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YOJANA

Vol. VI No. 11

Review of Package Programme

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Films, People and the Plan

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On the head and in the hands of this smiling girl from Orissa are chunks of iron ore. The picture is from the well-known Kiriburu mine of Orissa. A book review on Page 25 outlines the problems ahead of that State.

Jyaistha 20, 1884, June 10, 1962

25 nP.

THE PACKAGE PROGRAMME

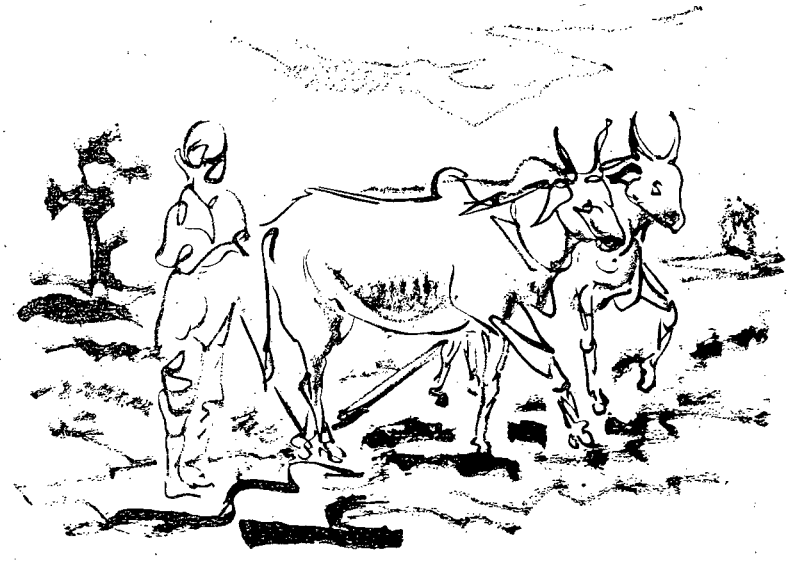
Intensive Approac

GOOD PROGRESS IN 7 DISTRICTS: SCHEME IS EXTENDED

The Package Programme, as the Union Food and Agriculture Minister told Parliament recently, is the only way in which the agricultural outputs of Indian farmers can match those of farmers in advanced countries.

Tests have shown that the output in these areas will go up by 40 to 60 per cent during the Third Plan, as against 31 per cent elsewhere.

Drawings by R. SARANGAN



Holds Key to Larger Food Output

SOME of our development programmes are launched in a blaze of publicity. Others are begun in a quiet way. Publicity has its advantages: it attracts the people's attention and probably their enthusiastic support. It also has disadvantages. A slip or an error is exaggerated out of proportion. Doing things away from the limelight, similarly, has merits and demerits. The chief merit is that those entrusted with the work have a larger freedom to experiment and make changes. The chief drawback is that much of the good work done does not get known widely enough.

The Intensive Agriculture District Programme, popularly known as the Package Programme, belongs to the second of the groups we have been talking about. It is being carried on without much trumpet-blowing; and for that reason its record has also not received the recognition that is its due.

To begin with, what *is* the Package Programme? An analogy will be of help in understanding the idea. Suppose we take a weak child to a doctor. He examines him: the boy's heart and lungs are all right; his limbs are sound; he has a fine intelligence; he has no basic, organic defect. But he lacks nourishment and is anaemic. What is the remedy? A combination of vitamins and tonics and good food and good care. With all these he will be as healthy and robust a lad as any other. But the snag in most cases is that the parents cannot afford the treatment.

The condition of our agriculture is similar. It suffers from an all-round insufficiency—of water and manure and seed and skilled management and investment. Suppose all these *were* provided. Then there would be no reason why our yields should not be among the best in the world.

This is precisely what the Package Programme aims at doing. It seeks to find out how much of money, material and trained staff our agriculture requires to raise production to the maximum, and to set about *providing* them.

The Package Programme is a selective beginning, something like a pilot project. While yielding pointers and lessons it also gives positive, measurable benefits. As a pilot measure it was launched in seven districts to begin with—one each in seven different States. Already, in two years, the experiment has shown many *lessons* and also *added* considerably to the agricultural production of the States.

Let us now look in some more detail at the origin, the course and the lessons thrown up so far by the Package Programme.

THE whole Programme arose from a suggestion made by the Agricultural Production Team sponsored by the Ford Foundation. This team which consisted of experts in the field of agriculture, was convinced that in the matter of soil, climatic and other conditions, Indian agriculture did not suffer from any inherent drawbacks. What then was responsible for the proverbially low yield of Indian agriculture? The team suggested that the precise answer could be found by working a programme under which an intensive effort was made, adopting all available methods, to produce increased yields of

selected crops in selected areas. Such an effort would show what innovations were necessary on the administrative side and what combination of supplies and practices were needed on the part of the farmer to increase agricultural production.

