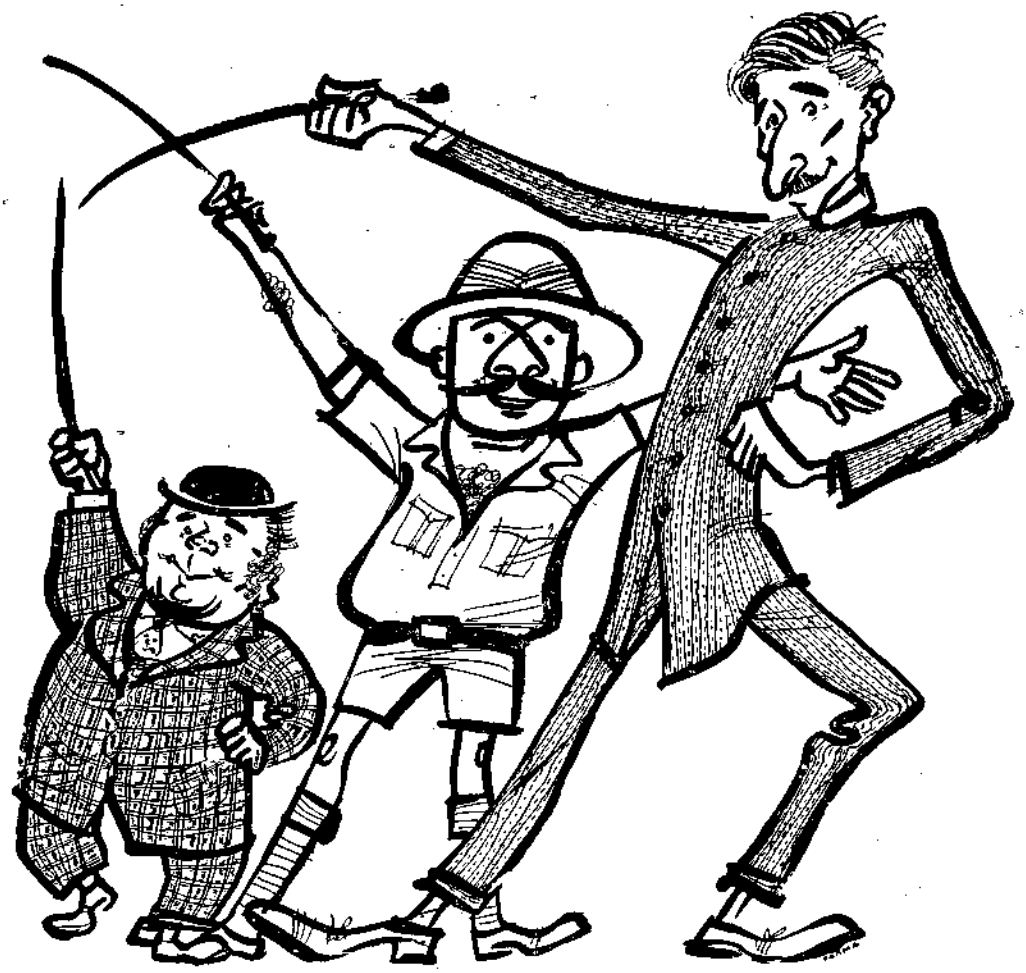
The sisal fibre which goes into making these articles is of a superior quality which costs around Rs 75 per 100 lb. in the market. (Twenty-five years ago the price was Rs 6). It is combed and cleaned to remove the impurities and to make it finer and then dyed and dried. Twines and braids are then made to the sizes required for making different articles.

Matting and footrugs are woven on handloom. Other articles are made by hand. The price of matting is Rs 1.50 per square foot. A ladies' handbag sells at Rs 10 to Rs 15.

The Sisal Fibre Industry Centre run by Eleanor L. Tishkins of the American Marathi Mission at Ahmednagar employs about 90 women. The unskilled among them do cleaning, dyeing and other preliminary work. The skilled workers make the articles to the designs supplied to them. The Centre produces articles worth Rs 50,000 every year.

—Photographs by courtesy of the Sisal Fibre Industry Centre, Ahmednagar.

TFRY-2



All for one, one for all!

"A solemn and public pledge," *said Tata-Fison.*

"To create!" *said Ralli, thinking of fertilizers.*
"To grow healthy crops—ensure bumper harvests—
to feed the hungry millions."

"To destroy!" *thundered Tata-Fison thinking of pesticides.*
"We'll exterminate scurvy pests,
villainous insects and strangling weeds."

"In short," *they said together,* "a public pledge
to cover the field!"

Tata-Fison and Rallis have combined their separate marketing organisations into a single, unified service. For the future, all Tata-Fison products will be marketed by Rallis' Fertilizer and Pesticides Division. The merger will prove of immense benefit to the Indian farmer. For the first time, one integrated service will provide advice and products covering both crop growth and crop protection throughout the country...a notable contribution to the cause of agricultural progress.

TATA-FISON AND RALLIS COVER THE FIELD!

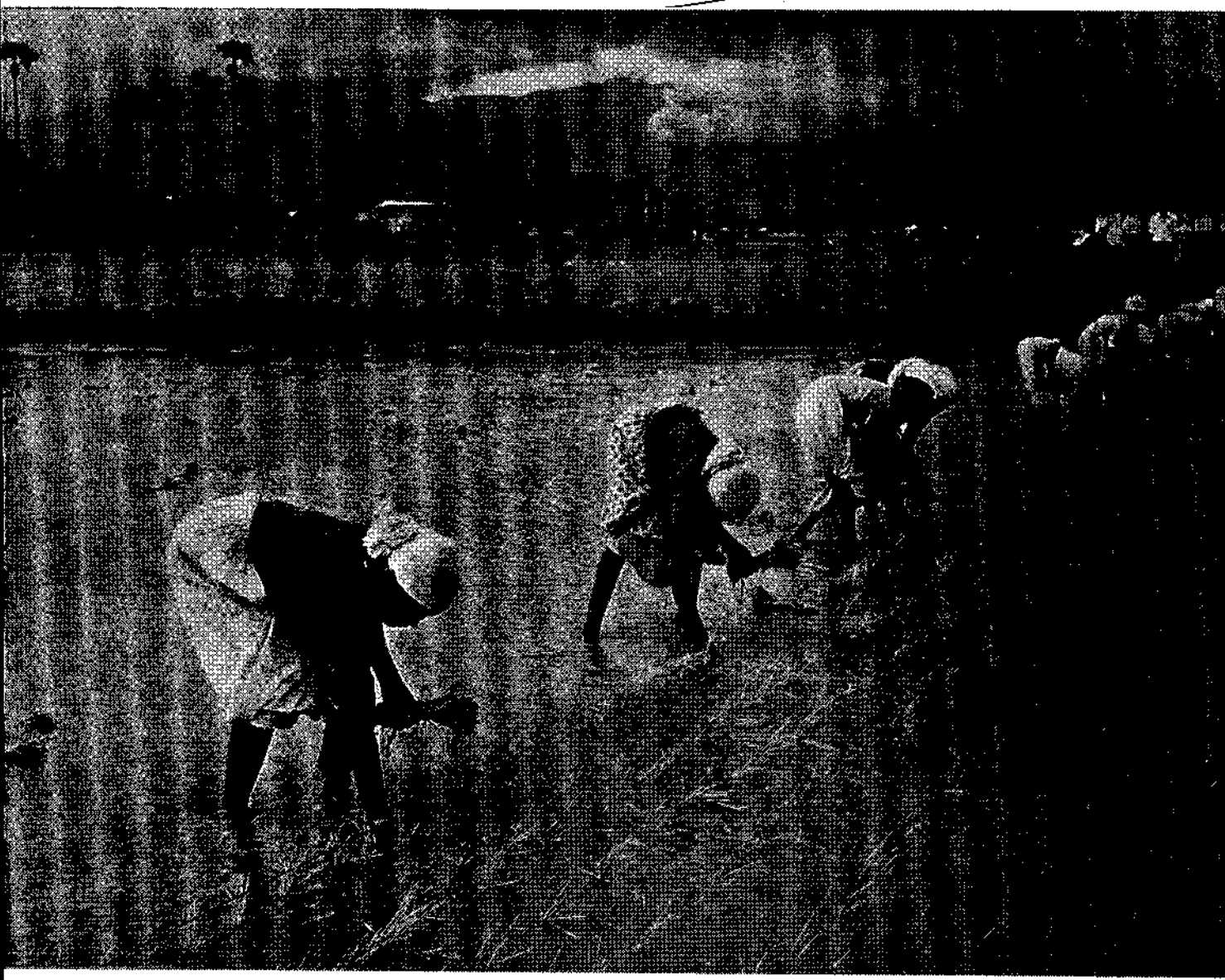
TATA-FISON RALLIS

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SAVING FOR DEFENCE : Page 6

YOJANA

No.-19



WHAT ARE UNIT TRUSTS ?
TRUTH ABOUT INCOMES

SEVENTH YEAR 19 SEPTEMBER 29, 1963 25 NAYE PAISE

ABOUT YOJANA

Yojana seeks to carry the message of the Plan to all sections of the people and to promote a more earnest discussion of problems of social and economic development.

It is issued every other Sunday in two separate editions, English and Hindi.

The Advisory Board of the journal consists of the Minister of Information and Broadcasting (Chairman); Mr. S.K. Dey, Dr. Ram Subhag Singh, Mr. T.N. Singh, Mr. Shriman Narayan, Mr. C. R. Pattabhi Raman, Mr. Akshayakumar Jain, Mr. Nawab Singh and Mr. T.P. Singh.

Although published on behalf of the Planning Commission by the Ministry of Information and Broadcasting, *Yojana* is not restricted to expressing the official point of view.

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Cover: Paddy planting in Palghat, a Package Programme district (see page 17). Photograph by T. G. SHIVARAM SINGH.

Over to You

HOUSE-BUILDING SPREE

IN the discussion "Does Defence Upset Development?" (*Yojana* August 4, 1963) Dr V.K.R.V. Rao correctly states "it is high time we started asking ourselves whether we have the kind of distribution machinery that most countries have when they have a war." I would like to know whether the Planning Commission has taken it seriously!

I am from Trivandrum, Kerala, the southernmost State in India. Emergency has cut deep into the construction programme of buildings for housing public offices for which the State Government (as well as the Central Government for its offices) is paying lakhs of rupees every month on rent as they have put a blanket ban on construction of office buildings. But who loses? Offices have to be conducted somewhere and they are being run from rented buildings which were formerly for residential purposes with the result that building rents have galloped in geometrical progression. Further, Trivandrum is the only State capital in India which does not provide quarters for even 1 per cent of its public servants.

It may be argued that some cement and steel can be saved for defence purposes. But Kerala Government has not put a ban on the construction of residential buildings or flats with, say, more than 1,000 square feet floor area. It is much more than what the so-called higher-income-groups in the bigger cities can afford to have. Hundreds of buildings are coming up in Trivandrum in its U-sector (upper class sector) with 2,000 and 3,000 square feet floor area for the enjoyment of one single family, because a house in Trivandrum costs less than 50 per cent of what it would cost in bigger cities. If constuction of houses and flats with more than, say, 1,000 square feet in floor is banned—which no one can reasonably deem a hardship especially during the emergency—it could save cement and steel; also, with the available money (almost all buildings in Trivandrum are coming with Government or similar loans of Rs 20,000 and Rs 30,000), the number of houses constructed can be doubled if not trebled.

Will the Planning Commission consider this?

Trivandrum. N.P. IYER

PEN FRIEND

I am 16 years of age and my main hobbies are collecting stamps and book reading. I want to have pen friends from India. Will you please publish my name in your journal? My name and address are:

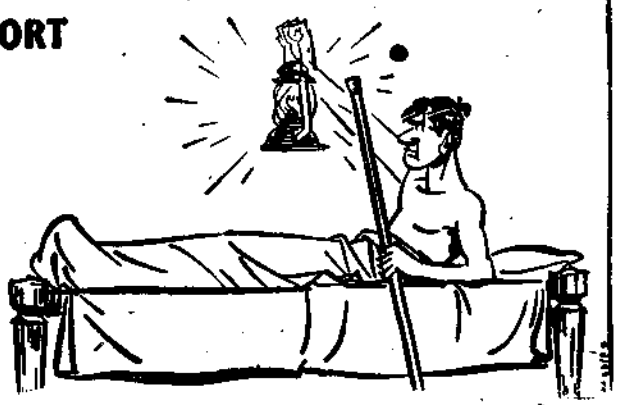
Beau-Champ
G.R.S. East
Mauritius. GOBURDHUN GUNSHUNDUTTAVYAS

rreedom is in peril, defend it with all your might —**Jawaharlal Nehru**

DEFENCE OF THE COUNTRY NEEDS CONTINUOUS EFFORT

The external danger that faces us is not of today only. It may last for a considerable time. So the nation will always have to be on its guard. There can be no complacency, no slackening of effort to strengthen defence in every way.

WORK RESOLUTELY



YOJANA

Vol. VII. No. 19 Fortnightly Journal Published on behalf of the Planning Commission ASVINA 7, 1885

THE MEN OF 'SEVENTY-SIX

OPPENHEIMER, the physicist, recently said that at the rate scientific journals were growing they would outweigh the globe in the next century. UNESCO calculated some time ago that at the rate at which the world's population was growing the human sum would have doubled a mere thirty years from now and that by the middle of the twenty-first century there would be only three square feet of space per person on the surface of the earth.

For laymen unused to much mathematics these statements are hard to believe. But Oppenheimer was not employing a figure of speech, and UNESCO was not exaggerating. They meant just what they said, no more, no less.

It is possible that in the next century books will have ceased to be printed on paper, and that a whole library in microfilm can be carried in one's pocket. It may even be that knowledge will be acquired without recourse to reading, and by pressing a button or by exposure to information-rays. Likewise it is possible that in the next two generations we shall have gone beyond oral contraceptives to, maybe, birth-inhibiting electronic gadgets. But while these are only possibilities, the increase of numbers, nothing else intervening, is a certainty.

Planning involves looking ahead, but to look too far ahead is giddy. Indian planning, being realistic, has so far thought up to the Fifth Plan. This 25-year period was conceived, right at the start of our planning effort, as the time required roughly to double our income. We are now right at the middle of this period. With all the knowledge of the past and of the experience of what happens when growth takes place, we still cannot be sure of how things will be in 1976 when the Fifth Plan would have drawn to a close.

We cannot be definite even about our population by 1976. The Third Plan document thought it would be be 625 million but that estimate rested on certain assumptions of family planning proving effective. Even if it will be only 625 million and not more, it means the staggering addition of nearly nineteen crore people.

Between now and then not only should we improve our capacity to feed and clothe so many new people, but we must be able to provide jobs for those born during the First and Second Plans who will have grown up and begun asking for employment. Professor V.K.R.V. Rao told the Working Group on Employment and Training this month that nearly 80 million new jobs will have to be created by 1976 if the shadow of unemployment has to be banished from our midst.

If we remember that during the First Plan only 7 million jobs were created and during the Second Plan 8 million, the creation of 80 million jobs in a mere twelve and a half years from now is not going to be easy. But such are the dimensions in which we have to move. If unemployment has not been got rid of thirty years after freedom, what would we be worth?

NEXT ISSUE

is a Special Number devoted to the theme

PLAN IMPLEMENTATION

Articles from leading economists and administrators including :

K. Santhanam	...	Chandulal Trivedi
Bharat Ram	...	Shriman Narayan
G. L. Mehta	...	T. N. Singh
H. V. R. Iengar	...	Tarlok Singh
Samuel Mathai	...	V. K. R. V. Rao
M. L. Dantwala	...	B. N. Datar
S. K. Muranjan	...	J. P. Bhattacharjee
S. Chandrasekhar	...	P. N. Mathur
Amarnath Vidyalankar	...	V. Jagannadham
Jagdish Bhagwati	...	N. K. A. Rao

64 PAGES :: 50 NAYE PAISE

PREVALENCE

PLANS SHOW STEADY GAIN IN MASSIVE BATTLE

Speech by Mr. GULZARILAL NANDA, Minister for Home Affairs, Planning, Labour and Employment, in Lok Sabha on September 10, 1963.

