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25 Naye Paise

SUNDAY, AGRAHAYANA 20, 1882



Men And Modern Tools At Bhakra

FOR THE ECONOMICS OF THE BHAKRA-NANGAL PROJECT, SEE PAGE 4



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Views On The New Yojana

FRANKLY, I was rather disappointed when I received a copy of the new Yojana the other day. I admit the number of pages has been doubled but then the size of the page is now half of what it was formerly. I concede the quality of the paper used is better but there was no noticeable improvement in the quality of the articles. Unfortunately, I am more interested in the quality of the articles than in the quality of the paper on which they are printed.

Mysore

P. S. VENUGOPALA RAO

Excellent

I AM writing this on seeing the "New" Yojana. It is excellent in get-up and in matter. My hearty congratulations for the improvement. You can have better paper for cover page, can't you? I liked best the "Table Talk", the new feature which deals with our National Income.

Hyderabad

T. SURYANARAYANA RAO

What's New In It?

AFTER all the advance publicity, your new Yojana of November 13, was, I must confess, a let-down. Like many other good things, the ten naye paise Yojana is, perhaps, gone for ever, but the 250 per cent price boost was, surely, unjustified—or is Yojana going to be commercial? You claim to have doubled the number of pages—so what? You have more than halved the size—isn't it? I searched in vain for those "two to four pages in colour" you promised us and there seemed to be more ads. in the issue now. I missed too such old features as "Small Talk" & "What they said of Plan and Country" in the re-vamped issue. Frankly, there was nothing new in the "face-lifted" Yojana—except, of course, the price.

(The face-list is not complete as yet—we hope to do much better shortly. Colour is being used on pages 1, 16, 17 & 32. Small Talk's new name is 'Side Track'—Editor)

A growl also for contributor Husaini's effusive write-up on Madras in the latest issue. Having enjoyed his travel sketches in previous issues, I was sorry to find that his enthusiasm for the 'Mothers of Madras' seemed to have tripped his reporting accuracy. How else could one explain his hearing the "soft rumblings of the Arabian Sea" on the Marina and see it "roll like a happy dog"? I am wondering who it was that rolled; as every school boy knows, the Arabian sea is more than 300 miles from Madras, cross country.

Madanapalle (A.P.)

RAM K. VEPA

Contributor Husaini writes:

"As for my enthusiasm for the social work of Madras, I am still unrepentant. In all other States, before the advent of Central Social Welfare Board, social work used to be confined to big cities. Only in the Madras State, the Guild of Service had already organised a network of welfare agencies in small as well as in big towns."

As for the howler of the Arabian Sea lolling on the Marina Beach, it was discovered soon after the issue was printed off and the writer has been feeling like a most unhappy dog. Apologies to all sons of Madras in particular."

Third Plan: Discussions With States Completed

THE criteria for determining outlays for individual States under the Third Five Year Plan need to be stressed again, to meet the criticism that allocations are not made on any rational basis. The following nine-point formula was approved by the National Development Council at its last meeting held in September, 1960:

(i) Population, (ii) Area, (iii) Completion of projects under execution, (iv) Provisions for utilising existing assets and services, (v) Provisions for basic national targets in the Third Plan, (vi) Power development, (vii) Making up for development lags in the Second Plan, (viii) Unemployment, under-employment and regional backwardness, and (ix) Provisions relating to the conservation of natural resources. This is being followed in regard to allocations made to States.

Discussions between State Governments and the Planning Commission on the proposals of States for the Third Five Year Plan have concluded. The outlays and targets for the Third Five Year Plan, as they have emerged from the Planning Commission's consultations with the States and discussions with the Central Ministries, will be considered by the National Development Council at its next meeting to be shortly held. The draft proposals of the States were considered carefully at these meetings by Working Groups consisting of officials from States, the Planning Commission and Union Ministries. Consultations were also held with Chief Ministers of States.

The Planning Commission has indicated to the States the phasing of outlays during the five-year period of the Third Plan. It is envisaged that for all States, the five-year outlay will be spread out at the rate of 14 to 15 per cent in the first year rising to

24 to 25 per cent in the final year 1965-66. This phasing will ensure continuity of output from year to year and also that larger projects are so phased as to provide adequately for materials and ancillary services, manpower, planning and other relating developments.

State Governments have also been informed of Central assistance for the first year of the Plan. It will amount to Rs. 350 crore. This will enable State Governments to work out their budgets for 1961-62 and plan for the next year as well. The amount of Rs. 350 crore as Central assistance for 1961-62 has stretched the Central resources to the maximum and there is no question of any increase beyond this amount.

PUBLIC CO-OPERATION

AS against a sum of Rs. 5 crore provided for public co-operation during the current Plan, there is an allocation of Rs. 10 crore during the Third Plan. In view of the recommendation made by the National Advisory Committee on Public Co-operation at its meeting held in August, 1960, it is proposed to retain at the Centre a provision of Rs. 365 lakh and the balance of Rs. 635 lakh will be provided to the State Governments.

The allocation of Rs. 10 crore consists of grants as well as loans. Under the former are schemes of research, training and pilot projects; under the second category are listed schemes of assistance to voluntary organisations for organising construction services.



POWER FOR VILLAGES

SCHEMES of village electrification are drawn up on the basis of the number of villages in the country in the different ranges of population, the number electrified in the First and Second Plans and the over-all allocation for power in the Third Plan.

TRANSPORT SURVEY

TO have factual data on the extent and nature of competition between road transport and the railways, the Neogy Committee, which was appointed in July, 1959, has undertaken sample surveys on six selected road transport routes located in the different parts of the country, covering 2,436 miles. The survey has been completed on five of the six routes. The Committee has enquired into the cost of operation of a few selected road transport undertakings, and also attempted to study the experiences of some foreign countries with the help of information secured through Indian Embassies abroad and published literature on the subject.

In addition, the Committee expects to undertake limited field surveys in the role of the traditional means of transport, namely bullock-carts and country-boats.

OUR NEXT ISSUE WILL DEAL WITH
UTILISATION OF RURAL
MANPOWER

An Appraisal of the Investment Criteria Suggested By Dr. Raj Social Costs And Social Returns of Bhakra-Nangal

DURING the last ten years of planning, we have been undertaking a large number of projects requiring considerable investment. But a good deal of discussion, if not also criticism, has come to be made of what some prefer to describe as "the obsession with gigantism." It is alleged by many, both within and outside the country, that our planners have shown undue enthusiasm for and taken pride in a few show-pieces involving large investment of scarce resources to the detriment of smaller and more fruitful projects yielding quicker results. The steel projects in the public sector, of course, are the major targets of this criticism, but the multi-purpose river valley projects too have not been spared.

It is not, however, any particular project that matters. The point to be considered is how far this criticism is objective: what is the logic behind it and are there any scientific criteria which can be invoked in support of this criticism? For as bigness has no virtue in itself, smallness too may have its own disadvantages. There may also be a choice to make between immediate investment-yielding consumer goods and others which will do so only via producer goods and after a time lag. The range of choice can thus be extended further. It is, therefore, of basic importance that we evolve a set of sound investment criteria to guide us in the selection of alternative investment projects and apply them with uniformity all along the line.

TOO FEW STUDIES

It is only to be expected that in India no significant effort has so far been made in this direction except for stray instances here and there. In the past public investments were few and far between and it is only with the post-war reconstruction programmes that we have witnessed some major efforts in public investment. In fact, there are few countries in the world in which studies of investment criteria have been consistently pursued, let alone applied. One would naturally expect that the centrally planned economies have done some progress in this respect; but it appears that even in the Soviet Union no valuable contribution has been made except for some theoretical consideration of the problem. It is only in the Netherlands that a good deal of work has been done in the post-war period because of the peculiar economic conditions prevailing in the country. Against this background, Dr. K. N. Raj's recent study, *The Economic Aspects of the Bhakra Nan-*



Pneumatic drill being used for cleaning rock face at Bhakra

gal Project, is timely and welcome and must be regarded as among the pioneering works on the subject in India.

As mentioned above, we have been debating the issue of the choice between big and small projects, consumer goods and producer goods projects, labour-intensive and capital-intensive projects and so on. Much of the discussion, however, has been carried on without any conscious reference to a set of definite guiding considerations. This is not to say that the discussion or criticism has all been prejudiced or uncalled-for. It is, however, essential that we make our choices with certain definite, objective criteria in mind. Dr. Raj has done well in the laying down a set of criteria which should underlie the choice from among alternative public investment projects and in making an effort to apply them to the specific case of the Bhakra Nangal river valley project.

The most important portion of Dr. Raj's study, in a sense, is the discussion in Chapter 2 on "Investment Criteria and Their Application." Having pointed out the major decisions to be taken in the formulation of a programme of development, he proceeds to the consideration of the investment criteria in the choice of a particular project. In any development programme, as he points out, the decisions to be taken are: (a) the level of investment; (b) the distribution of investment between different sectors; (c) the location of investment; (d) the choice of the projects in each sector; and (e) the design to be selected and the techniques to be adopted. For the present study, however, what is important, given these decisions, is: "How are alternative projects and project designs to be ranked and some selected in preference to others?" (page 15).

In this connection, the author rightly points out that though the location of the project might be decided by non-economic value judgments, it would be a mistake to disregard the economic considerations. From the economic point of view, therefore, he outlines the following tests for the choice between alternative projects and project designs: "(a) differences in the volume and type of labour required for construction; (b) differences in the volume and type of the equipment and materials required for construction; (c) differences in the period involved in the construction and in the life of the project; and (d) differences in the volume of output consequent on the investment." (page 17)

In short, the aim is to evolve basis for the valuation of the social cost and returns involved in the alternative projects, so as to make it possible for the planners to choose the socially most beneficial project among them.

SOCIAL COST & RETURNS

It would appear that these four decisions are sufficient and necessary for the choice of individual projects. The difficulty, however, is in regard to their practical application. The introduction of the concept of 'social cost' and 'social return' is of course useful and necessary. However, as the author himself realises, their practical application is none too simple. So much so that in certain vital aspects the final choice has to be made on a largely arbitrary basis. The above four criteria not only conflict with each other, but none of them singly, when all the considerations are neatly weighed, can produce a simple, unambiguous result.

Take for instance the very first criterion—the labour required for the construction of a project. On the first view, a project might be labour-intensive, and utilisation of surplus manpower in a country like India may be a weighty factor in favour of this project. On further consideration, it may be found that the utilisation of such manpower is bedevilled by further difficulties and considerations. Dr. Raj has given a lucid analysis of the various aspects of manpower utilisation. He rightly points out, for example, that though the marginal productivity of labour may be zero, the labour supply may not be as elastic as might be expected under these circumstances. In the matter of labour supply itself, the response to wage incentive may not be satisfactory even if the organisational difficulties are removed. It may be found that on balance a capital-intensive project, even in an under-developed country, is much more socially profitable than a labour-intensive project.

Dr. Raj would prefer a labour-intensive scheme if in the final analysis the additional demand created can be expected to be met by the expected increases in domestic supply. Even then, as he himself points out, the creation of these additional supplies might require resources which have better alternative uses. It would ap-

(Continued on page 22)

YOJANA ESSAY CONTEST

Rs. 250 In Prizes

FOR the fourth year in succession Yojana is conducting an essay competition to promote clearer thinking among our students in regard to the basic problems of planned development.

The competition is open to student members of college or university planning forums or other bona fide students.

Subjects

The subjects for this year's contest are:

- 1) **The Real Challenge of the Third Plan**
- 2) **Preconditions of Economic Take-off in India**
- 3) **Utilisation of Manpower for Rural Development**
- 4) **Non-economic Factors in Planned Progress**
- 5) **How to Reduce Economic Inequality and Increase Social Mobility**

Prizes

Four prizes will be awarded as follows:

1. Best Essay in English by student pursuing post-graduate studies—Rs. 75.
2. Best Essay in Hindi by student pursuing post-graduate studies—Rs. 75.
3. Best Essay in English by undergraduate student—Rs. 50.
4. Best Essay in Hindi by undergraduate student—Rs. 50.

Length & language: Essays may be submitted in either English or Hindi. They must not exceed 1,200 words.

Last Date: Entries should reach Chief Editor, 'Yojana', 542, Yojana Bhavan, Parliament Street, New Delhi-1 by January 31, 1961.

Token & Certificate: Each entry must be accompanied by the token published below and a certificate by the President of the college planning forum or the head of the institution where he or she is studying.



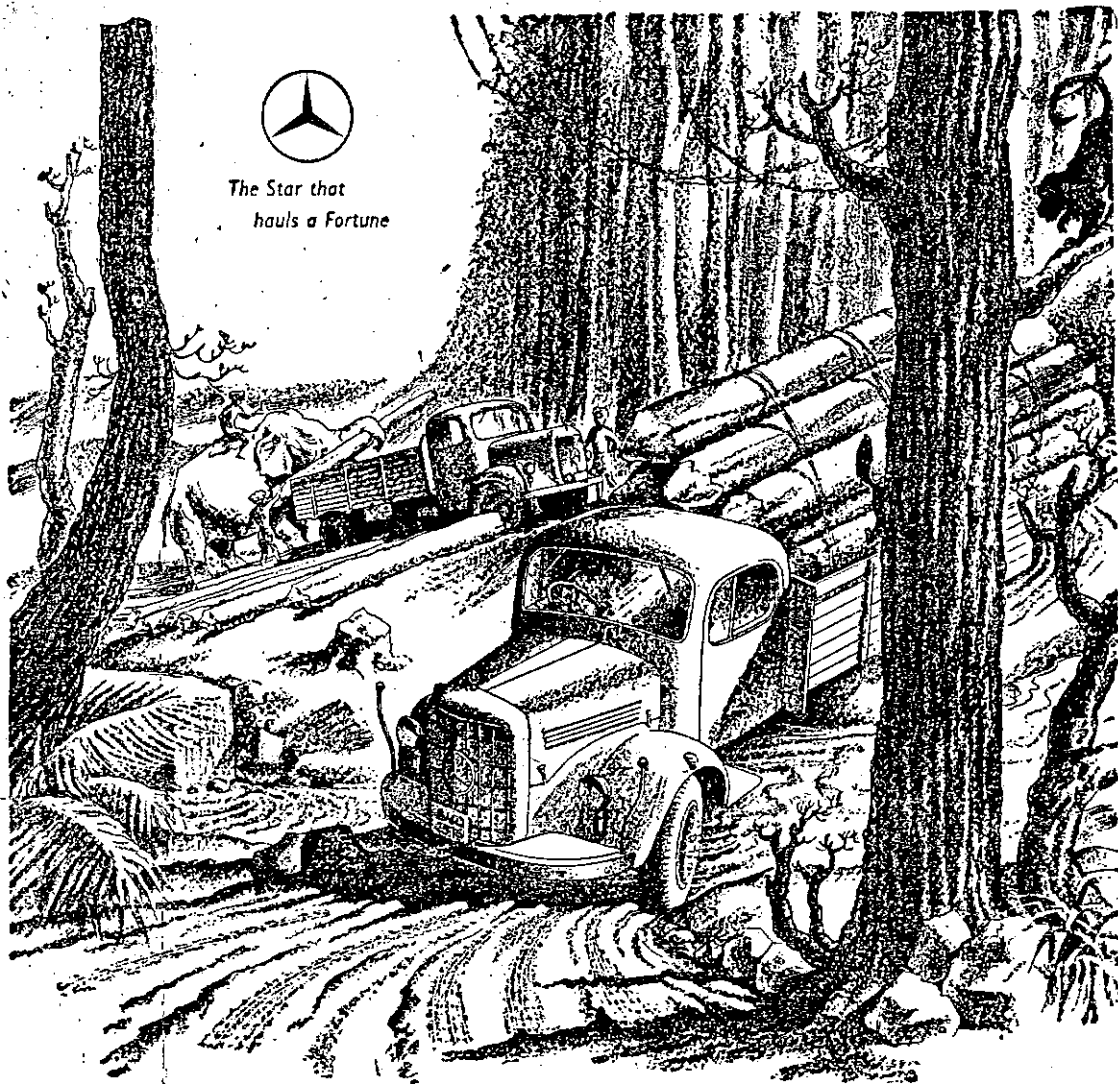
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Class

Institution



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hauls a Fortune



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WHEN A Tata-Mercedes-Benz owner tallies up his log book at the end of the year, he is agreeably surprised—more miles covered, more trips made, a higher payload carried; all of which mean better returns for him.

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time off the road...which again spells a higher return on his investment. Either way, the log book clearly shows—Tata-Mercedes-Benz always comes out on top.

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J. 452A

Border Planting Grows Into Mass Movement In Madras

LEAVES WHICH LEAD TO PLENTY

A. MUHAMMAD ALI

FORMERLY JOINT DIRECTOR OF AGRICULTURE, MADRAS

‘WITHOUT capital no improvement, and without improvement no capital. There would have been no escape for our countryside from this vicious circle except for two factors—plenty of manpower in the villages and a plan to make use of it for the national good.

The labour of the countryside can be used for the creation of new assets. One such asset which can be easily built up is green manure. This can be ploughed into the field and made to yield us, in terms of grain and money, many times the effort originally put in—and in very short time. This article describes what was done in Madras State to mobilise rural manpower in this cause—an effort which should serve as an object lesson to other organisers and other regions.

IN Madras State, the green manure plants commonly grown are wild indigo, indigo sannhemp, pillipesara, dhaincha and *sesbania speciosa*. Wild indigo thrives well in sandy soils and sandy loams, indigo in loams, pillipesara in clayey soils, sannhemp in loamy soils, and *sesbania* in all types of soils. Further, sannhemp is ready for incorporation into the soil as green manure in about 40-40 days, while dhaincha takes two to three months and wild indigo, indigo and pillipesara require five months to give the largest quantity of green matter. If during the growing period heavy showers are received and water stagnates, wild indigo and indigo rot completely. After three months dhaincha becomes woody. Pillipesara does not withstand drought and in case there is stagnation of water it also decays. Thus all these green manure plants have their own limitations except *Sesbania speciosa* which withstands drought and stagnation of water. Further, it is ready for incorporation as manure in six to eight weeks when about 10,000 lb. of green matter can be obtained per acre. If sown thick at the rate of 60-80 lb. per acre the plants grow thin and remain succulent even after five months of sowing. So, as a green manure plant, *sesbania speciosa* is unrivalled. Even though this was one of the green manure plants known to the Agricultural Department for twenty-five years, it was left to Mr. M. S. Sivaraman, then Director of Agriculture, Madras, to recognise its special merits and push it ahead in the most determined manner as the most suitable green manure crop for paddy under South Indian conditions.

When the *sesbania* drive was started by Mr. Sivaraman around 1952, only a handful of seeds was available. However, the seeds were soon multiplied into thousands of bags, facilitating sowing as a pure green manure crop in several lakhs of acres by about 1956.

How did Madras set about the task?

To start with, the Research Stations at Pattukottai and Aduthurai

demonstrated the right way of sowing *sesbania*—four inches apart along the field borders at the time of planting *kuruvai* (Kharif) in July. The seeds were sown in a nursery along with paddy seedlings. The *sesbania* seedlings were then planted on the borders at the time of transplanting of paddy. Generally four ounces of seeds were enough for border planting one acre. The border crop also gives about 1,500 to 2,000 lb of green leaves at the time of the harvest of the first paddy crop in October. The bulk of the green leaf is ploughed in for the second crop of paddy, leaving behind *sesbania* plants one foot apart for producing seeds. The plants yielded seed in December-January and this seed was sown along with the usual pulse crops for raising a pure crop of *sesbania* in February in single-crop lands which would be used as green manure in July. A seed rate of 60 lb. was used for this purpose and it gave about 50,000 lb. of green leaves per acre enough to manure ten acres in July.

Batches of farmers were taken to the Research Stations to see this crop. During the Farmers' Day celebrations in both farms, all the larger farmers of the district were invited to see for themselves the vast potentialities of *sesbania* as green manure both as a pure crop and as a border planted crop.

To assist the adoption of improved agricultural practices on a vast scale the Department of Agriculture launched a scheme of starting Village Agricultural Associations in every village. By the end of 1953 practically every village had such an Association. The total for the State was 16,000, with Tanjore district alone having about 2,000. Every one of these Associations received *sesbania* seeds at one anna per packet of four ounces for raising *sesbania* seedlings. Each Association was given, in addition, a few packets for border planting and seed multiplication. The more enthusiastic farmers were urged to raise *sesbania* nurseries on plots of one-third or one acre and distri-

bute the seedlings to other farmers in the village. They did so free of cost.

As a result of the concerted publicity measures adopted, border planting of *sesbania* caught the imagination of the ryots and spread faster than any other effort to popularise improved methods of farming in the State. The District Agricultural Officers, almost all the time on the move, went from village to village addressing meetings and organising in minute detail the border planting campaign.

As early as June every year, the Village Associations were informed that every pound of *sesbania* produced by them would be bought by the Department at four annas a pound. In one of the villages, a cultivator, with the usual scepticism of farmers, asked whether the price would be counted or measured. The District Agricultural Officer, Mr. M. J. David, took it as a good humoured challenge. That particular village had produced 25 bags of *sesbania* and each bag, consisting of 160 lb., was worth Rs 40. Mr. David called a meeting of the Agricultural Association of the village, and had one thousand rupee coins—the price of the 25 *sesbania* bags—measured out to the Secretary of the Village Agricultural Association.

This event made a deep impression on all people living within a 10 mile radius of the village. They had no further doubts about *sesbania* as a green manure crop and also as an additional money earner for paying land revenue. A larger function was arranged in another village where about 250 bags of *sesbania* had been produced. There again, it was decided to pay the growers in rupee coins. And 10,000 coins were heaped. Since the function was held in the open, the coins glittered in the sunshine.

(Continued on page 28)

DECEMBER 11, 1960

Hands that Mould Beauty

"PRECIOUS prints for precious little!" "Hand-made beauty in your hearth and home!" "Brighten and lighten with handicrafts." Here we have a copywriter's paradise. But one should beware of phrases while talking about handicrafts. There is so much pleasure a piece of genuine workmanship can give, that not to be vocal in its appreciation is not a crime. But handicrafts are judged by two factors—beauty and economic value. The All-India Handicrafts Week, now being observed, is an occasion for stock-taking and seeing if we have done more than mere talk.

It is true that a vital fillip has been given to the craftsmen. Training centres in every district and the Crafts Extension Officer in various community development blocks bring to the craftsman at his door better techniques of production, scientific advice, and the results of market research. Many dying crafts have been revived. Kalamkari, lacquer work and pottery are being restored, and these crafts have established a market. Art metalware has also made a mark, especially as an export item. Newer alloys are being experimented with, and younger people are being taught the art. What is really good about this revival is that it is not restricted to the communities which traditionally produced particular types of products.

There will have to be many more extension centres and more units producing handicrafts peculiar to each region. The crafts nowadays serve not only the immediate neighbourhood and community. The 'khes' of Punjab or bread-baskets from Manipur will find use in any home. To the Handicrafts Board credit must go for organising the marketing of these goods. In the last eight years the various surveys conducted by the Board in matters of production, improvement of techniques, marketing and sales organisation have helped to give a footing to Indian handicrafts in the trade map of the world.

The fact that we are in the world market is also a pointer to us that we have an obligation to maintain certain standards of production and integrity in our business deals. Handicrafts are a new venture and far too frequently have we to lose face as a country through the unbusinesslike methods of our tradesmen—orders not executed, advance payments received and forgotten, com-

plaints from tourists ignored. We must strive to maintain international standards of efficiency and integrity.

In quality the consumer, domestic or foreign, has a right to expect a minimum standard of uniformity. Bombay and Uttar Pradesh have done well to institute a type of quality control. Our wooden objects still have a habit of cracking or warping the moment they leave the place of origin. All that is needed is a bit of research to find out why this happens and education of craftsmen in the use of better methods and materials. Unless we establish a name for reliability in quality much of the gain may vanish. This is more important in respect of the newer products we have put in the market. Even after eight years of work it is the traditional handicrafts which are bringing in the money from abroad. Carpets, druggets and leatherware account for more than half our earnings in foreign markets. These are items which have organised themselves as an industry and market research has indicated the exact requirements of the buying countries. These industries have learnt to discard a piece which does not come up to specifications.

The work and effort put in have started paying but the profit is still a fraction of the outlay on the organisation. Of course, these things cannot be balanced or judged in terms of mere finance. There are other, not negligible, advantages like employment and creation of skills and talent. But the real test of success would be when we as a nation appreciate and respect craftsmanship and craftsmen. But this process of education is something which will have to be nursed by handicraft products themselves.

FIRST PERSON PLURAL

THE changes made in Yojana last month have brought forth many comments and letters—ranging from the approving to the angry. We have printed all of the criticism and only some of the commendation, for it is a convention of responsible journalism that a paper should treat its critics with more than courtesy. To them and to all our readers we say: we shall improve on our performance.

A few words about our new features. With this issue we are starting a newsletter from inside the Planning Commission. It will record, fortnight by fortnight, the most important activities, discussions and decisions of the Commission, and will be found useful by the general public as well as Plan personnel throughout the country. Another feature which was introduced with the new Yojana is "Table Talk". Its purpose is to point out the facts behind figures, and to make statistics more human and understandable. A democratic State has to shed both the fear and the distrust of statistics, and use them for what they are—a social tool of increasing accuracy. With the same end in view we have also started "Graphic Glimpse" where planned progress is presented through easily recognisable

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APPROACH TO POPULATION AND EMPLOYMENT

Villagers Must Be Exposed To Urban Ideas

AT present India's population is increasing at a rate of something like 1.9 to 2% a year. Yet, only 8 to 9 years ago, the population was increasing at the rate of 1.2 to 1.3% a year. What are the factors that explain this rapid rise in the rate of growth of population. Further, what is the significance of such population growth in terms of economic development?

The recent growth of population is mainly due to a rapid fall in the death rate, consequent upon the extension of health facilities to rural and urban areas. According to the Central Statistical Organisation, while between 1951 and 1961 the death rate is expected to fall by much as 4.3% (from 25.9 to 21.6%), the birth rate is expected to fall by just 1% (from 41.7 to 40.7%). This, in other words, means that every year we add nearly 8 to 9 million to our already heavy population. In terms of fresh addition to labour force, it means that we should find employment for something like 3 to 4 million every year.

Growing Labour Force

At present we neither have sufficient resources to employ these people, nor is the position expected to improve within a short time. In fact, the experience of the first two Plans shows that, despite our very best efforts, we can hardly employ a part of the current addition to the labour force. Thus, while the Second Plan was being finalised, it was estimated that there was a backlog of nearly 5 million of unemployed that had to be taken care of, in addition to the fresh entrants to the labour force during the Plan period. At the end of the Second Plan, we find that the figure of backlog has increased. According to the current rate of population growth, it is no surprise if it has nearly doubled as compared to the 1955-56

figure. When we further add to these figures, the figures of under-employed manpower, we find that there is a colossal waste of manpower in this country.

It is true that our Plans have tried to maximise the rate of employment through various programmes. Still, one feels, that the rate of employment could have further been accelerated, if we had carefully modified our planning strategy. For example, we have relied heavily

V. S. MAHAJAN

ly on the cottage industries, thinking them to be the best panacea for our employment problems. Unfortunately, these industries have not come up to our expectations. They have not succeeded in accelerating the tempo of employment as rapidly as was expected. On the contrary, they have put a brake on the development of more efficient large scale consumer industries, like cotton textiles, oil mills etc.