The Government accepted the suggestion. As advised by the Ford Foundation team, districts which had the greatest potentialities for increased yield were chosen. The Programme itself was launched on a limited scale with the agricultural season of 1960-61.

The seven districts in which a beginning was made were: Ludhiana (Punjab), Shahabad (Bihar), Tanjore (Madras), Pali (Rajasthan), West Godavari (Andhra Pradesh), Raipur (Madhya Pradesh) and Aligarh (Uttar Pradesh).

In these selected districts, efforts were made to provide all the essential elements for increasing production to the extent needed, such as supplies of fertilisers, pesticides, improved seeds and improved farm tools. Composite scientific demonstration plots were also laid in large numbers. What is more, every attempt was made to ensure enough credit to all the farmers of the area, irrespective of their being creditworthy in the old sense. It was also seen that such supplies of credit were linked to marketing of produce. To facilitate co-ordinated execution of the programme, the strength of the extension staff, especially those trained in agriculture and co-operation, was increased in each district. The entire programme was worked under the guidance of co-ordination committees at the district and State levels.

THE focus of the programme, the point where all the proposals became reality to the farmer, was the formulation of a production plan for each cultivator-family. This production plan contained the combination or "package" of improved agricultural practices which the cultivator had agreed to adopt, the various supplies and the credit required for implementing the Plan. Each district had also prepared a district plan containing a schedule of the needs, a time-table of work and a blueprint of the follow-up action required on the part of the administration to implement the production plan.

A full year's experience of the working of the programme in the first batch of seven districts has shown encouraging results. The total number of farm production plans prepared during 1960-61 was about 58,000 in three districts. This number increased to 1,81,000 during the Rabi season of 1961-62. Farm planning has been effective on the whole in getting a substantial number of cultivators to change over to improved practices.

No difficulty was experienced in meeting the full requirements of nitrogenous fertilisers or phosphatic fertilisers in the selected areas. This was true of other supplies as well. There was considerable expansion in the use of both nitrogenous and phosphatic fertilisers in almost all the States.

In the seven districts, a programme of composite demonstrations was undertaken. In all about 13,000 demonstration plots were laid out in the Kharif and Rabi seasons of 1961-1962. It is also proposed to have "whole farm demonstrations" in later years under which the entire holding of a cultivator will be taken up for intensive cultivation.

The result of the demonstration programme has been encouraging. For example, in the district of Shahabad, the percentage increase in crop yields obtained in demonstration plots ranged from 49 to 244. In West Godavari, the highest increase in yields obtained in demonstration plots was of the order of 83 per cent. In the case of Tanjore and Aligarh the percentage increase ranged from 8 to 50 per cent.

The seven States in which the first batch of seven districts are located provided soil testing facilities on a limited scale. This programme is expected to receive a fillip when soil testing laboratories for each of these districts are established and start functioning. Co-operative societies in the districts advanced loans on a liberal scale. They were helped in this by the respective Central Co-operative Banks and the Reserve Bank of India. The amount of loans to farmers in the selected areas came approximately to Rs 3.0 crore. Specialists in plant protection were appointed, plant protection equipment stocked and prophylactic treatment provided to seeds and crops to ward off attacks of insects and diseases. During 1960-61 and 1961-62

nearly 500 godowns were completed or were under construction. A programme for quality seed production and distribution for these areas was prepared. It is hoped that a systematic beginning in the production and distribution of quality seeds will be made in these districts from 1962-63. The implements workshop being established in each district will test and develop new implements, undertake large-scale field demonstrations and train farmers and village artisans in repair and use of improved implements.

Special attention was given to train the staff engaged in working the intensive programme in these areas. Two annual Central Training Conferences were organised for key personnel from the areas. A Central Staff Training Conference was also held in 1960 to discuss the programme and co-ordinate activities of the Central Ministries, State Governments, the U.S. Aid Agency and the Ford and Rockefeller Foundations. Two regional training conferences were organised for the district staff associated with the production and distribution of quality seed. Similar conferences have been organised in almost all the districts for the block staff.