DR Ram Manohar Lohia's figure of three annas per day for 27 crore people of this country is a startling and sensational figure. It naturally hit the headlines, for the headlines wait for such things. A kind of vested interest has been created in this figure so far as the honourable Member is concerned.

It is important to be clear as to what the issue before the House is. That the very large mass of the people of this country are steeped in poverty is not in question. That a very considerable section of these people lives in abject poverty has never been denied. But, at some stage the hon. Member seems to have made the discovery that 60 per cent of the households subsist on Rs 25 a month. From that he derives thefigure of three annas for 27 crore people.

I rise to dispel that wrong impression. The estimated per capita expenditure, according to the statement which I gave (on August 26, see *Yojana* of September 15) for the poorer 60 per cent of the population is 7.5 annas a day. It is not something to boast about. We do not boast about it. It is poverty; but the question before the House is: Does Dr Lohia's figure of three annas a day represent a level of living for 27 crore people, or is the average somewhat higher? Some people have said that it is immaterial whether it is three annas or seven annas. Three annas may not be material when compared to three rupees, but put against three annas, 7½ annas is material; it is two and a half times.

The prevalence of poverty and of cases of distress has been mentioned and we are asked if we are aware of them. We have more reason to be keenly aware of them than the hon. Member and others. While they may derive some satisfaction from accusing us or criticising us, our embarrassment, our deep dissatisfaction and pain continue till the conditions are changed. For him the thing is ended; for us it is not ended.

We were asked what we were doing about this distress. It will take a considerable time to recount the efforts that have been made and the measures and programmes that are being adopted. Also, there is going to be a debate on the progress of the Plan when things can be explained at length. At this moment I should like to touch briefly upon one or two essential aspects only.

Sound Statistics

Criticism in some cases has taken the form of certain personal observations. Statistics have been cited. I would say a word about the correct approach to the discussion. I do not deny that direct observation has value. The evidence of the eye is important. But in a vast country where conditions vary, where there is no uniformity, and where the economy is complex, piecemeal observation cannot be taken as the truth applicable to the whole country. Therefore we have to adopt scientific techniques. We have to find a way whereby we can have a representative picture of the situation through properly conducted national sample surveys. That is what we have done. Our statistics may not be perfect. I know they are not. They may have defects; we are trying to improve them. I was very sorry when some hon. Members poured ridicule on official statistics. The accusation that our statistics were charged with bias and that they were deliberately being falsified should have been avoided. It is an aspersion on hundreds and thousands of our investigators, mostly young people, who are engaged all over the country collecting these data. The data flow into the computing machines and the computing machines have no bias.

Cows were mentioned by Dr Lohia and dogs were mentioned by Prof. Mukerjee. It was said by several Members that people extracted grain out of cowdung. I do not question the veracity of these things. They are horrible things. But the impression created by the way in which these things are put is as if they are very wide-spread practices and that they represent the conditions all over the country. It is this to which I object.

What is the general scene? Don't they see anything better, any brighter patches anywhere? There has been increase in consumption. There has also been increase in production —52 per cent in food grains over the decade ending 1960-61 and 62 per cent in cloth. The increased availability of cereals, for example, is not going to be appropriated only by people in the higher ranges of income. They have always had all that they want. More has become available for the poor people and that is the most important thing. In the villages and in the urban areas people are better clothed.

The conditions would have been better still had the population not increased so fast. This increase in population, the House should remember, has occurred not because of increase in the birth-rate but because of the decline in the death-rate. This decline in the death-rate is seen practically at all age levels. An hon. Member referred to infant mortality. I should like to tell him that even with regard to infant mortality, there has been a very considerable improvement. Mothers certainly feel more comfortable because so many fewer infants are dying. So many lives are being saved at all stages and the expectation of life has risen from 32 years to 42 years. Is this of no consequence? This has not happened by an accident. It is the product of many things which have been done, the health measures taken, the health organisations set up and various facilities provided. The facts do not point to perpetual starvation.

As regards standards of living

OF POVERTY

TWISTING OF FIGURES HARMS ENDEAVOUR

I feel strongly that a national minimum should be made available as soon as possible. This will mean a minimum provision of food, clothing, shelter, education and health services whether they are provided through better wages and incomes or as part of the State's social expenditure.

Take education. Statistics show that there is an 85 per cent increase in the number of students going to schools. In the technical field the increase is even larger. So many schools are coming up in villages; everywhere children are going to school. Free education, up to a certain level, is progressively being increased. The expenditure on education has increased from Rs 114.4 crore in 1950-56 to Rs 300 crore in 1959-60. I would not have gone into these details if it had not been maintained that everything was wrong and gloomy, and that nothing was happening for the good of the people.

I do not claim that the problems have been solved. But to assert as the hon. Member, Mr Ranga, did that conditions were deteriorating is remarkable. He cited certain figures. He said that according to Government's own records, the per capita income had gone down from Rs 250 which it used to be in 1951-52 to Rs 193 in 1961-62. I wonder where the hon. Member got the figure. It would mean that the national income had declined by about 23 per cent. Here is an example of how people do not know the use of statistics. Statistics are a major tool in planning and planned development but they must be handled with care. But when Mr Ranga bases all his arguments on a wrong figure he is in a mess. Actually, instead of a 23 per cent fall, there has been a 17 per cent rise. The figure for 1961-62 was Rs 293, not Rs 193.

Solid Advance

It is elementary knowledge that the national income has increased by 42 per cent. I referred to the increase in agricultural production. Industrial production has gone up by 95 per cent. There has also been increase in things like electricity and irrigation facilities which are the basis of progress.

Whatever progress has been achieved in the last ten years is no mean achievement especially when we look at it against the background in which we functioned before Independence. It was well known that for years and years and decades and decades there was no improvement. Anybody can imagine what happens when you take a thing out of the rut and start moving it. The first period is a period of very great effort and correspondingly meagre results. We have had to overcome the forces of inertia. This is what we have done during this period. The chief obstacles have been removed and the way has been cleared for faster action and faster development. The foundations have been laid for more rapid development later. And there have been structural changes in the whole economy.

It was open to us possibly to spend this sum of money on just consumer goods and light industries. It may be that if we had done that, we would have shown a little more income per head. But what would have been the result? Continued dependence on foreign aid. But today we are hoping that in the next ten or twelve years we shall be independent of foreign aid, and achieve economic freedom. The things we have done towards that end do not show results immediately. Take the big steel works, the chemical plants and the machine-building plants. How many years they take! They take a whole decade to come to fruition and to go into full working. All the investments that have gone into them are not yet bearing full fruit. But when they do, it will then be a cumulative process. What we are engaged in is a very great and mighty endeavour, and it is not to be judged simply in terms of what the short-term results has been, although even this short-term gain has been considerable.

Further, all our efforts have to be within a democratic framework. We have to consolidate democracy. Democracy has its great merit, and it has also its disadvantages so far as action is concerned. *We are not prepared to secure a little higher rate of progress at the expense of democracy.* Ultimately it is the democratic force and the release of energy that takes place out of the free development of the individual that will pay us better dividends. As for economic growth, I am sure that democracy is not going to be a disadvantage but a great asset in the long run, though for the time being it may appear some kind of a handicap.

We should see the problem in this perspective and not magnify the dark spots alone. Seven annas, as I said, still represents poverty, but why tell the people that it is only three annas and that we have not improved at all? *Let there be no suppression of facts, but let there be no exaggeration either.* That is what I am pleading for.

Disparities

The question of disparity has been raised. I have never felt comfortable myself so far as disparities are concerned. The Mahalanobis Committee which has been inquiring into levels of living and distribution will soon bring out its report. But we need not wait for that report. We know that the disparities are very vast. We know that for these disparities there is no economic and social justification. Something should be done about them.

What are the things to be done? When about 40 per cent of the people who hold land operationally have less than 2½ acres and about 62 per cent have less than 5 acres, what do you expect? This is the problem of population in relation to land. The only solution is increased productivity of land. That is what we have been trying to achieve. We have incurred large expenditure for the purpose. A large number of people have to be taken out of agriculture and put into other occupations. There is no other way. That means industrialisation, both large-scale and

(*Continued on page 19*)

This is the story of a road. Fifteen thousand villagers worked out of their own pleasure in order to widen it so that it could help their movement and that of their produce.

This story shows how useful the Village Volunteer Force could be.

It also shows that in the most prosperous of our districts there are simple things to be done, which can be done promptly and with least expense if only the people unite.



15,000 WORK TO WIDEN A ROAD

Fine Example of Self-Help in Thanjavur



THANJAVUR district of Madras is called the rice granary of the South. It lies in the delta of the Kaveri. Rivers and channels crisscross the area. With so many stretches of water to cross, communication is a difficult problem in the district. Also, the delta soil, especially in areas close to the sea, create a drainage problem, and roads become impassable during the rains. Breaches and erosion are common features.

All this means that road surfaces, where there are roads, have to be metalled. But road metal is not found in the district and has to be imported from outside at a heavy cost. With the kind of unmetalled roads Thanjavur has, villagers find it difficult to move produce to the markets. One of the methods by which the crossing of the intervening rivers and channels is minimised is to lay the road along the river or channel banks and effect the crossing at places where bridges are already built. Such bank roads, as they are called, are a common sight in the district. They are gradually being improved, but it would be a stupendous task to improve all the roads if Government alone was to do the job. With the voluntary co-operation of the people, the task becomes less difficult.

One such bank road is the Mannargudi-Muthupet Road running on the bank of Pamaniyar river for 21 miles. Besides connecting two important towns it is the link for 50 to 60 villages. Portions of the road on either end are in a good condition and are used for bus traffic. But the middle nine miles in the Kottur Panchayat Union of Mannargudi taluk needed to be improved if buses could use it.

This nine-mile stretch serves 20 villages with a population of 20,000. When they clamoured for bus route, it was brought home to them that unless the five-mile portion between Kaluvathur to Edachimoolai was widened by at least six feet, buses could not ply by the road. The Chairman of the Panchayat Union Council, Mr Murugaiyan, represented that the Government should take up the improvement work. But he soon realised that he could himself take up the task with the help of the Village Volunteer Force.

Once convinced, Mr Murugaiyan set about the task thoroughly. He spoke to the villages and persuaded all the 47 Panchayats in his Union to join the work. A committee of 17 members with a leading cultivator, Mr P.A. Thangavelu Onthiriyar, as president was set up. Mr Murugaiyan was its secretary and the Block Development Officer (who was also the Panchayat Union Commissioner), Mr S. M. Thangaraj, was the treasurer. Mr M. Gopalaswami

Thenkondar, M.P. and Mr A.K. Subbiah, M.L.A., both representing the area, were on the committee.

The scheme evolved by the committee was that the villagers should give a day's free labour for the task. Meetings were held, individual contact was made by going to the houses. Nearly 20,000 handbills were distributed explaining the proposal. Announcements were also made through the microphone fitted to the Block jeeps. All the Panchayats took up the work with zeal and enrolled volunteers. Besides those who had already enlisted as members of the Village Volunteer Force, many others volunteered themselves, including school students and women. Duties were assigned, making no distinctions of caste or class and the areas divided. Volunteers were to bring their own spades and baskets. The committee undertook to supply food packets.

June 17 was fixed for the work. As the day dawned, nearly 8,000 volunteers carrying shovels, spades and baskets and accompanied by the village bands trekked towards the work spots. Some 7,000 more volunteers came by private lorries and other vehicles from villages more than five miles from the site. The number of women volunteers was easily 1,000. The five-mile stretch had been divided into 13 reaches, each in charge of an Extension Officer and a Grama Sevak for guidance and encouragement. The point up to which the road was to be widened had clearly been demarcated in advance. Wherever necessary, arrangements had also been made to get and keep ready casurina piles and other materials necessary for putting up abutments to prevent earth from slipping on the sides.

When the clock struck eight, the bands and village pipes went into action. Mr P. N. Vedanarayanan, Collector of the district, turned the first sod. This was the signal for the work to begin and the whole body of volunteers numbering about 15,000 went into action. Sand dunes of the river and unwanted field bunds vanished. School children busied themselves, under the guidance of some teachers, in supplying cupfuls of drinking water to volunteers on the job. Food packets were distributed in the afternoon but there was no break for lunch.

Since 15,000 people turned up instead of the estimated 10,000, the whole work, which was expected to take eight hours, was actually finished in five. In the normal course, it would have taken a month or more and cost Rs 15,000 to Rs 20,000 in wages alone. Such a task was completed in the course of a few hours. Kottur has shown the way how the hidden energies of our people can be tapped.

—From material supplied by the Department of Rural Development and Local Administration, Government of Madras.



Quotation Box

Air India must be more Indian. It should accept Indian currency, serve Indian food to its passengers, popularise Indian liquor and its hostesses should be able to speak and understand Hindi.

—Mr Arjun Arora, M.P. in Rajya Sabha

Mr Patil said that Mr Nehru had stated that if he found that as a result of mass resignations the Government was weakened in any way he would not hesitate to call back the Ministers who had stepped down from office.

—Press Trust of India report

This country's economic development is getting along not only on borrowed money but on borrowed time as well. A realistic and resilient policy of economic dynamism is therefore urgently needed.

—"The Eastern Economist"

Hyde Park, Chowpathy and Ramlila Grounds have been brought into Parliament, their idiom, their gusto, and their manner.

—Mr. M. Chalapathi Rau on "Parliamentary Eloquence" in "Mainstream"

Apart from the fiscal reliefs, the market looks forward earnestly to some psychological relief from Mr Krishnamachari...It wants him to realise that democratic socialism does not mean doom to Dalal Street.

—"Commerce"

It used to be said of the British diplomatic service that its members and their families formed a kind of temporary subsidized aristocracy leading more ducal lives than most dukes. As the Indian foreign service is closely modelled on the British, its members may well plead that they are only following the example of their British counterparts even if sometimes they are compelled to spend more than what they or their country can afford.

—From an editorial in "The Hindustan Times"

Those who go to the East European countries have their friends there, but others are not so fortunate ...But for the U. S. hardly any other Western country invites Indians for a trip.

—Mr T. T. Krishnamachari

To call the area (on Parliament Street) "Sardar Square" will not in any way remind us of the great Sardar Patel. For a common man Sardar denotes only a Sikh.

—A letter in "The Statesman"

*Our Defence Expenditure Is Not All Unproductive

*Being Forced to Save Is Different from Being Forced to Pay

DEFENCE FINANCE

A. K. DAS GUPTA

THOUGH I have chosen 'defence finance' as my subject, let me make it clear at the outset that I do not believe in war; I regard war as an uncivilised method of settling international disputes. However, when we are actually forced into war by a neighbour who does not believe in a civilised method of settling disputes, we have to make preparations in order to show to the other party that, if need be, we can stand against aggression. That is the spirit in which I look at the sort of preparation that we are going in for in the context of the Chinese aggression, and that is why my subject is 'defence finance', as distinct from 'war finance' on which there is already considerable literature.

I shall begin by drawing attention to the difference that exists, as I imagine, between defence finance, war finance and Plan finance. I make a reference to Plan finance because as the Emergency arose, a feeling was expressed in certain quarters that in view of the extra finance that would be necessary for meeting the aggression, a cut should be effected in our Plans. Some of us took pains to explain that such a downward revision was not called for, because plan finance was, in some sense, supplementary to defence finance and, in fact, we could not adequately defend ourselves unless we executed the various projects that had been contemplated in our Plan.

The difference between defence finance and war finance is in one sense fundamental. While war is destructive, defence is not immediately so. Defence finance involves production of certain things which are destructive only in the event of war but are more or less ineffective and useless in the absence of a war. Further, war is terminable, in the sense that there is a limit to the duration of a war. War is destructive of resources, human as well as physical. And in the process of the destruction of human beings, a stage will necessarily come when there cannot be any further struggle between nations, because the rate at which human beings die in the process is very much faster than the rate at which additions to the fighting force can take place. Thus, it is in the nature of things that war has a termination—it may be five years, ten years, or, as in the olden days, it might be hundred years. However, as civilisation advances, there is likelihood of the duration of war getting shorter rather than longer in view of the greater destructive strength of weapons. On the contrary, so far as defence is concerned, if war does not take place and every country has to make preparations for defence, one notices a certain sense of competition and interaction between the different nations—if 'X' moves fast, 'Y' tries to move faster and 'Z' probably faster still. This being the attitude, defence does not appear to have any end.