Further, where more employment opportunities could be created like various construction activities and small (factory) industries, we have rather been slow to move in. To take one instance, there is very slow progress in rural urban communications. The road mileage in India is deplorably low, and a very large number of villages still remain cut off from any form of modern transport. The necessity of opening up rural areas is also essential for creating one single market in India, which would ensure an uniform price structure and also accelerate the flow of goods and services between different areas. It is not fully realised that the most important single factor, hampering spread of economic activity in this country, is that a large part of our people are

'technically' outside the market economy.

Apart from having a large potential in the shape of creating direct and indirect employment opportunities, the role of transport is also important from the point of view of family planning itself. Our economy, at this stage cannot afford the luxury of population growth. What is more, one cannot expect the problem to solve itself through slogans of family planning, which hardly convey much sense to our rural folks. We have to be more pragmatic in our approach to family planning.

Need of Higher Incomes

There is ample proof that those rural areas, which are in active contact with urban areas, are quick to take to urban ideas; and since family planning is an urban idea, it needs urban-rural contact on the widest scale possible for its success. It is hard to see how, in the absence of adequate communication facilities between the two sectors, the programme of family planning can be given the widest publicity. More important, unless the income base of the masses rises rapidly, there cannot be real progress in family planning, for after all family planning calls for some minimum expenditure in the shape of contraceptives etc., which our rural folk are hardly in a position to afford. And, unless we speed up the programme of opening up the rural areas, and establishing small (factory) industries on an extensive scale, it would be idle to expect the growth of income base in the society.

Unfortunately, our planners have devoted disproportionate attention to the urban (industrial) sector as compared to the rural sector. No doubt, industries play a significant role in the process of development. But, at the same time, to devote too much attention to them, will only create 'unbalanced' growth, which may rather hamper the tempo of growth. Consequently, their spread effect in the overall growth of the economy is limited. The lesson is that, if we want smooth and rapid development, we must maintain proper balance between the different sectors of the economy.



ABOVE: On land where not even grass grew, now cattle and sheep flourish, thanks to the addition of copper and zinc compounds. An agricultural inspector checks on the growth of clover.

ON OPPOSITE PAGE: One of the farmers who have made the reclaimed desert their home.

BELOW: A contented herd of cattle.



DRAMATIC evidence of the change caused by adding certain minerals to hitherto unproductive land is to be seen in many areas of southern Australia.

In what was once known as the Ninety Mile Desert, hundreds of farmers are now prospering.

The area had been typical of other great patches of land scattered through southern Australia; then, in the late 1940's, scientists discovered the cause of the barrenness of such land, and began the battle to make it productive.

Washed by the rains of countless ages, the soil had lost the minute quantities of copper and zinc needed to sustain healthy plant life, and nitrogen also has been leached from the soil. As a result, useful plants could not be grown until the necessary chemicals had been replaced.

From 1944 to 1946 soil tests were conducted by experts of the Australian Commonwealth Scientific and Industrial Research Organisation on numerous plots in the Keith district to determine the best pasture procedure. Plots were sown with different types of clovers and grasses, and treated with varying amounts of superphosphate and different trace elements.

A Few Minerals

Slowly the way was found to set in motion the soil's natural rebuilding processes; by establishing pastures of clover and lucerne, for instance. All earlier efforts to establish such pastures had proved fruitless. Now it was demonstrated that clover would thrive if zinc and copper were added to the soil with supersphosphate, and that lucerne needed copper.

More than knowledge was needed, however. It took time and money to lift the spell of doom from this lifeless countryside. Now, however, by the use of trace elements, the processes have been set in motion that have built up the soil fertility, and the picture is completely changed.

The reclamation of this area has largely been made possible by the resources of the Australian Mutual Provident Society. This society is the largest life assurance organisation in the Commonwealth of Nations that is wholly owned by its policy holders. Since 1949 the society has developed or partially developed 400,000 acres in South Australia. Adjoining the border in Victoria some 45,000 acres have been similarly treated, and the programme is to continue in Victoria. Heavy clearing plant was assembled at Brecon, 12 miles south of Keith to rip open the desert. The great diesel tractors bucked and roared across the rough plain in the operation known as chaining. Between two tractors a length of heavy chain dragged to tear 250 feet swath through the scrub, knocking over rough bushes, including mallee. Sometimes great logs were used to knock down the scrub.

The land was left through the summer so that the vegetation could dry and be burned in autumn. After the initial rains for the season,

Turn Desert Into Pasture

R. M. YOUNGER

the land was ploughed, levelled and prepared for seeding.

When the sowing was being done, it also received its dressing of superphosphate and trace elements—in this case copper and zinc together. In addition to 173 lb. of superphosphate, 7 lb. of copper sulphate and 7 lb. of zinc sulphate to the acre were spread.

As the land is brought to fruitfulness, it is parcelled into farm blocks and handed over to selected farmers. Men who had themselves worked on the development of the land as employees of the Australian Mutual Provident Society, usually took up about 1,000 acres; some others took up larger areas.

Before blocks are handed over to settlers they are fenced and sown. At the end of the third growing period (five years from initial clearing) they are in full production and at this stage the individual settler takes over.

Each of the original group of settlers spent up to five years on the general reclamation and development work before he received his own farm. In that time the pastures were fully established and the farm brought to an economical working basis.



The first of the farms went to David Davidson, who was established on his 1,012-acre property in 1954. In normal seasons, with some cropping, his property would carry 2,000 dry sheep or its equivalent.

At least as much land has been developed by individuals and other groups as by the Australian Mutual Provident Society. In all, throughout southern Australia, a total area perhaps as great as 300,000,000 acres until very recently considered to be of little or no value because of its infertility, may eventually be made highly productive by the proper use of tiny quantities of the right mineral elements.

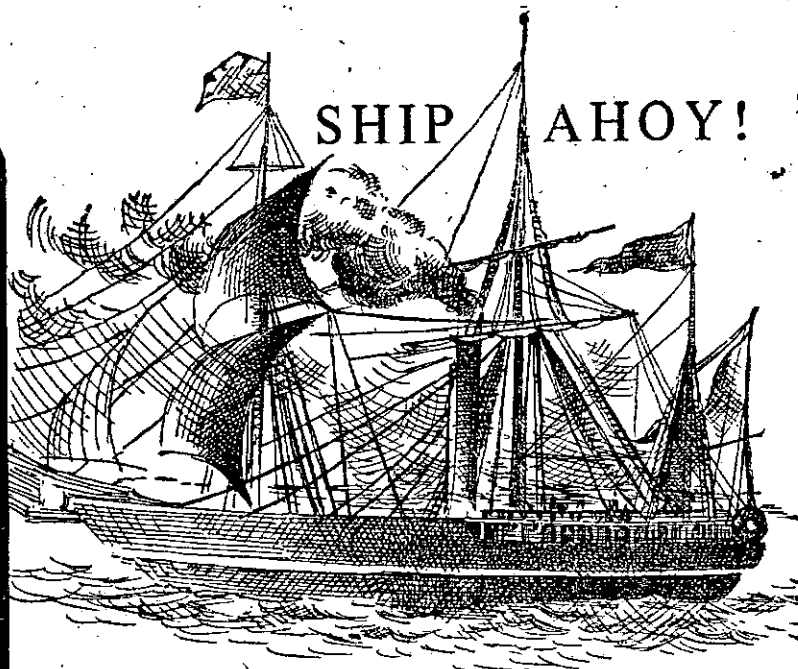
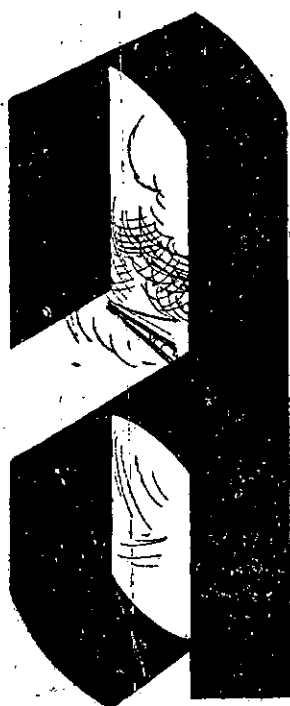
The transformation has begun in many other places, far removed from the Ninety Mile Desert. In Western Australia as well as in South Australia and Victoria, tremendous areas are being progressively transformed, and by making it possible to bring "new" and formerly useless lands under intensive cultivation, soil additives ultimately seem destined to add to Australia's fertile land an area larger than France and Spain combined.

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BUSINESS MANAGER



historic voyage ended as the steamship "Enterprise" reached Calcutta on 9th December, 1825. The first steam-powered vessel to make the England-India run, the 500-ton "Enterprise" won a cash prize of Rs. 100,000 offered by Calcutta's trading community for this truly pioneering achievement. Her captain on the hazardous voyage round 'the Cape' was James Henry Johnson, Commander, Royal Navy, and a hero of Trafalgar.

Though the "Enterprise" was the first ocean-going, partly steam-propelled ship to arrive at any Indian port, small steam-powered craft were being built in Calcutta as early as 1823.

Among the oldest and best known marine and general engineering firms in the country, a privately-owned concern known as Reid & Company's Hooghly Dock (founded 1819), the forerunner of The Hooghly Docking & Engineering Company Limited, was already flourishing before the introduction of steam to India.

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Look, Daddy No Hands!

THAT is one of the first things children say as they learn to prattle. But our children, specially those who go to school and then to college, seem to lose their hands forever, except to hurl stones at window-panes or scribble on the walls. The gospel of the dirty hands remains a vogue slogan.

The reasons for the low value assigned to hands are simple. For centuries in our country the rule has been: he who does not work, only he shall eat. A *literati* tradition, a large supply of labour, imitation of British 'nabob' customs of the last century—all these have given rise to a system where the educated men resemble the males of an ant-hill—drones who thrive on the labour of an army of workers.

THIS attitude is well illustrated by an official in Delhi who carries to his office only two things every day: his boredom and the morning's newspaper. The latter he has to have for fanning himself in buses or bus queues. But as soon as he reaches office, the twelve sheets of newsprint somehow become as heavy as sheets of lead. He calls out to his *chaprasi* (always by designation and never by name) and makes over the newspaper to him as though a weight has been carried too long and the remaining thirty steps are too much to traverse.

A MODERN society makes do with fewer personal servants. A smaller number engaged in domestic service—which means that wages are higher—is a sure sign that inequalities are dwindling. In Britain, America or Russia today, butlers, bodyguards, cooks, cleaners, maids, polishers, scrubbers, table attendants, valets, are all harder to hire. This is because the able-bodied are at work in factories and shops. Yet, only a few generations ago, when the benefits of industrialism had not reached down to the lower levels, they could be had in large droves. Jane Austen's and Turgenev's novels are full of anonymous packs of domestic labourers. Trevelyan, in his social history of Britain, refers to the armies of maids who staggered up the stairs with hot water for the nursing tub, and, quoting Clapham, says that in the third decade of the nineteenth century the female domestic servants alone were 'fifty per cent more numerous than all the men and women, boys and girls, in the cotton industry put together.'

And F. L. Allen, in his "Big Change" has this to say of how things were in America sixty years ago:

Because servants' wages were much lower and candidates for servants' job were in abundance, they (the well-to-do) could staff their quarters amply..... They employed a cook at perhaps \$5 a week, a waitress at \$3.50 a week; a laundress at \$3.50 a week..... The virtual disappearance of the servants, which has imposed upon all but a tiny fraction of American families the chores of cooking and cleaning and washing, not only marks the absorption of the immigrant proletariat of yore into general American society, in which domestic service has been regarded as humiliating, but also removes another contrast between the ways of living of the prosperous and the poor.

America and Britain have long ago become "do it yourself" countries. We are yet far from even regarding it as a desirable state despite several proverbs proclaiming the virtue of doing things personally. One of these asserts: "I do it—best; my son does it—middling; my manservant does it—disastrous."

Apart from the laws of economics, it was Gandhiji who mounted the major attack in our country against the practice of the lazy lords getting all their work done through servants and *chaprasis*. The Mahatma regarded himself as his own *chaprasi* and his own scavenger. He delighted in calling himself the country's First Bhangi.

WITH freedom, there has been a more determined effort to do away with the feudal system of a satrap surrounded by retainers. A foe of the *chaprasi* system—and easily the best friend of the *chaprasis*—is Prime Minister Nehru. He has repeatedly declared that such work as the *chaprasis* do is non-productive and that they slow down and even obstruct work. He wants to see fewer of them in Government.

YEARS from now there may be no *chaprasis*, but today, anyway, they are very much around us. They are real and too numerous to be wished away. And unless well-planned improvements in organisational methods and office architecture are steadily pushed through, the fellows who haul bits of paper and manufacture delays will increase rather than decrease.

Even more necessary is a change in the psychology of our cadres. They must learn to value promptness more than pomp, and throw the upholstery of uppishness out of the window.

IN such a context, it is not surprising that much should be made of the 'university without *chaprasis*' at Rudrapur. The ballyhoo must be making some of the professors there feel uncomfortable. A university would want to be known by the quality of its academic work and not by gimmicks. As the head of a great educational centre of the West said some time ago, three things and only three things make a university—teachers, books and students, in that order. Even buildings are secondary. Much less does a university depend on *chaprasis*.

(Continued on page 28)

Socialist Prophet

At 80

OF the Calcutta-born British celebrities ranging from Thackeray to Vivien Leigh, one of the most outstanding is Professor R. H. Tawney, who has just celebrated his eightieth birthday. His influence on the thinking of India, though less wide than that of his colleague Harold Laski, is at once deeper. Of his influence on his own countrymen, *The Economist* in a birthday tribute entitled 'Critic of Capitalism' says: "Prophets do not always convert compatriots or members of their own sect. Much of the worthwhile social revolution accomplished in Britain since 1911 owes its inspiration to Tawney. He will grumble that his country is a better place to be born in. No matter whose hands made it so, he was largely their guide." In this, he is like his equally distinguished brother-in-law, Lord Beveridge.

It is not only for Religion and the Rise of Capitalism that Tawney is remembered. He is the man to have first talked about the "acquisitive society"—an idea that has had a more forceful impact on sensitive minds than even Professor Galbraith's recent delineation of "the affluent society". Mr. Nehru's words are a reliable measure of India's response to modern ideas. The *Autobiography* and *Glimpses* reveal how Mr. Nehru has been influenced by Tawney, particularly in his attitude towards capitalism and socialism.

Tawney's own personal philosophy has been summed up by R.H.S. Crossman in an article in the *New Statesman*. "Tawney's socialism", Crossman says, "is profoundly re-

ligious... Capitalism, in Tawney's view, was not unworkable, but wicked; and socialism was to be preferred to it not because it would raise material living standard but because it would once again subordinate the economic system to Christian principles."

Substitute 'ethical' for 'Christian' and there you have Mr. Nehru's thought.

And finally a quotation from Tawney himself, which deserves to be specially pondered:

"To those who clamour, as many now do, 'Produce! Produce!' One simple question may be addressed: 'Produce what?' If the nation desires to re-equip its industries with machinery and its railways with wagons, had it not better refrain from holding exhibitions designed to encourage rich men to re-equip themselves with motor cars? What can be more childish to urge the necessity that productive power should be increased, if part of the productive power which exists already is misapplied? Is not less production of futilities as important as, in deed, a condition of, more production of things of moment? (*The Acquisitive Society* 1921.)

Problems Of Our Writers

WHAT are the problems of the writer in India? Themes? Encouragement? Earnings? Spiritual satisfaction?

More book titles are being published. More testimonial functions are being held to honour authors on their sixtieth birthday or hundredth book. We hear everyday of honours and prizes being awarded to them. But are our authors, as a lot, happy?

Authors in India are not as individualistic as in Britain and America. If they are not also as intensely occupied with their collective professional problems as in France, the reason is lack of intercommunication because of distance and language. Their mutual acquaintance is growing, and trends and waves have begun flowing beyond regional boundaries. Our writers meet more often in conferences and seminars. And on each such occasion a certain type of melancholy is noticeable. Somehow our authors feel depressed. Most of them are agreed that the coming of freedom has not meant a new flowering of literature.

A series of articles by leading men of letters in the *Illustrated Weekly* brings out this fact. Almost all the problems of our authors have been touched upon and the expected questions asked. Dr. Mulk Raj Anand wants to know why the travail of our people has not been reflected in our novels or plays. "Dinkar" is unhappy about the consequences of State pat-

ronage of literature. R. K. Narayan and K. S. Karanth are worried about poor sales of books. There are more readers; there is more money. But why don't book sales go up?

Even if we accept the theory that the money that should have bought books goes into cinema tickets and restaurant food, is it a complete explanation? Why should it be so? The cinema's superior charms? That is only another way of saying that our education is inferior. For what is up against good books is not good films but bad films. Many go to see films knowing them to be bad.

Perhaps the real explanation is twofold: one, that our authors yet don't have the right key; two, that life in our urban areas—where our book buyers mostly live, however few they may be—is so congested that there is no place where a man may sit with his book undisturbed. After all, Pasternak needs more solitude than Perry Mason.

Quotation Box

When I arrived (in India) the warning was fully vindicated: because I did not ask for a landing certificate at Amritsar—and they didn't think of giving me one, nor did the High Commission in London mention it—it took me a total of ten and a half months to secure the release of my luggage which had come by sea to Bombay. A total of about 70 letters were written by me and by others on my behalf, and I was fortunate to have an indirect approach to people in high places. The Bombay Customs took five and a half months to grant the release and the Port Trust took four months to decide whether to waive demurrage or not, during which period it rose to a total of Rs. 2,500—no small sum for a school teacher. Finally the Delhi Customs took a modest month to play their part, the luggage having merely been transferred to them for full clearance...

The other side of the coin should be just mentioned at least. Many people who are perfect strangers, and officials too at times, go out of their way to welcome visitors from abroad, make them feel at home, and help them. This hospitality does not go unnoticed or unremembered.

Mr. A. F. Burdett in a letter to *The Statesman*



Give me two seers...no no...four pounds...no no...two kilometres...no no...ten rupees' worth of ghee

JAGANNATH

Three Wheels And A Smile

"I was born in Jhang which is now in West Pakistan," said Jagannath Saigal. Knowing the strapping physique of people from the Multan region, I was not surprised at his fine height.

Jagannath Saigal is one of the three cycle-rickshaw pullers of Delhi whom a co-operative has enabled to own a scooter. He and I were sitting in the sun, on bare cots pulled out in the courtyard facing the co-operative society's office in Kamla Market. To our right, tin trunk manufacturers were trying to sell their wares to a foreign couple. To our left were two yellow and red scooter rickshaws, bearing the name of the Society on their backs, and five or six members of the society, rickshaw pullers with eager faces.

"I come from a family of traders," continued Jagannath. "We were three brothers and two sisters. I did not study much. After finishing VIII class I learnt Hindi and the special script in which we keep our Bahi Khata (account books). Thus equipped, I left school for the shop.

"In 1947, after Partition, we left Jhang. My elder brother settled in Jullundur where he got some land against his claims. He is still doing business there. I knocked about Delhi with my younger brother."

"Then what did you do?" I asked.

"I tried my hand at trade with little success, so that in 1951 started pulling a cycle rickshaw. Thus I came in touch with the blessed breed of rickshaw-pullers. I had to pay from Rs 3 to Rs. 6 per day for the hire of a rickshaw."

"And what does this co-operative society of yours charge now?" I enquired.

"Ten annas a day," he said, "or only five annas per shift. This has set the other owners right as well," he smiled. "Now they charge only Rs. 1-8 to Rs. 3 per day."

"We will talk about the society later," I said.

"Please continue with your personal story."

"What is there to be said?" he remarked. "It has not been an easy life, but thanks to the co-operative I have been able to marry off my two sisters. Then I bought this scooter on instalment from the society. And now I suppose I can say that my luck has turned."

"Excuse me, have you got a family?" I asked.

"I was married quite recently, in September," he almost blushed.

"Congratulations." I exclaimed. "Now tell me about this co-operative of yours."



"As you see," he said, turning back to point out at the board of the society, "it is called the Rickshaw Pullers' Industrial Co-operative Society Limited. I am one of the oldest members. I believe in unions and co-operatives. As early as 1952, I joined a rickshaw pullers' union. That failed. I joined another. That also failed. Then I joined the present one. This one survived because of the interest taken by Mrs Subhadra Joshi and our secretary, Mr. Behl. Now the society has about 500 members. It has licences to run 150 rickshaws. It has a workshop. It stocks and sells spare-parts. And though the secretary is Mr. Behl, our president is Akbar Ali, a rickshaw puller."

"How do the scooters come in the picture?" I enquired.

"You see," explained Jagannath, "rickshaw pedalling is not good for health. But if you stop it all at once, many people will be thrown out of jobs. So what you can do is to help improve the lot of the pullers. The society charges its members a nominal hire fee. It gives them a uniform in the summer and a jersey and a blanket in the winter. It makes arrangements for their medical aid and contributes towards the education of members' children. It also gives about Rs. 125 per year to every puller to cover the cost of repairs and maintenance and for getting the annual certificate of fitness for the vehicles.

"And yet, as I said, rickshaw pulling is not good for health. So as soon a member has shares worth Rs. 500 in the society, the society

(Continued on page 19)



MACHINE TROUBLE: Sometimes machines are as temperamental as human beings. Fortunately, Jagannath is a proficient mechanic. Even if the trouble is deep seated, he tilts the scooter against a tree or lamp post and sets it right in two minutes, as he says.

For Toilers Of Delhi



A NEW WAY OF LIFE

"What about me? What about me?" they shouted eagerly when the 'Yojana' photographer visited the workshop run by the Delhi Rickshaw Pullers' Industrial Co-operative. And shy enough while the youngest worker (extreme right) remained quite cool about being photographed, the two seniormost among them did their best to get into the driving seat of the scooter, perhaps to satisfy, vicariously, a deep desire to own a scooter. The price the winner in the struggle paid for his whim: he is not visible behind the windscreen while the lucky sequestered stands to the left of the scooter. At extreme left is Jagannath.



The Industrial Co-operative also runs a shop which sells spare parts of cycle rickshaws and scooters. In the beginning the Society sold shares at Rs. 25 each. Now it sells only 100-rupee shares. There are about 500 members and the Society has a fund of about Rs. 50,000.

Delhi Rickshaw Pullers' Industrial Co-operative

Photographs at right from top:

GET UP: says Jagannath to the petrol pump attendant. He dislikes the habit of some scooter riders who do their filling while their passengers wait and fret.

ME HELP YOU: he says to a lady passenger. He holds the child while she gets down.

END OF THE DAY: I cover about 400 miles during the day, says Jagannath. "Then at home even when I can take off my uniform, my niece Sarita insists on me to listen to her lessons. I cannot disengage myself," says he.



MONEY SUPPLY

The Workings Of Private And Governmental Borrowing

AT the end of 1956 money supply with the public amounted to Rs. 2,179 crore. At the end of 1959, it amounted to Rs. 2,520 crore. These figures represent the total of currency in the hands of the public and the demand deposits of banks. It measures the stock of monetary media of exchange with which economic activity is carried on. The question to ask is what are the factors which cause an increase or reduction in the money supply with the public. The actual level of money supply is not so important as variations in it. The table (condensed from tables 3.1 and 3.2 of *Economic Survey*, 1959-60) shows the variations in money supply in the last three years and the various factors which account for them.

The main influences at work are: Government's borrowing from the banking system, private sector's borrowing from the banks and changes in the foreign assets held by the Reserve Bank. Government borrows from the banking system when its total receipts are less than its expenditure; similarly, private individuals and companies have to borrow from banks to finance expenditure in excess of their incomes. The 'deficit' of Government or the private sector is 'financed' by the creation of credit—i.e. money—by banks (including the Reserve Bank). The deficit of the country vis-a-vis the rest of the world, if it cannot be met by external assistance, must be met by running down sterling balances; and this has the effect of reducing money supply. This is because exporters who have received payments in foreign exchange would present such foreign exchange to the Reserve Bank and obtain rupees; importers who have to make payments abroad would present rupees to the Reserve Bank and obtain foreign exchange. If imports exceed ex-

ports (and if there is no other way of financing this excess) Reserve Bank pays (on net) foreign exchange and receives in return rupees which go out of circulation decreasing the money supply with the public.

CAUSES MAY VARY

In one year the increase in money supply may be entirely because of Government's deficit; in another it may be due to private sector's deficit and in the third it may be due to the country having a surplus on its foreign account. The view one takes of the increase in money supply depends on which one of the other influence is operating.

In 1957 money supply increased by Rs. 96 crore. On private sector's account there should have been a decline of Rs. 120 crore in money supply (the private sector's indebtedness to the banks had declined by that amount*).

* It should not be concluded from this that there was no expansion of bank credit to the private sector. The decline is mainly because of large accumulations of P.L. 480 counterpart funds with the State Bank of India which, being held as time deposits, acted as a reduction in money supply.

The foreign accounts also were in deficit and the foreign exchange assets held by the Reserve Bank declined by Rs. 327 crore and money supply should have declined further by this amount. Both these influences were, however, swamped mainly by the very large increase in Government's indebtedness to the banking system—Rs. 477 crore. In 1958 also the position was similar. In 1959, on the other hand, money supply increased by Rs. 170 crore. The increase was on account of Government's deficit to the tune of Rs. 247 crore and the increase in the foreign exchange assets of the Reserve Bank by Rs. 24 crore.

During the first two years of the Second Plan we financed the bulk of our foreign deficits by running down sterling balances. The large budgetary deficits, therefore, were countered in their effect on the money supply by the decline in sterling balances. In the third and fourth years of the Second Plan, our balance of payments deficits were financed mainly by external assistance, as we could not draw down sterling balances any further. Hence budgetary deficits had a greater impact on money supply than in the first two years of the Plan.

THE CASH 'NEXUS'

Two other interesting facts need to be noticed: of the total money supply of some Rs. 2,520 crore at the end of 1959, Rs. 1,753 crore consisted of currency. In the developed countries of the

(Continued on page 19)

At the end of	1956	1957	1958	1959
1. Currency with the public (Rs. crore)	1485	1526	1607	1753
2. Demand liabilities (net) of banks	682	732	726	752
3. 'Other deposits' with the Reserve Bank	12	17	17	15
4. Money supply with the public (1+2+3)	2179	2275	2340	2520
Variation over the previous year		1957	1958	1959
Money supply (Item 4 above)		96	75	170
Explained by the total of:				
1. Change in Government indebtedness:				
a) to the Reserve Bank		421	212	95
b) to commercial banks		56	205	152
a+b:		477	417	247
2. Change in private indebtedness to banks		-120	-195	-107
3. Change in foreign assets of the Reserve Bank		-328	-109	24
4. Residuary items		67	38	6

Story Of Jagannath

(Continued from Page 15)

asks him if he wants to buy a two-seater scooter. If he agrees, the society gets a loan from the co-operative bank, buys a scooter, fits it with a body and gives it to the member who pays back the money to the society in instalments. Thus the society has bought 16 scooters and distributed 15 of them."

"Out of these 15, three of us, including me, have paid all the instalments and the scooter is finally ours."

"Mind you," he added, "it is not easy to get scooters. We got these 16 with great difficulty. The late Feroz Sahib (Feroze Gandhi) helped us very much."

"Do you have any complaints?" I enquired.

"Of course," he grumbled, "the interest is too high. The bank charges 7 per cent and the society three per cent more. But perhaps," he conceded, "the money-lender would have been even more troublesome."

"What are your future plans?" I asked hoping to have a glimpse of what the ambition of an enterprising young man is.