A REALISTIC review, however, would not be complete if it did not show where the programme has lagged behind. Some of the major points of weakness are as follows:

A large number of staff vacancies especially at field level such as those of V.L.W.s still remain to be filled in a few districts. There has been slow progress in the coverage of the area under the programme particularly in Pali and Shahabad districts with the result that the impact of the programme in terms of increase in agricultural production of the districts will not be significant unless the coverage is increased. This will mean intensification of extension activities to cover larger number of farming families and their adopting of the package of improved facilities. The farm plans also need to improve in quality and more time needs to the devoted to their follow-up. The scheme of channelling all supplies and credit through co-operative societies has not met with complete success. The societies have so far not played any insignificant role in supplying seeds, insecticides and implements. They have not evinced much interest in supplying fertiliser mixtures. The working of the credit programme has yeen hampered by the weakness of existing primary societies, lack of supervisory staff, lack of effective training and the inability of the co-operatives to meet the large demand for medium-term credit.

Some difficulties in regard to supply of iron and steel have also been felt. The detailed plans prepared for locating implement-workshops have run into hardship because of non-availability of qualified engineers to man them. The progress recorded in teaching the cultivator to use improved implements has also been slow.

A team consisting of representatives of the Directorate of Marketing and Inspection, Department of Co-operation, the Ford Foundation, and the Department of Agriculture has made a comprehensive survey of co-operative marketing arrangements in the different districts. Its report reveals that co-operative marketing arrangements are not adequate. The suggestions made by the team for strengthening the marketing co-operatives and eliminating the dominance of traders from the field are now under the consideration of the State Governments.

Preparatory work for implementing the programme in selelected districts has been taken up by all the remaining States. From the Kharif season of 1962, the Package Programme is being launched in the field in Mandya (Mysore), Surat (Gujarat), Sambalpur (Orissa), Palghat and Alleppey (Kerala). The districts of Burdwan (West Bengal), Bhandara (Maharashtra) and six blocks in Jammu and Kashmir are expected to start the field operations by Rabi 1962-63. It will take some more time for Cachar (Assam) to year up and strengthen its co-operative structure before implementing the programme. A similar programme is also proposed to be implemented in the Mandi district of Himachal Pradesh with the assistance of the Federal Republic of Germany. An agreement has already been signed under which help will be given to crop and fodder production, horticulture, poultry farming and animal husbandry.

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PURE SEED FOR FARMERS

Case for State Regulation

LET US LEARN FROM BRITISH EXAMPLE

M. K. Ramamurthi

A TEAM of the Committe on Plan Projects (C.O.P.P.) has made an expert review of seed multiplication and distribution schemes in the States and frankly dwelt on the limited progress made and the need to extend the supply of improved seed for raising agricultural output.

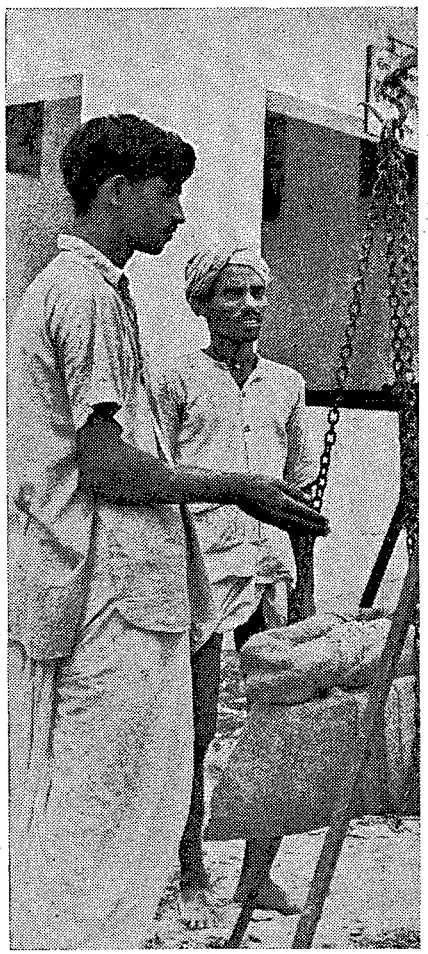
The use of certified and field-approved seed is an integral part of any programme for progress, and plant breeding through research must be hence reinforecd by results in the field. The Royal Commission on Indian Agriculture dwelt on the scope for rapidly extending the cultivation of improved varieties of crops in British India. The report expressed the view that co-operative agency should be utilised to distribute better seed to ryots because there are no seed merchants in the sense in which the term is understood in European countries. The report urged that the selection and distribution of pure seed should be controlled by the Government Departments of Agriculture in relation to local conditions and any increase in the number of seed farms be postulated.