However, so far as the present discussion is concerned I shall proceed on the assumption that even in regard to defence there is a certain limit. That is to say, we, in India, are concerned, at the moment at any rate, with finding extraordinary finance, and not normal finance, for defence because we find that our defence preparations have been extremely inadequate. In view of the extraordinary character of this defence finance, we can take it that there is only a certain limited duration during which we should exert ourselves more than we normally do. We do hope that with added effort of an extraordinary character we shall be able to boost our defence effort to a level from where we can take stock of our situation a little more comfortably than we can today. That is the spirit in which we should consider the problem of defence finance at the present stage.

Not Destructive like War Finance

DEFENCE expenditure is unproductive, at any rate in the short period. Even in the long run it cannot certainly be as productive as Plan expenditure. Yet it should not be as unproductive as war finance either; it should be possible to divert some of the resources earmarked for defence for productive purposes and thereby for the development of the economy. How far this is possible is a technical matter on which technical experts would be in a better position to make more precise assessments. But I am sure that some degree of substitution between military and civilian goods is possible. I am not, however, concerned with that kind of defence. My concern is with an extraordinary defence expenditure over a course of five years or at the most ten years. From that point of view then there is little difference between defence expenditure and war expenditure. The difference between defence (or war) expenditure and Plan expenditure is, however, clear; the latter is productive and the former is by and large unproductive, if not destructive.

Does this difference suggest any difference in our attitude as to how these expenditures will have to be financed? This is a very vital question. We all know that there are different methods of financing any extraordinary expenditure. We can tax the people, or take loans from them or print currency notes through what is called deficit financing. These are apart from earnings of enterprises in the public sector which, in a non-socialist country, form a very small part of the total revenue of

By courtesy of the National Institute of Community Development, Mussoorie, where this was delivered as a lecture.

Government. If we consider government as a separate entity distinct from the public and we look only at the finance of the Government, ignoring its repercussions upon the rest of the community, government finance is on par with that of an individual. Looked at from this angle, there is a difference between Plan expenditure on the one hand and war and defence expenditure on the other, so far as the method of financing is concerned. The reason is very simple. If we spend something on a productive enterprise, then we do take loans from banks or other agencies. This is perfectly rational, and it is fully justified as long as the return from the expenditure does not fall below the interest that we have to pay against the loan. Such an argument applies to an individual. This applies as well to a State. If the public does not like to be taxed beyond a certain level, it is open to the State to take loans so long as the productivity of the enterprise is high enough to take care of the interest that has to be paid against the loan. But, defence expenditure being unproductive, it cannot be financed through loans, if only because the interest burden remains. A few decades ago, it used to be asserted in text-books that there was a difference between ordinary expenditure and extraordinary expenditure and that the latter could be and perhaps should be financed out of loans, while ordinary expenditures should be met out of taxes. But this is not a valid proposition. There could not be any distinction between ordinary expenditure and extraordinary expenditure on this ground, because, in so far as war is not productive from the economic point of view, there is no justification for the State to depend on loans for meeting such expenditure. Circumstances may compel a State to resort to loans to finance extraordinary expenditure of any kind; in a democratic country taxation beyond a certain level may be found impracticable. But such loans do not have any economic justification.

If, however, instead of looking only at Government finances, we regard the community as a whole and consider the State as a part of it, we do not see much difference between Plan expenditure and war or defence expenditure, and between savings and loans and taxation as a method of financing these expenditures. The reason is that, if we ask the people to save, they forgo current consumption. If we ask them to pay taxes, equally we are asking them to forgo current consumption. It is a matter of indifference as to whether we are asking them to save or to pay compulsorily, which is characteristic of a tax. This is the case as regards the present. But what about the future? As an individual, I can comfort myself into thinking that if I save and pay loans to the Government, then after 10 years or 12 years or 20 years, as the case may be, I shall be repaid and that too with some interest. But it is people like myself who will be taxed by Government on that future date in order for it to have enough resources with which to pay the interest or repay the capital. If I am the only individual in the country the answer is very simple. If I pay tax today the transaction between myself and Government is over immediately. If I pay a loan to the Government, the transaction is not over because at the end of a certain period, the Government will have to pay me back the money and also the interest. If the loan has not been productive then it is from me that the Government will have to take money by way of taxation or again by way of fresh loans to repay the original loan. The position is the same if we look at the taxable section of the community. There is, however, a difference in distribution. If one man in the community makes a bargain out of the loan then another man will be injured on account of the loan. This is because the aggregate must be the same. But taking the entire community as an entity, we should be more or less indifferent whether recourse is to be had to taxation or to loans.

Printing notes for financing the additional expenditure has got other repercussions, namely possible rise of prices. Deficit financing and consequent printing of additional notes may be justified in the context of Plan expenditure because it is productive, but that also is permissible only if the rate of increase in money supply and in money income does not exceed the rate at which the output increases. But deficit financing in the context of defence or war expenditure will lead to rise in prices because it will not be matched by any increase in output.

Coercion That Is Not Coercion

SO FAR as loans and taxes are concerned, we have seen that taking the taxable community as a whole, there is hardly any difference between them though they have different consequences in the distribution of income. As the distributive impact of loans and taxes is quite vital, it is in this context that we should examine the Compulsory Deposit Scheme. Compulsory saving, in my judgment, is distinct from taxation. No doubt, there is an element of coercion in compulsory saving as in taxation, but the element of coercion is of a different character. Being forced to save is one thing and being forced to pay is a different thing. Consider compulsory savings with reference to ordinarily untaxed persons. These people will remain untaxed when the question of returning the money arises. Though these people will be paying today some of their savings to the Government under a certain degree of compulsion, thus making it appear as if they are being taxed, actually at the end of five years they will be repaid with interest. On the other hand, those within the taxable limit will be paying taxes to the Government to enable it to return its loan with interest. To provide an additional incentive to the untaxed group, I would go to the length of suggesting that the tax exemption limit should have been raised from Rs 3,000 per year as it is today to Rs 4,200 per year as it was in the years 1956 or 1957, the logic being that as soon as we introduce this compulsory savings scheme, we do not need to tax people under this category. This is because the compulsory savings from this group will contribute more to the exchequer than the amount of tax payable by them. The money to repay them will come from the taxable group which will be taxed at a higher rate. It is hoped that after five years, the Plan output will also increase and possibly this taxable group will have additional income and will be able to pay the additional tax with less difficulty. In this way, a sort of built-in redistribution of income of a more egalitarian character will be contained in this method of compulsory savings.

There are two considerations, however, which are paramount in this context. Firstly, its duration is assumed to be limited. If it were indefinite, one would

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UNIT TRUSTS

What They Are & How They Work

V. BALASUBRAMANIAN

THE Finance Minister, Mr T. T. Krishnamachari, told the Lok Sabha on September 6 that a proposal to set up a unit trust was being examined by Government. The unit trust is based on the principle that one should not keep all one's eggs in one basket. In other words, an investor should spread his investments widely. His capital should not unduly be dependent on the fortunes of a single firm or industry or even a few firms or a few industries.

Where, however, the investor is a man of moderate means, he is under certain practical limitations in practising this admirable principle of the dispersal of investment risks. In the first place, his savings are relatively small. It is not worthwhile and sometimes it is not even possible for him to divide them into small bits and put them in different companies. Secondly, it is also the purpose of investment in shares to secure as high a level of dividend income as possible, consistent with security of capital and reasonable prospects of capital appreciation in the future. So the investor needs the help of investment experts and counsellors in choosing a combination of shares which will yield him all these advantages.

Small People's Co-op

But a small investor cannot afford the services of experts; nor can he really hope to interest them in the very modest business which alone he is in a position to place with them. The object of the unit trust is to enable the small investor to disperse his risks widely and also to secure the services of investment experts. This helps him to minimise loss, and maximise the possibility of capital appreciation and good dividend income.

The unit trust is, thus, in a sense, a co-operative of small investors. Resources are raised by the sale of units in a trust unit. They are invested in a carefully selected range of industrial companies, financial enterprises and commercial undertakings. The choice of the stocks and shares is made by managers of the unit trust advised by investment experts. The operation of the trust fund is governed by a trust deed. The trustee—it may be a bank or insurance company of standing or any other agency authorised by law—holds the securities in which the trust fund is invested, collects the dividends which these investments pay and also ensures that the managers of the trust carry out their responsibilities to the unit holders in accordance with the trust deed.

When an investor buys units in a unit trust deed, he buys a proportion of the trust fund and has, therefore, indirectly an interest in every share of every company in which the fund is invested. The dividends paid by the companies in which the trust has holdings form the income of the trust. This income is distributed to unit holders. Each unit holder receives a share of the income in accordance with the size of his holdings.

The investor may buy units from the managers of the unit trust and he may also sell it back to the managers. The offered price, that is the price at which a unit trust offers to sell units in it, and the bid price, that is the price at which the unit trust is prepared to repurchase its units, are calculated on the basis of the stock exchange values of securities owned by the trust fund.

Being tailored to the requirements of small investors, unit trusts could grow rapidly only as the habit of investment in stocks and shares began to spread among the people. It is equally true, however, that the setting up of unit trusts might itself encourage the investment habit among people of moderate means. For the trusts make it easy for the small investor to put his savings in stocks and shares at substantially reduced risk of capital loss and greatly enlarged opportunities of securing a good return on his savings as well as gaining from the appreciation of his capital over a period.

Proven Service to Small Investors

M. K. RAMAMURTHI

TAKING care of small investors by spreading risks wisely and widely, unit trusts in Britain and the U.S.A. help to broaden financial democracy and promote people's capitalism. They help also to promote stability in share prices and improve investment climate when required.

In the course of 1963, a year of unrest for the stock market in India, references have been made to unit trusts as a means of saving our investors from undue risks and anxiety. Mr Morarji Desai mentioned the subject of protecting the investor and his successor has also referred to the subject of unit trusts in connection with early improvement in the investment climate. Financial journalists have referred to expert inquiries and an article in the Reserve Bank of India Bulletin about two years ago dealt with the unit trust as a medium of investment quite familiar to the U.S. investor who prefers 'mutual funds'—the American term for unit trusts. In a sense, the unit trust arrived long ago and our Finance Ministers who have seen new shares lose their gloss and old shares drop in price have only lately realised that investors' own mistakes can be prevented by creating in India also the appropriate climate for unit trusts. One under official auspices has been thought of, but the matter is really one for leading investment experts who certainly can point to the experience of unit trusts abroad and ask for safeguards in the interest of the middle-class investor who cannot take risks like tycoons who can afford to stimulate or depress markets.

The unit trust movement was born of the great Depression following the great Wall Street crash in 1929 which proved that investment companies tied up with banks and brokers were not wise or safe. Professor Galbraith

FINE RECORD IN U. K.

has made the great crash a text for a sermon to investors.

The unit trust as a life-belt for small investors became familiar about 1935 in the U.K. but managers made mistakes and U.K. Government in trying to prevent fraud had to legislate in 1938 for unit trusts as also for outside dealers in shares. There has been since 1958 legislation for the protection of the buyer of units in unit trusts and the Board of Trade in Britain as the supervisor of company law keeps an eye on unit trusts' operations.

Regulation by an association to make unit trusts respectable and acceptable has been familiar enough and the last few years have seen many new trusts launched to bring more unit trusts for helping British investors to buy investments in Europe and the U.S.A. because of the boom in the stock markets. Merchant bankers have sponsored new trusts and even Rothschilds promoted a new unit trust.

Instalment buying applied to investment also has been common. In 1960 it was estimated that British investors had invested £ 200 million in the unit trusts that buy assorted shares and collect dividends. The same dividends are converted into payments on units sold. The main safeguard devised for small investors is that the securities held by unit trusts are kept by a trustee, usually a bank or big insurance company that is designated as the custodian. The managers make a charge which is deducted from the income drawn from the shares held. But the unwary investor is taken care of by the experts who run the trusts.

The mutual fund in the U.S.A. is perhaps more active and elaborate but this year it has been found out that mutual funds are not immaculate. Their salesmanship is too keen and their eagerness for commissions from brokers too obvious. The abuse discovered by the Securities Exchange Commission by its inquiries have been pointed up after the slump of 1962. In fact, British unit trusts, more conservative and less prone to utility, have done better than U.S. mutual funds, divided into two categories, the open-end and the closed-end type.

The principle applied for reduction of investment risks is diversification by industries and by regions by a mixture of ordinary shares and prior charges, so that a stable annual income is available for regular distribution to the buyers of shares in unit trusts. The return can only be modest but the risk of depreciation is far less than in buying shares of one's choice on the chance of tips or prospectuses' promises. The expansion recorded in unit trusts, both in number and size, has been taken as a sign that the British economy is not stagnant. The fluctuations in investments have enlarged opportunities for unit trusts, whose units are quoted regularly. A holder of units can sell back to the trust after due commission is paid. Marketability is preserved by the trust which fixes the price of units in relation to the market quotations for the investments held by the unit trust itself.

High Probity

A high degree of intelligence and probity is demanded, and supplied, by British unit trusts—which have got over the initial mistakes by acquiring experience. The success of unit trusts postulates regular saving for the sake of buying shares. That may easily be expected as land, houses and jewels are practically out of reach for salary earners at present. The unit trust can go on buying proved or approved shares, if more units are sold and cash resources duly increased. That is the British way and the record of British unit trusts is fairly reassuring.

There are no strange principles involved. The unit trust gets money from the public and invests on behalf of the subscribers. In return, the unit-holder gets a certificate showing the number of units purchased. That represents his stake in the unit trust. It is not quite like a bank deposit, because the investments of the trust may go up or down in value. But in the U.K. there are wholesome rules for managers too. The management charge is limited to 13.25 per cent of the sum invested over 20 years and only 5 per cent can be charged for the initial purchase of units. That is about the same as brokerage payable on every purchase of shares. From the management charge collected must be paid commissions payable to lawyers, accountants, banks and brokers *plus* fees to the trustee for keeping the funds of the unit trust. This alone means that the unit trust must be above suspicion of any nature. The management must be always competent and disinterested.

The investment of the money must be governed by the trust deed and a unit trust must register its holdings. Trusts apply the rules of selection applied by good and competent investors, so that half-yearly dividends can be easily assured for the holders of units.

There is no limit to the size of a trust and the managers, if they inspire confidence, can go on investing more. The unit trust makes sure of a clear title to shares held and fair return on the invested capital. It can advertise and sell units. Both in Britain and the United States the unit trusts keep growing, because they usually offer real protection against inflation, a regular income and the prospect of a higher price for units bought out of funds supplied by subscribers to the unit trusts. They are saved tax worries and the trouble of watching share prices from day to day. The selection is done by prudent persons who have to earn their pay.

The field of choice for managers has widened and in the U.K. the trade unions too find it profitable to invest outside trustee securities through a trust that helps them to buy wisely and well. There is no guarantee that all unit trusts perform equally, but it can be said that the distribution of risks through assorted investments by a unit trust helps the small man also to enjoy the principle of saving for personal prosperity.

The appeal of unit trusts to investors lies mainly in the safety promised. Unit trusts cannot afford to speculate and they may know more about orderly management of investments than the average investor who is invariably an optimist without adequate experience. Small investors can get a good deal (the pun is intentional) from a unit trust. The present depression may well produce one suited to Indian investors' requirements. And British experience shows that unit trusts can be trusted.

Joint Farming Gains Ground

In Dhulia

Landless & Landed Come Together

M.K. PARDHY

THE Dhulia district of Maharashtra has made a good start in co-operative farming. Since the first co-operative farming society was organised by Mr Naval Patil in a village called Navari in 1947 the number of societies has increased to 76. Fifty-four of them are joint farming societies and the remaining 22 are collective farming societies. Most of these societies are in the Dhulia, Sakri, Sindkheda and Shirpur *tehsils;* Sindkheda *tehsil* leads with 34 societies.

The 54 joint farming societies together have 4,317 acres of land. The 22 collective farming societies have been formed by 581 landless labourers on 5,334 acres of land given to them by the Government, of which 4,330 acres have so far been brought under cultivation.

A pilot project to promote co-operative farming was started in the Dhulia *tehsil* in October 1961. Next year, another pilot project was taken up in Sindkheda. The project aims at developing ten farms in a block. The target has been reached in both the blocks and now there is a demand for a third pilot project.