"I want to build a house," he replied without hesitation. "Both my brother and I drive the scooter in two shifts and yet we barely manage to get Rs. 250 per month after deducting the cost of petrol, servicing and repairs. Out of this we have to pay Rs. 40 per month for a miserable tiny house. I did not ask the Government for any land as a refugee. But our society asked for land to build us quarters. And after great difficulty, they offered what? Land near Shahdara. How can a poor rickshaw driver live in Shahdara and do work in Delhi? In any case, I am going to have a house," he said with determination.

Jagannath also offered to show me his present house. From Kamla Market we went to Kamala Nagar, a distance of four miles. It was not as bad as he led me to believe; a tiny bedroom 8' x 10', a box room 6' x 6', and a kitchen, all very neatly kept. He had made the smaller room into a drawing room. There was a cane sofa set, a rather middle-aged radio set, a dressing table carefully covered with cloth. Jagannath's wife had gone to her parent's home. But his pretty five-year-old niece, Sarita, offered us tea and sweets.

"Many I drink to your future?" I asked Jagannath, lifting my cup of tea.

M. A. Husaini

MONEY SUPPLY

(Continued from page 18)

world, currency constitutes a relatively minor proportion of money supply. Indeed it is said that notes are the small change of the banking system. The bulk of the transactions in the economy are conducted through banks. The high proportion of currency to money supply shows that banking habit in our country is not fully developed. The other fact which needs to be noticed is that whereas the amount of money supply is of the order of Rs. 2,500 crore, national income is many times this amount—around Rs. 12,000 crore. A large part of our national income, consisting of agricultural output consumed at home by the farmers, does not come on to the market. But with the increase in commercialisation, more and more of the national output will enter the cash 'nexus'; and money supply will have to increase correspondingly.

It is easy to see now that a deficit in Government's account does not necessarily lead to an increase in money supply: for, at the same time there might be a deficit in the balance of payments. Also, an increase in money supply is not necessarily inflationary:

Plan Quiz

1. Where is the Dantiwada project, which has recently been approved, situated, and what are the benefits that it will yield?
2. What are the agencies newly set up which provide credit facilities to industries in the private sector and what is the aid so far rendered by them?
3. What is the Third Plan target for production of commercial vehicles for road transport?—a) 22,500; b) 45,000; c) 60,000.
4. What was the amount realised in the first six months of the financial year

1960-61 from items on which duties are levied and collected by the Central Government?

5. What is the object shown in the photograph below?

Answers on Page 25



it might be required to take care of the increasing monetisation of the economy.

CORRECTION

In the Footnote to the last Table Talk on Balance of Payments instead of 'we have not repaid it in kind' read 'we have now repaid it in kind'.

The last sentence of the article should read 'Thus the import surplus (which is equal to items 3+5) is a measure of our draft on the current savings of foreigners.'

ACKNOWLEDGEMENT

In the last issue of YO-JANA the Photographs on Agricultural implements were made available to us through the courtesy of Indian Council of Agricultural Research.

The truth about Vanaspati

SEVERAL erroneous and misleading statements have been made in the Press and in Public about the wholesomeness of vanaspati. It has therefore become necessary to reassure consumers that these statements arise out of misconceptions; they are not based on facts or reliable scientific evidence.

Ever since hydrogenated fats such as vanaspati or shortening, and margarine were first made and consumed over 50 years ago, scientists in India and abroad have been stating their confirmed opinions — backed by exhaustive researches — in favour of the wholesomeness and nutritive value of these fats. Here are a few statements, made collectively and individually, by responsible scientists and public men, whose competence to comment on this subject is beyond doubt:

"Vanaspati is wholesome food and there is no objection, from the nutritional standpoint, to an increase in its consumption."

— Dr. W. R. Aykroyd, formerly Director of Nutrition Research in India and Director of Nutrition in the United Nation's Food and Agricultural Organisation: (1946)

"Vanaspati has no deleterious effect on health."

— Results of a series of investigations in 1947-49 initiated by the Government of India.

"My advice is to let vanaspati be used as it is a good wholesome food."

— Dr. (Sir) S. S. Bhatnagar, Kt., D.Sc., F.R.I.C., F.R.S., Director-General of Scientific & Industrial Research. (1949)

"Government are quite clear and convinced of the fact that the use of vanaspati is not harmful to

health. By repeated scientific and medical tests it has been found that vanaspati or its like has been used in three-fourths of the world, and nobody has suffered from it."

— Pandit Nehru, the Prime Minister of India, on 10th June 1952, in Parliament.

"The effects of hydrogenated oils have been studied in detail. As a result of these studies it has been shown that vegetable oils like groundnut oil, sesame oil and their hydrogenated products with melting point 37°C, and butter have almost the same nutritive value. Hydrogenated oils have similar digestibility as non-hydrogenated oils. The hydrogenated oils influence the utilisation of other dietary constituents such as calcium to the same extent as untreated vegetable oils and butter. Moreover, butter and hydrogenated fats as sold in India are good sources of vitamin A."

— Findings of the Indian Council of Medical Research, laid on the Table of the Lok Sabha by Mr. D. P. Karmarkar, Union Minister for Health, on 11th December 1959.

Vanaspati is, in fact, particularly nutritious. Every ounce of it is fortified with 700 international units of vitamin A and 56 international units of vitamin D. Therefore, vanaspati is as nutritious as the best edible semi-solid fats, and certainly more nutritious than edible oils which do not contain vitamins.

It is therefore not surprising that vanaspati has been in daily use in homes all over India for over 30 years. It has been in use as the dietary fat for the men of our Armed Forces for the past 18 years; it is also used regularly in refugee camps, hotels, restaurants, clubs, hospitals, and other institutions where food must be inexpensive as well as healthful and palatable.

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VALLATHOL

One Man Who Did The Work Of Many Giants

THOUGH culturally and linguistically always one, Kerala was divided politically and administratively for long centuries till the States were reorganised about three years ago. But whether in the British period or in the distant past when several local chieftains had held power, Malayalam language and literature served as a strong integrating force. Towards the turn of the present century there was a sort of dullness and absence of a vitalising ideal in the literary realm. The gulf between 'life' and 'letters' was widening till about 1910 when the stars began to glitter in the literary firmament of Kerala. They were Kumaran Asan, Vallathol and Ulloor. Though the three of them started as romanticists, they could not long be divorced from the currents and cross-currents of popular life. While Ulloor wrote as a revivalist in social matters extolling the past culture of India and Asan echoed the agony of communities which suffered social prejudices and disabilities, Vallathol became the champion of the national movement. There never existed such a trio in the history of Malayalam literature. They came to the scene at a time when talent was being wasted on trivial themes dressed up in verbal finery and far-fetched *alankaras*. The great renaissance brought about by them will be recorded in golden letters by future historians. Vallathol was the last of the triumvir and his death in 1958 has caused a void in the literary scene of Kerala.

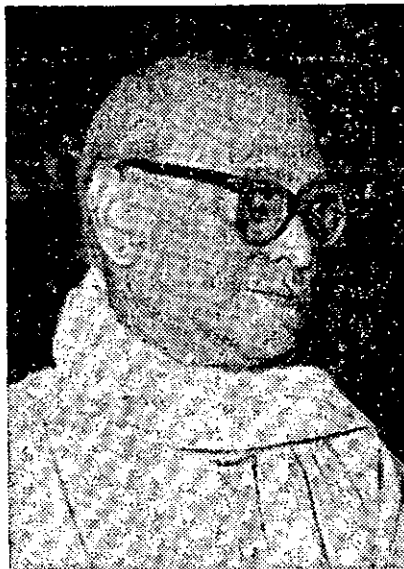
Vallathol Narayana Menon was born in 1879 in a middle class Nayar family in Malabar. His education was in Malayalam and Sanskrit in the traditional way. His uncle trained him as an *ayurvedic* physician. The creative urge in the boy could not be curbed by anybody, for even at the incredible age of eleven, Narayanan used to write verses. When he was just 13, he had completed three books. By the time he was 26, he had sixteen books to his credit. What brought him to the notice of the whole of Kerala, was his translation of *Valmiki Ramayana*, which he completed when he was just 27. Since then it was a steady and spectacular rise in the field of poetry and 'Vallathol' became a household word.

Vallathol was truly versatile. In the words of Sardar K. M. Panikkar, he is indeed three poets rolled into

one—the classicist, the nationalist and the progressivist. But as the poet of nationalism in Kerala, Vallathol reigns supreme and possibly he has few equals in other Indian languages. What made him the leader of renaissance in Malayalam literature was his association with the national movement. The First World War had unleashed the forces of national revival and the urge for a new life was evident throughout India.

GANDHI HIS 'GURU'

Poet Vallathol's nationalism was not simply political. It was in fact a combination of the cultural renaissance



sance movement started by Bankim Chandra and Tagore and the political emancipation movement indicated above.

He accepted Gandhiji as his guru. Gandhiji and his ideas made so profound an impression on Vallathol that he became a missionary by himself. Though the non-co-operation and other allied movements slowly spread in Kerala through Congress workers, it was Vallathol who gave fire and spirit to the movement in Kerala.

Vallathol was a man of large heart and wide sympathies. Several of his poems show that he appreciated the best in every religion. He wrote with passion and zeal on Hindu-Muslim

unity. The problem was real and poignant in his own little Malabar. "If brothers fight against each other in a country, does it become unworthy of freedom? The fight amongst brothers is not a fight; it is only a temporary turbidity of friendship. Do we not see that waves in the ocean beat against each other; but in the next moment they laugh and flutter through their foam." He does not spare any one. "To stop killing of cows they (Hindus) kill human beings! If Allah does not enjoy music and drum, would the ocean beat its drum so long and would the cuckoo continue its beautiful song! Are we not mad that the left hand causes injury to the right and both are in blood?"

Vallathol has more than seventy works to his credit. Among them translation from Sanskrit is a major contribution. In addition to *Valmiki Ramayana*, he has translated *Sakuntalam* and few other classics in simple and attractive language. He completed the translation of *Rigveda* when was 75. *Chitravogam Mahakavyam* and *Aushadhaharanam* are works written in the classic style. But Vallathol will be better remembered by his shorter poems and lyrics. *Aniruddhan*, *Magnalana Mariam*, and the hundreds of lyrics on various aspects of life published in the seven volumes of *Sahitya Manjari* have spread a wave of freshness and vitality in Malayalam literature. Some of his poems have been translated into Russian, English and Hindi. The 17 selected poems of Vallathol translated and published in Hindi by the Sahitya Akademi have been well-received. These poems will now appear in the other Indian languages.

Vallathol was not only a great poet; but an artist in every fibre of his being. He is the one man who was responsible for reviving the art of Kathakali, which had been neglected and relegated to the background as a dumb-show in the wake of English education. Vallathol went begging from place to place (even outside India) to build up the Kerala Kala Mandalam which is the major institution to train students in Kathakali and allied dances. Until his death in March 1958, Vallathol was the director of the institution, which has now been taken over by the Kerala Government. It is Vallathol who planned and worked hard to bring to of notice of the connoisseurs of art in various parts of the world an art which is a combination of many arts—music, *mudras*, make-up and costume and above all the unvarnished expression of the basic culture of India in the themes chosen. India can well be proud of this national art. Vallathol was the moving spirit of Kathakali. In fact ever since he became deaf—this happened during his 30th year—he was literally living in Kathakali, speaking its gesture language.

DR. K. M. GEORGE

Social Costs Of Bhakra

(Continued from page 5)

pear that it is not easy to make out whether it is so in a particular case. Dr. Raj's remedy does not seem to be very dependable in such a difficulty. He says: "From a practical point of view, therefore, it may be better to treat the entire additions of consumption as a social cost in the first instance and re-value this cost later according to our assessment of how far they are met by resources which had no alternative uses, how far by drafts on foreign exchange, and how far by domestic resources which have alternative uses." Obviously, our assessment is bound to change from time to time and whatever the assessment, it would only be a *post mortem* of mistakes made or those luckily avoided.

What is true of labour is perhaps even more true of machinery. In practice, it is difficult to strike a balance between the optimum use of labour and machinery. It is, of course, important in the case of public projects not to ignore the social cost as distinct from private cost, particularly in the context of utilisation of labour in a country like India.

TIME ELEMENT

The consideration of time in investment assumes particular importance in a country where large sections of the population are below the subsistence line. In such an economy the clamour for immediate rise in consumption will always be persistent. For the precise reason, it is necessary for planners to reconcile the immediate and the ultimate and achieve a social optimum along the time horizon. It is particularly essential that political considerations are kept aloof in this context, because they may obscure the long-term vision. Dr. Raj has referred to how in Russia, immediately after the Revolution, doctrinaire considerations caused a good deal of confusion in Soviet planning. Following the Marxist approach, the Soviet planners regarded labour as the only source of value and went in for capital-intensive projects in utter disregard of capital costs involved. This is a warning to all the developing nations to avoid all pre-conceived theoretical notions in the formulation of their developmental plans.

The time element involves the period required for the fruition of a project, the rate and duration of the flow of the final product, the durability of assets created, provision for depreciation and so on.

If the concept of social product introduces a wholesome element into the consideration of development programmes by widening the outlook of the planners from the restricted concept of limited cost and limited returns of a project to its social cost and social returns, it also introduces an element of arbitrariness which may prove too spacious for the planners to accommodate really unproductive projects.

Thus it appears that the criteria formulated by Dr. Raj are in the abstract sound and unexceptionable, but in the very nature of things

their reconciliation and application are not easy. One can, therefore, say with some amount of justification, without belittling the value of Dr. Raj's contribution and without for a moment forgetting the difficulties inherent in the very nature of the problem, that the author has succeeded in posing more problems than he has been able to answer. But that itself is no mean achievement.

In the later chapters of the book, Dr. Raj has attempted an application of the principles he has earlier evolved to the concrete case of Bhakra Nangal Project. As he is aware, this effort has obvious limitations in view of the fact that the project is the only one of its kind in a particular region and there is also no basis for comparison in respect of costs and returns of a similar project elsewhere. Further, as he says, it is not also possible to see how the Bhakra Nangal Project would rank with other irrigation and power projects in order of preference. It is essential to remember that since the location of the project was decided by socio-political factors like the rehabilitation of the refugees from Pakistan, economic considerations cannot be applied all along the line. Perhaps the wisdom of its location cannot be doubted if we consider "the hope and confidence" that it has given to millions of people uprooted by Partition. What remains to be analysed, therefore, is the project design, the techniques of construction, the materials to be used and the period of construction.

In the course of this analysis, Dr. Raj has thrown up a number of important bits of information about the project, but many of them are incidental to the main study and, therefore, it is not proposed to assess them here although they deserve serious consideration otherwise.

A point that has to be examined is the low labour content and highly capital intensive nature of the project. Dr. Raj's rough estimates show that the share of labour in the total cost of the project is a little less than one-third, that of the unskilled labour being only 14 per cent. Machinery and equipment, on the other hand, account for 30 per cent and materials 26 per cent. The foreign exchange component is very substantial, namely, 40 to 45 per cent. The power generated by the project is expected to serve such a wide area that the share of transmission cost is as high as 53 per cent.

All these things were unavoidable in view of the nature and the purpose of the project. What, therefore, deserves criticism is not so much the choice of the project as such, but the fact that all the implications of the choice were not properly gone into and that a large number of *ad hoc* decisions were taken from time to time which show both the absence of clarity of vision and uncertainty about the future product of the enterprise. Dr. Raj has done well to bring out all these factors and to emphasise the utmost need for avoiding these mistakes in future. But this again is rather incidental. The project afforded limited scope for the application of the investment criteria and more comprehensive efforts for their application would be highly rewarding.

—M. R. K.

YOJANA

DIFFICULTIES IN AGRICULTURAL PLANNING

tent ownership coincides with actual cultivation, one disincentive will disappear and the farmers will be in a better mood to respond to the growing needs of the country.

FISCAL MEASURES

A well-known feature of Indian agriculture, apart from the desire of the farmer to grow only as much needed by him, has been its large reliance on family resources and, to a smaller extent, on the resources of other agriculturists. Even for credit the Indian farmers have depended least on non-agricultural producers. As a result, fiscal or monetary instruments have only an indirect, and in any case a very feeble, effect on agriculturists. But it is precisely these instruments that are available to the planners.

This handicap is being gradually removed. Agriculture is becoming more and more amenable to the forces operating in the whole economy. This 'opening' has been effected through organised credit, mostly co-operative credit, in the provision of which the State plays a major role. One can visualise a situation when most of the credit requirements of agriculture will be met by the organised sources. If that comes about, the planners will have an effective lever to guide agricultural production.

UNEMPLOYED RESOURCES

One of the major difficulties in agricultural planning is the existence of unemployed or under-employed resources, mainly in the form of human labour. Under-employed resources are a handicap in any scheme of rational resource allocation. It is more so in agriculture when under-employed labour largely belongs to the family of the cultivator. As the work has to be spread out and overt unemployment avoided, what happens is that even when more productive non-labour resources are available and are within the reach of the cultivators, they are hesitant to use them. In such a situation, the price factor plays only a secondary role.

On a conservative estimate there are 10 to 15 million workers who can safely be taken away from the agricultural sector. The employment opportunities during ten years of planning have not kept pace with the increase in labour force. The back-log of unemployment in the non-agricultural sector is progressively increasing. It was thought that because of the massive public works programmes in the rural areas and because of the rapid migration of rural labour, rural under-employment might have eased during past few years. The ascertained facts do not warrant this conclusion. It is reported in the press that the second round of the All-India Agricultural Labour Enquiry has revealed that the employment situation in rural areas has, if anything, worsened. With an admitted failure of the cottage industry programme to gather momentum, there is no reason to be-

(Continued on page 26)

THE experience of a decade in planning has proved conclusively, if proof was needed, that the success of any plan in this country hinges on the performance of the agricultural sector. Unfortunately it is precisely in this field that, more often than not, our targets have gone awry—in spite of agricultural produce finding a ready market and favourable prices all along.

Planning of agricultural production is particularly difficult because of the large number of farmers in India and the fact that agricultural operations are not fully responsive to market mechanism. Added to these, the seasonal fluctuations are very wide, because ours is a country of continental size.

DR. V. S. VYAS

Reader in Economics,
Sardar Vallabhbhai Vidyapeeth,
Vallabh Vidyanagar.

These are among the difficulties which the planners must encounter. Some of these are common to agricultural planning all over the world; others are more particularly applicable to India. Again, some of the difficulties are the result of long-term forces and will take an equally long time to correct, while others can be solved quicker.

For a clearer understanding, we can distinguish these handicaps in the following groups: (a) the structure of farms, (b) the ownership pattern and attempted changes, (c) the inefficiency of fiscal and monetary measures, (d) the existence of underemployed resources and (e) weather hazards.

STRUCTURE OF FARMS

It is estimated that there are more than 30 million farms in this country. Each one on an average comprises an area less than eight acres. This average is also, in a sense, misleading, as nearly 60 per cent of holdings cover an area of only five acres or less. This structure gives rise to two types of difficulties. In the first place, the direct administration, even direct contact, of these farms is impossible. Reliance has to be placed on indirect contacts and on market forces. Both have their limitations in our setting.

In the second place, the small size of farms makes it impossible to introduce even some of the more elementary innovations. Service co-operatives can only go a certain length in overcoming this limitation.

A lasting solution to this problem,

from the planners' point of view, can only be large-sized co-operative farms covering, say, the entire land of a village. Such amalgamation may reduce the number of farms in the country to 3 or 4 lakh, and these can be helped or supervised more effectively by the States. To achieve this end, a vigorous campaign has to be launched to popularise joint co-operative farming. If the Gramdan movement gathers momentum, it can also help. However, the indications are that neither of these movements is likely to make much headway in the near future. The difficult problem of extending modern technology to innumerable tiny farms is going to be with us for some time.

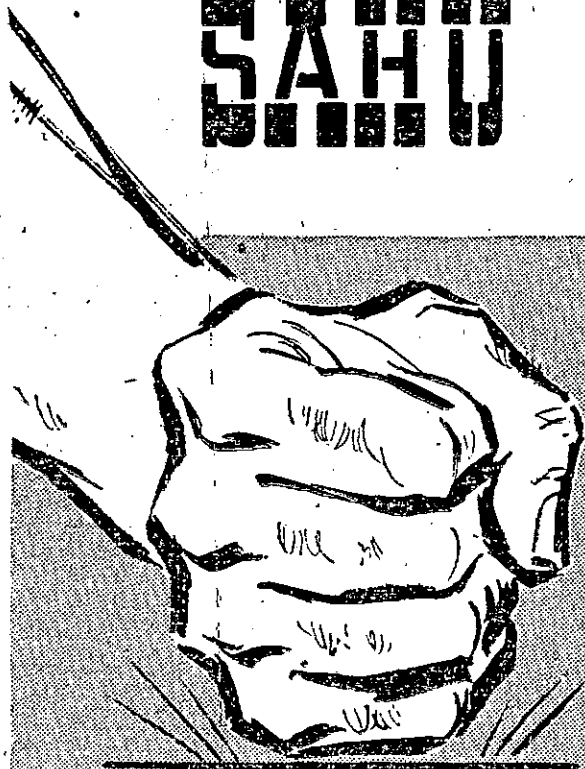
OWNERSHIP PATTERN

Till recently, nearly 30 to 40 per cent of our land was cultivated by farmers who did not own it. Various economic surveys have shown that on these fields the capital investment was meagre. The farmers were not to be blamed for this negligence, as the lion's share of any increment on these fields would have been taken up by functionless intermediaries. In such circumstances about a third of the country's agricultural land remained unexploited.

This handicap was sought to be removed by legislation aiming at the abolition of intermediaries. Yet the measures undertaken were piecemeal in character and were based on some extremely simplified assumptions regarding the structure of ownership in land. (See V. S. Vyas, *Some Unsolved Problems of Indian Agriculture*, Economic Review, September 1960). Besides, implementation of these measures was unsatisfactory. The immediate result was a lot of shuffle in the countryside and an atmosphere of uncertainty. It is difficult to gauge the net outcome. The feeling persists that evictions of tenants took place on a large scale, more land went under 'personal cultivation' and the size of the holdings increased. This increase in the size of holdings, however, did not lead to the advantages of scale. Nor did the new land under personal cultivation show a more intensive approach to cultivation as the holdings were resumed for 'personal cultivation' only on paper but were actually cultivated by the same old tenants. In a minority of cases, they were being cultivated with the help of hired labour.

Later tenancy enactments, specially those after 1955, have plugged many of the loop-holes of earlier legislation. It is believed that about 80 to 85 per cent of land is now being owned by the tillers or is being personally supervised by the owners. To the ex-

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* * *

The country's first multipurpose food plant has started work in Coimbatore. It has been sponsored by the Central Food Technological Research Institute. The process of manufacturing nutritious food consists of making specially prepared low fat groundnut flour and Bengal gram. Two types of food—spiced and plain—will be produced for the time being. The major part of the production will be bought by the Government of Madras for its programme of mid-day meals for school children.

* * *

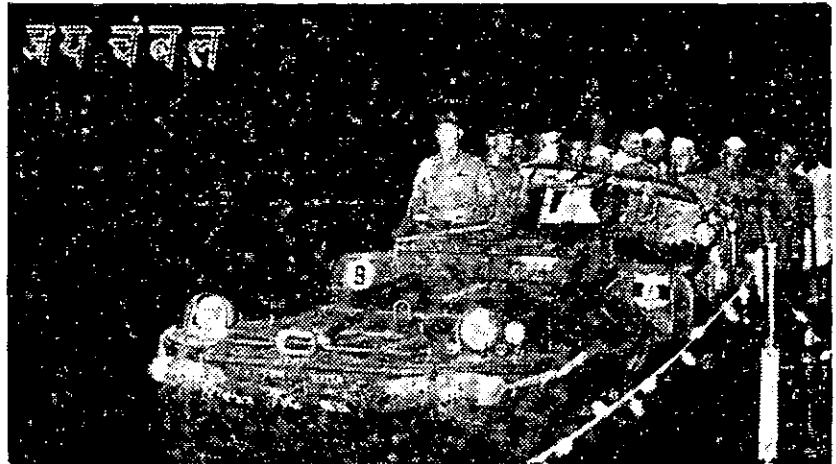
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The excavation and foundation preparation work for the Rihand Dam in Uttar Pradesh has been almost completed. The concreting work is nearing completion on the dam and appurtenant works. The installed generating capacity of the power house at the Rihand Dam is 250,000 kW. consisting of five sets of 50,000 kW. each, with a provision for the sixth set at a later date. The first and second sets which are under erection at present are expected to be commissioned in June 1961 and the remaining three sets in July, September and October 1961, respectively.

* * *

The construction of the prestressed concrete bridge over Ramganga river near Sherket in



The Prime Minister and others in an Army duck after the inauguration of the Chambal Project.

Uttar Pradesh is in progress. Sinking of all wells, construction of four piers and the left and right abutments are over.

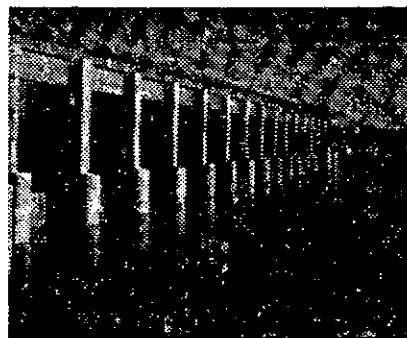
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Construction work on the Sholayar Hydro Electric Project in Kerala has started. The Project which is expected to cost Rs. 432 lakh will have an installed capacity of 54,000 kW.

* * *

In the seven years of the Bhoodan movement 44,11,191 acres of land have been donated by various individuals. The major portion of this still awaits allocation.

* * *



Two canals, the right and the left which are fed by the Kotah Barrage have started functioning. These canals will irrigate lands in Rajasthan and Madhya Pradesh. The 162-mile long canal in Rajasthan and 398-mile long canal in Madhya Pradesh will eventually irrigate 11 lakh acres of land.

QUIZ ANSWERS

1. The Dantiwada project approved for completion during the Third Plan, will be situated in the Danera taluka of the Banaskantha district of Gujarat State. It consists of a 900-foot long dam across the river Banas. The reservoir will have a storage capacity of 16,400 million cubic feet of water and the canal system will irrigate 110,000 acres in the Banaskantha and Mehsana districts. It is also proposed to generate 1,000 kW of power at a later date. The estimated cost of the project is between Rs. 8 and 9 crore.
2. These agencies and the loans sanctioned by them are: The Industrial Finance Corporation set up in July, 1948—Rs. 84.61 crore till June, 1960; the Industrial Credit and Investment Corporation of India set up in January, 1955—Rs. 14.05 crore until September, 1959; the Refinance Corporation for Industries, formed in June, 1958—Rs. 2.4 crore till March last year; and the National Industrial Development Corporation, set up in 1954 (latest figures not available).
3. c). 60,000.
4. Rs. 366.65 crore have been realised from Central levies during the period April-September 1960-61. The more important of these items are Central Customs Rs. 77.95 crore; Union Excise Duties (including coal cess and salt cess) Rs. 193.90 crore, Corporation Tax Rs. 36.78 crore; and Income Tax Rs. 47.02 crore. The total during the corresponding period in the last financial year was Rs. 328.49 crore.
5. Bamboos being filled up with wood preservative. (See also page 29).