The reports of the Plan project teams echo the views of the Linlithgow Commission of 1928 and it is possible to declare that advocacy of a special wing of the agricultural department to deal with agents in the field engaged in the propagation of better seed must be linked with what the Commission then said on the subject after the notice taken of what had been achieved in respect of Cambodia Cotton.

British Legislation

The progress of British agriculture is not due so much to protection through subsidies or price support as the deliberate exclusion of inferior seed and the concentration on pure seed, even if it has to be imported.

The use of machinery or fertiliser is not so important as the application of the Seeds Act in the interest of better farming including the correct use of grassland under specified types of herbage. The situation in India where grains predominate may be distinguished but a reference to two important Committees (which reported in 1957 and 1960 on the transactions in seeds) and the protection of the trade may be justified because the results of conscious regulation of the trade in seeds are made clear in the first report (Cmd. 300 of 1957). It may be noted that farmers in Britain asked for strict control and desired a warranty



from sellers in respect of the seed. In Britain the law, enforced since 1920 after experience during an emergency, imposes on the seller of seed an obligation to disclose the percentage of purity and prospective germination. The object is the protection of the buyer, usually a farmer, against negligence or fraud; to indicate origin and to limit the sale of inferior seed is another aim.

The U.K. Committee, which included Sir Paul Benthall (well known in Calcutta) as an independent member affirmed that the regulation of the trade in seeds was a means of technical education. The Seeds Act and subsequent regulations had promoted confidence between the seedsmen and farmers. About 60 different types of seeds are covered by regulations which insist on a purity test for the elimination of weed seeds. The dressing of seed by powders to check diseases and pests is now well established.

Stress on Quality

The seed certification schemes in the U.K. rest not only on the work of the agricultural stations supported by the Government but on the acceptance of responsibility by the distributors to the ultimate users. There is thus no risk at all for the farmer, if certified, field-approved seed is taken. It is now recognised that what has been done in regard to commercial crops like cotton and sugarcane by the widest possible use of improved seeds must be soon extended to food crops, especially millets grown by the small or poorer cultivators.

The place held by better seeds in any scheme of agricultural practice improved by stages may justify the payment of a premium for good seeds breeding true. And the common ideal hereafter may be fewer varieties of paddy with due regard to regional variations in climate.

The issue whether the plant-breeder should be allowed to make an extra charge for clean, high-class seed engaged the attention of the U.K. Committee which reported in 1960 on the contribution made by private parties to national agricultural improvement. Though the U.K. regularly imports foreign seeds suited to British soil and climatic conditions, the whole object had been to secure widest acceptance of pure, clean seeds conferring something like a patent on plant breeders. The licensing system permitting farmers to try high-class seeds implies payment to supplier of seed. And in India seed farms run by the State and working through Panchayats or rural reconstruction guides (Gram Sahayaks) as in the Block Development areas in Madras will be perhaps justified in charging extra for giving full measure from proper storage depots. In India there is today no specific conflict of interest with the private sector and the whole object of State farms now is to enlist selected farmers as registered growers whose output

Plan Quiz

1. Fill in the blanks:
   (A) India produces about..... lb. of goat hair every year.

   (B) The annual export of goat hair is worth about Rs.....

2. (A) The number of post offices opened during the Second Plan period was: (a) 20,000, (b) 25,430, (c) 22,231.

   (B) At the close of the Second Plan, the total number of post offices in the country was: (a) 60,000, (b) 85,000, (c) 77,000.

   (C) The number of post offices opened during 1961-62 was: (a) 2,530, (b) 6,230, (c) 3,700.

3. How many women were taking university education in 1960-61?

   What proportion did they form of the total enrolment?

4. What are the features of the Koyali refinery project?

(Answers on page 7)

can supplement that made available by State-owned seed farms whose operating results may improve if larger and steadier offtake of selected seed is ensured by the administrative improvements envisaged by the C.O.P.P. team.

The position as to the results of seed improvements in the widest sense embracing all crops may be examined also by reference to a recent official British publication which says that by 1959-60 Britain was producing two-thirds more food than before the War because the yields under wheat, barley and oats had gone up by 30 to 40 per cent. This followed the seed crop inspection and seed certification scheme, meant to ensure freedom from disease and to raise yields by the highest rate of germination.

While the seed trade in Britain is a seasonal one, its dependence on outside suppliers does not really hamper its effectiveness as an apt agent of agricultural advance. Exports of seeds are small, and high and reliable quality is ensured for the home farmer by the technical staff associated with the trade. Further, large retailers maintain testing grounds for the seeds handled. As in the case of livestock, pedigree is certified in the case of seed also by the authorities and specialisation, as in the case of raising seed potato in Ulster, ensures healthy and vigorous crops. Less of a compulsory legal code today and more of an instrument of agricultural education, the regulation of the seed trade in U.K. is generally held up as a model.