I visited a few of the societies in July to find out and realised that their steady growth in Dhulia was not a chance happening but was due to the realisation that they fulfilled a need. To the landless, labourers who have been craving for generations to till their own lands, co-operative farming has come as a great opportunity. They get free land from the Government in addition to other assistance. All they have to do is to collect a small share capital and stand united for hard work. Among the landowners, very few have sufficiently big holdings and other means to make a happy living. The practical results achieved in the fields have convinced the farmer of the benefits of co-operation.

The co-operative societies have evolved a pattern of working. After providing for the reserve and other funds, most of the societies distribute 6 per cent dividend to their landowner members and proportionate bonus to the landless members. In addition, a working member is paid regular wages amounting to about Rs 600 in cash and kind for his work during a year.

Federation of Societies

The societies prepare their crop plans in consultation with the Agricultural Extension Officers. Some of the societies have started poultry farming, sheep and cattle breeding and dairying as side occupation. Apart from the collective farming societies which are generally given fallow and wastelands for cultivation, several joint farming societies have brought fallow lands under cultivation. The pooling of land and resources reduces the production cost by 5 to 10 per cent and increases the yield by 25 to 50 per cent. New crops are experimented which an individual farmer could not do on his small holding. This has led to more productive use of lands.

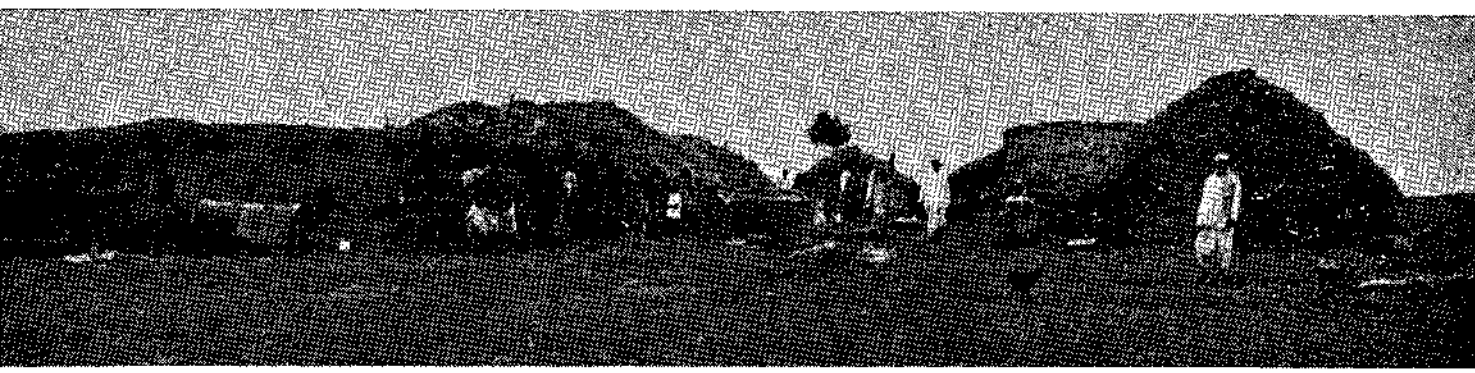
The societies have now taken a further step to combine themselves into a federation for the common cause. The federal body, named as the Dhulia District Co-operative Farming and Irrigation Societies Federation Limited, was registered in December 1960. In addition to the farming societies, seven lift irrigation societies also have joined the federation. Its main object is to guide and help the farming societies in maintaining accounts properly and in other technical matters. It also organised training camps and so far 250 persons from the various societies have benefited by them. It pools all cotton and groundnut droduce of the societies for marketing through the Sale-Purchase Co-operative Union at Dhulia.

Co-operative farming is thus building up its strong organisation in the district. Its foundation was paved by Naval Patil with a sound idealism. Co-operators like Hansraj Patil of Dhulia are building on it a structure of a business house and young leaders like Dashrath Patil of Morane are cementing the structure with a sense of social revolution.

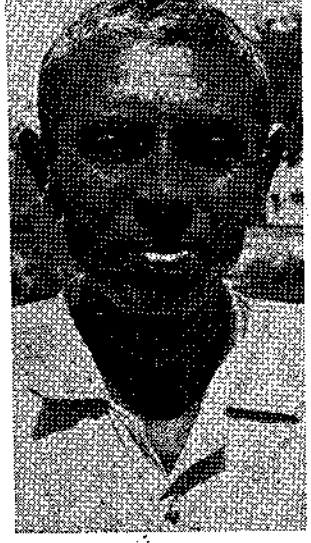
The working of a few typical co-operative farming societies which I visited will give an idea of the social and economic change that co-operative farming has been bringing about in the life of the district.

The Jayashree Collective Farming

(*Continued on Page 23*)



Colony of the Jayashree Collective Farming Society. The huts will soon be replaced by permanent houses for the members.



SUCCESS STORY

Rural Sage of Navara-Navari

Naval Patil has worked for Vinoba's revolution in the villages of Dhulia. He pioneered the movement of co-operative farming and gave it an ideological basis. Since 1947, when he organised the first co-operative farming society of the district, 76 such societies have come up and many more are taking shape.

MR Naval Patil who lives near the village Navara-Navari, 32 miles from Dhulia, is the pioneer of co-operative farming in the Dhulia district. He registered the first co-operative joint farming society in 1947 with 14 members. The colony which has come up there is named Navalnagar after him.

Mr Patil has led a dedicated life. After matriculation he worked as a school teacher, but soon left it to participate in the national movement in the 'thirties. He was the president of the District Congress Committee in 1938. He returned to his village in 1940 where he was arrested in 1942. After Independence Mr Patil was a member of the State Legislative Assembly for nine years.

It was Acharya Vinoba Bhave who advised him to live in a village and serve the poor peasants. Mr Patil says he studied communism but was not convinced. By chance he came across a book on Denmark's co-operative agriculture and that soothed the agitation in his mind. He made a thorough study of the Danish co-operation and that decided the future course of his life. He was convinced that agriculture on co-operative lines would help him to take Vinoba's revolution to the rural people.

Naval Patil preached his new gospel. But it was difficult to persuade them. They had apprehensions as to the ownership of land. To forgo one's title was like slicing off one's heart. Would group ownership be a substitute for the pride of personal ownership? And what boon would this sacrifice bring? Would the fellow members be as honest as himself? Would they till his land with the same sincerity as they would till their own? And why should others share the fruit of his toil from his land?

Naval Patil never tired of convincing the farmers that there was no question of losing the title to one's land either legally or in practice. Co-operative farming was a wider concept—of joint ownership and joint responsibility. He told them of the scriptural prayer: "Saha nau bhunaktu, sahaviryam karavavahai—let us join together to partake of our food and act in unison". Act unitedly, the benefits multiply.

Naval Patil succeeded in persuading 14 farmers to pool their lands, along with his, and formed a joint farming society. But then he had to face other hazards. The lands were unyielding, rains were unkind and the situation was perilous. The first few years passed in unfruitful trials and toil. The society ran into losses year after year. Besides some antagonistic persons went to work on the members. As a result, most of the members withdrew their lands. But Naval Patil did not lose heart. He reorganised the society. Ramdas Patil, his brother-in-law, joined him. Fourteen labourers and an Adivasi landowner became members of the society. Now the society has 120 acres of well developed land. The production of the land has more than doubled during past few years—the total annual income amounts to about Rs 15,000.

As firm as his belief in co-operative farming as a means to improve agriculture is Naval Patil's convition that it is the labourer who counts for the success of agriculture. That is why labourers who have no land of their own are enabled to be members of the society. Daga Narayan, a 70-year-old labourer-member of the society, gets Rs 300 in cash, food grains valued at Rs 200 and clothes and other benefits worth about Rs 100 every year.

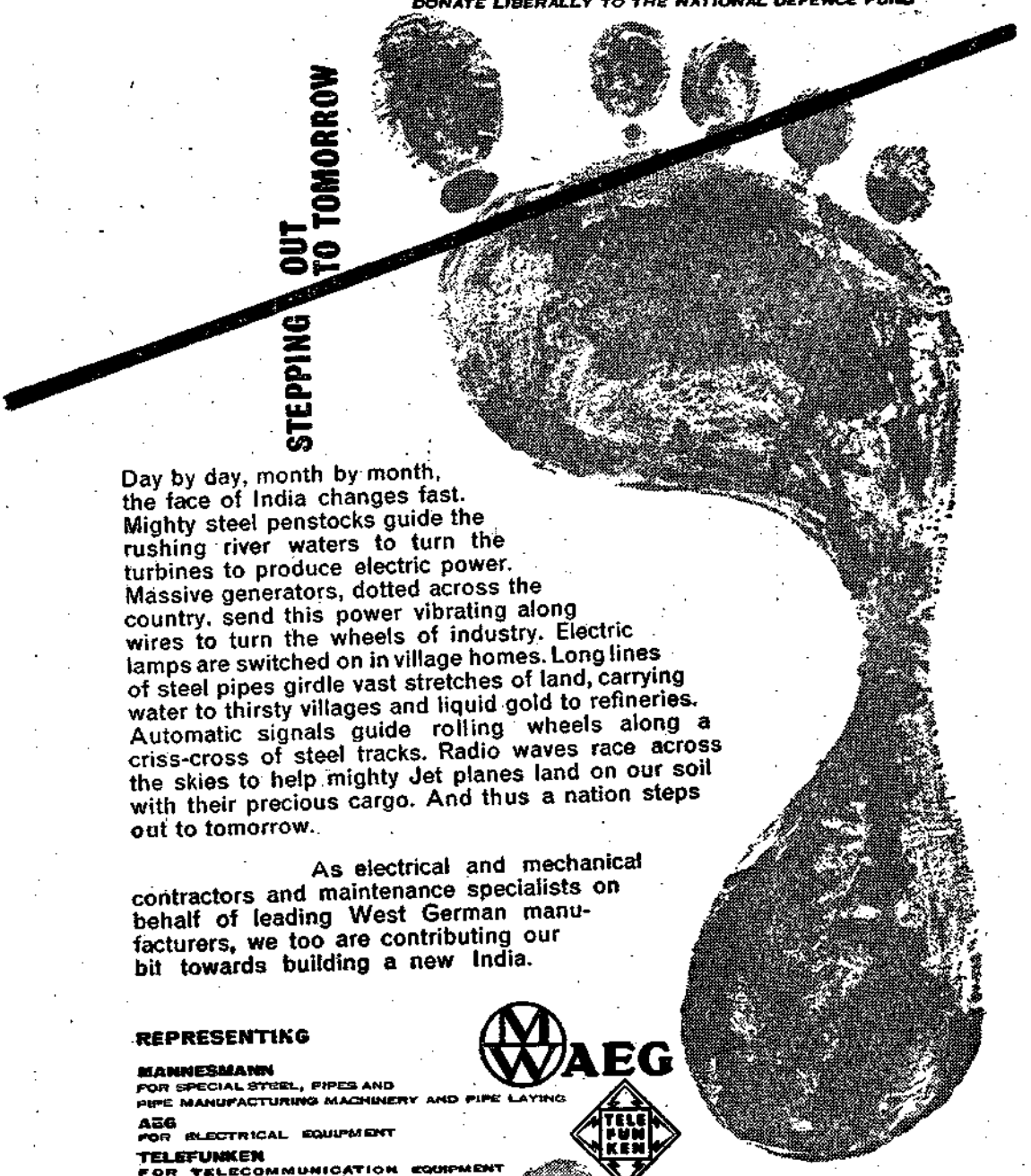
Faith and a child-like simplicity are Mr Naval Patil's main assets. He laughs away failure. He tried sugarcane and *gur*-making, and failed. But the rusted steel pans now lying idle in the field seem to hold no grudge against him. He tried to grow bananas, and failed. He has bunded the fields and this has paid him. He dug two new wells which have yielded plentiful water and he is now digging a third one. He has experimented with several crops. Now he grows Deviraj cotton, Bajri, wheat, groundnut and chillies. He has planted lime and other fruit saplings and he is soon going to try grapes in a one-acre plot. On the bunds, he has planted Arjun trees which yield nutritious green fodder all the year round.

At 55, his cheerful smile defies the wrinkles on his face. His wife works in the field. Their son and daughter are away. His brother-in-law, Ramdas Patil, who is now the president of the society, has the brain of a mechanic and helps him to solve all the technical difficulties.

After Naval Patil's pioneering effort, dozens of co-operative farming societies have sprung up in the district. In the surrounding villages, five new societies have been organised under his guidance.

DONATE LIBERALLY TO THE NATIONAL DEFENCE FUND

STEPPING OUT TO TOMORROW



Day by day, month by month, the face of India changes fast. Mighty steel penstocks guide the rushing river waters to turn the turbines to produce electric power. Massive generators, dotted across the country, send this power vibrating along wires to turn the wheels of industry. Electric lamps are switched on in village homes. Long lines of steel pipes girdle vast stretches of land, carrying water to thirsty villages and liquid gold to refineries. Automatic signals guide rolling wheels along a criss-cross of steel tracks. Radio waves race across the skies to help mighty Jet planes land on our soil with their precious cargo. And thus a nation steps out to tomorrow.

As electrical and mechanical contractors and maintenance specialists on behalf of leading West German manufacturers, we too are contributing our bit towards building a new India.

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HAMARA HINDUSTAN

THE PARIJATA OUTSIDE MY WINDOW

G. N. ACHARYA

JUST beyond the low window of my room is a Parijata tree. It has been there for over a quarter century. It is a tough tree; it has to be. Nobody bothers to water it. In Bombay, where water is scarce, and the tax on it, when available, is high, few people can afford to water their plants.

Trees wilt and seem to be dying in the scorching heat of May and June. But plant life is obstinate. Now, with the rainfall for the season already exceeding 220 centimeters, they have brightened, and put on rich, lovely, green foliage.

The Parijata has to be tough for another reason too. Its tiny, white flower with its pink stem is favoured of the gods. It is high on the list of flowers usable in Hindu worship. The commonest way of picking the Parijata is for people to violently shake the tree and let the flowers fall down. It is an ancient and therefore venerated habit.

A Parijata tree in full bloom is a pleasing sight. The flower has also a gentle, pervasive fragrance. It would, therefore, seem unreasonable to hate the tree. But I do hate the one in my compound. I feel it has reduced my life span by a good many years.

The reason for this is the habit I have mentioned, of people coming and shaking it, and so disturbing my sleep. Flower stealing is a a common habit. All flowers are fair game, but those permissible in worship, more so. There seems to be an idea that everybody is free to go to any compound and pick flowers.

Though I have called it stealing, the people who pick flowers do not seem to be conscious of guilt. They don't come quietly and surreptitiously, look before and after, take their picking and run. They come in groups; they talk, argue and sometimes intone devotional verses. This and the process of shaking the Parijata tree goes on from early dawn till late morning till, in fact, the tree can be seen to be denuded of all flowers. And it goes on till the end of winter.

The fact that their action causes trouble to others does not seem to appeal to them. Though touched with religious sentiment, because the flowers are picked for worship, this predatory habit of raiding trees in anybody's compound is utterly destructive.

Here in Shivaji Park where I live, some years ago every compound had a bush of Krishna Kamal, a large, delicate flower with blue tendrils and an overpowering fragrance. Indiscriminate raiding has destroyed every single bush. It is delicate. The flower-bearing tree known as Ratki-Rani is less delicate. But most of those trees have vanished too. Only a few of the tough Parijata still survive.

I remember some years ago, in Britain, a woman who had plucked a daffodil from a park was not only fined five pounds, but held in custody for a night. It was mentioned in Parliament because of the heavy punishment. The Home Secretary justified deterrent action, as many flowers had been picked from that garden.

We have not reached a stage where such ruthless steps are practicable. But it is well to remember that all appeals to grow more trees are futile as long as prevailing public attitudes are not corrected. That calls for a long and persistent, if tedious, process of public education.

DEFENCE FINANCE

(*Continued from page 7*)

not suggest compulsory saving as method of defence finance. Secondly, compulsory saving should be confined to the group who are not ordinarily taxed and who are not expected to be taxed even after the end of the period. However, in the last budget the higher income group has also been placed under this scheme of compulsory savings. This was not necessary, and I am afraid it is likely to be ineffective in most cases. The budget indicates some realisation of this in that it fixes compulsory savings for the higher income groups at a lower rate than for the poorer sections of the people.