PRIZE BOND SCHEME

How To Make It More Attractive

THE Government of India embarked upon a new scheme of public borrowings in the form of five-year interest-free prize bonds on April 1 this year. The scheme was highly appreciated for its novel features and the public accorded it a warm welcome as was evident from the response at the issuing offices. During the first quarter comprising the months of April, May and June, public subscriptions reached as high an amount as Rs. 9.2 crore. But a report from Bombay reveals that the country's response to the scheme during the second quarter is disappointing, with the total sale less than Rs. 50 lakh. This sharp decline of public interest is a matter which needs careful consideration. This slackening may be attributed to the wearing off of the first flush of enthusiasm on the part of the people. But unfortunate experience with a similar scheme introduced in the country in

reduced, but to no disadvantage. A scheme providing both a prize and a regular return will have greater appeal to the people than the present one. The double attraction will have a greater psychological pull. Even if the chances of getting a prize are small, there is always a definite return to look forward to.

The present rule is that all the bonds of a series will participate in all the twenty draws irrespective of whether they have won a prize in a previous draw. This fact strengthens the speculative trend and reduces the chances of more prizes going to more people. It is only if we adopt the 'one bond one prize' principle that a large percentage of holders will benefit. For this purpose it may be suggested that all the bonds may be entitled to participate in all the draws, but one bond shall win only one prize. As soon as a bond wins a bigger prize in the next draw, it can claim only the difference between the two prizes. The amount thus saved may be awarded to the bonds on the waiting list.

Another drawback noticed in the present scheme is the rule that all the bonds of a series, whether sold or unsold, are entitled to participate in the draw and win prizes. The long list of prize-winning bonds is thus illusory. And the fact that many prizes have been allotted on unsold bonds creates an unfavourable impression on the public. To strengthen public confidence in the scheme, the prize declared must really go to those who have actually spent money buying the bonds. If the present series of bonds are considered to be too big, they could easily be regrouped.

IN RURAL AREAS

A somewhat different problem is to popularise prize bonds in the countryside. Lack of post offices and State Bank branches which issue these bonds, mass illiteracy, lack of information, and the need to preserve the bonds for as long as five years are some of the obstacles in the way. The rural people spend more money on social ceremonies and are also known for their desire to hoard money in coin, note and jewellery. At the same time, belief in one's luck is more prevalent in the rural people than in townfolk. For this reason it is likely that prize bonds, if an effort is made, will have excellent response from villagers.

The Government should devise new methods to popularise the bonds. A special publicity campaign should be undertaken in 'mandis' and grain markets, where at the time of harvests money flows freely and peasants assemble. They will not find it

difficult to invest five rupees and take a chance. The serial number of the bonds should be published in regional languages also. Similarly, declaration of the result of the draws should be published in these languages and disseminated in the interior countryside.

Prize bonds can and do serve a useful purpose in mopping up small savings for the purpose of implementing the national plans. What is now required is to enlarge their appeal as well as broaden the machinery for their sale.

Agricultural Planning

(Continued from page 23)

lieve that the situation on the farms with under-employed labour has improved. This hurdle in planning will be crossed in the following years only to the extent we are able to provide for intensive farming and can speed up the programme of cottage industries.

WEATHER HAZARDS

The most important and most universal limitation to greater agricultural production consists of weather hazards. The Indian monsoon is notorious for its vagaries. One of the most effective ways to minimise the hazards of an uncertain monsoon is the spread of irrigation and water-management practices. Apart from bestowing other advantages, irrigation gives the planners a surer ground to base agricultural plans over a large region of this country.

It is estimated that the potentialities of irrigation from all sources is about 200 million acres, or more than half of the country's cultivated area. At the time of Independence about 48½ million acres of land were receiving the benefits of irrigation in the country. During the First and Second Plans an additional capacity of 33 million acres through major and minor irrigation projects and roughly 20 million acres through minor projects was achieved. Only perennial irrigation is an effective safeguard against the unpredictability of rainfall. It is estimated that about 80 to 85 million acres will receive perennial irrigation by the end of Second Plan.

It is proposed to reach a target of 200 million acres by 1975-76. Success in bringing more and more areas under irrigation will lead to a firmer grip over the agricultural production.

However, so long as farms are too many and too small, so long as their ownership pattern is blurred, so long as certain resources are underemployed, planning of agricultural production, even if we can manage the climate, will remain a hit-or-miss affair. Correction of some of these handicaps will enable agriculture to respond to the challenge of higher production.

P. N. VARSHNEY

Lucknow University

January 1944 cannot be forgotten. That scheme was given up in 1945 because of lack of response after the initial excitement. It is useful to scrutinise the terms of the scheme.

The scheme offers attractive prizes, which depend upon more chance; but are these prizes enough to stimulate the urge to save and invest? There is reason to believe that a large number of people would prefer an interest-bearing or income-yielding plan to the speculative motive which forms the basis of the prize bond scheme. Some savings may flow out of the speculative motive, but their size cannot be large. Big prizes do attract, but the question is how far they do so. Will a prudent man lose interest for five years for the mere chance event of getting a prize.

TWO DRAWBACKS

To overcome this limitation it may be rightly suggested that an element of interest should also be introduced besides the prizes. It means that instead of the entire amount of estimated return on the amount of prize bonds being distributed in the shape of prizes, a part of it may be paid as a definite return on the amount invested and the rest as prizes. In the present scheme, the cost of prizes works out at 3.68 per cent per annum, which is enough to be apportioned in this way. The interest payment may take the form of a higher redemption amount rather than the regular interest payment for the sake of convenience. This happens to be the practice in case of Post Office certificates. The value of the prizes will, thus, be

Crafts, established by the Maharaja at Jaipur in 1866, is the second oldest art school in India. The Maharaja took a personal interest in the crafts and rewarded the workers with money, jagirs and honours.

There are about 250 families of sculptors in Jaipur earning their livelihood by stone carving. The tools they handle are simple

PRIDE OF PLACE

and consist of a few finely tempered chisels of different sizes, hammers, files, ramps and scrapers.

The material used is mainly marble from Makrana, which is fifty miles west of Jaipur. ▽

The worker squats on the floor, saws the marble to the required size and, seizing it between his feet, draws a rough sketch with ink of the figure to be carved. He then scoops into the piece from all sides with small saws, after which he shapes the forms with chisels. When the figure is ready, the women of the household help in polishing the surface.

Stone Carving of Jaipur

THE stone carvers of Jaipur are among the best-known of the numerous classes of craftsmen for whom Rajasthan is noted. Popularly known as 'Silawats,' these workers on marble live in the side-streets of the famous Chandpole Gate of the Pink City.

Raja Man Singh, the military commander of Emperor Akbar, and a patron of arts and crafts, invited a large number of artisans and craftsmen from different parts of India to settle in Amber. Among them were many sculptors from Mandu in Madhya Bharat, Narnaul in Delhi and Mandavar in the Brāj region. When a descendant of his, Sawai Jai Singh, shifted his capital from Amber to Jaipur, the artisans also migrated to the new capital.

The great age of Jaipur stone carving, however, was during the reign of Maharaja Ram Singh II (1835-80). The School of Arts and

Photographs and Text
by Suraj N. Sharma

Top Left: A young stone-carver using the medium chisel.

Left: A familiar subject as it emerges from the hands of the Jaipur craftsmen



Hamara Hindustan

(Continued from page 13)

With every distinction goes some grudge. One can be sure that a few at least of the staff at the place still hanker after the privilege of being able to order about orderlies. Every office in Delhi where the messenger system has been introduced has officials who feel angry and apologetic that they can't ring the bell and have a *chaprasi* bring their visitors a glass of water. An interesting problem to analyse. What are they ashamed of—of water, or of visitors?

BUT since it is such a comfort to be waited upon, and to have people around, most Americans, with all their flamboyant pride in the equality that prevails in their land and with all their nostalgia for the aseptic beauties of the American kitchen, feel a pang when the time comes for them to leave India. There is a particular U.S. engineer—and not an advertisement for either his country or his profession—who, back home, never tires of boasting to his friends that he had a dozen servants. He shows them movies in which the

wives and children of the 'menials' are lined up before the camera.

HOME or office, everybody who is anybody in our country expects to be served by servants. After all, a person's nature does not change when he crosses the threshold of his home. Till, recently it had even been thought that it was part of the Government's obligations to its officers to provide them with servants to work in their homes. 'Mem-sahibs' have traditionally regarded all *chaprasis* of the Sahibs' office as a relay of attendants. But egalitarian ideas are slowly spreading. Many officers nowadays are socialists by conviction. *Chaprasis*, on their part, have formed unions of their own. But a recent order of the Madras Government serves to prove that the problem has not been finally solved. The aim of the order is to see that *chaprasis* work only in offices and not at the homes of the bosses. So far so good. But it also offers a compensation to the officers for the loss.

"LOOK, no hands." What does it matter, as long as we are compensated—at thirty rupees a month!

Madras Movement

(Continued from page 7)

The co-operation of village panchayats in the production and timely distribution of *sesbania* seedlings was fully enlisted. In some parts of Tanjore district there is a system of raising paddy seedlings under small tanks before receipt of irrigation water. The presidents of Panchayats of such villages were prevailed upon to raise the seedlings of *sesbania* along with paddy nurseries. These public-spirited men bought large quantities of *sesbania* from the Agricultural Department, raised seedlings below the tanks and arranged distribution in their Panchayats area free of cost as a form of service. This helped many small cultivators to obtain their requirements of *sesbania* seedlings.

During one of his tours the District Agricultural Officer of Pattukottai found that in a village with an area of 1,000 acres of paddy the ryots had planted *sesbania* along the borders of only 700 acres. The remaining 300 acres had gone without seedlings because the farmers had not been able to afford the cost. So he sent a note to a large farmer living some four miles away urging him to donate seedlings for border planting 300 acres. The farmer readily agreed, but no cart was available. So the officer sent another personal letter to another public-spirited farmer living two miles away to send his cart for transporting the *sesbania*. He readily agreed, and the cultivation of the 300 acres got enough seedlings for border planting the same day. It happened to be the day of the weekly fair, and the secretary of the Agricultural Association of the village was able to

get together a meeting for the distribution of the seedlings. Teachers and students of village schools took an active part in the campaign. In one village over 80 boys and girls took part in a function and they completed border planting of 100 acres in just 15 minutes.

It would be interesting to examine what personnel was needed to bring about these results. In Tanjore district there are five revenue divisions. In 1954 the National Extension Scheme was introduced in two of them, and the Agricultural staff employed one Agricultural Officer for each division, assisted by one agricultural demonstrator for each *firka* and one demonstration *mistry* for every 5,000 acres. In the other revenue divisions which were not under N.E.S., however, the staff pattern was one District Agricultural Officer for roughly two revenue divisions and one demonstrator for two to three *firkas*, one fieldman for every *firka* and two *mistries* for a *firka*. In Thiruthuraiyandi taluk there were two N.E.S. Blocks where the staff admissible for development work was one on the all-India pattern, namely one Agricultural Extension Officer, one fieldman, four demonstrators and ten Gram Sevaks. In spite of this variation in staff, the outturn in border planting of *sesbania* progressed almost at the same rate throughout the district mainly owing to popular enthusiasm. What the officials started, the people took up. And then on they worked almost on their own. By 1955 over a million acres or the entire area under paddy in the district had been covered. Green manuring has now become an established part of farming in this region and the acre yield of paddy is steadily mounting from year to year.

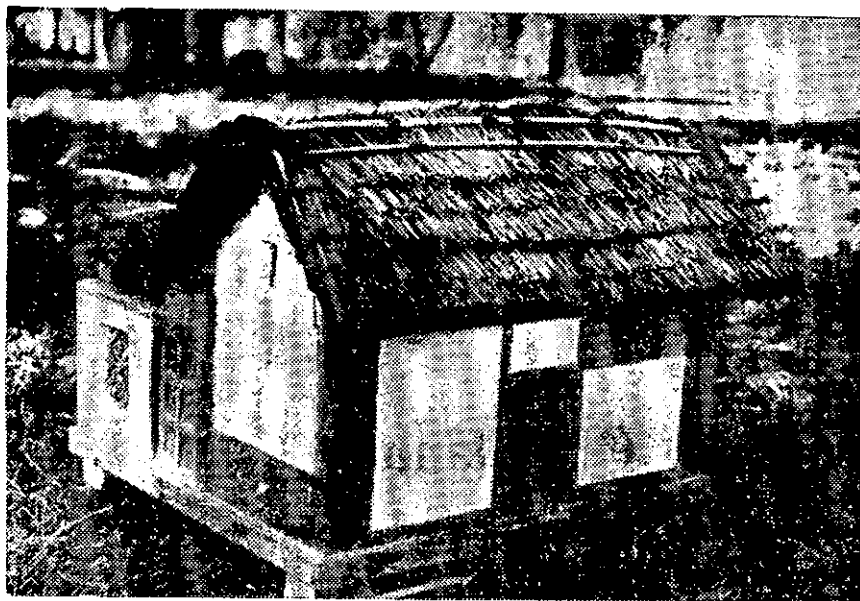
BRIGHT SPOT

HINDUSTAN Machine Tools has produced 101 machines valued at Rs. 40 lakh in November as against 100 machines for the previous month, and 60 machines for the corresponding month in the previous year. November was the third successive month with a production of 100 machines or over.

The HMT will establish an industrial estate, which will comprise 50 ancillary units. Already five units manufacture components like non-ferrous aluminium and bronze castings, lathe accessories, milling machine accessories, electrical accessories and packing cases.

In the manufacture of machine tools, Hindustan Machine Tools, with its present capacity of 1,000 machines per annum, has to manufacture over 2 million component parts of various types every year. Instead of manufacturing all these components in the main factory, the HMT will set up a large number of small-scale ancillary feeder industries in the industrial estate. These will be owned and managed by small-scale entrepreneurs mainly of the worker-proprietor type.

A Mere 25 Rupees More



The thatched roof and walls of this hut have been treated to last longer.

AND YOUR HUT WILL STAND FOR 35 YEARS

Usually a village hut is made of mud, and at times, it is mixed with lime; the same material is used for the flooring. The roof is of thatch, spread over wooden or bamboo rafters. As far as comfort goes, this has only one advantage—it is fairly cool in summer, although a trial in the rains. After the first six months the thatched roof develops festoons of cobwebs, breeds a variety of insect life, and acquires a sooty grey colour from the smoking kitchen. At best the life of such a hut is three years, and the cost of building material, at present-day rates will be about Rs 50 to 60. But, with the process evolved by the Forest Research Institute at Dehra Dun, it will be possible, by spending only Rs. 20 to 25 more, to build huts which will last for 35 years without requiring any replacement.

Wood rot is caused by insects and humidity. Bamboo, for instance, contains a good amount of water because even when dry the sap is not wholly lost. This attracts insects which bore into the wood rendering it completely useless in a couple of years. To counteract this, a 'wood preservative', for example "Ascu", a product of research in the laboratories of the Forest Research Institute, zinc-chloride, or creosote, is injected into the bamboo. The sap is pushed out and the preservative fills up the sap tubes

in the wood. This is done by filling the preserving liquid in a jerry-can or an ordinary tin can, connected to bellows. These are operated by hand or foot. After impregnation the bamboo is allowed to rest for a week. It can then be used for any type of construction with the confidence that it will stand against fungus and mois-

ture for a long time to come. Thatch and roof grass can be just soaked in cisterns containing the preservative and taken out after a couple of days. Thatch treated this way is fire-resistant and remains clean, as cobwebs and other insects are repelled by the presence of the preservative.

We have started manufacturing iron and steel, it is true. But then it will be a long time before all our buildings can be supported by steel and iron shafts, and girders. Indeed it is not necessary. In the meantime, instead of buying iron and steel at fancy prices, we must make full use of the products of scientific research.

Wooden beams, after being fully impregnated with preservative, are a good substitute for steel. The picture below, showing a sports stadium illustrates how instead of steel girders, wood has been used. The efficiency is nearly as high. Buildings like railway stations, bus-stops, cattle-sheds, Panchayat houses, schools and workshops built with this type of woodwork will prove as solid in the long run as those in which steel has been used. No replacement will be needed for at least 35 years.

Wood preservation can be undertaken in any village as a subsidiary industry requiring little investment. The equipment can be rigged up easily. All you need are a pair of bellows, a tin container or a jerry-can and two or three lengths of tubing. The chemicals are easily available, though creosote, being imported, is likely to be expensive. There are other equally effective substitutes. Further information and guidance can be had from the Wood Preservation Section, Forest Research Institute, Dehra Dun.

—AMMU KRISHNASWAMY



Laminated arched roof for a sports arena

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The pamphlet surveys what the Five Year Plans are expected to achieve in the field of employment and also analyses the problem of unemployment as it exists today. The appendix lists the employment opportunities and training facilities in selected avocations available in India.

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THE PUBLICATIONS DIVISION
OLD SECRETARIAT, DELHI-6

Jullundur Centre Teaches Skills And Crafts To Orphans And Widows

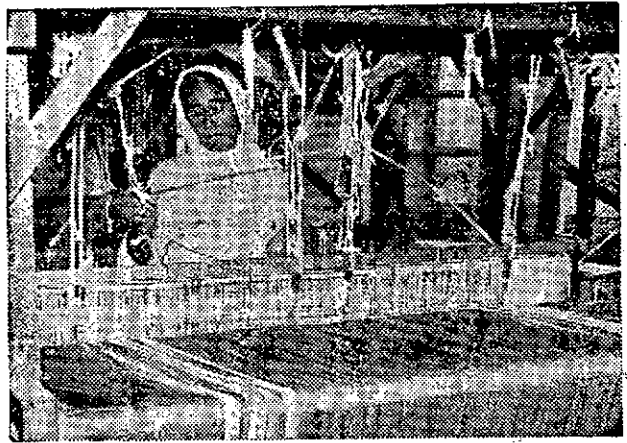
IN the dark deeds that were let loose during the partition of the country women were the worst sufferers. The homes they had built up with loving care disappeared. Fathers, husbands, children were swept away in the flood and fury. While some found shelter in the lap of death, a large number were abducted.

Along with the General Relief Camps to provide shelter to the immigrants in East Punjab, organisations were set up in both the countries to recover the abducted persons.

The Gandhi Vanita Ashram was established on February 21, 1948, near Jullundur for the reception of such women and children. In the beginning, as many as 11,000 abducted women and children were taken care of at one time at the Ashram. Free food and shelter were provided to all of them. Nearly 10,000 of these persons have since been rehabilitated. The present strength of the Ashram is 1,240 and the inmates consist mainly of destitute widows and orphan children.

The Ashram now serves as a training-and-production centre, and among the crafts taught are tailoring, weaving, hand and machine embroidery, leather and plastics work, soap, wax and phenyle making, dyeing and calico-printing and cooking. Those who become proficient in a particular trade are provided facilities of work and paid wages. At present about 175 trainees and workers are engaged in the Centre.

Arrangements have also been made in the Ashram for the education of the unattached children. A high school provides free education to about 700 students. Free stationery is also provided. A junior basic training centre is also attached to the school, where about 40 young girls and widows belonging to various other Homes and infirmaries receive training. After completion of the training they are given a diploma by the Punjab Education Department which enables them to find jobs as instructors. Widows who want to receive education are coached up to the matriculation standard in the adult education class organised in the Ashram. After completion of their studies they are sent up for training in various courses such as teachers' training course, auxiliary and staff nurses' course, health visitors' course and Gram Sevikas' and Lady Social Organisers' course. As a result of the help and guidance provided by the Ashram, a large number of trainees have already obtained good posts. One of the girls who grew up in the Ashram is about to receive her M.B.,B.S. degree. A boy from the



*An inmate of the Ashram receives training
in weaving*

Ashram has passed his M.A. and secured a gazetted post.

Trained apprentices, when they leave the Ashram, are paid a sum of Rs. 250 to set themselves up in their trade. This is done under a Government of India scheme.

R. P. THAKUR

First Person Plural

(Continued from page 8)

symbols. Another of Yojana's new services to have received a good response is our offer to answer queries about the Plan. At the same time, a familiar feature, "Cultural Heritage", has been given a new shape. Instead of only reproducing the words of our ancient and more recent poets and saints we now publish a brief assessment of the life, work and ideas of the leaders of our Renaissance in the various regions. This we are doing to synchronise with the Tagore Centenary Celebrations. Each fortnight a well-known man of letters will introduce a major figure of our cultural resurgence.

As stated in the programme outlined in our November 13 issue, the new Yojana plans to devote every alternate issue to a special region or aspect of development. Our last number examined in detail the importance of improved agricultural implements. Our next issue will deal with the problem of rural manpower mobilisation. Meanwhile we have already begun work on our Republic Day Special Number. Celebrating also Yojana's entry into its fifth year, it will be double our normal issue in size. A distinguished set of contributors will be examining the fundamental problems of our development and evaluating our ten years' experience of planning, and the number is bound to attract, hold and profit as large a number of readers as our Third Plan Special Number of last July.

Finally we should like to confide in our readers that we had had some upset in our printing arrangements. These troubles are now ended, and we can promise again the technical neatness associated with Yojana.

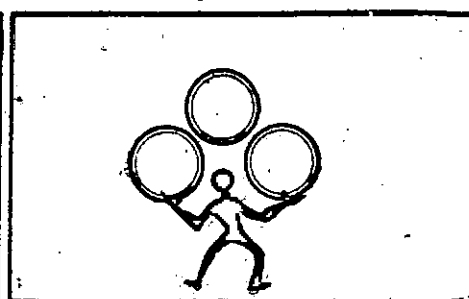
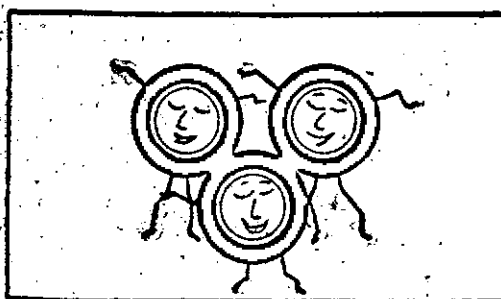
GRAPHIC GLIMPSE

MANUFACTURE OF TYRES

Rubber, the First Plan pointed out, occupies a key position in industrial development and defence. Apart from its uses in chemical plants, rubber is mainly required for speeding up our road transport. The chart shows the progress made and planned in the production within the country of tyres for bicycles, cars, lorries, etc.

AUTOMOBILE TYRES

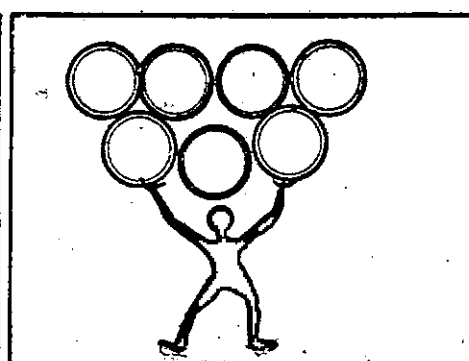
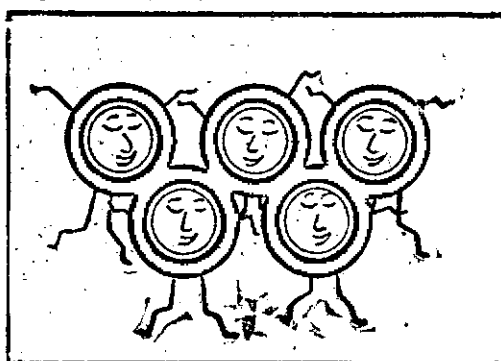
BICYCLE TYRES



1955-56

900,000

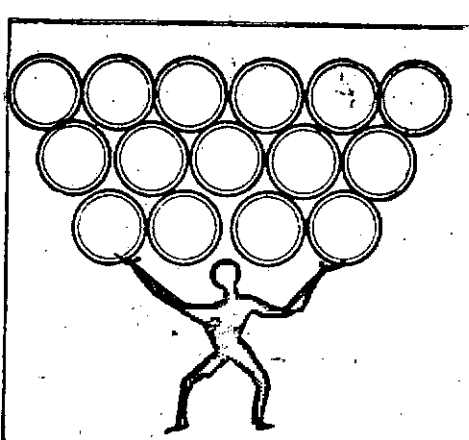
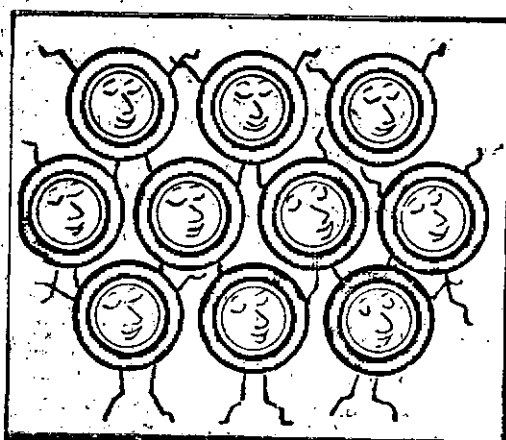
5,780,000



1960-61

1,500,000

14,000,000



1965-66

3,000,000

31,000,000

YOJANA

Journal Published on behalf of the Planning Commission

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NEW DELHI, DECEMBER 25, 1960

25 Naye Paise

SUNDAY, PAUSA 4, 1882



A FIELD SURVEYOR LOOKS THROUGH THE THEODOLITE—(SEE PAGE 15)

In This Issue: BIRTH OF A MAP
PLAN PROJECTS FOR
UTILISING RURAL MANPOWER

YOJANA



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Over To You

FRANK AND FORTHRIGHT

(What our readers feel about Mr. Khushwant Singh's article "Frank Conversation At An Empty Table" published in the Unesco Courier and reproduced in Yojana last month. See also page 14.)

IT is hard to understand why an article like "Frank Conversation at an Empty Table" in an international magazine (reproduced in Yojana, November 27) should be condemned. Are we hypocrites that we behave in a certain manner and they try to hide it? It is painful but true that the constitutional provisions and appeals of national leaders against non-discrimination are not in harmony with the mass behaviour. Calling Negroes names, as a letter to the editor of a New Delhi daily pointed out recently, should be condemned strongly. And if someone among us stands and admits the guilt with regrets—even at an international level—well, why frown at him? Are we so insensitive that we can't be ashamed of ourselves?

My Negro friend told Mr. Khushwant Singh that "they (Indian students) seldom mix with us and even avoid sitting near us". I hope I will not be mistaken if I too say something about the African students. My stay at International Students' Hostel, Delhi, for more than a month last year brought me in close contact with my African friends. The hostel inmates, the majority of them from African countries, were all undergraduate students, getting handsome scholarships from the Indian Government, even though they often failed in their examinations. In the dining hall, the African students always clustered at one table, and I had the same feeling of being ostracised as my Negro friend had in the Coffee House. The ease with which they could approach the Secretary of the Indian Council of Cultural Relations (under whose supervision the hostel was run) and complain against anything, whether justified or not, gave them an air of superiority. There they were "WE" and "US" and we Indian students, two of us, were mentioned as "those Indians". And yet I tried to have friendly relations with them but I was shunned.

Let me again declare that it is bad on the part of Indian students to boycott our guests. But I would also appeal to my African brethren to have a friendly attitude towards India and try to understand the spirit and culture of our country.

M. S. MADAN

Junior Research Fellow, Indian Council of Agricultural Research

II

EVERY sensible person, I think, would feel sorry to read Mr. Khushwant Singh's article about the unfriendliness shown by the Indian students to their African colleagues. This surely runs counter to the policy of racial equality which we are espousing. Our representatives at the U.N. are most vehement in condemning the Apartheid now prevailing in some countries of Africa. But this disclosure makes our endeavour look like a mockery. Two hundred years of white domination has shaped our attitude to different people. We still attach great value to the complexion of a person, and we feel pride when we talk to a white foreigner. It has now become imperative that we discard this attitude.

Mr. Khushwant Singh is to be congratulated on this frank disclosure. The country which is most vociferous in denouncing others' racial policy must also be prepared to put up with counter-invectives when she herself suffers from this malady. Judged from this angle, Mr. Khushwant Singh is justified in publishing his article.

(Continued on page 31)

Approach To Manpower Problem

SOLUTION POSSIBLE ONLY

BY DEVELOPING

LOCAL INSTITUTIONS

CONTRIBUTED

THE Draft Outline of the Third Plan considers at some length the measures which may be adopted to ensure that more work will become available to all those who want it and that available manpower is used to the greatest extent possible in increasing agricultural production and creating community assets.

The nature of the problem is by now fairly common knowledge. There are too many people dependent on agriculture and the area available for cultivation is too small to employ all of them productively, even with the primitive techniques of cultivation now in vogue. It has been estimated that the current level of farm output could be produced, without any major shift to labour saving devices, by three-fourths the number presently engaged in the sector. In fact it can be argued that removal of the excess labour is a precondition for raising agricultural productivity.

Thanks to the protective influence of the existing social organisation and particularly of the joint family system, much of the surplus labour is supported and sheltered. But there is a considerable section of the rural population which is so poor that the unemployed manpower seeks extra full- or part-time work but cannot find it. Such open unemployment is found mostly among the landless labourers who depend wholly on wage employment and the small land owners whose holdings are too small to provide them even a subsistence income. It is estimated that the unsatisfied demand for employment in rural

India is of the order of 15 million man years.

INADEQUATE

Although agricultural production has recorded substantial gains during the last decade, and the level of investment and output in other activities has increased the additional employment opportunities created have not been sufficient to absorb even the natural increase in labour force. A sizeable fraction of it in fact has had to fall back on agriculture thereby increasing the already severe pressure on the opportunities for gainful employment in rural areas. Such information as is available suggests that there has been no marked improvement in the availability of work for agricultural labourers; their earnings on the other hand have deteriorated, if not in absolute terms, certainly in relation to the position of other classes.

Nor does any significant improvement appear likely during the Third Plan. In the Planning Commission's estimation out of

the anticipated 15 million increase in the country's labour force only 10.5 million will find jobs in non-agricultural activities. The remainder will have to be accommodated in agriculture, failing which, there will naturally be an increase in the open unemployment in the country.

INTENSIVE FARMING

The labour requirements in agriculture will no doubt increase with the growth of output. The measures suggested in the Draft Outline to make it obligatory by law for farmers to construct field channels for irrigation, to discharge traditional obligations in respect of maintenance of important works etc. and to participate in approved conservation and afforestation programmes would, if implemented, help to stimulate large employment. The intensification of agriculture itself would call for more labour. But whether the extra labour requirements would be large enough to absorb existing underemployment as well as the new entrants to the labour force who cannot find other jobs, is open to question. In any event there is no doubt that the volume of open as well as the sheltered surplus manpower will continue to be quite large.

It has long been recognised that the pool of idle or partially idle labour represents a resource which, if properly mobilised, can help to increase the rate of capital formation without caus-

(Continued on page 7)



Nagarjunasagar—which lays emphasis on using more manpower than machinery

SURPLUS MANPOWER AS A RESOURCE FOR DEVELOPMENT

V. V. BHATT

Reserve Bank of India

INDIA, like many other overpopulated underdeveloped economies, suffers from considerable unemployment and under-employment. On a very conservative basis, it is estimated that about eight million persons are at present unemployed and about 15 million are under-employed; both together form about 15 per cent of the working force.¹ In spite of our two Plans, we have not been able to reduce the extent of unemployment or underemployment; on the contrary, both seem to have increased during the last decade.²

From an economic point of view, this failure to make full use of the available labour force has been wasteful, as through the fuller use of available manpower resources, the increase in national income and investment could have been much greater than what was actually realised. And from a socio-political view point, this failure is even more serious; under a democratic set-up, the existence of such large unemployment and under-employment creates a potentially explosive socio-political situation, as living standards are linked not so much to aggregate output but to its distribution through employment.

DECENTRALISATION

IT is sometimes suggested that since the use of labour would involve the existence of complementary scarce resources like capital equipment and since modern technology does not permit, to any significant extent, substitution of labour for capital, the availability of capital equipment would determine the extent of utilisation of surplus labour. Though modern technology may not permit the use of more labour in the central productive processes, there are ancillary processes like materials handling and packing which need not be mechanised. Further, in construction activity, there is considerable scope for the use of labour in place of capital equipment. However, the under-

developed economies like India are using more labour in such processes and in construction activity than the advanced countries and probably there is no additional scope for using more labour.³

There is probably some scope for the use of more labour if some industries are organised on decentralised basis; various small units can specialise in the production of different component parts and all these could be assembled in one large concern. Such decentralisation of productive activity in some cases is possible as the experience of Japan shows.

However, all these measures, even if feasible, may not make such impact on the employment situation as the modern industrial sector is not very large in the under-developed economies like India. Available capital equipment, thus, would be a limiting factor with regard to increase in the employment of labour in the modern industrial sector.

USE OF LOCAL RESOURCES

With regard to agriculture and the rural sector in general, however, available capital equipment does not seem to be a limiting factor, for two reasons. First, the requirement of capital equipment is not very large, and, secondly, most of the needed capital equipment can be produced by means of labour and other non-scarce resources.

For example, in agriculture, men can work on improving the land with the use of local non-scarce resources and negligible equipment like shovels, baskets, wheelbarrows, carts, hoists and so on, which can be produced by labour and involve only marginal use of scarce resources.⁴ Things which could be done with such equipment and with the use of labour and other non-scarce local resources include contour-bunding, terracing and levelling, drainage, irrigation ditches, and minor canals, digging wells, fencing, making local roads and other constructions from local material.⁵ All these could help in improving agricultural productivity.

Further, many cottage industries also require equipment, which can

be produced, by and large, by labour with the use of local non-scarce resource; with technical assistance, the supply of needed scarce materials, and credit and marketing facilities, these industries could be strengthened and expanded to meet the domestic requirements of some consumers' goods, and even to enlarge exports. Some special services like primary education can be expanded with negligible equipment; the educated could easily be employed in such fields.

ORGANISATION

Of course, to facilitate such productive use of surplus labour, it would be necessary to have some administrative agency to organise the available surplus labour for undertaking productive activities relating to agricultural and rural development, and to supply the needed technical assistance, materials and credit facilities. With regard to the products of cottage industries, some marketing arrangements also may be necessary. Employment of surplus labour, thus, would depend upon organisational efficiency.

Apart from organisational efficiency, there is another limiting factor and that consists in the supply of essential consumers' goods, particularly food. With the increase in employment, the incomes and hence the demand for essential consumers' goods would also increase and unless their supply increases correspondingly, there would be inflationary pressures.

CONSUMPTION DEMAND

These inflationary pressures could be softened, however, because of the saving-potential that lies concealed in a state of unemployment and under-employment. Nurkse⁶ drew attention to the existence of this saving-potential. With the increase in productive employment, if those who were previously unemployed or underemployed and those on whom they depended for their subsistence, do not increase their consumption, there would be no inflationary pressures; all that would happen is that the unproductive consumers would now become productive consumers and thus would bring about an increase in capital formation and national income.

In an under-developed economy, with almost subnormal standards of living, it is unlikely that this saving-potential could be realised completely. First, the under-employed or unemployed, when they are productively employed, would require larger consumption of essential consumers' goods. Secondly, those who provided for the essential consumption of the under-employed or unemployed, would also increase their consumption once it is possible to do so with the productive employment of their dependants. And lastly, the cost of transporting food to

the urban areas to feed the newly employed would reduce the effective saving potential.

The experience in the under-developed countries suggests that the increase in the incomes as a result of productive employment of the under-employed or unemployed would be spent at least to some extent on additional consumption; the newly employed and those who supported them earlier would increase their consumption. However, it is likely that in spite of some increase in consumption, a part of the increased incomes would be saved. Thus, there would certainly be some saving potential.⁷

MOBILISING SAVINGS

However, this saving potential would be less than what would be necessary to avoid inflationary pressures. Further, the possibility of this saving potential would be greater if the unemployed or under-employed are productively employed in the rural areas where they reside, rather than in the urban areas, as, in the latter case, the increase in consumption would be larger because of the need for transporting food, higher wage rates and the necessity to have two establishments. In fact, in practice, in a country like India, it may prove difficult to transfer unemployed under-employed from one part to the other because of the unwillingness of people to move to regions where a different language is spoken and where the cultural traits also are different. Even in the rural areas, it may not be possible to realise the maximum possible saving potential. Nurkse⁸ himself had realised this. As he mentioned in his Cairo lectures: "The peasants are so close to the subsistence level..... It may be possible to tax them through increasing their rents and taxing the landowners..... Some form of collective saving enforced by the State may prove to be indispensable for the mobilisation of the saving potential implicit in disguised unemployment."

Taxes on agriculture would not be politically feasible unless agricultural output is increasing at a fairly high rate. Further, the farmers cannot be induced to work harder unless they are promised some increase in their consumption, which at present is very low.

Thus inflationary pressures would arise with the increase in productive employment. To avoid these pressures, the output of particularly food should be increased at a fairly high rate. Further, there should be taxes on agriculture as well as on other sectors with a view to preventing consumption from increasing at a rate higher than that of the output of consumers' goods, particularly food.

A policy of productive employment of the unemployed and under-employed in India would have to

break through two barriers—organisational barrier and the inflation barrier. With regard to the organisational barrier, we have already evolved the administrative framework for rural development in Community Development agencies. This framework is now to be strengthened. For the Third Plan, the unit of Planning and development would be the block or the district. The Community Development agency would help the block or the district Panchayat Samiti—the elected democratic administrative unit for the block or the district—in formulating and implementing the plans for agricultural and rural development through the use of surplus manpower and other local materials. The Community Development agency would also supply the needed technical and financial assistance, scarce materials, fertilisers and improved seeds and implements. Finally, co-operative credit institutions would provide the required credit facilities. The block or the district plan would be based on the plans of the constituent villages; the village Panchayat and the village co-operative would formulate and implement these plans with the active assistance of the Community Development agency.

Thus with the effective functioning of this administrative set up, it should be possible to organise the productive use of the unemployed and under-employed labour.⁹ To the extent to which this can be successfully done, the urban unemployment problem too would be relieved as the migration from the rural areas to the urban areas would be smaller. For utilising the urban unemployed in productive activities, the small scale industrial sector is sought to be strengthened and extended. There is already an institutional framework to provide technical assistance, credit facilities and required scarce materials to the urban small-scale industries; this institutional framework would be strengthened and made more effective.¹⁰

The inflation barrier is sought to be removed by providing for a large increase in food and agricultural output during the Third Plan. National income during the Third Plan is expected to increase by 30 per cent; however, food output is expected to increase by 33-40 per cent.¹¹ This much increase in food output would hardly be necessary on the basis of over 5 per cent increase per annum in national income and about 2 per cent per annum increase in population. However, the expected increase in income does not include income increases as a result of productive employment of the under-employed or unemployed labour; the food target is fixed, presumably, to provide for the increase in consumption of food as a result of the increase in the productive employment of the under-employed and unemployed. Employment could be increased, on the basis of the

food target, till the increased, on the basis of the food target, till the resulting increase in the aggregate national income does not exceed the rate of 7 to 8 per cent per year. The food target, thus, would make possible a substantial expansion in employment. Further, to avoid inflationary pressures, taxes on agriculture as well as the other sectors are to be increased.¹²

Thus with the organisational framework visualised and the proposed increases in food output and rural and other taxes, it should not prove difficult to secure a rapid increase in capital formation and output through a substantial increase in the productive utilisation of surplus manpower.

The real problem is that of implementing the proposals made in the Draft Outline. And this would depend entirely on the vigour and imagination with which the State Governments strengthen the organisational framework, necessary for the utilisation of surplus manpower, and adopt appropriate policies for increasing food output and restricting consumption through land taxes. Given the will and determination to solve it, the problem is soluble.

Paper presented to the Naini Tal Seminar of Planning Forums Summer 1960.

1. *Third Five Year Plan—A Draft Outline* pp. 5,84-85.
2. *ibid.*
3. c.f. Bhatt, V.V., *Capital Intensity of Industries*, Bulletin of the Oxford University, May 1956.
4. c.f. Nurkse, Ragnar, *Some Aspects of Capital Accumulation in Underdeveloped Countries*, Cairo, 1952, pp. 26-30.
5. c.f. Ford Foundation: *Agricultural Production Team, Report on India's Food Crisis and steps to meet it*, Delhi, 1959.
6. Nurkse, Ragnar, *Some Aspects of Capital Accumulation in Underdeveloped Countries*, Cairo 1952.
7. c.f. Lewis, W. Arthur, *Unlimited Labour: Further Notes*, The Manchester School of Economics and Social Studies, January 1958 pp. 6-7. For a complete discussion of the limitations of the concept of saving-potential see Chandavarkar, A.G. (*Saving Potential of disguised unemployment*, *Economic Journal*, June 1957).
8. Nurkse, op. cit. pp. 26-27.
9. *Third Five Year Plan—A Draft Outline*, pp. 66-71, 83-88, 153-157.
10. *ibid.*, pp. 83-88.
11. *ibid.*, pp. 31-33.
12. *ibid.*, pp. 49-15.

BUILDING VILLAGE ASSETS THROUGH MORE WORK

Pilot Projects Being Launched

DURING the Third Plan, agricultural production has to increase twice as fast as it did during the decade 1949-50 to 1958-59.

This part of the Plan calls for an intensive and concentrated effort. In the main, it is through the participation of millions of peasant families in village production plans and in large-scale programmes of irrigation, soil conservation, dry farming and the development of local manurial resources that the major agricultural objectives are to be realised. The question is how, in the conditions prevailing in India, the manpower resources available in rural areas can be effectively harnessed for development.

The two main aims to be realised are that much more work should become available to all who are willing to work, and that the available manpower should be used to the greatest extent possible for increasing agricultural production and creating community assets. Capital formation in this manner is essential in under-developed economies.

FIELD EXPERIENCE

In order to acquire field experience of the methods in which the rural manpower problem can be solved in differing conditions and regions, a number of Pilot projects are being undertaken. Detailed proposals have been worked out for more than 30 such projects, located in the various States. A couple of these will be outlined later in order to give an idea of how a pilot project will work. The objective in every case will be to increase the employment opportunities in an area and to see that the local people are benefited. The schemes will all be taken up for execution during the slack season. The normal agricultural operations in no place will be hindered. Actually, the work done during the slack season will be such as will probably show results in the very next agricultural season.

The main considerations in the choice of the sites are high incidence of unemployment, and definite scope for undertaking short-term programmes which are likely to add substantially and swiftly to agricultural production. As a rule, wages will be paid to every worker

employed in the projects. The work will, where possible, be entrusted to village co-operatives or voluntary organisations like the Bharat Sevak Samaj. Each pilot project will cost approximately Rs. 2 lakh.

The work to be undertaken in the pilot projects will comprise five categories: (i) programmes included in State and local Plans involving the use of skilled or semi-skilled labour; (ii) works undertaken by the community or by beneficiaries in accordance with obligations laid down by law; (iii) local development works towards which local people contribute labour with some assistance by Government; (iv) schemes in which village communities build up remunerative assets; and (v) supplementary programmes to be organised in areas having high incidence of unemployment.

Some of the pilot projects will be taking up simple, familiar schemes, while in others new approaches are being attempted.

An example of the simple approach is the Bhauwapar-Bela Bund to be located in the Gorakhpur district of Uttar Pradesh. The bund will be 6.2 miles in length and will protect an area of 10,000 acres against floods caused by the wilful Rapti river.

Although the area came under the Community Development programme in the Second Five Year Plan, it has been found that no development work of lasting value can be undertaken so long as it is not guarded from floods. The people of the place have on their own built bunds from time to time, but their efforts have failed, owing to lack of technical knowledge. A bund built last year on 'shramdan' basis was too low and was washed away during the floods. The new bund will cost Rs. 4.67,000, of which more than Rs. 2,94,000 will be required for the earthwork itself. The people's contribution will be Rs. 2,00,000, mainly in the form of land and labour. The villagers will be giving away, without expecting compensation, 41.4 acres of land required for the bund and also lending the use of 117 more acres from where soil can be dug. Nearly 168 lakh cubic feet of earthwork will be required, involving 1,17,000 man days, or the labour of 2,000 people over three months. Payment for this will be made to the

Panchayats at half the scheduled rates.

West Bengal will locate a project in the Burdwan area which will consist primarily of building village irrigation channels, improving tanks and constructing new roads.

This project will benefit the local population of 150,000, which includes 20,000 displaced persons from East Pakistan. The programme, now devised includes construction of 19 miles of village channels, serving 2,000 acres; improvement of six tanks, providing irrigation of 30 acres; and building of 8 miles of roads.

'SOCIAL WORKS' APPROACH

Madras State is approaching the problem of rural manpower not in the narrow sense of organising works programmes but as making an effort to tap the villagers' sense of collective responsibility towards the creation of community assets. The wages to be paid to those who work in the Madras project will not be at the 'local market rates' but will consist of a cash wage of 6 to 10 annas per day plus a square meal.

The manual work will be done

PLAN QUIZ

1. What is the assistance given by the State Governments to small industries since 1956?—
a) Rs. 15 crore; b) Rs. 3 crore;
c) Rs. 8 crore.
2. How many households have so far been resettled in the Dandakaranya?
3. How many family planning centres are there in the country?
4. What are the industries for which the Government, on the recommendations of the Tariff Commission, has extended protection up to the end of 1963?
5. What is depicted in the block below?

(Answers on page 27)





Quotation Box

I couldn't help noticing that the population in the village seemed to consist mostly of old men, women and young children. "Where are all the young men?" I asked, expecting to be told that they were busy in the fields. "They have gone away," said my host. "There is more money to be made in the cities, and as soon as a boy is old enough to work he leaves the village. It is no use trying to stop him. What attractions does the village have to offer him? Once he has got used to living and working in the city, he does not want to come back." It was difficult to make the young men of the village understand that it was more important to raise the level of food production than to earn (and spend) twenty or thirty rupees a month in Lucknow or Benaras by pulling cycle rickshaws or carrying loads at railway stations.

Mr. Ruskin Bond in an article in *The Hindustan Times*

from 7 a.m. to 1 p.m. and will be followed by the midday meal. In the evening there will be educational and cultural programmes. On Sundays there will be no work, but there will be the meal all right. The purpose is to make the pilot project an integrated 'social works' programme where the workers feel that they are giving more than 'wage labour'.

One of the programmes will be minor irrigation—deepening of tanks, strengthening of bunds and desilting of channels and digging of ponds. Another will be improvement of village plantations. Village common lands, under a new Madras law, have become the common property of the village. The villagers will be persuaded to plant trees such as tamarind and palmyra which will yield fuel and timber. Green manure plants will also be cultivated. Laying of roads, soil conservation and building works are some of the other schemes to be included in the pilot projects. Ten villages from a development block in each of ten districts are being selected for trying out the programmes.

Reading list on Rural Manpower

In addition to the articles published on this subject in this issue, the following select bibliography compiled by the Planning Commission Library might be found useful:

1. India. Ministry of Labour. Agricultural Labour Enquiry: Report, Delhi, Manager of Publications, 1953. 2 Vols.
2. India. Ministry of Labour. Rural Manpower & Occupational Structure. Delhi, 1954. 530 p.
3. India—Planning Commission. Report of the Agricultural Personnel Committee of the Planning Commission, 1958. 216 p.
4. Labour Mobility: Unemployment & Economic Change: An Indian Case by Ralph C. James. *Journal of Political Economy*. December, 1959. 67 (6).
5. Mamoria, C. B. Agricultural Problems of India. Allahabad, Kitab Mahal, 1960.
6. Mobilising Human Capital in India by S. B. Sarkar. A.I.C.C. Economic Review June 15, 1960.
7. Nanavati, M.B. & Anjarlia, J.J. The Indian Rural Problem. Bombay, I.S.A.E., 1960. 612 p.
8. Rao, C.V.H. Rural Reconstruction Problem. Madras, Yuvak Book Depot, 1948. p. 68.
9. Rural Manpower—A Note. New Administrator. April, 1960.
10. Saxena R.C. Labour problems & Social Welfare. Meerut, Jai Prakash Nath Publishers 1959. 312 p.
11. Uttar Pradesh Government of. Manpower Mobilising Our Biggest Resource. Lucknow. Govt. Press, 1952. 43 p.

Local Institutions

(Continued from page 3)

ing undue strain on scarce foreign exchange resources or on the domestic price level. In fact one of the major objectives of the Community Development Programme was to mobilise, on a voluntary basis, rural labour for the construction of minor irrigation works, land improvement, roads, schools, hospitals and other community assets. But the actual achievements have been conspicuously small. We have not yet evolved an effective way to solve the formidable difficulties inherent in such an endeavour.

LOCAL INITIATIVE

The Third Plan provides for technical and some financial assistance to local development works, such as the construction of approach roads, village schools and drinking water

wells, and to schemes for building up remunerative community assets such as tanks, fuel plantations and common pastures. In addition a special works programme for areas which have a high incidence of unemployment is contemplated.

However, neither the State nor the Central Governments have the resources necessary to finance or organise a works programme on the requisite scale. It is for this reason that students of the Community Development programme have repeatedly stressed the importance of developing village institutions imbued with the idea of progress and capable of organising local resources to that end. The latent energies of our vast population can be harnessed to the need of development only through organised effort through local institutions, and not through centralised planning machinery.

YOJANA

DECEMBER 25, 1960

RURAL HANDS IN NATION'S SERVICE

"MANPOWER" is a word which came into prominence during the recent wars. It may be described as "the power furnished by human physical strength; also the collective strength, ability to work or availability for work of the people in any given area or nation."

In the industrialised countries, manpower means not only the numbers of people available for work of different types, but the skills they have acquired and placed at the disposal of the nation. In our country, however, manpower mainly connotes the large mass of unskilled rural people.

Mahatma Gandhi called rural unemployment 'the problem of problems' in India. The task of planning is to find work for all our men. It would be idle to condemn the "idlers" among us. Most of them are idle not by choice but by compulsion. They are idle because they have been given no work. Agriculture does not absorb all the people who live in our villages. Farming in our land being dictated by the monsoon, intense work, like intense rain, is concentrated in just a few months of the year, followed by long stretches when people are forced to be workless. Thus our rural population consists as much of the unemployed and the under-employed as of the employed.

Side by side, of course, the number of urban unemployed is also growing, leading to the paradox of unemployment coexisting with a severe shortage of trained men and women—of doctors, skilled workers, artisans, teachers, scientists, engineers, nurses. To train them, we need money. To create any job, investment is required. But the size of the investment is not the same for all types of jobs. It is higher in industry than in agriculture. Nevertheless, to solve the unemployment problem, we have to have resources. But suppose, as in India, resources themselves are not easy to have. What is the way out?

The way out is to treat our vast untapped pool of manpower itself as a resource—and not as a problem. This is the approach that has been adopted by our Plans.

Primarily it is a question of organisation. The challenge before our enlightened people—officials or village leaders—is to show to those around them how the power that is hidden in their arms and hearts can be converted into visible assets,

to the enrichment of their homes, their villages and the nation. The way lies through soil conservation programmes, through building of roads, through the deepening of wells and the desilting of tanks, through building bunds to keep off floods, to cite only a few of a hundred methods that can be adopted—methods which will not involve the buying of machinery but which employ more human hands which will lift and move household tools like hoes and pickaxes and baskets.

Organising ability comes in not only in persuading people to do these things, but in doing them at a more socially useful level. When a road is built or a bund is repaired, a contractor is usually hired. Supposing no contractor was engaged but the village Panchayat or a labour co-operative took up the work. The men at work would be able to earn much more and they will also have the joy of having taken part in work of national importance.

This challenge of organisation has been accepted by the Third Plan. Utilisation of rural manpower will be one of the major programmes of the Plan. If this has to become a countrywide campaign, all the problems that arise and all the various avenues open for putting our rural citizens on constructive work must be foreseen and explored. For this purpose more than 30 pilot projects are being taken up. An article elsewhere describes how these projects will be organised, so that we can obtain the key to converting the potential wealth of our villages into actual capital.

UGLY POSTERS

THERE are some who feel that Acharya Vinoba Bhave and his followers are making too much of cinema posters. Reform may have lost its glamour, but the crusaders for clean posters are definitely not all prudes and cranks.

To say that a country which has produced the sculpture of Khajuraho and of some of the temple cars ought not to fuss about a little brassiness on posters isn't really an argument. A great deal has been written about obscenity in art, particularly during the controversies on 'Lolita' and 'Lady Chatterley's Lover'. But obscenity in what is not art has found no champions at all.

The bad cinema posters are not provocative; they are disgusting. They deserve to be struck down not because they are immoral but because they are so monstrously crude, stupid, vulgar and commercial. The uglification of our streets and squares and parks, which is half due to these loud posters and garish lights, must be checked.

Articles in *Yojana* dealing with planning and development may be freely reproduced by other journals and periodicals with a simple line in acknowledgement.

Health And Water Supply Schemes Being Studied

IN consultation with the Ministries concerned, the Planning Commission will shortly make its proposals regarding procedure and patterns of assistance to States.

During the Third Plan, the highest attention is to be given to health schemes concerned with the control of communicable diseases, water supply and sanitation, training programmes, primary health centre programmes and family planning.

WATER SUPPLY—URBAN

IT was estimated in 1957 that not more than about 39 per cent of the urban population had adequately protected water supply. The effects of the First and Second Plan efforts to increase this percentage are likely to have been diluted by the increase in population in the meantime.

If drinkable water cannot be ensured, the promotion of other health services becomes largely ineffective.

RURAL WATER SUPPLY

CONDITIONS of rural water supply are worse than those in the towns. A large number of villages have no source of water supply and many more subsist on water open to pollution. One of the main reasons for this unsatisfactory state of affairs is the great variety in the sources of water supply from place to place. If the 550,000 villages in the country have to have some source of drinkable water during the course of the next ten years, it is estimated that an outlay of about Rs. 300 crore would be required for the rural water supply schemes in the Third Plan.

FAMILY PLANNING

THE number of family planning clinics opened so far is

695 in the rural and 313 in the urban areas. To secure a rapid extension of such centres, training programmes are being developed for workers and inspectors.

During the Third Plan, family planning activities are being intensified in the direction of co-ordinating and integrating gradually the family planning services with medical and health services, in strengthening



the staff of medical institutions for surgical operations and in providing facilities to patients to go to such institutions.

As The Plan Moves

THE Indian Airlines Corporation for the first time has shown a net profit—Rs. 7,81,000 for 1959-60. Two previous years had recorded a loss of Rs. 91 to Rs. 100 lakh. The Air India International's profits for last year were Rs. 28,28,000, an improvement on the previous years Rs. 19,20,000.

PRELIMINARY work has started on one of U.P.'s biggest thermal power stations. It will have 250,000 kW capacity and will be erected in Mirzapur district near the Singrauli coal fields. The power station will be completed in the Third Plan period. Power from this station will be fed into the main U.P. grid by high voltage transmission lines, so that it will be available anywhere in the State.

AS against a production target of 9 lakh electric fans for the Second Plan, production during 1960-61 would be about 1 million. The production of electric fans during 1950-51 amounted to 1.94 lakh. For the First Plan, a production target of 3.2 lakhs to 3.5 lakh had been envisaged, against which the

annual production during 1955-56 had been of the order of 2.87 lakh.