Interested persons outside the Government have deliberately attempted to give a wrong picture. Somehow it has entered into the heads of the poorer sections of the community that compulsory saving is a terrible coercion and that there is hardly any difference between taxation and compulsory savings, that what they are paying is virtually a form of tax. In the case of the higher income groups, this would be true. But in the case of the lower income groups, the intention is just the opposite. I should have thought that Government would make it clear that there is a vital difference, even from the point of view of the elements of coercion, between compulsory savings and taxation. If a man does not pay a tax, he is punished, whereas in the case of compulsory savings, a person who forgoes present consumption and makes certain sacrifices, at the end of a certain period gets benefits that a non-paying man does not get. Therefore, benefits cancel the coercion. In the case of compulsory savings, it is more by way of propaganda that this pressure or coercion should be applied. We cannot say to the people that if they do not save they will be sent to the prison, or that if they do not save they will have to pay more by way of fines. If a man does not save, it is because he does not understand the benefits of saving. We should send people to him in order to convince him that here is a method by which he can benefit the State as well as himself, that, at the end of a certain period, it is he who will receive the benefit and his richer neighbour will pay more taxes to the Government so that he may be repaid and so on. The more the people know about it, the better from the point of view of the success of the Compulsory Deposit Scheme.



By KALI BISWAS

BIRDS IN TH

POULTRY FARMING SPREADS IN AJMER

Mrs. Kanta feeds the birds in her courtyard. They lay silver eggs.

To a Mother— Children's Education

MRS Kanta has four children, three daughters and a son: Vaijayantimala who is 11, Sheela Kumari who is 8, Vijayalakshmi who is 6 and Tulsi Das who is 4. The mother naturally wants them to have a good education. But the father, L. K. Bhagwan Das, being a mere clerk in the railways, cannot afford the money to put the children in a special school. So Mrs Kanta thought of a plan. Why not start a small poultry farm and supplement the family budget?

In 1961 she bought 100 chicks from the Government Poultry Farm, Ajmer, and registered herself as an "approved breeder."

The first eggs from the birds began coming six months later. With the income, Mrs Kanta admitted two girls in a convent school. Impressed by Mrs Kanta's initiative the convent agreed to buy eggs from her. Thus the marketing problem was also solved.

"I have now 44 birds with me," she said when I saw her at her small home. "It is moulting period now and I get only a dozen eggs a day. In winter I get as many as 30."



The birds are kept in the courtyard. Covered with wire net, the bird enclosure is clean and gives the birds ample space to move about.

In front of the house, there is another small pen where the cockerels are kept.

How does a mother of four children find time to tend so many birds? Mrs Kanta's reply surprised me.

"Why, I have lot of time on my hands. I feed the birds myself and look after their health. The children also help me, particularly this boy. He does not allow anybody else to come near the pen." I looked at Tulsi Das. He had only a shirt on and a small stick in his hand. He watched us for a moment and ran to his mother who hugged him.

Mrs Kanta said the earning from the farm is about a hundred rupees a month on the average. She is planning to expand it. She wants to dispose of the cockerels and get 200 chicks. "For some reason I had to withdraw Sheela Kumari from the convent. I have to readmit her. Then there are two others. How can I meet the additional expense unless I get more layers?"

To Young Graduate— A Paying Career

IF to Mrs Kanta poultry farming is a source of additional income, to P. K. Datta it is a full-time vocation. Mr Datta, 23, is a commerce graduate. He went to Delhi to get training in dyeing and cleaning. An accidental meeting with someone convinced him that there is more money in bird-keeping. He changed his mind and went back to Ajmer. He took training in poultry keeping at the Government farm earning a stipend of Rs 45. In 1962 he bought 50 leghorns and 50 Rhode Island Reds from the Government farm at concessional rates. Unfortunately 35 chicks died and of the rest nearly two-thirds turned out to be cockerels. But Mr Datta was not disheartened. He went on adding birds to his farm. Today he has 300 birds.

Ask him anything on poultry, you get more than a mere answer. He took me to the courtyard where the birds were. I saw several pens, separate and well laid out. He took out a white leghorn from another pen and talked to me about its chara-

IR LIFE

cteristics. "I give my birds plenty of green leaves and gram. I also have them vaccinated by the Government animal husbandry staff."

The yield is a daily 125 eggs in winter. The eggs are graded and stamped. The price in summer is Rs 2.12 per dozen. In winter the price goes up to Rs 3.

Datta is happy with having chosen poultry farming as a career. He invested Rs 3,500, and has already recovered Rs 2,500, besides a stock of Rs 3,500. His monthly income is around Rs 500. "I am expanding my farm", said Mr Datta with a sense of pride. "In February I shall get 500 birds. In fact I have bought 1,700 square yards of land for this purpose."

As a breeder did he face any difficulties? Of course he did. The Government Poultry Farm, he said, sold eggs at 15 nP. each. It sold birds for Rs 4 or 5. Private breeders were not in a position to sell eggs or birds at such low prices. Of course breeders got help and encouragement from the animal husbandry department. But if the idea was to promote poultry farming, he wanted the Government farm to give more scope to private breeders.





To a Headmaster— Prizes and Pride

MR V. E. D'Rozario is an artist, a bird fancier. To him poultry is more a source of aesthetic pleasure than of money. His main interest is to improve the breed.

As I chatted with Mr D'Rozario in his drawing room, a dachshund kept wagging his tail. From the window I could see his Siamese cat sunning itself on the grass. In the verandah there were cages with a variety of chattering birds. In front of the house grew a fine collection of roses and cacti.

Mr D'Rozario is the headmaster of the Jawahar Higher Secondary School of Ajmer. His second love is poultry, to which he devotes all the time that his work spares him. He goes through the British and American poultry literature and keeps in touch with the foreign breeders.

Mr D'Rozario started his farm in 1954 with 40 birds. In order to improve the breed he imported 30 eggs from a Mrs W. J. Mitchell of Devon, England, winner of an international poultry award in 1956. He got 21 chicks. He cross-bred the males with the local female birds. A specimen of this hybrid bird won for him the President's Silver Plaque at the All India Poultry Show in 1956. He won this coveted award in 1957 also and again successively for two years in 1960 and 1961.

To introduce new blood Mr D'Rozario imports foreign eggs every five years. He has now some 150 birds including imported varieties.

Money in Eggs

He gets the local female birds mated with the males of the imported species.

According to Mr D'Rozario a balanced diet is essential for good laying. He said he had sold a batch of pullets which had been giving eggs regularly to two village breeders through the Panchayat Samiti. The hens had stopped laying after two days. Reason: lack of balanced food.

In the company of his birds, Mr D'Rozario is scientist plus teacher. For my benefit he caught hold of a Rhode Island Red and showed me the uniform chocolate colour of its feathers. Then he took a Black Minorca and explained how the greenish black colour of its feathers differed from those of other varieties. And of course he held up another bird which, he was confident, would win for him the President's Award at the coming All-India Poultry Show. "You know," Mr D'Rozario said, "to be a champion, a bird should possess prominent, fiery red eyes; medium-size

A prize bird has every right to strut about in Mr. D'Rozario's drawing room.



cone; a round breast; length and breadth tapering slightly towards the tail, beautiful wing markings, both primaries and secondaries; and it should have rich, red undercolour and its shape should be almost like a brick." The bird which stood majestically on the ground had all the features.

Government Farm Serves Them

THESE three people are some of the 100-150 poultry breeders in Ajmer whose number is increasing steadily. The reason why this particular line is popular in Ajmer is the help and guidance the breeders get from the Animal Husbandry Department and particularly from Dr G. S. Mahanot, District Animal Husbandry Officer. The breeders I met owed their success in some way or other to the encouragement given by Dr Mahanot. The preventive measures taken by the department brought down the mortality rate and increased the confidence of breeders. The department provides prospective breeders many facilities. They can avail themselves of a training course of six months. By registering as approved breeders and paying an annual fee of Rs 3 they can buy chicks and get amenities at 50 per cent of the normal rates.

Thus Ajmer furnishes a good example of what a Government farm can do for a neighbourhood. The Government Poultry Farm of Ajmer is about two miles from the city, and is situated at the foot of the Aravali ranges. The farm has two incubators which together can coddle about 3,000 eggs. Three more incubators are to be installed soon. From the incubators the chicks are taken to the brooders where they are kept on litter. To give the young chicks warmth and comfort electric bulbs have been placed under a wooden cover. "This type of brooder," said Dr Mahanot, "can easily be made in villages. For electric bulbs the villagers can use lanterns. We are getting a thatched hut made to give demonstration to the villagers."

As they grow up, the chicks are removed from one brooder to the other. Six-week-old chicks are vaccinated against Ranikhet disease. Two weeks later follows vaccination



Commerce graduate Datta examines an egg.

against fowl pox. From the brooders the pullets are taken to the laying rooms where they mate. They are provided with small stone chips which they eat. They contain calcium, which is essential for the formation of strong eggshell. Laying rooms are provided with trap-nests. The moment a bird goes inside the nest the door closes automatically. It is opened only after she has laid the egg. The device helps in judging the quality of the egg and the hen. Eggs are then collected for testing.

Mr Dindayal Sharma, manager of the farm, said only 20 per cent of the eggs were released for consumption after testing. The rest went to the incubator so that more good chicks could be obtained for distribution.

The demand from breeders has kept growing. Dr Mahanot said that private breeders, if they so desired, could get their eggs coddled in the incubator on a nominal charge of 6 nP. per egg. Orders for eggs and birds were passed on to approved breeders.

New Projects

INDIA has signed a contract with Japan for the supply and erection of equipment valued at Rs 22 crore at the ALLOY STEEL Projects at Durgapur. The project will manufacture one lakh tons of special steel ingots and 60,000 tons of finished products in the first phase to be completed by the end of the Third Plan.

The National Coal Development Corporation will build a COAL WASHERY with an annual capacity of 30 lakh tons at Kathara in Bihar. A contract has been signed with Soviet Union for the supply of equipment and machinery valued at Rs 2 crore for the washery.

THE Industrial Development Corporation of Andhra Pradesh plans to set up a factory at Yellandi to produce one lakh tons of PIG IRON every year. The factory will cost Rs 7 crore.

The Corporation will also set up a BALL BEARING factory near Hyderabad in collaboration with a Japanese firm at a cost of Rs 3 crore.

The Corporation has already been given licences for establishing an INTEGRATED GLASS project at a cost of Rs 2 crore with Hungarian collaboration and a plant for manufacturing high tension and low tension INSULATORS with Czechoslovakia's collaboration.

A LUBRICANTS plant will be set up in Bombay by the Government of India in collaboration with the ESSO Oil company. It will have an annual capacity of 1.45 lakh tons and will cost Rs 7.1 crore.

The RAW FILM factory at Ootacamund was inaugurated by the Chief Minister of Madras on September 7. The factory is being built in collaboration with Messrs Bauchet and Company of France.

BRIGHT SPOT

WORLD'S MOST PROFITABLE AIRLINE

Air India made a record profit of Rs 3.45 crore in 1962-63 —Rs 2.68 crore more than its profit in the previous year and the highest for any airline in the world. It has declared for the first time a dividend of 5 per cent on equity capital to the Government.

Fact Gatherers

In what has come to be called the "3-Annas Debate" Mr Nanda referred to the substantial work that has been done by National Sample Survey (NSS) in building up a body of statistics collected and tested through modern scientific methods.

How is NSS run and how does it set about its business?

The National Sample Survey was set up in 1950 as a direct outcome of the recommendations of the National Income Committee appointed in 1948. It is under the control of the Department of Statistics of the Cabinet Secretariat and works in collaboration with two other organisations, namely the Central Statistical Organisation and the Indian Statistical Institute. The survey programme is chalked out by C.S.O., and the actual investigation in the field is done by N.S.S. which is the field organisation. The results of the investigations are forwarded to I.S.I. for processing and tabulation. The report prepared by I.S.I. is further scrutinised by C.S.O. before publication.

N.S.S. has so far completed 120 surveys of which 80 have already been published. The rest are under print or scrutiny. The surveys have been made in 17 rounds. (Each round lasts for a year. However, before 1957, a round lasted for four to eight months) A band of 800 investigators attached to 20 regional offices and the headquarters in Delhi goes round collecting data on specific subjects. There is an inspector for every four investigators and the regional office is headed by a superintendent. Information is collected on the basis of full confidence and trust of every person approached. Sample units and methods are determined by scientifically established standards.

Among the subjects, survey of consumer expenditure is a continuous study year after year. Since 1957, production of food grains also has been a subject of continuous investigation. The other subjects covered in different rounds include cost of cultivation of crops, production of small-scale industries, output of the transport sector, output of different trades, pattern of landholdings, indebtedness of the people, the second agricultural labour enquiry, family planning, birth and death growth rates, and data on retail prices.

Kerala Package

Military terminology is often used in writing about economic development. We speak of the food front, of agricultural strategy and of pockets of resistance. The intensive agriculture schemes that have been adopted for certain regions or certain crops can, employing military language, be compared to Panzer attack. Places most favourable for forward action are chosen and heavy artillery is pushed up there.

The Package Programme rests on the idea that quick addition to total production can be achieved by helping the agriculturally active districts to become even more active. *Yojana* has already carried reports about the progress of the Package Programme in Raipur and Thanjavur. Two other regions where there has been a striking increase in production plans are the Alleppey and Palghat areas of Kerala, which together form the Package region of the State.

The programme started there in the Kharif season of 1962-63. The principal crop is paddy of which three harvests are taken in Alleppey. The number of production plans has risen in that district to 34,000. In Palghat nearly 23,000 cultivating families have had plans drawn up. Loans given under the programme amount to Rs 8.15 lakh in Alleppey and Rs 8.93 lakh in Palghat.

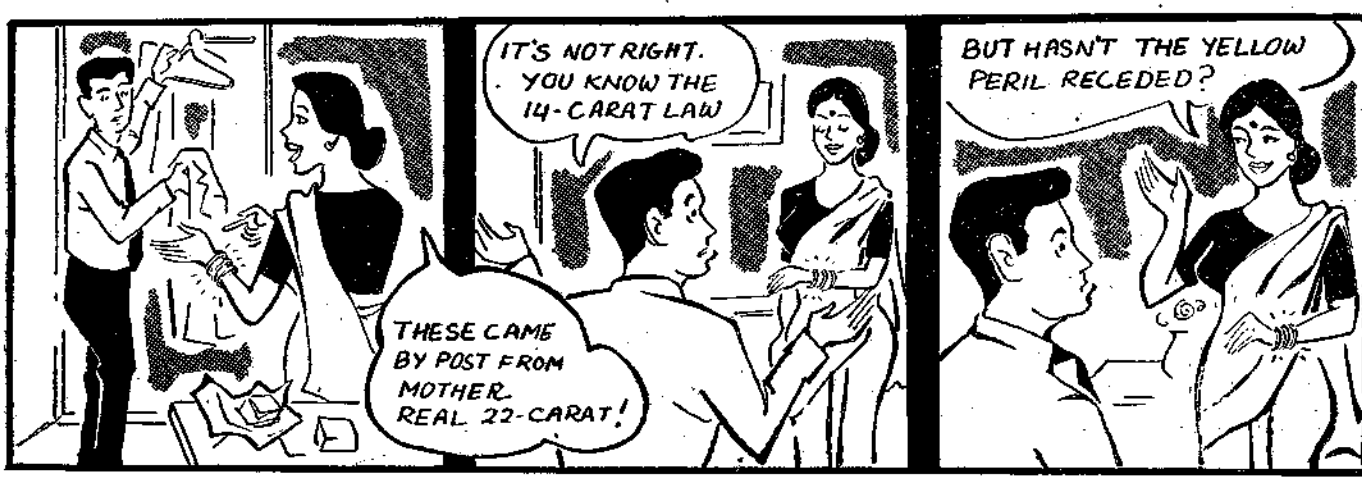


IGNORAMAN

Wants to Know:

Does revised gold policy mean more zari for borders?

MR AND MRS SHAMBU — **By Malinda Topa**



Books

UNDER-DEVELOPMENT DESCRIBED

Problems of Under-developed Economy by D. S. Nag. Published by Lakshmi Narain Agrawal, Educational Publishers, Agra. 463 pages. Rs 18.