THE iron ore mines at Rajhara have now been fully mechanised to supply 7,000 tons of iron ore daily to the Bhilai Steel Plant. Situated 55 miles south of the steel plant, the Rajhara deposits have been estimated at 114 million tons. These are spread over a length of about four miles down to a depth of 1,920 feet, and provide one of the best varieties of ores with iron content ranging from 65 to 69 per cent.

THE new building of National Museum, New Delhi, (see *Yojana*, November 13, 1960) was inaugurated on December 18. The portions now ready form less than half of what the Museum will be when completed in 1965. A visitor who would want to see all the seventeen galleries would be walking nearly a mile.

INDIAN scientists have developed a process by which jute bags used for storing food-grains could be made insect-proof by treating them with an insecticide.

With Growing Industrial Use

INDIA NEEDS MORE DIAMONDS

Panna Mines To Be Developed

P. V. RAO

Geological Survey of India

DIAMOND, the most highly coveted and prized of all the precious stones, has been known for several centuries. It is the hardest and most brilliant of all the minerals, and is the only gem stone composed of a single element, carbon. Paradoxically, graphite, another crystalline material, also composed of the same element carbon, is soft, dull and opaque.

Till 1728, India was the sole producer of the world's diamonds. A number of the world's most famous diamonds are of Indian origin. These include the Great Mogul (originally weighing 787½ carats and later reduced by cutting at different times to 106 1/16 carats) which, after changing many hands ultimately formed part of the British Crown jewels under the name of Koh-i-noor; the Pitt or Regent (originally 410 carats, later reduced to 136.7/8) now amongst the French crown jewels; the Darya-i-noor (186 carats); the Nizam (277 carats) and the Hope Diamond (67 carats).

Amongst the numerous accounts of various foreign tourists and traders regarding the diamond industry in India from the fifteenth century onwards, special mention may be made of those by Jean Baptist Tavernier, a French jeweller, and Henry Howard, Earl Marshal of England. Tavernier visited India in the second half of the seventeenth century when the industry was at its height of fame. With the discovery of the Brazilian diamond fields in 1725, and the South African fields in the latter half of the same century, the diamond industry in India had almost come to a close. Production on a small scale had, however, been continuing in some parts of Central India.

Diamond crystallises in different forms of the cubic system, the common one being the octahedron. In the mineralogist's scale of hardness, diamond is assigned the highest number 10, denoting



Dr. C. V. Raman, who has done extensive research on diamonds, seen with some diamond-bearing minerals.

that it is the hardest, but it is about 140 times as hard as corundum, which occupies the next place, 9

The crystals of diamond may be clear and transparent, translucent, or dull and opaque. Diamonds with tints of red, green, blue, yellow or brown are also known. The refractive index (R.I.) and dispersion (measured by the difference between the R.I. for violet and red rays of light) of diamond are very high. The fire, brilliancy and play of prismatic colours characteristic of the gem are due to the strong dispersion and these are brought into full force by suitable cutting and polishing of the gem.

The specific gravity of the clear varieties of diamond is 3.53 while that of the black varieties ranges from 3.4 to 3.6. The size of the diamond crystal varies very much ranging from small grains weighing a fraction of a carat (carat is equal to 0.2 gram) to many hundred carats. The large-sized ones are, however, comparatively rare and fetch fabulous prices. The largest find so far known in the world is Cullinan, weighing 3,025 carats (over 1-1/3 lb.) found in the diamond mines of Transvaal.

For use as a gem stone, diamond is first reduced in size by cleaving or sawing. In doing

so the planes of weakness, flaws and inclusions if any, are eliminated. It is then cut and polished. Diamond-cutting is mainly done in three different ways, viz., *en cabochon*, leaving the gem with a circular or oval outline; *faceted*, which involves cutting of plane surfaces exhibiting intricate geometrical designs; and *brilliant*, the best and most commonly employed method as it brings out the fire and brilliancy of the gem to the maximum extent.

Diamond cutting and polishing in India was a highly accomplished and flourishing art in the past. The Indian workers far excelled their European contemporaries specially in cleaving and cutting the gems. Gem cutting and polishing is still flourishing in some places where mining of the gem is in vogue and in certain other places like Bombay, Madras, Delhi and Jaipur.

OCCURRENCE IN INDIA

It is now a well established and accepted fact that in most cases diamonds were originally associated with basic igneous rocks of volcanic origin such as 'kimberlite' and 'eclogite' in South Africa and 'diabase' in New South Wales. The diamond bearing kimberlite in Africa occurs in the form of vertical pipes up to about 2,300 feet in diameter, suggestive of their having been originally volcanic necks.

In India diamonds are commonly found in association with river gravels of geologically recent times, and in conglomerates at the base of a series of unfossiliferous pre-Cambrian rocks. These gravels and conglomerates are themselves of secondary origin, having been formed under water from material derived from pre-existing rocks. The diamonds must have also been dislodged from some pre-existing rocks and due to their high specific gravity, deposited along with the heavier pebbles which formed the conglomerates and gravels.

The diamond workings in India are situated mainly in two widely separated tracts—South India and Central India.

South India: Almost all the old workings in South India are situated in parts of Anantapur, Cuddapah, Kurnool, Krishna, Guntur and Mahabubnagar districts in Andhra Pradesh. These tracts were previously included in the historic kingdom of Golconda which was its capital city and chief mart. It is from this place that the term 'Golconda diamonds' came into vogue. The workings, except those in Kurnool districts are mostly in gravels. At the latter place the diamond-bearing zone is a thin layer of conglomerate below 20-30-foot layer of quartzite easily penetrated by shallow shafts. The material from the layer was worked out and after careful cobbing, pounding and washing, searched for diamonds on specially prepared clear ground. The Great Mogul was found about the year 1756 at Kollur on the Krishna where 60,000 persons are reported to have been employed. The Regent was found in 1701 at Paritala, also on the Krishna near Vijayawada.

In one area near Wajrakarur, eight miles south of Guntakal, there are many old workings for diamonds but no trace of any conglomerate

or gravel. The diamonds were considered to have been derived from a basic rock occurring in the vicinity in the form of a volcanic neck but prospecting operations of this material yielded no diamonds. The diamonds in this area are considered, contrary to the commonly accepted view, to have been derived from 'pegmatites' occurring in the vicinity.

Central India: Diamond mining was flourishing in many of the central Indian Princely States such as Panna, Charkhari, Bijwar, etc., later forming part of Vindhya Pradesh and still later merged into Madhya Pradesh. The industry has been persisting in parts of this area specially around Panna, for a long time, though on a small scale. In this region, the principal diamond bearing layer, is a thin band of indurated sandy conglomerate. Later investigations have revealed that there are two or even three such layers in this region. Diamonds are also found in alluvial river gravels. In the year 1930, the existence of a volcanic neck or pipe near Majhgawan, twelve miles south-west of Panna, was noted. It is filled with a diamond bearing agglomerate-tuff (of volcanic origin) which was not distinguished from the conglomerates till that time by the miners. The pipe area is about 1,600 feet long and 960 feet wide on the surface. In appearance the tuff is similar to the South African 'kimberlite' but in mineralogical and chemical composition it is different from the latter.

INDUSTRIAL USES

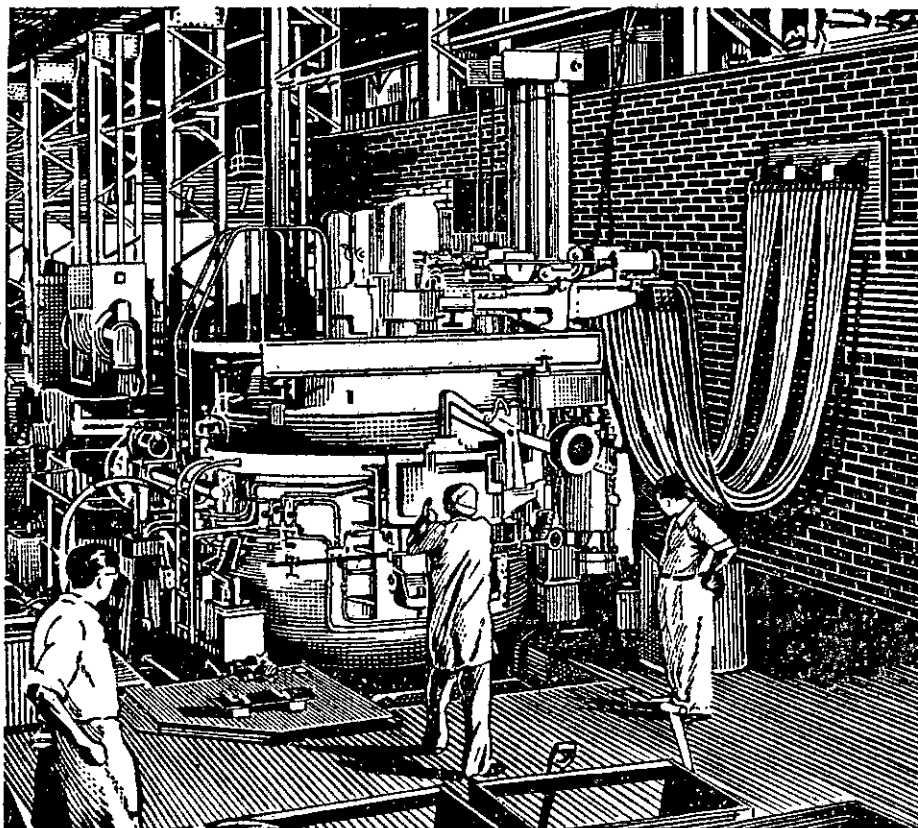
It is not generally realised that about 80 per cent of the world's output of diamonds is now employed for industrial purposes. In all cases where material of great hardness is required, the diamond has no equal. It is largely used in precision cutting tools, 'truing' of grinding wheels, on the periphery of metal discs used for sawing through rocks, metals, porcelain and glass. Diamonds are also employed extensively in the 'bits' used for rotary diamond drilling, in preparing dies for precision wire drawing from metals like copper, tungsten, etc.

The industrial diamonds include the gem varieties which cannot be used as such due to certain inclusions, flaws, etc. as also 'ballas' 'bort' and 'carbonado'. Bort is a gray or grayish black variety while carbonado is black, massive and opaque. The absence of cleavage in the last named, makes it eminently suited for diamond drilling etc. Ballas is an intermediate variety between carbonado and ordinary diamond.

PRODUCTION

About 98 per cent of the world's supplies of diamonds at present come from a number of countries in Africa. Just before, during and after the World War II, the world production ranged from nine to eleven million carats per year. With a production of 13.6 million carats in 1949, there has been a gradual increase, reaching 24.6 million carats in 1957. About 75 per cent of the production is of industrial diamonds chiefly from Belgian Congo, the rest being of gem quality. In terms of value, however, the latter fetch more than half the total price.

(Continued on page 22)



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HC-74

The Fair And The Unfair

PATRIOTISM is a large screen. Any slogan can be written on it, and behind it can be shoved all our dirt. Fortunately 'patriotism' is giving place to the more rational habit of objective self-examination. Now and then, of course, we slip back into righteous anger, especially when a foreign author or journalist writes a book attacking or ridiculing our ways. Our own authors, too, do not always escape the wrath of ill-informed people. Especially when they fancy that their religious feelings are hurt, books are burnt, presses stoned and the authors threatened. In fact, one of our literary men thinks that readers' intolerance is the most important factor inhibiting honest expression in our country.

But there are frequent instances to show that our head and heart are in the right place. Last month we reproduced on this page an article that Mr. Khushwant Singh, former editor of *Yojana*, had contributed to *Unesco Courier*. The article called attention to the feeling of loneliness experienced by many African students in India. It also traced the prevalence of colour prejudice in our country to the 'varna' system prescribed by Manu the lawgiver. In printing the article we invited our readers to speak out and say whether they agreed with some who feel that such views ought not to be put down in print in the interests of patriotism.

The response has been heartening. If those who have written represent a fair sample of our students and others, then we can regard it as a clear vote against 'doublethink' and hypocrisy. If it is true, as it pitifully is, that we are not totally free from the colour complex, the best way to overcome it is by turning the light on it, and not by hiding it.

THE episode narrated by Mr. Khushwant Singh brings to mind a meeting Mr. Krishna Menon addressed a few years ago in the United States. The hall was packed with people of all shades of colours. After Mr. Menon's speech, a young man from the audience, obviously an American of African origin, asked him why India, which year after year asked the U.N. to castigate South Africa, 'did not take up the cause of U.S. Negroes.' Mr. Menon patiently and pertinently pointed out that the colour problem in the U.S. had ceased to be a world problem because neither the higher organs of Government nor advanced opinion within the U.S. countenanced race and colour discrimination.

That is even more true of India.

BUT the point to examine is: is there a colour bar in India?

I recall a 'Kavi sammelan' in Delhi when a young poet recited a poem, after the usual prefatory remarks in which he explained he had written it on his first visit to Calcutta. The first two lines were:

Baboo Kalkatiya,
Rang Kaala....

Then he went on to describe how the typical dark man of Calcutta had a typical black little moustache. And how the audience laughed!

A particular text-book prescribed for eight-year-olds in a few Bombay schools some years ago also comes to my mind. It contained lessons on people of the different regions of India. The lesson dealing with Madras began thus:

Madrasis are black.

They eat chillies.

They wear few clothes.

A larger kettleful of mistakes, misconceptions and prejudices would be hard to imagine.

I also recall a conversation. Place: Delhi. Company: A bunch of not-so-young (and not so old either) women from the Punjab and U. P., with three persons from the south. One of the Delhiites had just returned from a southern tour and the others asked her for her impressions. Her very first remark was about how dark the people there were. Overlooked was the fact that in that group the fairest had happened to be all from the south.

And, of course, the matrimonial advertisements. The shrill cry of salesmen offering 'fair-complexioned' commodities on the marriage market is one of the undisputed facts of our life. It is as real as the second question that is asked when a baby is born. First: "Boy or girl?"; immediately afterwards: "Fair or dark?" If it is a girl and if she is dark, the father feels as though he has been found guilty and fined a couple of thousand rupees.

GRANTED all this. But do the darker-complexioned among us find life a burden? Are privileges denied to them and power kept beyond them? Are they, or have ever been, condemned because of their colour?

Whether the caste system had its origin only in colour and whether the earlier tribes—who certainly did not show much dislike of intermingling—were recognised only by the hue of the skin has not yet been settled by scholars. If castes were called 'varnas' and 'varna' meant colour, and if Brahmins formed the top 'varna', how is it that the Brahmins of today come in all shapes and colours? Pitch-dark Brahmins are to

(Continued on Page 29)

IN DEFENCE OF BIRDS

IF there is a word to be said for birds, Mr. Salim Ali will say it.

He has just let go a barrelful against 'ignorant politicians' who say that birds should be killed because they eat up crops and make our food position more difficult.

Plain arithmetic is often the enemy of real mathematics. Birds eat grains. Yes. But to kill off the birds will not result in simple saving of all that quantity of food; because if the birds were killed off, there would be more insects of all kinds on the fields and they would in turn eat up the grains.

A few years ago China made sparrow-killing a national campaign. What effect it had on what biologists call the 'natural balance' is not yet known in detail. That is, we do not know for certain whether and how far the insects have multiplied because their natural destroyers, the sparrows, have been destroyed. And it is not so easy to kill insects as it is to kill sparrows. And not all insects are edible!

Anyway, when sparrow-killing was in full swing in China, some enthusiasts advocated that we in our country should undertake a similar 'Yajna'. For one thing, with our traditional sentiments in such matters, we wouldn't have done it. For another, we don't have the organisation to organise any national drive of this nature. But the real question is: must we do it because China did it? And is it beneficial at all?

Mr. Salim Ali, like a true scientist, does not make any dogmatic assertion. All he says is that we need more surveys and studies to be able to say how the natural balance would be affected by any official measures we take. For significant conclusions to be drawn, such studies should cover not just one or two years but a much longer period.



The Chambal River

THE MIDWIFE OF IDEAS

GOOD printing is the exception rather than the rule in our land. Good art work and illustration are even rarer. When one comes across well-printed books, one must speak about them. "Ambar" tells the story of the Ambar Charkha, and has been issued in eight languages. Whichever side you are on in the Ambar Charkha debate, for or against, you will like the book for its imaginative draughtsmanship, colour schemes and lay-out. It has been published by Mr. G. S. Pohekar for the All India Khadi and Village Industries Commission.

"Kota Barrage," a pamphlet issued by the Directorate of Public Relations of Rajasthan for the inauguration of the Chambal Project, is another pleasing publication, pleasing mainly because of three or four outstanding photographs, one of which has been reproduced here. (Please make allowances for newsprint.)

What is the secret of good printing?

Parliament was recently told of the steps being taken to improve the printing standards in government presses in our country. One important thing to bear in mind when mulling this question over is that, more than in other industries, printing depends primarily on the man and only secondly on machinery. You might have the best and most modern machines, as some of our presses have, and you can still turn out a shabby product.

Good printing is the product of love and pride in craftsmanship. Professor Hardy said of Ramanujan that he was on terms of intimate friendship with everyone of the first 10,000 numbers. A good printer must likewise own personal kinship with type-faces and inks. No wonder then that good printers come from jealously run guilds and printing houses where the young apprentice is surrounded by men who are fastidious and not easily satisfied. That explains why, in our country, Bombay and Calcutta and Madras lead in printing and Delhi lags behind.

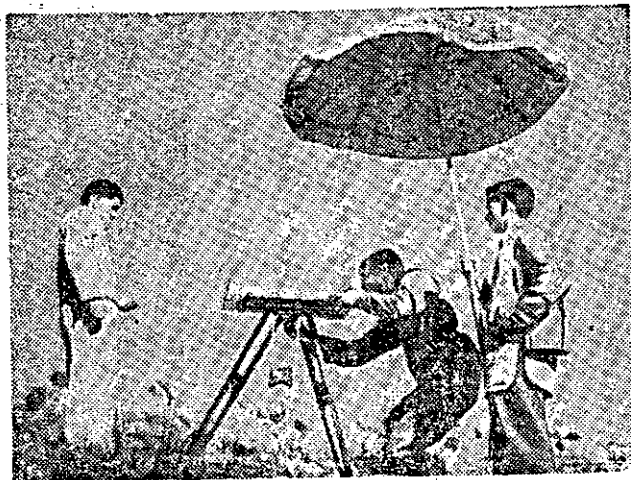
BIRTH OF A MAP

IN school all of us had our favourite countries in geography. My own vote was for India, Spain and Italy as far as countries went and as for continents Australia and Africa were a fascinating lot. Sentiment increased in proportion to the 'drawability' of the mass of land. The less wiggly the outline of the country on the map, the neater the reproduction in our own note books, the more marks for the map, and with it its attendant approval from the teacher which meant more than anything else.

Apart from all that, there was the hold the atlas had on you. And in my world Philip, whoever he was, was one of the most eminent men. Between him and Dudley Stamp there was nothing they didn't know. Philip knew the shape of the land and Stamp what was in it, along with even the types of winds that blew over the ocean and over the country. And to the questions why a country is shaped the way it is, why is Scotland like the bonnet of the old woman in the shoe, and why is Italy like overblown gum-boots we were frequently told 'Because it's in the map'. It was that obvious!

Yet there was a time when there were no maps. The earliest recorded maps must have been in Egypt. In the tomb of Menna at Thebes, there is a representation of two chained men, perhaps slaves, surveying a field. Ptolemaic and Roman papyri describe measurements of land. After a wide gap we find the Arabs in the middle of the fifteenth century familiar with the use of the compass, used to chart maps of the coastline of the countries they visited. One such map was shown by a Gujarati to Vasco de Gama in 1498. Between then and now there has been immense improvement and one can draw a map with a fair degree of accuracy. It cannot be accurate enough for the most fastidious, because, in a number of maps, visual inexactitude makes for a difference of 0.03 inch per mile.

Modern map making involves the following processes: land survey, aerial survey, fair mapping and printing. When a mass of land has to be surveyed a number of convenient points are taken, as for instance bends of rivers or height in rocks and hills. The distance between various points is established and the process of primary triangulation is started. By measuring the distance between two or three points, the angle and the area covered can be worked out. Chains of small triangles are worked out this way and the land is divided into squares or quadrilaterals mar-



Plane tabler adjusting sight rule

ked out into triangles. The area within each square is again marked at convenient points and by a further triangulation the area enclosed is surveyed. Sometimes, when we take a walk, we come across just a plain piece of masonry or markings on a stone, which are not obviously mile-stones. These are called bench mark elevations and are erected by the Survey of India; the figure shows the height or depth of the place in relation to the mean sea level. Incidentally these are points in the triangulation process.

From each point the land is surveyed. The instruments used are the theodolite, the clinometer, plane table, and graduated staves. The theodolite is used to measure the angle between any two objects, however much they may differ in altitude, as for example the pole star and the top of a hill. The clinometer is a small instrument which reads slopes and natural tangents of vertical angles. Making use of these natural tangents heights can be calculated. For distances within two miles, the clinometer is a very efficient instrument. The plane table is a flat board mounted on a tripod. On the table is fixed a sheet of drawing paper. Along with the plane table is used a sight rule which can be aligned on various objects the surveyor wants to survey, and with it the direction is also determined.

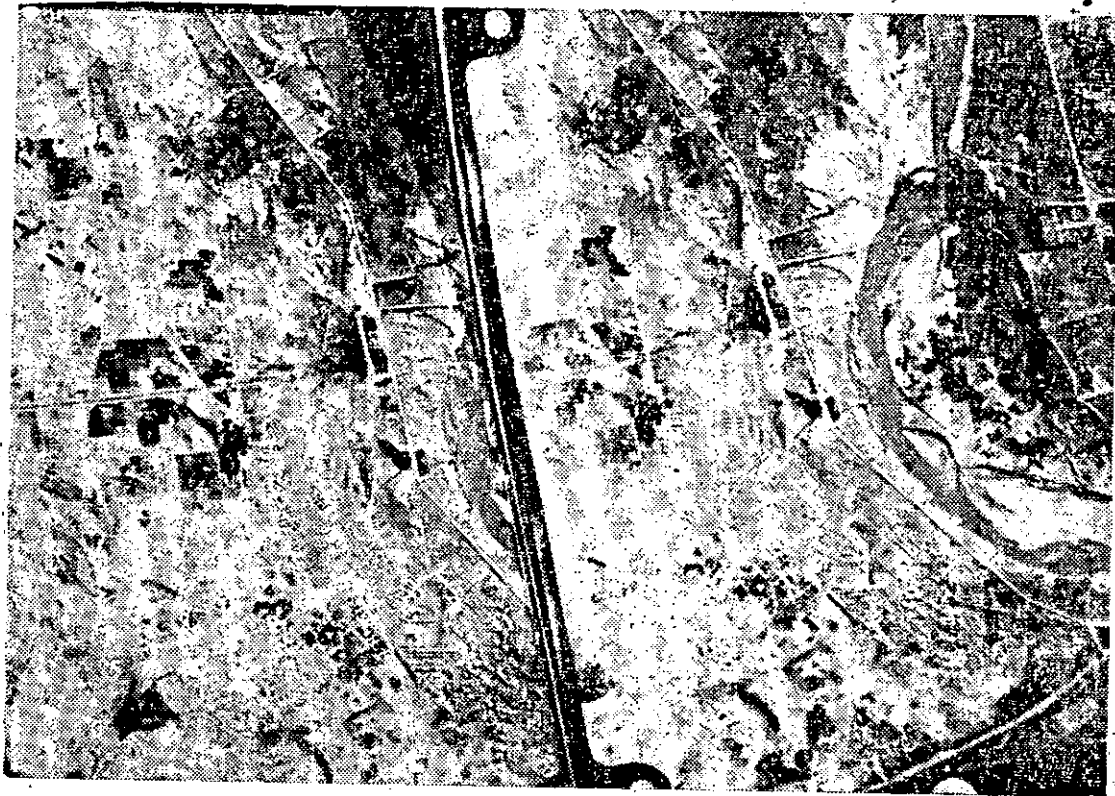
In land survey the plane table naturally is very important. The board is first set. This is done at one of the points fixed earlier by the tri-

(Continued on Page 29)

Men And Mountains Make A Map

*RIGHT: Distance is being measured
in a mountainous terrain.*

*BELOW: An aerial view of a plain
stretch of landscape. Several such
photographs are arranged in a way
that continuity is traced along a re-
cognisable line such as a river bank
or a road.*



The
art
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BE



Dal photograph of a mountain.
ecked with the measurements
y field staff from various heights

achines help to draw a map.

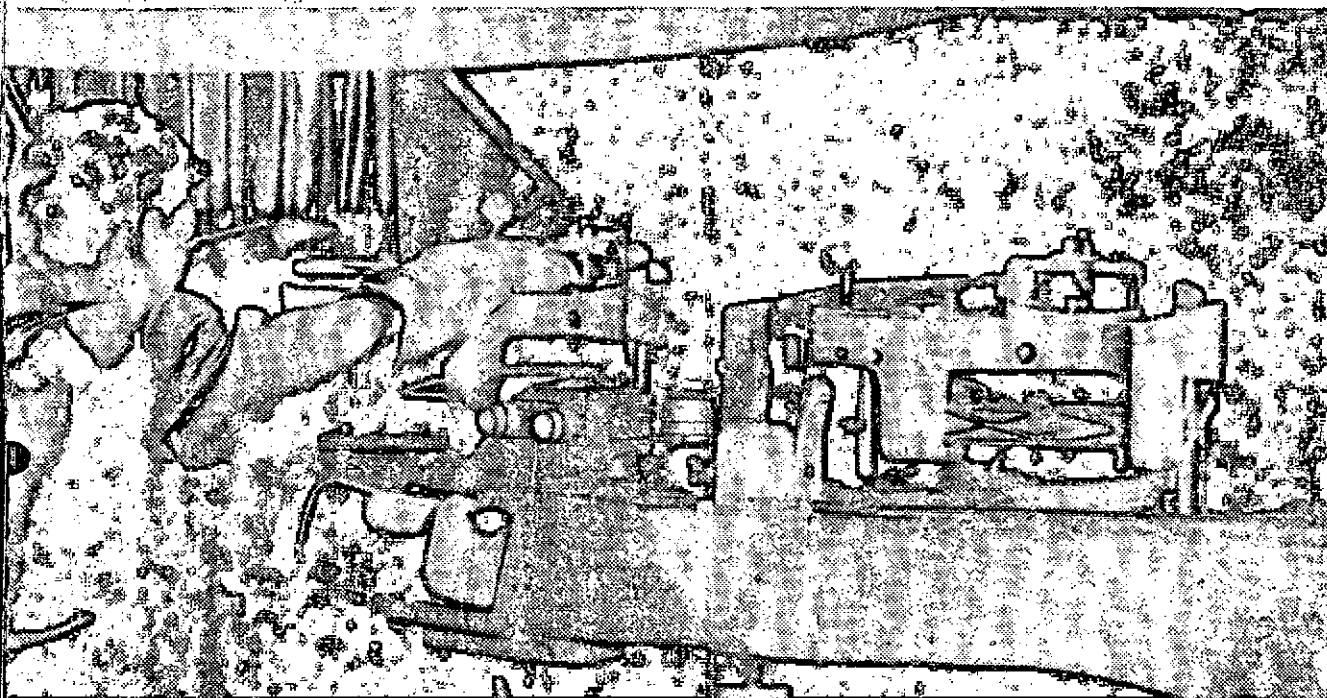
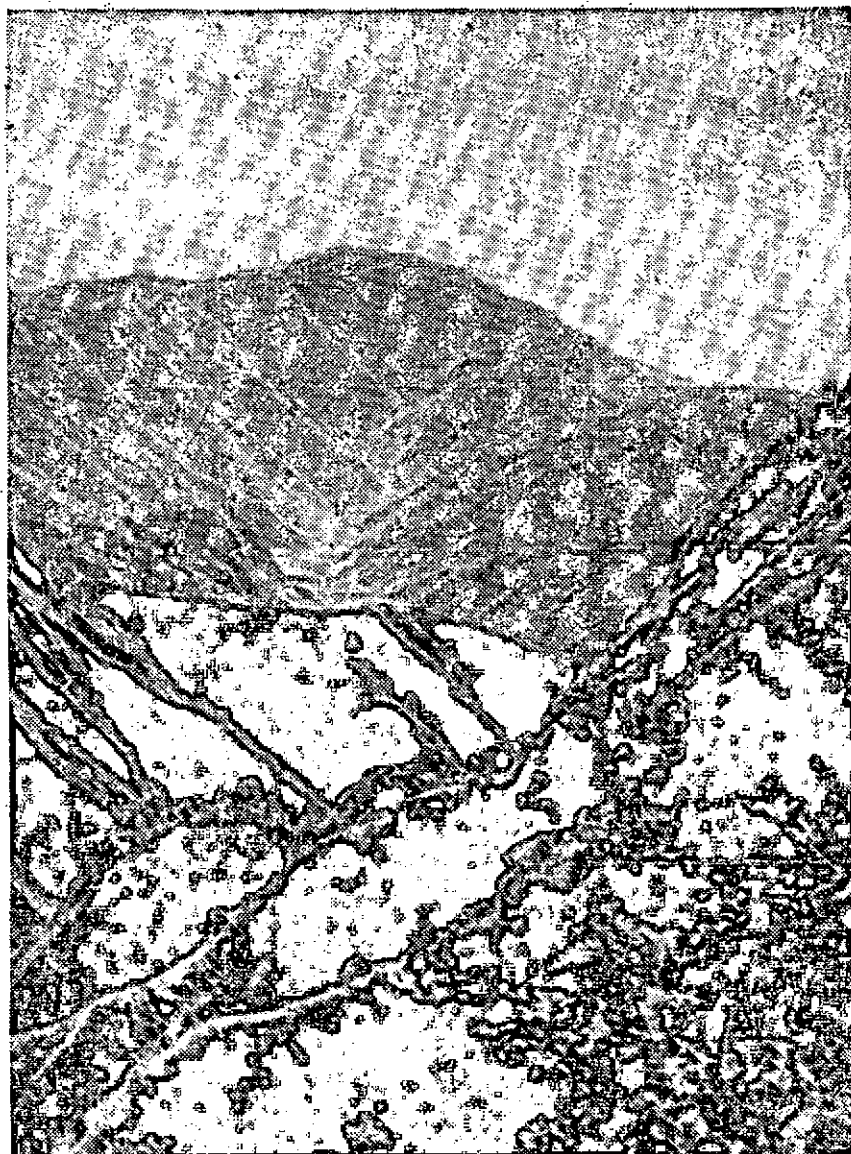


TABLE TALK

INDEX OF INDUSTRIAL PRODUCTION

How Is It Compiled? What Does It Tell?

THE growth of industrial production can be measured either by the increase in the value of output of all industries or by attempting to measure the increase in quantities. Value of output is not a satisfactory measure, since it can increase without any increase in physical output, merely because prices of the various industrial products may have risen. The quantities of output, on the other hand, cannot be added up: you cannot add yards of cloth to tons of steel. Hence the device of index numbers.

The index of industrial production is constructed by taking a "weighted" average of the indices for individual industries. The base taken is 1951. To illustrate: the output of say, cement in 1959 was 6.83 million tons; in 1951 (the base year) it was 3.19 million tons. The increase over the eight years is a little more than twice: the index for cement in 1959 will be 214. Indices for different industries are worked out in this manner every month on the basis of monthly output. The General Index is an average of these indices. It is not a simple average, because some industries are more important than others—important, that is, in the sense of their contribution to the total industrial output. (Clearly, a 10 per cent increase in the output of cloth cannot be treated as the same thing as a 10 per cent increase in the output of safety pins). The average is therefore worked out after multiplying the index for each industry by its "weight" corresponding to its importance.

If the net value of output of all industries was 100 (net value means value added by manufacture) and the net value of cloth produced was 30, and the net value of the cloth industry would be 30 per cent. These proportions were

higher than in 1951. In other words, the quantity of output had increased over the eight years by 52 per cent.

SOME LIMITATIONS

Put thus, the matter looks simple. But the Index of Industrial Production is not all that innocent. Between 1951 and today a number of new industries have come into existence. Not all of these are included in the index number. We now produce commodities like domestic refrigerators, room air conditioners, duplicators, typewriters, etc. We have also started producing a large number of chemical intermediates and products of metal industries. The output of these does not enter the index. This is not all. Among the industries included in the index, some have grown much faster than others. For instance,

INDEX NUMBER OF INDUSTRIAL PRODUCTION
(1951 = 100)

(1)	Weights	1955	1956	1957	1958	1959	June 1960
(2)	(3)	(4)	(5)	(6)	(7)	(8)	
GENERAL INDEX	100	122	133	137	140	152	166.5
Selected Industries:							
Tea	5.9	106	106	107	114	113	151.7*
Sugar	4.3	143	167	186	176	187	3.1*
Vanaspatti	0.6	151	148	175	171	184	135
Cotton Textiles	36.1	112	118	116	109	112	116
Jute Textiles	11.9	119	127	121	124	125	129
Chemicals	4.2	159	171	181	206	214	243
Cement	1.9	140	154	175	190	214	237
Finished Steel	4.2	117	124	125	121	161	130
Engineering:	4.6	183	218	241	254	283	340
Sewing Machines	0.14	228	293	377	462	567	628
Machine Tools	0.04	157	254	530	795	928	1076
Automobiles	2.7	104	144	143	120	163	235
Bicycles	0.23	430	581	692	799	867	748

* Seasonal industries

worked out taking the figure for the base year, namely, 1951. They are shown in col. 2 of the table

What is the meaning to be attached to a statement like this: "The general index of industrial production was 152 for the year 1959"? The meaning is that, if there were no price increase and if the relative importance of each industry remained the same as in 1951, the net value of output of all industries in 1959 would be 52 per cent

(as the table shows) the production of sewing machines is about 6 times as high today as it was in 1951; the output of bicycles is about 8 times as high and that of machine tools is over 10 times as high. On the other hand, output of cotton textiles has increased much less: in 1956 it was 18 per cent higher than that in 1951, and today it is about 16 per cent higher. Jute textiles have increased since 1951 by about 29 per cent; sugar by about 90 per cent and cement by nearly two

and a half times. These are our traditional industries; and in 1951 (i.e. before the planned development of the economy) they constituted a much larger proportion of total industrial output than they do today. But the weights of these industries are based on their importance in 1951. This is inevitable; for, if we want to have the index, we cannot have the weights changing. The present index understates the growth of output because the industries which have expanded rapidly have a relatively poor weight whereas those which have grown less fast dominate the scene. It is necessary to revise the index and the technical examination of this is in process.

SEASONAL CHANGES

The present index covers some 88 items which are classified according to International Standard Industrial Classification. It is possible to read off, from the "Monthly Statistics of Production of Selected Industries of India" published by the Central Statistical Organisation, the monthly change in the output in the index for major products such as engineering, chemicals and metal products as also for individual industries. A point worth noting is about seasonal industries. In the table on P. 18, it will be noticed that the index for sugar for June 1960 is only 3.1. The reason for this is that sugar production is concentrated during the period November-May. For the rest of the year, the sugar mills do not work. Similarly, tea is also a seasonal industry. In the case of such industries, monthly output figures do not have much significance; and if the general index is computed on the basis of these monthly figures, there would be a considerable distortion — in some months the general index will shoot up (when, say, sugar output is at its highest) and in some other months the general index would be depressed. This difficulty is solved by working a 'seasonally adjusted' series of general index. The June 1960 figure given in the table (166.5) is seasonally adjusted; the crude index in June was 160.7.

GROWTH SINCE 1951

The table shows the trends in the output of major industries covering about 75 per cent of the total weight in the index. During the first year of the Second Plan there was a rise of 11 points in the general index; but the growth of industrial output became slower in the second and the third years, when the index rose by only about 3 to 4 points in each year. In 1959 and 1960, once again, the industrial production has increased at a fairly fast rate. The slower expansion in production in 1957 and 1958 is not difficult to explain. In these two years, the output of cotton textiles declined. In 1957, jute production also fell. These two industries

cover nearly half (49 per cent) of the total weight. The decline in the output of these industries could, therefore, be off-set only by a spectacular increase in the output of other industries; but this could not be expected to take place in a matter of two years. In 1959 and 1960, while the engineering and chemical industries continued to expand, the output of cotton and jute textiles also increased. Hence the significant rise in the general index.

Since 1951, industrial output has increased by nearly two-thirds. The Third Plan target is to increase it further by about two-thirds in the next five years.

Fruit Of Research

BETTER PLASTER FOR VILLAGE HOUSES

IN the villages, the walls of houses are usually of sun-dried bricks or lumps of earth. A suitable plaster is necessary, therefore, for protecting the walls particularly during the monsoon. The traditional materials now used for plastering the walls are clay, straw and cow-dung. The drawback of this plaster is that it is not strong enough to withstand the monsoon. Consequently, there is need for annual repair, which costs much in time and labour.

A mud plaster has been developed in the Institute which does not add much to the cost. The other advantages are that it is made from materials available in the villages, and beside being durable it can easily be made by the villagers themselves.

The life of mud plaster is enhanced when bitumen is added to the soil. The soil, which should neither be too clayey nor too sandy, is mixed with *bhusa* and rotted well. Bitumen, which is to be mixed with the soil, is prepared by diluting a road-grade bitumen with kerosene and small quantities of wax. Bitumen thus prepared is mixed with rotted clay and after thorough mixing, the plaster, half inch thick, is applied in the usual manner.

Finally, the plaster is covered with usual coating of cowdung. This type of plaster has been tried in many villages with great success.

IN places where there is an abundance of bamboo, pencil-making can be a profitable small industry.

The advantages of bamboo over some of the other types of wood are its cheapness, the fact that it can be worked upon with just ordinary tools, its property of retaining colours which makes it possible to dye it in beautiful shades, and finally the fact that it lends itself to softening.

This is how bamboo pencils are made: Hard bamboo slices of thickness equal to the diameter of the pencils are taken. Such slices are made just with the ordinary knife used by basket weavers. The surface is then smoothened. This helps the adhesive to set quickly. Grooves half the diameter of the pencil lead are made on each slice. The pencil lead is then placed on the groove and the top slice pressed and tied over it.

The block will be rectangular, and can be cut in to the required shape—round, octagonal or hexagonal. The pencil is then sand-papered and painted.

ARUPPUKOTTAI SRI JAYA VILAS (Private) LTD.

(H.O: ARUPPUKOTTAI)

ARUPPUKOTTAI 625
MADURAI 624

PILLAYARPALAYAM ROAD
P. S. NO. 158
MADURAI.

23rd June 1960

Ref. No. _____

The Sales Manager,
Messrs. Ashok Leyland Limited,
Bank of Mysore Buildings,
N.S.C. Bose Road,
M.A.D.R.A.S-1.

Dear Sir,

There are fifteen Ashok Leyland Comets in our fleet of 51 buses. The first Comet was put on the road on 1-1-58. We are operating them on morassil routes and none has experienced any major breakdown so far.

Considering the mounting passenger traffic on the one hand and the indifferent road conditions on the other we unhesitatingly say that the 203" wheelbase Leyland chassis is ideally suited to tackle both the problems. It is the only chassis available in India with the largest seating capacity (we are able to seat 66 persons in all) and it withstands the severe running strain over long distances.

In fact the dependability and economy of the Ashok Leyland Comets are so convincing that we are thinking of replacing the existing vehicles with them.

Thanking you,

Yours faithfully,
For ARUPPUKOTTAI SRI JAYA VILAS (P) LTD.,

S. S. Srinivasan

Managing Director.

We
thought
you might
like to
read this



This testimonial explains Leyland's enormous popularity in over 50 countries in the world. The exacting standards of precision combined with fine craftsmanship makes Leyland the most wanted vehicle today.

Ashok Leyland COMET

- precision built to give lasting service
ASHOK LEYLAND LIMITED, Ennore, Madras

THE discussion on the Draft Third Plan indicates widespread agreement within the country on the size of the Plan and the priorities. However, much disagreement prevails about our ability to raise the resources envisaged in the Plan.

It should be noted that during the Third Plan there will be a net investment of Rs. 11,250 crore out of which Rs. 4,000 crore will be invested in the private sector and the remaining Rs. 7,250 crore in the public sector. The resources for the public sector are estimated as under:

Financial Resources (Rs. Crore)

1. Balance from revenue on basis of present taxes	350
2. Contribution from Railways	150
3. Surpluses of other public enterprises	440
4. Loans from public	850
5. Small Savings	550
6. Provident Fund, betterment levies, Steel Equalisation Fund, etc.	510
7. Additional taxation	1,650
8. External Assistance	2,200
9. Deficit financing	550
Total	7,250

From the above figures it will be clear that more than 50 per cent of the resources for the Third Plan are to be obtained through foreign aid and additional taxation. Some of the problems involved in raising the additional taxation will now be considered.

During the First Plan period, Rs. 276 crore were obtained through additional taxation. In the Second Plan period, the aim was to obtain Rs. 800 crore through additional taxation. In actuality, this figure is going to be exceeded, and it is estimated that the net addition to the Government revenue will be around Rs. 1,000 crore. It is against the background that taxation has already increased that some people have expressed serious doubts about the feasibility of obtaining a further Rs. 1,650 crore during the Third Plan. They argue that even if it is feasible it would be "extremely burdensome" and will adversely affect the incentives in the private sector. An examination of the Indian tax structure will reveal that the fear expressed is ill-founded. In weighing the burden of taxation in any

Taxation In Third Plan

A case for curbing the concessions

M. P. BHATT

L. D. Arts College, Ahmedabad

country two facts must be taken into consideration. First, it is necessary to know what percentage of the national income is collected in Government revenue. Secondly, not only the rates of taxes but the base of the taxes must be examined as well. In India only 8.5 per cent of the national income is gathered by the Government. This percentage is considerably lower than what prevails in many developed and less developed countries, as indicated in the table below:

Revenue As A Percentage of National Product

1. Tanganyika	12.23
2. Uganada	17.14
3. India	8.5
4. Nigeria	8.41
5. Ceylon	19.35
6. Gold Coast	22.20
7. Jamaica	13.28
8. British Guiana	17.67
9. Colombia	12.87
10. Italy	23.53
11. France	28.09
12. U.K.	37.09
13. New Zealand	33.18
14. Sweden	33.31
15. U.S.A.	29.31

With the imposition of the additional taxation proposed in the Third Plan, this percentage will rise from 8.5 to only 11 per cent. The three per cent increase in the taxation can hardly be considered as burdensome particularly in a developing economy like India where the national income is also increasing side by side.

With regard to the second factor, it should be noted that although our rates of the direct taxes might appear higher, the base of these taxes is considerably narrow. Income-tax is particularly less heavy than in countries like the United King-

dom, Japan and West Germany. The base of the direct taxes is further narrowed by various tax deductions and tax concessions. Some of the concessions like the development rebate and tax holiday have no justification from the point of view of either equity or economic effects.*

Moreover, before the taxable income is determined, various tax deductions like the business expenses depreciation and business losses are given. The rules regarding these tax deductions in this country are liberal. Being badly worded, they can also be easily circumvented. The net result of these liberal tax deductions is the low tax yield and a wide scope for tax avoidance and evasion. The business expense rules enable the business community to transform personal expenses into business expenses, and the loss-offset provisions encourage purchase of 'havala' (bogus losses). Perhaps this weakness in our tax structure is responsible for lower yield from direct taxes. In spite of the considerable increase in direct taxes in the last decade, the contribution of the direct taxes to Central revenue which was Rs. 187 crore at the beginning of the decade—has increased only to the extent of Rs. 200 crore at the end of the decade.

The inevitable conclusion is that if we want to realise the target of taxation fixed in the Third Plan we have to remove some of the useless tax concessions like the development rebate and tax holiday or at least limit their applicability to industries of special national importance. It will also be necessary to make the rules about business expenses rules, depreciation and loss-offset more strict

*For the detailed reasoning, please refer to the author's article "Tax Concessions are Development Rebate" in the A.I.C.C. Economic Review, April 15, 1960.

(Continued on page 31)

DIAMONDS IN INDIA

(Continued from page 11)

The production of diamonds in India, compared with that of the world, is almost negligible and even this meagre production has not been quite steady. Thus in 1935, the production was 1,401 carats valued at Rs. 0.56 lakh; in 1950 it was 2,769 carats valued at Rs. 4.18 lakh, and in 1958 it was 1,535 carats at Rs. 3.43 lakh. There has, however, been a gradual increase in the average value per carat, it being Rs. 40 in 1935, Rs. 151 in 1950 and 223 in 1958; in 1951 the value reached Rs. 319.

Apart from the demand for use as gem-stone with high monetary conversion value, there is a steadily increasing demand for industrial diamonds in India. The gap between supply and demand is therefore so great that diamonds have to be imported in large quantities. The value of diamonds imported into India varies from year to year; it was Rs. 31.25 lakh in 1935-36, Rs. 220.16 lakh in 1944-45 and Rs. 313.54 lakh in 1947-48. There has been a steady decline thereafter, being Rs. 5.65 lakh in 1958-59. This was mainly due to import restrictions.

FUTURE OF INDUSTRY

The actual causes which had contributed to the decline of the diamond industry in India are not known for certain. Apart from competition from overseas markets, other factors such as the crude, primitive, unscientific and unsystematic methods employed in prospecting and mining, water difficulties in quarrying, inadequate supply of labour and water for washing, limited knowledge and use of diamonds for industrial purposes and too heavy taxation by the authorities may have had adverse effects. Some half-hearted and hesitant attempts at mechanising the production were made by small concerns in a few places but these proved too inadequate. The existence of vast unexplored areas in the vicinity of the old workings, the availability of efficient and modern machinery to replace manual labour, the great demand for diamond in the modern industries and the high prices now prevailing are all pointers to the necessity and advisability of reviving the ancient diamond industry in India.

The Government of India set up a Diamond Mining Industry (Vindhya Pradesh) Committee to enquire into the various aspects of the industry and the industry itself was nationalised in 1956. Intensive geological mapping was carried out by the Geological Survey of India during recent years in the Panna area. During the course of this survey a rock closely resembling that of the Majhgawan pipe, and about 40 miles west of it, was discovered.

Sampling was carried out in the Majhgawan deposit; when 20 sampling shafts were excavated. Treatment of nine samples gave an average yield of 10.2 carats of diamonds valued at Rs. 1,400 per 100 loads (in diamond mining one load=0.8 metric ton).

The Panna deposit has also been examined and prospecting operations by the National Mineral Development are well under way.

YOJANA ESSAY CONTEST

Rs. 250 In Prizes

FOR the fourth year in succession Yojana is conducting an essay competition to promote clearer thinking among our students in regard to the basic problems of planned development.

The competition is open to student members of college or university planning forums or other bona fide students.

Subjects

The subjects for this year's contest are:

- 1) The Real Challenge of the Third Plan
- 2) Preconditions of Economic Take-off in India
- 3) Utilisation of Manpower for Rural Development
- 4) Non-economic Factors in Planned Progress
- 5) How to Reduce Economic Inequality and Increase Social Mobility

Prizes

Four prizes will be awarded as follows:

1. Best Essay in English by student pursuing post-graduate studies—Rs. 75.
2. Best Essay in Hindi by student pursuing post-graduate studies—Rs. 75.
3. Best Essay in English by undergraduate student—Rs. 50.
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Length & language: Essays may be submitted in either English or Hindi. They must not exceed 1,200 words.

Last Date: Entries should reach Chief Editor, 'Yojana', 542, Yojana Bhavan, Parliament Street, New Delhi-1 by January 31, 1961.

Token & Certificate: Each entry must be accompanied by the token published below and a certificate by the President of the college planning forum or the head of the institution where he or she is studying.



Name

Class

Institution

LAKSHMINATH BEZBARUA

Pioneer of Assam Renaissance

K. RAGHAVENDRA RAO

ASSAMESE literature had its period of renaissance, which was both romantic and modernistic, from about the middle of the nineteenth century up to the outbreak of the Second World War, and Lakshminath Bezbarua was a leading figure of this movement.

A brief look at the movement would serve the double purpose of increasing our appreciation of Bezbarua and of showing us how similar basically are such movements everywhere in India. First, there is a feeling of having reached the end of a tradition. This is followed by an enthusiastic absorption of Western ideas. Then there is a gradual wearing off of the glamour of the Western ideas, followed by a serious search for the roots of the native tradition. In the final phase, there is an attempt, not always successful, to synthesise the native and the modern elements. This phase of synthesis has thrown up some of the greatest writers of modern India of whom Bezbarua must be counted one.

In Assam the beginnings of this movement are traceable to 1826, the year of the Yadabandu Treaty which set the seal on British domination over Assam. British political domination brought Western influence, primarily through the activities of the American Baptist Mission. In 1846 this Mission started a monthly, *Orondoi* (Dawn), which produced the first crop of modern writers of whom the most important were Anandram Dekhial Phukan, Hemchandra Barua and Goonabhiram Barua. The next landmark was the starting of the monthly, *Jonaki* (Fire-fly), in 1889, by Assamese students in Calcutta. The title was presumably suggested by nostalgic memories of humid, fire-fly-lit nights on Brahmaputra banks! This journal inspired writers of such calibre as Lakshminath Bezbarua himself, Chandrakumar Agarwalla and Hem Chandra Goswami. With these writers the romantic movement in Assamese was launched.

GREAT VERSALITY

BEZBARUA was born in 1868 and died in 1938, and his life spanned two literary generations—the first which raised the romantic slogan and the second which reacted against that slogan. The very first

and obvious thing to note about him is his remarkable versatility. He was a great journalist, scholar, poet, playwright, essayist and short story writer. He found time and talent to do justice to all these forms. In the field of scholarship, he made some contribution to the study of Vaishnavism. His lectures on it at Baroda have perhaps not received the notice they deserve. In poetry he was essentially a lyricist, but he tried his hand at longer narrative and ballad-type forms with no less success. Historically he was responsible for important innovations in Assamese poetry. He introduced the themes of secular love and love of nature. He infused new life into a poetic diction that had become rigid and lifeless. His love lyrics such as "Malati" or "My Beloved" reveal his romantic temperament at its best. He concludes characteristically and romantically a poem, called "Poetry," thus: "Poetry is imagination—the desire of a poet's heart." Patriotism was one of the elements of Indian romantic poetry, and Bezbarua's poetry is no exception to it. His patriotic poems like "Mor Des" or "Assam Sangit" thrill Assamese hearts.

HISTORICAL PLAYS

In the field of Drama, he addressed himself to the task of interpreting Assamese history patriotically and romantically. His play *Belimar* catches successfully the tragic and doomed splendour of the decadent Ahom court. The whole play is suffused with a bitter sense of regret at the loss of Assamese freedom. The play *Chakradhwaja Sinha* recreates imaginatively a glorious chapter from the seventeenth cen-

tury. It is about the defeat of the Muslim invaders by the Ahom King Chakradhwaja and his great general, Lachit Bar Phukan. The play *Jaymati* is romantic in a different sense. It concerns an exotic Naga beauty named Dalimi.

However, Bezbarua's greatest contribution is in the field of the short story. Here his prose is flexible and wide-ranged. His stories have been collected in the volumes, *Surabhi* (1960), *Sadhu Kathar Kuki* (1910) and *Jonbini* (1913). These stories are masterly studies of Assamese rural and middle class life. Their humour is gentle and subtle, and their pathos tender. They reveal Bezbarua as a master of realism as well. In spite of their mildly romantic flavour, they provide realistic insight into Assamese character and manners. They possess something of folklore simplicity and depth. Though not well-known as a novelist, he is the author of a semi-historical novel, *Padum Kumar*, memorable for its descriptions. For instance, Gauhati is described as "guarded by a garland of sky-embracing mountain."

He is justly regarded as the first essayist in Assamese. He had the true essayist's qualities of charm, wit and tolerance. His essays start with apparently trifling things, but soon proceed to unravel their complex mystery. They are also anecdotal, and a collection of them, entitled, *Barbaruar Bhavar Bhuburani* (Barbarua's Thought Bubbles), is woven round a central character called Kripabar Barbarua, a fascinating figure, an Assamese Don Quixote and Sancho Panza rolled into one!

Like all great writers, Bezbarua is difficult to sum up. He was a romantic who could write realistically. He was an optimist who was not blind to the darker side of life. His sturdy optimism is perennially inspiring. In any cultural or literary history of India, his place is high and secure.

(The author wishes to acknowledge his indebtedness to Prof. H. V. S. Murthy of Gauhati University for helping him with some information.)

THE Second Plan target for power-driven pumps and diesel engines has already been reached. There are at present 63 units with a production capacity of 1.4 lakh of power-driven pumps. The number of such pumps produced in 1959 was 85,067 and in 1960 (up to September) 72,900. In the case of diesel engines, the number of units were 26 with a production capacity of 53,455 annually. In 1959, production had amounted

to 30,335 diesel engines and in 1960 (up to September) 30,790 diesel engines.

An equally heartening thing about these two industries is that they have a high indigenous content—85 and 95 per cent respectively. Four units with an annual capacity of 10,000 agricultural tractors have been licensed and one unit went into production in September this year.