THE main topic of interest to economists during the thirties was employment; in the post-war era the interest has shifted to problems of growth and development. Evidence of this is the number and quantity of the publications brought out by individual scholars, academic institutions, business enterprises, government organisations and international agencies. Some of the publications deal with specific facets of the problem of development, and others are more general in character, like Dr. Nag's book which is based on his thesis for a D. Litt. degree of Agra University.

From its very nature one should not expect a new theory of development to emerge from the book. All it does is to discuss various factors which either promote or retard development, and to indicate the broad contours of a theoretical framework.

The first chapter attempts a definition of an under-developed economy. The basic criteria are a low standard of living, a low rate of investment and inadequate supply of entrepreneurship. The next two chapters give a detailed account of the inhibitory factors prevalent in under-developed economies, such as predominance of the rural sector, rural unemployment and underemployment, dependence on exports, poor capital base, low levels of per capita income, and the prevalent demographic pattern with high birth rate and steeply falling death rate. International comparisons are made to highlight the difference between the so-called developed and under-developed countries. The author could have given more up-to-date figures in all these comparisons.

Having traced the basic characteristics the prerequisites of development are listed. These cover social and institutional factors, such as the caste system, laws of inheritance, mobilisation of capital, a development-oriented fiscal policy, etc. In dealing with these topics the author has relied, as can be seen from the copious quotations, on the works of Lewis, Colin Clark, Bonne, Herbert Frankal, Harrod-Domar, Keynes and Rostow, to mention only a few. There is a little too much of such freewheeling. Much digression could have been avoided without hurt to the main thread of reasoning. For example, in the chapter "An Analysis of Theories on Development", the author, after devoting more than ten pages to Marxian interpretation of history, the theory of surplus value, and his prophecy regarding the doom of capitalism, realises that "our study being mainly concerned with problems of [illegible] under-developed economy", and then switches over to Marx's framework of growth and development. While the theories of Ricardo, Schumpeter, Keynes, and Harrod-Domar are adequately dealt with, the author could have been a little more sympathetic to Malthus who was the first to bring out the interplay of production and population in a scientific way. The last two chapters dealing with "recent changes in concept and attitudes about under-developed economy" and "reorientation of economic theory" stand out both in regard to exposition and treatment of subject matter.

Some of the typographical errors (for example page 58 gives the birth rate as 25.35 per cent instead of per thousand) could have been avoided. An index would have helped.

A.V.R. CHAR

Small Industries For Mysore

Small-Scale Industries of Mysore. National Council of Applied Economic Research. 215 pages. Rs 12.50.

THERE has been of late a deluge of literature on small-scale industries. Some of the surveys and enquiries into the conditions and problems of the industry are very competent but the general tendency has been to generalise vaguely and philosophise about the place and future of village and small industries. The orderly development of this sector requires more of policy-oriented studies. To be meaningful and operationally effective, such studies must be broken down by industries, areas and so on. This publication of NCAER is one such study. The programme of development of the small industry in Mysore as outlined by the Council bears the stamp of pragmatism. The additional outlay suggested for the period 1961-71 is Rs. 10 crore which seems to be modest in view of the development envisaged.

The problems of Mysore do not appear to be very different from those of the rest of India. The maladies afflicting small industries are everywhere similar. Spelling out the problems in terms of over-all handicaps like lack of capital, power shortage, scarcity of raw materials, limitations of market and inadequacy of skills, does not help much. Even a State is too big a unit for a purposeful enquiry into small industries.

Even so, the present study has succeeded in detailing in concrete terms a programme of development in certain fields. There is immense scope in Mysore for wood-based and plantation industries, ancillaries and sub-contracting. The Hindustan Machine Tools and Mysore Kirloskars have set an example in how sub-contracting can be profitably encouraged. On the whole, however, very limited use is made of sub-contracting in the State. The general tendency to produce everything oneself has come in the way of extensive use of sub-contracting and ancillary and assembly work. The tables listing items which can be wholly manufactured in small-scale units, engineering goods suitable for assembly by small scale units and items suitable for ancillary production are useful for drawing concrete programmes.

Thus there are some definite, action-oriented recommendations; but on the whole further explorations will have to be made. However useful a general survey dealing in aggregate terms, actual programming cannot be done without more intensive and specific industry-studies.

M.R. KULKARNI

BOOK OF BEES

Bee-keeping in India by Dr. Sardar Singh. Indian Council of Agricultural Research. 214 pages. Rs 8.

THE book consists of twelve chapters and illustrations. These chapters cover the subject-matter as follows: importance of bee-keeping; the honey bees; species of honey bees; indigenous methods; equipment how to acquire bees; bee pasturage; seasonal management; miscellaneous manipulations; enemies and diseases; honey and beewax; and pollinating agent. It is commendable that the author has assembled a considerable mass of facts and a few new plates on the subject. The book will be found useful for students of agriculture and amateur bee-keepers.

The illustrations do not always appear to reproduce the originals faithfully and they fail to convey their value. In Chapter 5, glaring omission is of villagers' beehives. Had this been included, along with appropriate illustration, the treatment of the subject would have become fuller. The text gives an impression of being disjointed. It should have been more systematic.

The get-up of the book needs to be improved to justify the price fixed for it.

J.P.S.T. CHANDRA

BOOKS RECEIVED

Anthropology on the March edited by Bala Ratnam. Published by the Book Centre. Madras. 390 pages. Rs. 36.00.

Economic Trends and Indications Vol. II. by Bhikhalal Kapasi. Economic Trends and Indications publication. 226+xxx pages. Rs. 7.50.

General Education Reconsidered—edited by K. Satchidananda Murty. Asia Publishing House, Bombay. 132 pages. Rs. 8.00.

ASCI Case Collection, First Series—by A.R. Towl & M.S. Doraiswami. Asia Publishing House, Bombay. 344 pages. Rs. 25.00.

The Development of Firms—by A.S. Mackintosh. Macmillan & Co., Bombay. 305 pages. $ 7.00 or 37sh. 6d.

Report on Public Works Administration. Published by the Committee on Plan Projects, Planning Commission, New Delhi. 126 pages.

Pocket Compendium of Madhya Pradesh Statistics 1962. Directorate of Economics & Statistics, Madhya Pradesh, Gwalior. 391 pages. Rs. 7.50.

THE FACTS ABOUT OUR INCOMES

(*Continued from page 3*)

small-scale, and large funds and effort are now being devoted to industrialisation.

We have recently undertaken the rural works programme. It should be remembered that this country is not the same everywhere. Conditions vary. The statistical average does not take us anywhere. In some places the incidence of unemployment is very heavy and that has to be taken into account. So we try to create employment in these areas. We do things which will raise the agricultural potential so that the area becomes self-sufficient in production and employment and we do not need to pour funds into the place.

The other programme we have undertaken is rural industrialiation. It is not possible for us to take away all the rural people to big cities. On the contrary, industry should go to the villages. That is the scheme we are working out.

Clear Objective

A third approach to the problem of disparity and its solution is social expenditure. It is not necessary to have a mechanism by which everybody's income rises before disparity decreases. Something has to be done directly for the specially vulnerable sections. So, besides the normal acceleration of programmes of development, we are doing something specially for those areas and sections of the population where poverty is more intense.

As regards concentration of wealth, one of the ways we are approaching the problem is by developing the public sector. We have to see, however, that we do not create conditions where disincentives to production and enterprise arise. We would like to go to the maximum extent to reduce the disparities without impairing the objective of increased production and employment.

The objective is clear: development of production, development of the economy, reduction of disparities, and the bringing about greater equality. There is commmon ground in the House as to what we should do. I would hope and expect that Members would treat this as a national question, not a party question.

Rural Income

I shall now deal with some of the figures Dr Lohia has given. May I assure the hon. Member and others that the figure of 7.5 annas arises out of several calculations? There are several rounds of National Sample Survey with which at least the hon. Member is familiar. Let it be understood that this is a new and most advanced technique developed in this country. It has proved itself. There are several rounds, one after another, and there is internal consistency between these. These figures are, by and large, very near the truth. There may be some limitations here and there, but we can depend upon them for all practical purposes. The figure I have given is based on those rounds. Other data available in the country are also consistent with the figure.

Dr Lohia is a very learned person and I have great respect for him. His learning extends to many things but as regards statistics, I may inform him that it is not really for him, because in every minute of his speech, he made a mistake in statistics. He made a great play of the gap between income and expenditure in the rural areas. According to him rural consumption is about Rs 8,700 crore and rural income Rs. 6,600 crore and he asks us how we account for the difference of Rs, 2,100 crore.

I would like to tell the hon. Member that as on other occasions, in this case also he has jumped, losing sight of several things. Rural income is not derived only from agriculture. Some income is derived from non-agricultural subsidiary occupations. This figure is Rs 670 crore. Thus Rs 6,074 crore are derived from agriculture, Rs 826 crore from allied occupations and Rs. 670 crore from non-agricultural subsidiary occupations. The total is Rs 7,570 crore. The consumption expenditure figure is still higher, but I may tell the hon. Member that this figure pertains to the entire rural population, including the non-agricultural population in rural areas. That explains the difference. When one talks of the rural areas, one must also take into account income other than that derived from agriculture. All this together comes to about Rs. 9,900 crore.

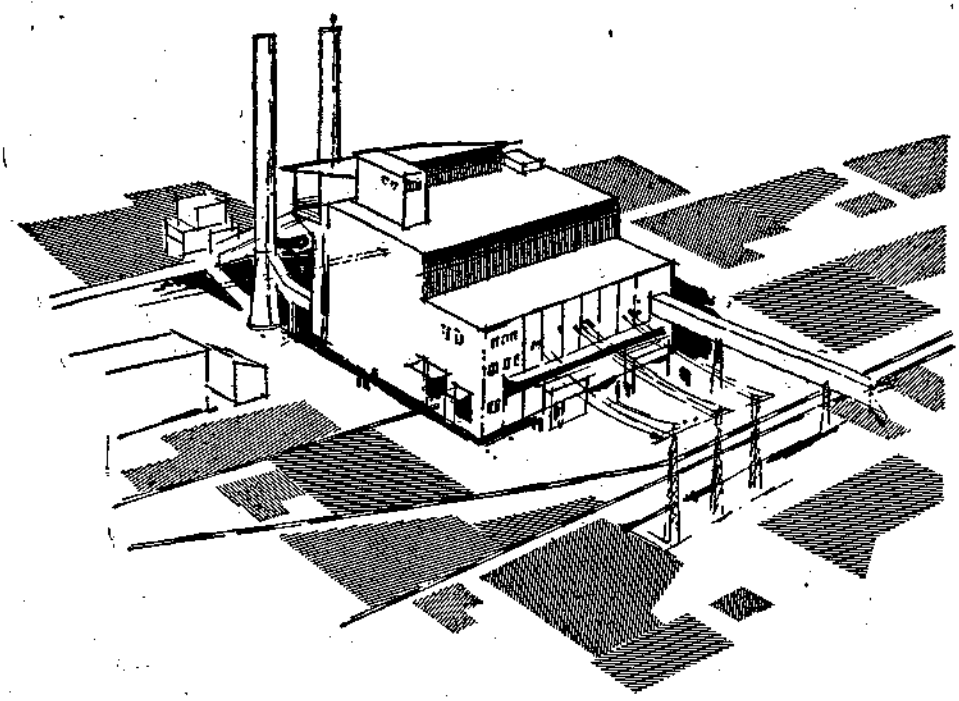
Because of his innocence about those things, Dr Lohia came out with a formula that the top 10 per cent of the population accounts for 50 per cent of the total national income and the top 20 per cent take away 60 per cent of the total. The actual percentages are not what he gave. Against 50 per cent given by Dr Lohia the correct figure is 25 per cent. The moment you make allowance for that, you come to a very different figure.

Dr Lohia says the Government has been adding 20 per cent to every figure in order to get more tax revenue. Assuming that 20 per cent has been added to every figure, he has gone on to deduct that. By all these processes of deduction and subtraction the income of 27 crore people should have been zero, and not even the figure of three annas he has somehow reached. Again, Dr Lohia took one of the States, namely U.P. He had some information for that State and then he applied it to the whole country. With all deference to the people who come from U.P., what is true of U.P. does not hold good for the whole country. And there too he applied his formula of 50 or 60 per cent and got the results he wanted. Likewise, quoting from a book brought out by the National Council of Applied Economic Research he says that in 40 districts the per capita income is less than Rs 120 a year. The book deals with a total of 289 districts. He takes 29, out of which he chooses four, and then he tries to prove that the figure for these districts represents the reality for the whole country. About agricultural holdings, I need not join issue with him. The figure of 34 per cent or so with less than one acre relates to all the population including that section which has nothing to do with land.

Indeed all the figures he has given are based on this method of calculation which is *ab initio* wrong.

I have taken a long time, and I would submit that there is really nothing at all to differentiate between friends on the opposite benches and ourselves regarding the main purpose which is to grapple with the problem of poverty and to resolve it as quickly as possible. If that spirit prevails, I think we will have some better results.

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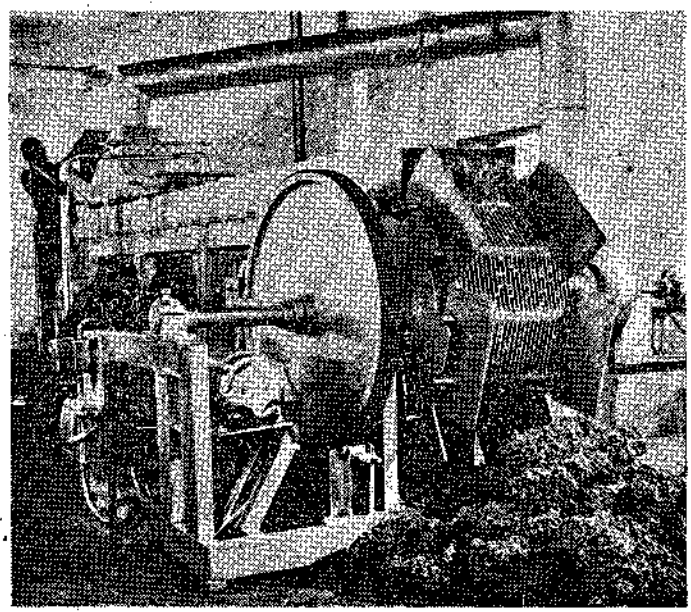
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Cheaper Cement from Furnace Slag and Fly Ash

A pilot plant producing cement from fly ash.



During the Third plan period 900,000 houses are to be built under different schemes for which a provision of Rs 202 crore has been made. Besides, an investment of Rs 1,125 crore is expected to be made in the private sector during the period.

Though building activity in the country has increased considerably there is a shortage of building materials. Prices are also high. More and cheaper varieties of building materials are required to meet the increasing demand. The Central Building Research Institute (C.B.R.I.), Roorkee, has evolved some new building materials from industrial wastes and its recommendations have been published in various journals from time to time.

The following article sent by the Institute gives a brief account of some materials that can be manufactured from industrial wastes and used in building houses.

Fuller Use of Our Resources 4

ONE possible way of meeting the shortage of traditional building materials is to make greater use of the large quantities of industrial wastes that accumulate in the vicinity of steel plants.

Of the principal industrial wastes which can be utilised in the building industry blast furnace slag and boiler furnace residue are most important.

About 2 million tons of blast furnace slag are available per year in the country for disposal. Every ton of iron produced in the steel plants yields ½ to ¾ tons of slag as by-product. The slag is either air-cooled, granulated or expanded, depending on the condition under which the molten slag is cooled. Air-cooled slag, or the molten slag allowed to cool gradually in the air, can be used as an aggregate in concrete or concrete products, or as a metal for roads. Molten slag when cooled more quickly produces granulated slag. This is suitable for the manufacture of slag cement or pressed bricks. Expanded or foamed slag is formed when the slag is cooled with a limited quantity of water. This can be used as a light-weight aggregate.

Furnace residue may be either cinder or fly ash. When lumps of coal are used for raising steam in boilers, the furnace residue, available in lumps of various sizes, is called cinder or clinker. The Railways and thermal power stations using lump coal produce about 3½ million tons of cinder which can be used as an aggregate in precast blocks or as pressed bricks or in mortars or plasters. Fly ash is the finely divided residue caused by the combustion of pulverised coal in the boiler. It is produced at thermal power stations. About 1½ million tons of fly ash are produced per year and the quantity is expected to rise to 3½ million tons by the end of the Third Plan. It can also be used for manufacturing pozzolanic* cement, as a light-weight aggregate for use in concrete, concrete blocks or slabs, in masonry mortars, in making fly ash cinder bricks and aerated concrete.

Industrial wastes in raw or processed form can be used in the manufacture of pozzolanic cement, slag cement or masonry cement. The first two have the useful properties of lower heat of hydration, increased resistance to attack by sulphates or acidic waters, improved workability and reduced segregation, making them particularly suitable for special construction jobs.

The Institute's work on the use of Indian granulated slag in the manufacture of Portland blast furnace slag cement showed that it can be prepared by separate or

* A volcanic dust first found at Pozzuoli, near Naples, which forms with mortar a cement that sets in air or water.

combined grinding of 65 parts of the Portland cement clinker with 35 parts of the slag from the Tata Iron and Steel Works at Jamshedpur. The Chaibasa Works of the Associated Cement Company have started using Tata's slag for the production of this cement. Slag from Bhilai and Durgapur steel plants are also proposed to be used for producing this cement. The grinding of slags in the wet state can be exploited for mass concreting. The slag is ground finer and is more active and can replace as much as 65 per cent of Portland cement in mortars and concretes.

The other two types of cement which can be manufactured by utilising slag are lime-slag cement and super-sulphate cement. Experiments made indicate that super-sulphate cement with good strength and resistance to sulphates and acidic waters can be manufactured from the Tata slag. The granulated slag is activated by means of $CaSO_4$ in presence of a small quantity (up to 5 per cent) of Portland cement clinker.

Fly ash can be used for the manufacture of pozzolanic cement either at the cement works or at the construction site, where it can be added to the cement at the time of mixing. Though used for general purpose Portland fly ash cement is more suitable for mass concrete work. It is cheaper and also economical. Fly ash from Bokaro, Durgapur, Kanpur and Madras have been tested. They also fulfil the specified requirements and are suitable for use as pozzolana for producing Portland pozzolana cement. Up to 20 per cent of the Kanpur and Madras varieties and 25 per cent of those of Bokaro and Durgapur can be used for manufacturing Portland pozzolana cement.

Durgapur fly ash can also replace up to 20 per cent of sand in 1:8, 1:10 and 1:12 cement, sand, and Madras fly ash up to 15 per cent of sand in 1:3:6 cement, sand, gravel concrete. Part of sand replaced by fly ash increases workability, reduces bleeding and segregation and also saves cement.

A number of power stations are concentrated in the West Bengal-Bihar areas. In view of the nearness of the cement-producing centres and higher level of industrialisation in and around this area, manufacture of Portland fly ash cement at the factory site or use of fly ash at the site of construction of minor and major projects can be started.

A New Aggregate

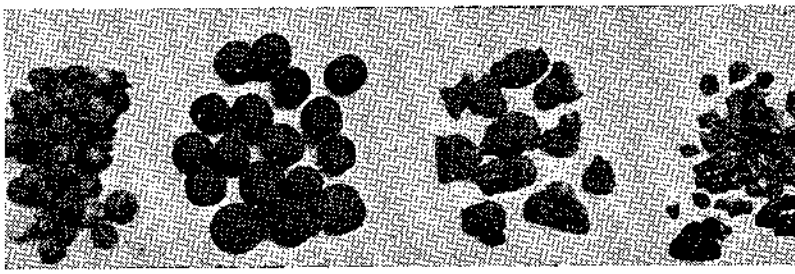
Blast furnace slag from the Tata Iron and Steel Company has been found to possess suitable physical and mechanical properties for use as an aggregate. The resulting concrete has properties similar to those of ordinary dense concretes. Standard tests on air cooled slag of Bhilai steel plant has also given satisfactory results for its use as an aggregate.

Light-weight aggregates can be made from any of the following four materials: clinker, sintered fly ash, expanded or foamed slag and bloated clay. Clinkers contain a comparatively high content of unburnt fuel. Concretes prepared with them possess greater moisture movements and drying shrinkage. Steam curing for 10 hours at atmospheric pressure reduces the drying shrinkage and increases stability. A 1:6 cement cinder mixture (by volume) is suitable both for strength and stability. The cost of cinder concrete block construction is cheaper than that of brick masonry work at places where bricks are available at Rs. 50 or more per thousand. Blocks made with the sintered fly ash aggregate are lighter and more stable.

The Institute has produced a sintered light-weight aggregate on a pilot sinter strand with the Bokaro and Durgapur fly ash. The cost of production is estimated to be about Rs 35 per 100 cubic feet. The unit weight of crushed sintered aggregate is 55 lb. per cubic foot. The aggregate is suitable for making concrete blocks and for on-the-spot concrete construction.

Expanded or foamed slag can be crushed to suitable sizes and used in making light-weight concrete. Slags from the Mysore Iron and Steel Plant at Bhadravati and from the Durgapur steel plant have been found suitable for making foamed orexpanded slag light-weight concrete. It is lighter, free from deleterious material and suitable for use with reinforcement. The production of this aggregate does not require complicated machinery and capital investment is low. Cinder and sintered fly ash and expanded slag can be used for making concrete blocks.

Coal ash can also be used in place of *surkhi* in making lime mortars. The proportions (by volume) are 1:2, 1:3 lime coal ash or 1:1:1, 1:1:2 lime, coal ash, sand.



Light-weight aggregate: (Left to right) fly ash, bloated clay, expanded slag and clinker.

The mortar is prepared in the same way as that of lime *surkhi* mortar. Lime coal-ash mortar is cheaper than cement mortar and is suitable for building two-storey houses.

Cheaper Bricks

Among other materials evolved at the Institute are pressed bricks and another variety called clinker mix bricks. Pressed bricks have been manufactured by using a suitable mixture of lime, cement and granulated slag. The Indian Iron and Steel Company, Burnpur, has produced this variety and used it in its constructions. As regards clinker mix bricks, it has been found that they can be manufactured by using 10 per cent cement by weight of fly ash. They are suitable for manufacture near the thermal stations where production of clay bricks proves expensive.

The Central Building Research Institute has done valuable work on the manufacture of building materials from industrial wastes. Some offer immediate prospects, though others require setting up of new machinery.

Contributors may kindly note that material sent by them will, in case of non-acceptance, be returned only if accompanied by sufficient postage. —*Editor*

District with 76 Co-op Farms

(*Continued from Page 10*)

Society of Bhamer, 42 miles from Dhulia, is a lesson in community life. The society was registered in January 1960. It has 16 members, all landless labourers belonging to different castes—eight are Bhils and three are Harijans. It has set up a colony of huts near the fields, about two miles away from Bhamer. All the members live together and work together without any inhibitions of caste. They have come together with a purpose which has wiped out all the traditional barriers among them.

The society has been given about 300 acres of wasteland on the slopes of the hills. The land was undulating and strewn with big stones when the society took it over. The members have removed the stones, constructed bunds and levelled the fields for cultivation in 250 acres. The remaining 50 acres are left out as uncultivable. A well has been dug and there is a small tank nearby for irrigation. The members have 16 pairs of bullocks. A godown, which also serves as a cattle shed, has also been built.

Until now the society grew only dry crops but now with the help of the new well, irrigated crops have become possible. The annual income of the society is about Rs 20,000 to Rs 22,000. Members were given bonus at the rate of 40 per cent for the first two years and 25 per cent for the third year. So far, Rs 5,000 have been distributed.

The members are paid wages for their work in kind. The society runs a consumer store to supply all commodities of domestic use to the members, and the bills are adjusted against the wages. A lower primary school has also been opened. The society has plans to build a housing colony for the members replacing the existing temporary huts.

Model of Organisation

The Pujya Sane Guruji Co-operative Joint Farming Society of Morane, five miles from Dhulia, is a model of organisation. It was registered in February 1960 with Mr Dashrath Patil as the chairman. Its 13 members have pooled 116 acres of land. It has installed four engine pumps increasing the irrigation to 31 acres from original eight acres only. It has reclaimed five acres of undulating rocky land. It takes three crops and claims to be producing the best crops of Deviraj cotton, Bajri and chillies in the area. *It won the first prize for cotton production in 1961 in the district competition.* The income of the society was Rs 37,307 in 1960-61 and Rs 29,362 in 1961-62, the decrease being accounted for by the drought. In 1960-61, it distributed Rs 8,617 — nine per cent — as property income on the lands pooled. In the subsequent two years, the property income was distributed at the rate of 6 per cent.

The society has been running a dairy for the past two years. It has 11 buffaloes and half a dozen cows. A buffalo gives 10-11 litres of milk daily. Systematic records of each animal and daily production of milk are maintained. The dairy unit has already earned a profit of Rs 15,000 in addition to manure valued at Rs 1,000.

Centres of New Ideas

Explaining how the co-operative farmers differ from the other farmers in the village, Mr Dashrath Patil said, "The other farmers are in debts and their yield is going down. Our farmers are now free from debts and are prospering. Other farmers do not know how to use their lands properly. We use the land scientifically and this adds to its productivity. Above all, our members are men with an ideology and a social purpose and our society has become a centre for transmitting new ideas. Our society is one of the four formed simultaneously in four different villages by men of similar ideas. The other three are: the Jayaprakash Society at Waghwadi, the Navayug Society at Chilane and the third at Jogshelu, and all of them are doing good work with a patriotic fervour."

The Vishwanath Co-operative Joint Farming Society at Vishwanath, 10 miles from Dhulia, was formed in June 1961 under the chairmanship of Mr Hansraj Madhavrao Patil. The first impact of the society during the past two years is that the feud between the two parties in this village of 74 houses has subsided. Most of 14 members who formed the society did not have enough funds or implements to till their lands. Now there are six pairs of bullocks and three oil engines on the wells. The society has bought 21 acres of land to add to its original 95 acres. In 1961-62, its total income was Rs 20,380 and the net profit amounted to Rs 3,094. It has also 20 cows and two bulls, 100 sheep and 150 poultry birds. It runs a flour mill. Now the members do not have to seek employment in the black season period and they are free from debts.

The society has co-operated with the Jaya Ambika Co-operative Joint Farming Society of Nyahalod at a distance of one mile from Vishwanath and the two have jointly bought a tractor with all attachments. The Nyahalod society is also led by Mr Hansraj Patil.

Work Yields Wealth

The Gautam Co-operative Joint Farming Society at Navara-Navari is remarkable for two reasons. Firstly all its ten members are Harijans. Secondly, unlike many other joint farming societies in the district, all the ten members are active workers and they work together as equal partners although four of them are landless labourers and the other six are landowners.

The seniormost among the members is Mr Samrat Tukaram Bawiskar, an old man of 60 years. When I saw his tanned and lean figure working on the well along with other members, I asked, "Babaji, why don't you take rest in your old age?" He replied, "I am still fit to work. How can I take rest when these young boys are working?" He was happy to see that since the inception of the society, they get full employment throughout the year. Previously they had to seek work elsewhere for six months in a year. "Our lands also yield better crops now", he added. He has invested eight acres of his land in the society.

The society was registered in February 1962. The members have pooled 63 acres of land. After harvesting the first year's crops, they paid off the loan of Rs 5,000 and distributed Rs 3,600 as property income in addition to the wages to the members.

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DA.63/217

HIRAKUD COMPLETES SECOND STAGE

THE Hirakud Project completed the second stage when the Chiplima power-house was commissioned on September 15. Three units of 24 mW each have been installed at the power-house.

The Hirakud system now has a total installed capacity of 270 mW. The project will also irrigate 5.7 lakh acres of land in Sambalpur and Bolangir districts of Orissa and supply perennial water to the delta irrigation scheme which will irrigate 16 lakh acres more.

More Power for Madras

The Parambikulam-Aliyar hydro-electric project was inaugurated by the Chief Minister of Madras on September 6.

The project envisages the harnessing of the water resources of the Anamalai hills for irrigation and power development. It will have four power stations to generate 1,80,000 kW of power and will be completed in 1965 at a cost of Rs 8.9 crore.

FORTNIGHT IN YOJANA BHAVAN

Mr Gulzarilal Nanda, Minister for Planning, Labour and Employment, and Deputy Chairman, Planning Commission, assumed office as Union Minister for Home Affairs on September 1. He will continue to be additionally in charge of the Ministry of Labour and Employment.

Mr B. R. Bhagat has been appointed Minister of State for Planning. Until recently he was Deputy Minister of Finance.

Mr Swaran Singh, Union Minister of Food and Agriculture, assumed charge also as Member, Planning Commission, on September 5.

Dr S. R. Sen has been appointed Adviser, Programme Administration, Planning Commission. He was Joint Secretary in the Commission.

Mr K.L. Joshi, Chief, Education Division, has been appointed Secretary, University Grants Commission.

Dato Abdul Jamil, Secretary to the Treasury, Government of Malaysia, came to Yojana Bhavan on September 19 and met Mr Tarlok Singh, Member, Planning Commision.

Fourteen Canadian Universities Overseas Service volunteers recently arrived in New Delhi for a year's assignment in India. They met Mr B.P. Patel, Adviser, Programme Administration, on September 15.

HMT'S BIG PROFIT

The Hindustan Machine Tools Limited earned a net profit of Rs. 2.15 crore in 1962-63 as against Rs 1.27 crore the previous year. It has declared a dividend of 10 per cent successively for the third year.

HMT plans to build its fifth factory at Hyderabad. The third factory at Pinjore is likely to start production in November next and the fourth factory is under construction near Ernakulam.

The Oil India Ltd. has declared a bonus of three months to its workers.

AHEAD WITH BOKARO

THE Union Minister for Steel and Heavy Industries announced in Lok Sabha that the Bokaro steel plant will be set up in the public sector without any delay.

The announcement follows the formal withdrawal of India's request to the United States for help to build the plant.

It is estimated that the construction of the Bokaro plant will cost Rs 558 crore, which is Rs 162 crore less than what had been estimated by the U.S.A.

According to the project report prepared by an Indian company, Dastur and Company, the plant will have an initial capacity of 1.5 million tons, to be later expanded to 4 million tons. Most of the equipment can be made indigenously. Equipment worth Rs 227.3 crore would have to be imported. The Government is likely to approach several sources for assistance to different units.

India produced 39 lakh tons of finished steel last year.



SNIPPETS

THE Delhi College of Engineering and Technology has been renamed as the Indian Institute of Technology, New Delhi, and has been declared an institute of national importance.....The exports of bananas are likely to rise to Rs 8 crore this year from Rs 2 crore in 1962. Steps are being taken to step up the production of grapes with a view to exporting them.....India exported to the U.S.A. 258 lakh yards of mill-made cotton textiles in the first six months of 1963, as against 70 lakh in 1961.....With the recommissioning of the kerosene refining unit, the Nunmati refinery is now working with full complement.....Some of the departments of the heavy machine building plant at Ranchi are likely to begin production by the end of this year.....The Indian Oxygen has set up the second oxygen plant in Bombay.....In May last, India produced minerals of the value of Rs19.2 crore—Rs 1 crore more than in April. Coal accounted for 66 per cent of the total value....The Employees' State Insurance Scheme has been extended to suburbs of Gauhati and Jorhat (Assam) since September 1.....The maximum age limit for emergency commissions in the Army will be reduced from 30 years to 27 years from January next.....All India Radio has opened a new broadcasting station at Kanpur...The number of dailies and periodicals in the country was 9,211 in 1962...A new process for preserving milk in its natural state, without the use of any chemical or refrigeration, has been invented by Mr Amjad Kazmi. ... The Fisheries Department of the Maharashtra Government has produced 30 lakh baby fish in Bombay in a year under the scheme of artificial fish breeding by hormone injections.

D. RAGHAVAN

How Madras Is Modernising Its Agriculture

CLAIMING the most ancient origins for their culture, language and way of life, the people of the southernmost part of our peninsular India are prepared to take everything in their stride. They adopt the most modern methods of agriculture without wanting to disturb the social and economic pattern inherited from the ages. They want to be modern without being cut off from their ancient moorings. Do the Tamils look up to Japan for a model? Perhaps they do.

The Madras Agriculture Department can be called a streamlined machine. The labours of pioneering Englishmen in the pre-Independence Madras almost put us to shame in the matter of thoroughness. Tomes have been written on the economics and pathology of agricultural and horticultural crops, about the new varieties introduced, and over the new uses evolved. That work is now carried on in dozens of research laboratories and stations in the State and an attempt is made to saturate the land with improved varieties.