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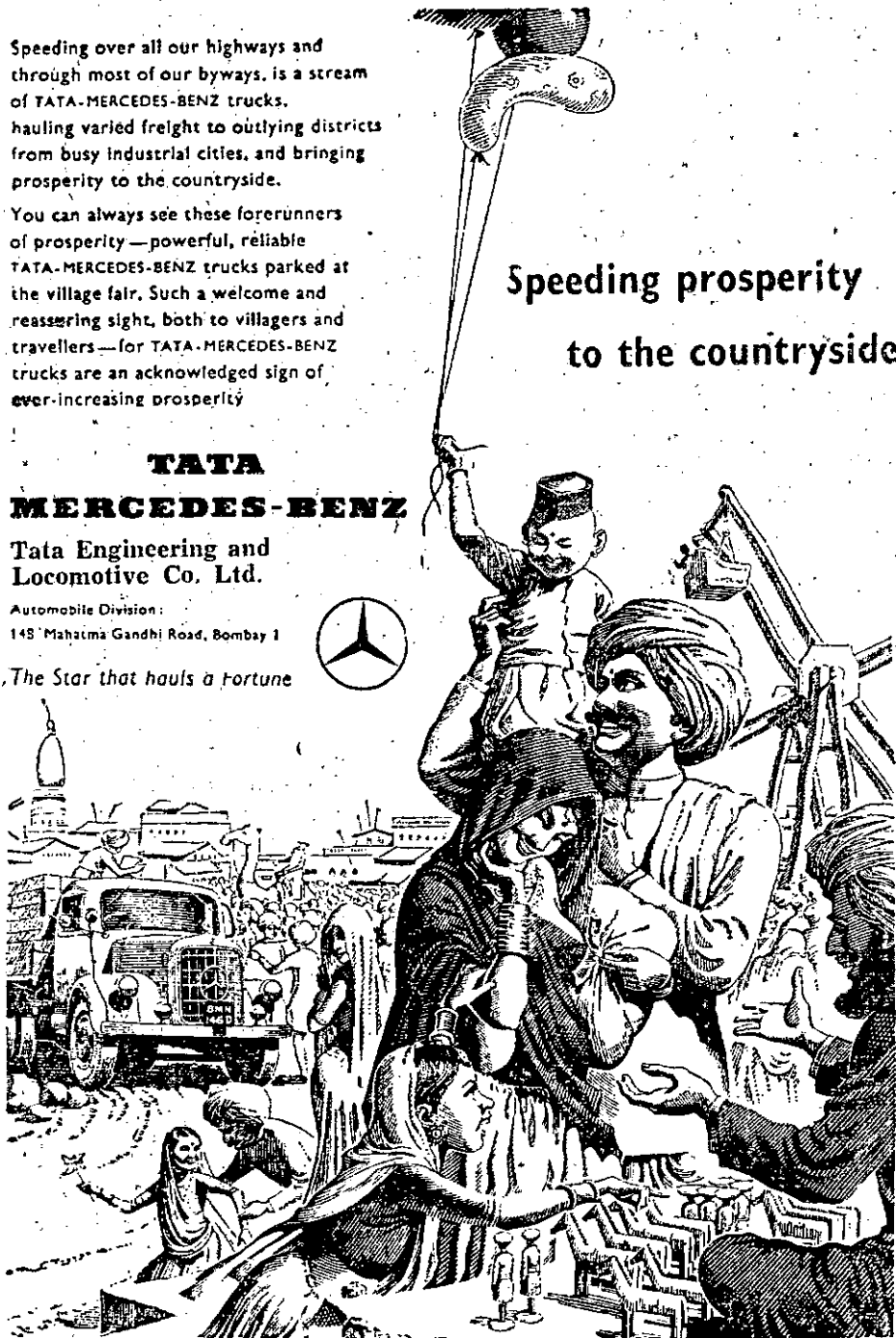
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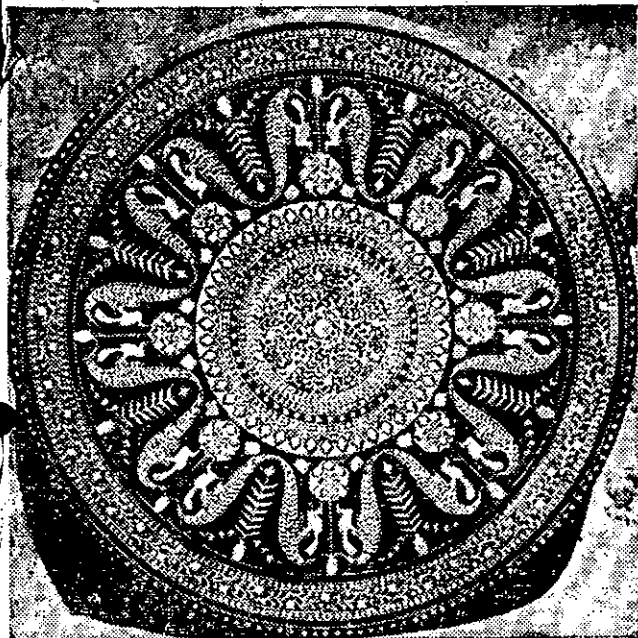
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The Star that hauls a fortune





Top of a table made in Hoshiarpur

IVORY inlay on wood, mainly *sheesham*, is the traditionally famous handicraft of Hoshiarpur. In the town and around it, particularly in the villages of Bassi Ghulam Hussain, Bhooth Garh, Piplanwala and Dyosa Bassi, several families of craftsmen carry on this ancestral vocation. In the beginning of the century, the craftsmen suddenly rose in favour and produced articles adopted to European tastes. But that demand did not last long.

The more popular of the Hoshiarpur inlay articles range from 'qalamdars', mirror cases, chessboards and boxes, to tables, screens and ornamental furniture.

Small pieces of ivory are arranged in broad geometrical forms which would merge with the integral shape of the object. The units which make up the patterns consist of simple floral and bird motifs.

An illusion of majesty and mystery is created by these little pieces of ivory displayed and arranged on the dark-faced wood. The motifs have been standardised and can be made rapidly

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BUSINESS MANAGER

PRIDE OF PLACE

Inlay Work Of Hoshiarpur

without much difficulty. The skill, however, lies in the arrangement of the standard motifs. It is observed that wherever the craftsmen have used traditional motifs in traditional arrangements, the ornamentation is successful and pleasing, but wherever an attempt has been to do something new, it invariably results in loss of balance, integration and beauty. Unfortunately the present trend, as in many other crafts, is to adopt cheap alien motifs. Needless to say, landscapes and human figures do not come out successfully in this craft. The use of camel bone, *chikri* wood and white celluloid has further added to the deterioration of effect. The need therefore is to re-educate the Hoshiarpur artisans, and this work is being done by the All India Handicrafts Board.

Adapted from an article by Mr. P. N. Mago, Director, Delhi Design Centre, All India Handicrafts Board.



An inlaid toilet box

Guide-book To India's Welfare Economy

SUBHASH CHANDRA SARKER

ENGLISH and U.S. economists clung to the theory of *laissez faire* despite its conflict with the facts of life. They were evidently swayed by a number of historical factors which were favourable to their countries—such as their early emergence as industrial powers, and their possession of vast resources of urbanised labour and, through their colonies, of raw materials and markets. In the case of the United States, the large areas of virgin lands unburdened by feudalism undoubtedly went a long way in sustaining economic thinkers in their belief in free competition in economics as well as politics. Their governments, however, were wiser, and either through the logic of events or through the pressure of public opinion (as distinct from the opinion held by professors of economics), they were adopting measures to secure greater control over the functioning of the different economic interests within the country.

These measures, of course, fell far short of what were necessary; yet they were unmistakably contradictory to "free enterprise". But then the idea of "free enterprise", which had meant opposition to Governmental action not only in agricultural and industrial operations within the country but in foreign trade as well, itself underwent a change. The devastation caused by the First World War led to a general economic disequilibrium which the Western countries could not overcome. The Great Depression which followed only increased the acuteness of the disequilibrium. John Maynard Keynes had the courage to restate the theory in the face of ever-increasing compulsion for the governments to take a more direct part in economic affairs.

PUBLIC INVESTMENT

Nearly three-quarters of a century before Keynes attempted the task, the weaknesses of the capitalist mode of production had been analysed with a far greater thoroughness by Marx. Strangely enough, although the writings of Marx were well known throughout the world and also to Keynes, the latter did not acknowledge his debt to Marx. The blind anti-Marxism

in the West, and the fear of the British ruling classes that a formal recognition of the value of Marxian economics would give a great fillip to the nationalist movements in the colonies, explain this reluctance to acknowledge an evident debt. Another factor that must have counted heavily against according the due recognition to Marxian theory was the existence of a planned economy in the U.S.S.R. which was already exercising a great influence over the people in economically under-developed countries.

The extent to which actual governmental participation in economic development has outpaced economic theory of the Western European and American countries is evident from the following table giving figures for the last pre-war year and for 1958:

Share of the Public Sector in Gross Domestic Fixed Investment in Selected countries

Country and item	1938	1958
BELGIUM		
Public sector, total	—	21.3
General government	—	9.9
Public enterprises	—	11.4
CANADA		
Public sector, total	30.1	31.7
General government	21.7	17.2
Public enterprises	8.4	14.6
FRANCE		
Public sector, total	16.0	34.3
General government	10.0	9.6
Public enterprises	6.0	24.7
NETHERLANDS		
Public Sector, total	—	31.7
General government	16.7	15.7
Public enterprises	—	16.0
NORWAY		
Public sector, total	20.2	22.9
General government	10.0	3.8
Public enterprises	10.2	13.1
SWEDEN		
Public sector, total	24.4	38.8
General government	15.6	17.0
Public enterprises	8.8	21.8
UNITED KINGDOM		
Public sector, total	30.3	41.1
General government	10.7	9.0
Public enterprises	19.7	32.1
UNITED STATES		
Public sector, total	30.6	18.7
General government	26.1	16.2
Public enterprises	4.5	2.5

Source: Table 1 to 9 U.N. Department of Economic Affairs, World Economic Survey 1959, New York, 1960, P. 42.

In six of the countries the share of the public sector in gross domestic fixed investment exceeds thirty per cent. In the U.K. it is as high as 41.1 per cent. In the U.S.A., the percentage had touched 30 and is now still as high as 18.7, while in India, after a decade of planned development, it is only about half of it.

INDIA AND PLANNING

It is not to be wondered at that Indian economists have all along questioned the validity of *laissez faire* notwithstanding, Indian industrialists could not get so much as a licence from the British Government to start a motor car industry or a shipbuilding yard.

Theoretically, historically and realistically Indian economists and writers have thus no reason to be apologetic about the pattern of development India has chosen for herself. Mr. Guha's half-apologetic "Introduction" has struck this reviewer as being rather odd, even as his failure to refer to Marx and Marxists' contribution to the development of economic thinking. One need not wear any of the various Marxist labels in order to own this debt. In her planned endeavours India must take into account the historical experience of other countries and in this she can hardly avoid referring again and again to the practice in the U.S.S.R., if for no other reason than only for avoiding the mistakes committed in the Soviet Union.

This small point of criticism does not affect the value which the book otherwise possesses. The Indian scene is in the process of such rapid and many-sided transformation that it is hard to remain abreast of the developments. The changes in the statistics of investment, production and employment represent only the focal point of the change. To sum up these achievements is a very difficult task. On the one hand, even the most conscientious effort, if it is to remain within a manageable compass, is likely to appear incomplete and inadequate, while, on the other hand, by the time the compiler has accomplished his task and succeeded in overcoming the various hurdles in the way of appearing in print, the speed of events may make him look out-dated. Mr. Guha, who is the editor of the A.I.C.C. *Economic Review*, thus deserves praise for having undertaken the necessary but difficult task of explaining the complex processes of change in terms intelligible to the general readers but also sufficiently precise to enable the specialists to rely upon his analysis for a valuable simplification of data which is important for every effort at an analytical study.

* *Welfare Economics in India* by Sunil Guha. Firma K. L. Mukhopadhyay, Calcutta-12. 1960 Pp viii, 364. Rs. 12.50.

On this page, readers' questions on the Plan and the development of the country will be answered.

Questions should be addressed to the Chief Editor,

Yojana.

Questions from Kumari B. Swarajya Lakshmi, Kovvur, West Godavari District, Andhra Pradesh:

- i) What are the aims of our Third Five Year Plan?
- ii) What does the Plan want to achieve by the end of the period?

Answer: The two questions are overlapping. The objectives of the Third Five Year Plan have been set out in the Draft Outline as follows:

- 1) to secure during the Third Plan a rise in national income of over 5 per cent per annum, the pattern of investment being designed also to sustain this rate of growth during subsequent plan periods;
- 2) to achieve self-sufficiency in food grains, and increase agricultural production to meet the requirements of industry and exports;
- 3) to expand basic industries like steel, fuel and power and establish machine-building capacity, so that the requirements of further industrialisation can be met within a period of 10 years or so mainly from the country's own resources;
- 4) to utilise to the fullest extent possible the manpower resources of the country and to ensure a substantial expansion in employment opportunities; and
- 5) to bring about a reduction of inequalities in income and wealth and a more even distribution of economic power.

This is what we want to achieve by the end of the Third Plan period. If, however, you want to know the main targets set for the Third Plan in the various fields of production and social services, please refer to Yojana of July 10, 1960. On

1960. On page 3 of the issue the targets of the Third Plan are set out in summary, and on page 14, under the heading "Twenty Questions" a gist of the aims, resources, programmes and targets of the Third Plan have been given. The details are not being published all over again here, as that would require five to six pages!

MARRIAGE FIGURES

Questions from Mr. Shiv Swarup Agrawalla, 10 Rajnarayan Mukherjee Lane, P.O. Salkia (Howrah):

Can you inform me the number of marriages which take place in India every year?

Also please state the average age at which boys marry and the average age of the marrying girls.

Will it be possible for you to publish the number of unmarried persons above the age of 30 in India?

Answer: In order to get the most authentic answers, we referred the questions to the Office of the Registrar General, India. The Deputy Registrar-General explains in reply that since marriages in India do not have to be registered, no figures for marriages are maintained. Similarly there is no information regarding the average age of marriage of boys and girls.

But, as it is important to have a rough idea of the number of married and unmarried people in India, such figures are arrived at with the help of Census apparatus.

The Deputy Registrar-General has given a statement (printed below) showing the number of unmarried persons in certain age groups from 25 onwards according to the 1951 Census. These figures are based on

10 per cent sample population excluding displaced persons. Now the table:

Age Groups	No. of unmarried persons
25-34	.. 4,48,093
35-44	.. 1,45,547
45-54	.. 77,833
55-64	.. 38,805
65-74	.. 14,152
75 and over	.. 6,491
Age not stated	.. 11,137
Total no. of unmarried persons between age group 25-34 and Age not stated	7,42,058

QUIZ ANSWERS

1. b). Between April 1956 and September 1959 the State Governments have disbursed Rs. 7.92 crore to 19,703 small industrial units and 1,776 industrial co-operatives. In addition, loans of Rs. 4.66 crore have been sanctioned up to March 1960 to 558 small industrial units by the State Financial Corporations and Rs. 5.11 crore by the State Bank of India to 1,691 parties.
2. Up to the end of October 1960, as many as 1,931 families have gone to Dandakaranya. Of these, 919 cultivating families have been moved to village sites and 648 families allotted 4,721 acres of land. More than 3,100 acres are now under crops. The total expenditure incurred on the project until September 1960 is Rs. 4 crore 75 lakh.
3. In August this year, more than 1,000 family planning were functioning, a majority of them in the rural areas. The Second Plan target of 1,800 clinics is certain to be reached. The Third Plan target is 8,000 centres.
4. The Government has this month announced extension of protection up to the end of 1963 to the bicycle industry, the conductor industry—including bare copper conductors, aluminium conductors steel reinforced (A.C.S.R.) and All Aluminium (A.A.C.) Conductors—cotton textile machinery and the power and distribution transformer industry.
5. Research workers of the Palaeontology Section of the Central Laboratory and Workshop of the Oil and Natural Gas Commission, Dehra Dun, treating rock samples in a centrifuge.

BUILDERS OF NEW INDIA

increasing the yield from the land

Randheer Singh of Mancha village in Kanpur District has won the Uttar Pradesh food production competition for the second time in succession. In 1958-59, he was able to make his land yield over 49 maunds of wheat per acre.

Randheer Singh has been able to raise the yield by systematically applying improved methods of cultivation-intensive ploughing, use of organic manure and chemical fertilizers, sowing of better seeds and adequate irrigation.

Progressive cultivators like Randheer Singh help build a new India by providing more food for the nation.



THE PLAN MEANS PLENTY AND SECURITY

Work for it-Save for it

DA 60/539

Fair And Unfair

(Continued from Page 13)

be found not only in Kanchipuram but in Kashi, Kolhapur, Puri and Dwaraka as well.

And the colour of one's skin has not acted as a disqualification in finding jobs or in being elected to office. Even among actresses there are dark beauties. And among our officials and politicians, the dark have never experienced any disadvantages.

THIS is nothing new, and British laws and the Constitution of 1950 cannot claim any credit for it.

And there is nothing legalistic about this point. The argument here is not: "Because there is no legal bar, therefore there is no colour prejudice in India". Even emotionally there has been no rejection of the dark-skinned people. The very name Krishna, byword for frolic and amour and grace, means dark. And the most forceful of our epic beauties, Draupadi, was dark-skinned too. Throughout our history the captains and kings, the sages and seers, have not depended on pigmentation. Neither Vyasa nor Pulakesin nor Shivaji.

BUT how does all this—one might legitimately ask—square with the undeniable feeling of loneliness and sense of being left out that Africans experience when in India? If street urchins laugh at African lads who have much more civilisation in them, it must not be forgotten that street urchins have laughed at British and American soldiers also. In Delhi and Bombay and Calcutta—particularly in the last ten or fifteen years—this making fun of the 'red skins' might have disappeared, mainly because of the tips thrown and the knowledge that the 'red skins' might be fleeced (economics overcoming emotional rejection). But even today in many parts of India the sight of a foreigner—whatever his colour—arouses the same kind of stares and giggles. It is the being different and not being dark that is here involved. Sarvajna, a southern poet of the late seventeenth century, made fun of the men who looked like girls and could only grow soft hair on their chins. This sort of distrust of the outsider is a feature of every traditional society.

Why do Africans find that Indian students don't invite them home? The wariness about the unfamiliar is the main reason. One can be sure that the boy who doesn't take an African class-fellow to his home will not also think of inviting an American, a Briton or a French student either. There are mother's kitchen taboos to think of. And more often there is the intense self-deprecation that the lower-middle-class boys and girls feel about their homes; about home being not good enough for all but the most intimate to see;

about there not being any separate drawing room to receive visitors about their ability to offer the kind of repast they ought to spread before a man who has come from so far away. And so on.

SO what some Africans are up against is a clash of two sensitivenesses rather than prejudice. It is an extension of our sub-xenophobia—distrust of the man from the other region or state within even the country. This will disappear as knowledge grows, and the hosts are a little better off.

H. Y. S.

Birth Of A Map

(Continued from Page 15)

angulator. The plane tabler revolves the sight rule and notes down the data obtained. He sketches in detail what is immediately around him. The drawing sheet now gives you the topographical details—vegetation, habitation, physical features etc. and for that particular area the map is almost ready. The survey team checks up again. This time it is the familiar landmarks—temples monuments, etc. They get the name of the place from local government officials like the 'patwari' and counter-check with the village inhabitants on the pronunciation and record it as correctly as possible. This process is repeated till the entire territory is covered.

The information obtained by surface survey is checked with an aerial survey. Air photographs can include an immense amount of detail. To map accurately from photographs requires that each point in the map shall appear at least in two photographs. This is done by taking the photographs in such a way that there is a 60 per cent overlap (see centre-spread). The photographs are their fed into plotting machines—the special mechanisms of stereoscopic lenses and levers which can trace outlines on paper. With their aid the continuity and course of, say, a stream or a road can be established, and the surrounding landscape checked with the other plane table sketch. Thus a map becomes ready. The only thing that then remains is to get the fair map printed.

A. K.

**BRIGHT
SPOT**

Blast Furnace No. 1 at the Rourkela Steel produced a record output of 1,155 tons of pig iron on November 30, 1960. The production was 155 tons more than the rated capacity of 1,000 tons per day.

113,000 acres of land can be reclaimed in W. Bengal

P. L. JAISWAL

A COMMITTEE set up by the Union Government some time ago to advise on location and utilisation of waste-lands has reported that there are several large-sized blocks of waste-lands covering 1,13,640 acres in West Bengal which, if reclaimed, could increase agricultural production in the State by nearly 43,000 tons valued at about Rs. 1.40 crore. The cost of reclamation would be Rs. 1.32 crore or Rs. 116 per acre.

The committee has further pointed out that the reclamation of char lands is most profitable. On the other hand, reclamation of eroded lands offers greater promise of increasing production, since extensive areas of such lands are available in the State and the cost of reclamation is not high. The eroded waste-lands covering an area of 85,379 acres can be reclaimed by simple soil and water conservation measures. The committee has suggested that information on the availability of waste-lands for arable cultivation should be obtained through rapid surveys. The char lands, the committee feels, are very fertile and capable of producing good crops of paddy, sugarcane and jute. The committee has suggested that a belt of thick growth of grasses may be established along the banks of river Teesta to prevent erosion.

In the red soil of West Bengal, where irrigation facilities are not available, the committee has suggested the construction of earthen embankments across gullies in order to hold rain water for agricultural and other purposes and to check erosion on the downstream side of the gullies.

EXPERIMENTS with bacterial fertiliser conducted at the Indian Agricultural Research Institute, New Delhi, and its substations have revealed that they can increase the yield of crops. There was a significant increase in the yield of berseem when it was inoculated with phosphobacterian. Increase in the yield of wheat and maize has also been reported from other stations.

Cultures of phosphobacterian and a zoto-bacterian had been brought from the Soviet Union by Dr. Punjabrao Deshmukh, the Union Agriculture Minister, when he visited that country some time ago. These fertilisers

are being used on more than 10 million hectares in the Soviet Union. Their use has increased production of legumes by 20 to 25 per cent, and those of vegetables, potatoes, oilseeds and cotton by 10 to 15 per cent.

India has not so far tried these fertilisers and much more field experiments under different soil and climatic conditions with a wide variety of crops will be needed before their use can be standardised here.

The Soviet Union has agreed to train two specialists in laboratory techniques, manufacturing processes and methods of application.

What is Sylvia, who is she?

A NEW variety of pea, the pods of which are edible, has been developed at the Indian Agricultural Research Institute. Normally, the pea shells are fibrous and inedible and therefore thrown away. The fibre is present in the form of a parchment layer lining the inside of the skin of the pod. Even the best of garden-peas do not shell more than 50 per cent. A new sugar-podded variety, Sylvia, has been brought to light by the plant Introduction and Exploration Organisation at the Indian Agricultural Research Institute. The pods of this variety are a real delicacy and compare with the finest French-beans.

Sylvia flowers in 60 days and the pods are ready for first picking in 95 days. From a 100-foot row of staked plants a total yield of 70 lb. of whole pods over a harvesting period of 40 days can be expected as an optimum yield.

The variety is sown in October-November. The seeds are drilled in furrows, 1½ feet apart spacing the plants about 3 inches in the row. Other operations are similar to those for the common garden peas.

The edible podded peas like Sylvia deserve to be popularised in home gardens. Seeds of this variety can be had from the Botany Division of the Indian Agricultural Research Institute, New Delhi.

You And Nutrition Fruits

The prohibitive cost of fruits in India bring them within the reach of only the fortunate few. Fruits are in the main good sources of vitamin C. Since most fruits are consumed fresh without any treatment, and since vitamin C undergoes easy destruction by usual home-processing methods involving heat, fruits offer the best medium of deriving this vitamin. Citrus fruits such as oranges, limes and lemons and tomatoes and guavas are rich in vitamin C. The Indian gooseberry or 'amla' is particularly endowed with sizeable amounts of the vitamin.

Some fruits like mango, papaya, tomato etc. are rich in carotene as well. Dried fruits such as figs, apricots, raisins etc. are rich in iron. Banana, commonly consumed and available throughout the year, is a sustaining fruit, and provides more calories but less of vitamins and minerals.

Fruits in season are cheap and should be consumed as much as possible.

S. C. BALASUBRAMANIAN

Taxes In Third Plan

Continued from page 21

and more effective in application.

It may be argued that these measures would adversely affect the incentives to the private sector and thereby retard the rate of capital formation in the economy. In reply, an elementary economic fact might be stated—that in a developing economy where the income and demand are expanding and where an inflationary situation prevails, taxes do not have adverse incentive effects, for it is possible to have high profits side by side with high taxation.

RURAL TAXATION

Efforts need to be made during the Third Plan to tax rural incomes. Out of the increase in rural income during 1950-57, only 15 per cent is estimated to have been collected through taxation. The corresponding figure for urban incomes is 40 per cent. This indicates the difficulties as well as the possibilities of increasing revenues from the agricultural sector.

The role that indirect taxes has to pay in an under-developed economy is well-recognised and need not be repeated here. The Third Plan has very clearly indicated that much of the additional taxation will come from indirect taxes. Here it must be emphasised that in a developing economy the yield and the scope of commodity taxes is bound to increase. This is so because increased income results in increased turnover of goods which in turn results in increased yield by way of taxes. The scope of commodity taxes is further increased as new products are produced. This brief discussion would show that the task of obtaining resources through taxation for the Third Plan, although difficult, is not beyond our capacity.

FRANK AND FORTHRIGHT

Continued from page 2

cle in a foreign journal, for that only would shock as into awareness and make us follow the right path.
Gauhati

N. C. BAROOAH

III

HATS off to Mr. Khushwant Singh for touching on our blemishes. The sentiments expressed by the former editor of *Yojana*, far from being unpatriotic and derogatory to the nation, really depict the morass and inconsistencies through which we steer our boat of universal goodwill, and honour. A really wonderful painting of the hidden scorn that man from Ghana develops towards the evading 'whites' that pop their heads so insultingly indeed!

Patiala

BRIJ KISHORE

IV

WE should encourage the publication of such articles in the Indian Press. Unless weaknesses in our national character are exposed we will not mature as a nation.

It is inadvisable, however, to publish such articles in foreign newspapers. To say so is not to excuse the false sense of patriotism which makes our papers hesitate (if not refuse) to publish such criticism. And when a writer is unable to give publicity to his views in India he would definitely seek it outside.

Simbhaoli (Meerut District)

SAJJAN SINGH

V

I READ with much interest the article "Frank Conversation at an Empty Table" (*Yojana*, November 27, 1960). There is nothing unpatriotic about it. Whatever Mr. Khushwant Singh has said about India is true. But the reason he gives for the tendency of the upper castes to avoid contact with the lower castes seems to be insufficient. Colour prejudice may be one reason. But the desire for cleanliness is another, and perhaps more important, reason. One does not mind touching an "untouchable"—at least in urban areas—if he has had a bath and clean clothes.

I am deeply hurt to read about the behaviour meted out to African students. I am sure the latter will find much affection and friendliness if they come to our university. At present there is not a single African student in our university. I wonder why the favourable environment here has escaped the notice of the authorities concerned with the education of African students.

Dharwar

JOSHI V. P.
Karnatak University

VI

THE article "Frank Conversation at an Empty Table" by Mr. Khushwant Singh was read out to the U.N. Club of this College and discussed by the members. At the end of the discussion votes were taken 'for' and 'against' its appearance in the *Unesco Courier*. The majority saw no harm in publishing this article in a journal of International circulation. We should be bold enough to face facts in our own country and outside too, and not live in a fool's paradise. The colour prejudice evinced by some of our grown-ups and students is highly deplored by us all.

Sidhwan Khurd (Ludhiana)

Miss A. KURIYAN
President, U.N. Club,
Khalsa College for women.

OUR NEXT ISSUE

WILL CONTAIN FEATURES SPECIALLY PREPARED FOR

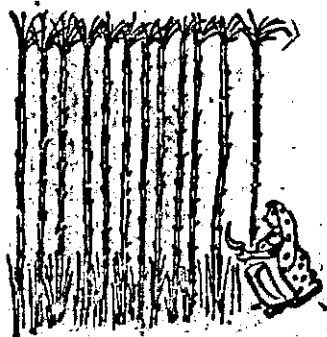
INDIA PLAN WEEK

SUGARCANE AND SUGAR PRODUCTION

SUGARCANE

(expressed in terms of 'gur' production)

PRODUCTION
BY END OF
1955-56



6 MILLION TONS

PRODUCTION
By END OF
1960-61



7.2 MILLION TONS

PRODUCTION
TARGET FOR
1965-66

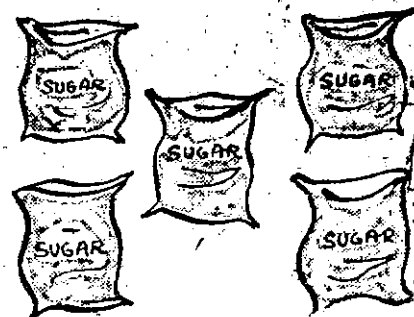


9.0 MILLION TONS

SUGAR



1.86 MILLION TONS



2.40 MILLION TONS
(already reached)



3.0 MILLION TONS