Nurseries of all kinds have sprung up; field demonstrations, far from being mere show-pieces, have infected large chunks of areas with a permanent enthusiasm for the recommended varieties of improved seeds, new fertilisers, the latest pesticides and insecticides, scientific crop rotations and a host of other agronomic improvements leading directly to a better use of land resources.

Whether it is paddy, sugarcane, cotton, millets, oilseeds or vegetables, breeding work goes on continuously in the laboratories and the ryots are kept informed of the latest developments and about the new varieties evolved. Every new variety means so much more return, in terms of quantity and quality. No new variety is recommended to the cultivators or introduced in the field until it is vigorously tested and retested. The co-ordination among research stations, the development staff and the farmers is largely responsible for the remarkable progress made by Madras on the agricultural front.

LAST year, 32,100 tons of improved paddy seeds were issued to farmers, covering an area of 14,45,000 acres, while the current year's target is 37,500 tons which is to be sown over 19,70,000 acres. About 75 improved strains of paddy, suited to different tracts, season and situations, have been released for cultivation so far in Madras State.



In the primary stage, the State seed farms run by the Madras Agricultural Department multiply the seeds from stocks supplied by the agricultural research stations. There were 158 State farms functioning in 1962-63. In the current year 40 more are to be established. These primary seeds are distributed to selected farmers in a Panchayat area designated as Gram Sahayaks, for final multiplication and distribution to farmers of the Panchayat area. Every year a third of the area in that Panchayat is proposed to be covered.

Village level distribution of improved seeds by the Panchayats saves the farmer transport and time as it enables him to get the seeds almost at his door. With rural credit available from Panchayats, the farmer's job of procuring good seed is rendered easier. For the State, the scheme solves the problem of procurement, storage and distribution of seeds in the rural areas. Increase in production of rice due to this improved seeds scheme is estimated at 10 per cent.

But a great deal remains yet to be done. The cry has been and continues to be "Give us the water, and we shall finish the job". Minor irrigation has been speeded up by a large-scale use of power pumps for lifting underground water. Here pioneering work has been done by progressive farmers who have delved deep into the Mother Earth as much as 100 to 200 feet in search of water. Coimbatore and South Arcot districts have taken the lead in this field and produced some remarkable results. The Nilgiris district offers immense potentialities for the exploitation of a large variety of fruits, vegetables, spices and plantation crops. One can only hope that what has been achieved so far is an earnest of what is yet to come.

THE most urgent problem facing agriculture in Madras is to make it a viable small-scale industry. The solution seems to lie in a gradual switch-over to mechanised operations. Final touches are being given to a massive programme of large-scale indigenous manufacture of agricultural equipment. Some tools in use in the South have been found to be so effective that their introduction in the North is being seriously considered. Medium and small-size crawlers, threshers and tillers worked on power are also being produced.

Farming has always been regarded as an honourable profession in this country. It is yet to be made a worthwhile profession, free from agonising drudgery. Judicious use of fertilisers, improved seeds and implements, timely plant protection measures and approved farm management practices are showing in Madras how this could be done.



BANK-BREAKING RIVER

Project to Curb Floods: Barrage to Serve 22 Lakh Acres

THE Kosi is one of our problem rivers. Besides causing devastating floods during the monsoon every year the river has been changing its course. During the past 100 years the Kosi has moved 70 miles west from Purnea in Bihar. Its annual toll, in physical assets alone, used to be of the order of Rs. 10 crore.

The Kosi rises in the Himalayas. It has a catchment area of nearly 23,000 square miles of which one-fifth remains under permanent snow. The river becomes laden with coarse and infertile silt before it comes out of the mountains. Again, because of the heavy rainfall in the catchment area the river remains in flood before it falls steeply into the plain at Chatra in Nepal, carrying silt along with its waters. Almost every monsoon the Kosi breaks its banks and carves a new channel along the line of least resistance.

A scheme to harness the turbulent river at a cost of Rs 44.76 crore was drawn up in 1953. It will afford protection against floods and irrigate about 22.85 lakh acres on the left bank of the river and 8.34 lakh acres on its right bank in Bihar and Nepal. The project also envisages the construction of a 3,770-feet-long barrage across the Kosi river about three miles above Hanumannagar in Nepal with a rail-and-road bridge on the river. A power-house with four generating units of 5,000 kW each will also be built on the Eastern Kosi Canal.

The barrage and headworks including the road bridge have recently been completed ahead of schedule. Embankments giving protection to nearly 8,000 square miles in Nepal and India were completed in 1959.

KOSI PROGRESS

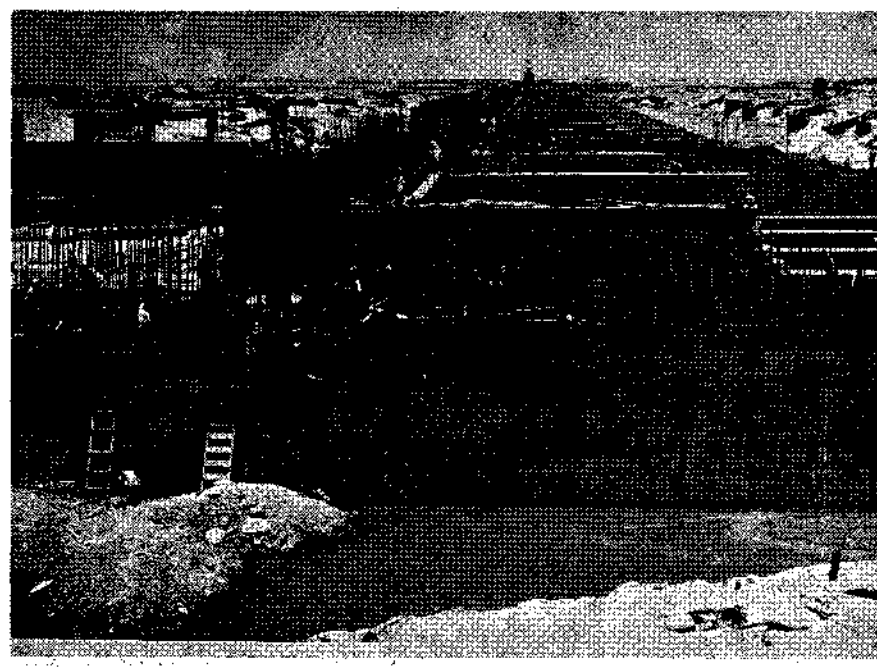
Nearly 81 per cent of the earthwork in the main canal, four branch canals and other distributaries has also been completed.

The people of the region have taken a keen interest in the project and not fewer than 100,000 have worked on it daily at times. The Bharat Sevak Samaj and other voluntary organisations have played a notable part in completing the barrage earlier than the scheduled time.

Work is in progress for the second stage of the project, namely the construction of the power-house, the Western Kosi Canal and the extension of the embankments and the Eastern Kosi Canal.

The Kosi Project is expected to be completed during 1964-65. The expenditure incurred up to April was Rs 43.87 crore.

Pictures : FILMS DIVISION



CONSUMERS' COLUMN

HOW TO KEEP PRICES IN CHECK

V. SUBRAMANIAN

PRICES of food grains have gone up recently. The following are the main factors responsible for this rise.

(1) Purchasing power of the urban people has increased owing to enhanced wages.

(2) Agricultural production and productivity has not substantially increased to meet the demand of population which is increasing at the rate of 2 per cent per year.

(3) The additional levy on motor vehicles, diesel oil, both by the Centre and the State Governments has enhanced the cost of transport charges from rural areas to urban areas.

(4) The higher rate of agricultural taxation imposed by the State has reduced the incentives for farmers.

(5) No attempts have been made by the Government to cultivate vegetables near the urban areas.

Let me now explain these points at some length.

The development of new industries under both the public and private sectors has raised the urban population and a large number of people have migrated to the new industrial areas. Secondly, the enhanced wages offered to workers on the recommendations of the wage boards have also increased the purchasing power of the urban worker.

Development schemes, multi-purpose projects and the introduction of land ceiling and other reforms have not increased agricultural production. On the other hand, the cost of cultivation has increased several times what it was in pre-Independence level. In an article "Land Reforms in Jammu and Kashmir State" (*AICC Economic Review*, July 1, 1963) Mr M. L. Bhatt of the Agro-Economic Research Centre, Vallabh Vidyanagar, says: "These reforms, which in fact ended the semi-feudal system, were expected by farmers to give a psychological boost to the cultivator, induce him to take an active interest in the improvement of land and landless labour, increase yield per acre, encourage social responsibility, enthuse community spirit, narrow the gulf between the rich and the poor, ensure equal distribution of land and impliedly pave the way for development of State economy. But these hopes have been belied inasmuch as agricultural industry is still in doldrums and has not witnessed any significant or marked progress. The yield per acre and the total output has not increased." The view is worth considering in the present circumstances.

Mr M.S. Sivaraman, Adviser, Programme Administration, Planning Commission, observes ("Greater Use of Organic Manures", *Capital* Annual Supplement, December 20, 1962), "The continued use of such organic manures helps to build the fertility of the soil. Thus in the Cuttack Rice Research Institute it was found that the yield of paddy went up in five years from 2,500 lb to 3,500 lb through repeated application of 5,000 lb of green manure every year. The use of composts for eight years has improved the yield of paddy to 550 lb even without manuring for the ninth year. But when the field was manured with ammonium sulphate for eight years the yield of paddy in the ninth year fell to original level when no fertilisers were applied."

Seeds required for green manuring for an acre of land can be produced in the field itself in the season along with the main crop from a two-ounce packet costing 3 nP. The emphasis should be on productivity rather than on production.

The Central and State Governments have levied heavy taxes on motor vehicles, diesel oil and other accessories which have raised the cost of transport. It is estimated that nearly Rs 3,000 are levied on a single motor vehicle in India per year which, compared with other countries is high. The enhanced taxes on motor vehicles and diesel oil raise the cost of transport further. So reduction of taxes on these items is necessary.

On the recommendations of leading economists the State Governments have increased the land revenue to which land cess, surcharge, Panchayat development taxes also are now added. For instance, in Madras State the new taxes are 170 per cent more than that of original land revenue. Mr S. K. Patil, then Union Minister for Food and Agriculture, recently said, "The real thing to do was to make the agriculturists feel that economically agriculture was paying and was a gainful occupation." He threw a feeler that States might offer incentives for increasing production by progressive remission of land revenue. "What you lose in land revenue will be more than made good by greater production."

Agriculturists are not in any way benefited owing to increased cultivation costs and taxes. In fact, they reduce the real income of the small farmers. They migrate to towns in search of employment after disposing of their lands. Therefore, reduction in agricultural taxes is also necessary for giving incentive to farmers.

Rising prices of food grains can be checked if steps mentioned above are taken.

C.D.S. CHECKS INFLATION

K. S. RAMACHANDRAN

THE Compulsory Deposit Scheme has been subjected to adverse criticism by politicians and the public alike. The main objection is that it lowers the level of general consumption through cuts in individual pay packets. The monthly deductions from the salaries of those earning more than Rs. 1,500 per annum necessarily cause a little fall in individual incomes set apart for consumption. But does this not also imply rise in individual savings?

The Compulsory Deposit Scheme is one of the Government-sponsored measures devised to combat inflation and increase national saving. By this measure a small part of the income of an individual will be acquired as loan, which is to be repaid with interest after a period of five years. This forced saving is all the more significant now in view of the continuous rise in the prices of

(Continued on opposite page)

YOU ASK US WE TELL YOU

Questions from readers on planning and development will be answered on this page. It might be noted that the purpose of this service is to provide information. Trade queries will not be entertained.

Provident Fund For Employees

C.R. LAXMANAN, Madurai

What is the coverage under the Employees' Provident Funds Scheme? How are the funds utilised?

ANSWER: By the end of May 1963, the Employees' Provident Funds Scheme applied to 36 lakh workers in 23,000 industrial establishments all over the country. The Employees' Provident Funds Organisation, which was set up ten years back, began work with six industries only, but now it has extended to 81 industries.

The total collection in the Funds amounted to Rs 431 crore at the end of May 1963, and Rs 125 crore had been refunded on account of final settlements and advances. On an average, about 12,000 claims involving Rs 50 lakh are settled every month. About 63 per cent of the claims are settled within 10 days.

The funds are invested in the Union Government securities and Rs 309 crore had so far been invested.

Democracy In Industry

SUBIMAL KANTI DAS GUPTA Tezpur (Assam)

What is an industrial democracy? What is its scope? What progress has India made in this direction?

ANSWER: Industrial democracy implies acceptance of the principle of real participation by the workers in the management of industry. The idea covers different forms of participation, such as labour management, consultation through bodies like joint production committees, works committees, works councils, joint management councils, workers being represented on the boards of directors of industrial enterprises and, lastly auto-management.

In India, we have had works committees within the framework of the Industrial Disputes Act 1947. Production committees, though without statutory force, are working in many Government undertakings and in some privately owned factories. The Second Plan had stated that "the creation of industrial democracy is a prerequisite for the establishment of socialist society." As a sequel to this observation a beginning has been made in the form of establishing joint management councils on a voluntary basis. At present such councils are functioning in 60 units, 20 in the public sector and 40 in the private sector. Efforts are being made to develop these councils as a normal feature of our industrial system.

As the experiment calls for a radically new approach on the part of the parties concerned, progress in this field is bound to be gradual. Although, therefore, the establishment of a true industrial democracy is still a distant goal, the idea seems to be taking root.

Use of Waste Lands

P.K. VARTI, Nasik

What is the extent of wastelands in the country? Are there any plans to put them to productive use?

ANSWER: There is no accurate assessment of wastelands in the country. However, according to the Report on Wastelands of India by the Committee on Natural Resources, there were about 1,274 lakh acres of wastelands in 1958-59. These included fallow, saline, alkaline and water-logged lands. Of these, 508 lakh acres were culturable wastelands and 324 lakh acres were permanent grasslands.

For the productive use of the wastelands, surveys of such lands have been undertaken in the various States. The Union Ministry of Food and Agriculture has approved schemes to survey about 20 lakh acres in 100 districts all over the country. The State Governments have already been distributing culturable wastelands to the landless people for cultivation and it is reported that between 1951 and 1960 over 50 lakh acres of wastelands have been distributed to landless labourers, cultivators with small holdings and co-operative societies in different States. The Third Five Year Plan envisages effort to settle 7 lakh families of landless labourers over an area of about 50 lakh acres of wastelands. Achievement of this target depends on the actual availability of wastelands which are now in the process of being identified.

C.D.S. CHECKS INFLATION

(*Continued from page 28*)

necessaries of life which does not permit anyone to save anything even if he has a mind to do so.

The scheme does not affect the poorer sections of the society. It applies only to those whose earnings exceed Rs 1,500 per annum, which is five times the average per capita income in India. It cannot make life harder for the poor, as some critics complain.

The measure enables the Government to get money for meeting part of our defence requirements. People will also get back a tidy sum after some time which they would not have otherwise saved. In India the saving habit has yet to be cultivated. Most of us spend a good part of our earnings on food and there is much scope for saving by the middle and upper classes. The scheme which thus helps in compulsory saving is to be welcomed.

As an anti-inflationary measure, the Compulsory Deposit Scheme prevents a part of the fluid money from going into current consumption and thus into active circulation. It diverts the money into the coffers of Government. At a time when the price level is threatening to rise further, an effective curb on consumption by these classes is essential to combat the inflationary trend. This the Compulsory Deposit Scheme provides.

REG. NO. D-876

TATA-FISON AND RALLIS — they "know-how"!

"Demonstrations," *said Tata.*

"You mean brass bands, flags, pretty girls?" *Fison asked hopefully.*

"Useful demonstrations," *said Ralli, bringing him down to earth,* "to show farmers how our fertilizers and pesticides grow better, healthier crops and protect them, too!"

Tata-Fison and Rallis have combined their separate marketing organisations into a single, unified service. For the future, all Tata-Fison products will be marketed by Rallis' Fertilizer and Pesticides Division. The merger will prove of immense benefit to the Indian farmer. For the first time, one integrated service will provide advice and products covering both crop growth and crop protection throughout the country...a notable contribution to the cause of agricultural progress.

TATA-FISON RALLIS COVER THE FIELD!



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