Priority must be given

The Planning Commission in India has not envisaged the adoption of legal measures and safeguards to control the use of sub-standard seeds, but the C.O.P.P. team found from sampling experiments that the increase in outturn attributable to improved strains of paddy in Madras was as much as 12 per cent and many of the improved varieties responded to increased application of manure. If achievement fell short of target, the Team also discovered that in 1959-60, the paddy grower had come to accept improvement in seed as a coefficient of progressive farming and in 40 per cent of the Madras acreage under rice the better seed was already in use.

The value of State seed farms managed, if possible, by retired officials of the agricultural department is confirmed by the Project team's conclusions and recommendations. The table of priority has been set out mainly in relation to the needs of small cultivators who cannot reckon on irrigation facilities. Millets are assigned a higher priority than groundnuts. The storage godown equipment must include mechanical winnowing appliance. Propaganda among ryots can be left to the large number of agricultural officers doing extension work. *But whole villages should be induced to go in for better clean seeds, so that neighbouring villages would be ready to copy their example.*

The Third Plan document has made only a brief reference to seed multiplication and distribution. But progress on the lines suggested lately by the Programme Evaluation Organisation is advocated along with the maintenance of a seed store to serve every development block. These suggestions are fully endorsed by the C.O.P.P. team though no reference to British farming under the conditions of close State regulation of the seed trade can be found. There is, however, the consolation that what is certainly good for Britain is good for India also. And upgrading of seed supply means that the individual farmer need not save a part of his crop for seed but can turn confidently to a store supplied by a State seed farm for clean, healthy seeds in order to secure a higher return. In any case, incentives in the new agricultural order ought to include seed farms worked with a will and worked well.

Answers to Quiz

1. (A) Annual production—13.5 million lb.

   (B) Annual earnings from export —Rs. 7 million by exporting about 7 million lb.

2. (A) (c) 22,231 against the target of 22,000.

   (B) (c) 77,000 approximately.

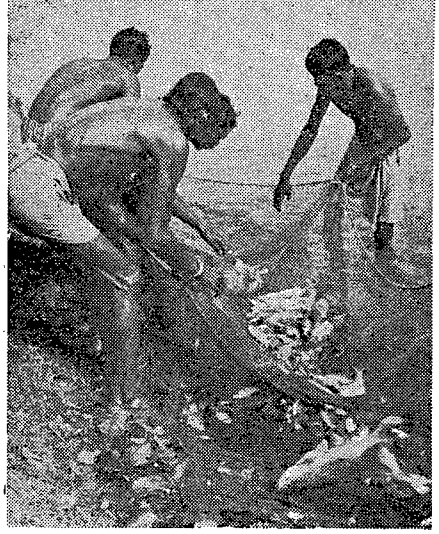
   (C) (b) About 6,230.

3. In 1960-61, there were 1.72 lakh women students in the Indian universities, as against 1.06 lakh in 1956-57. This worked out to 17.2 per cent of the total enrolment of 9.99 lakh students in the universities.

   During the five years of the Second Plan, the number of men students increased by 12.5 per cent and that of women students by 16.2 per cent.

4. The oil refinery at Koyali near Baroda in Gujarat is to be built in two stages, each stage putting up a capacity of one million tons. The first stage is expected to be completed by the end of 1964 and the second about 9 months later. A number of units of the refinery will be designed in India.

   The refinery will be set up with Soviet collaboration and an agreement for preparing the project report was signed with 'Tjazhpromexport', a Soviet organisation, in New Delhi on February 12.



Success Story

ELECTRICITY FROM FISH !

Physics students know of the experiment with frog's legs to demonstrate the presence of an electric current. But the story of the Gram Panchayat of Balod in Madhya Pradesh is somewhat different. What Balod has done is to stock some tanks in the village with fish. The fish have had a good market. With the help of the proceeds, the Panchayat has undertaken a whole series of services, including the electrification of the village.

It started like this: The C. D. Block staff stocked 20,000 fish in a pond. This yielded more than Rs 2,000 soon after. The Panchayat decided to take over ten tanks and do the same. This year's income from the sale of fish is estimated at Rs 50,000.

With additional revenue, the Panchayat's finances have become sound and stable. Realisation of house tax and other levies has also gone up. This steady rise in income (from Rs 70 in 1957-58 to Rs 19,500 last year) has emboldened the Panchayat to undertake development works. A godown has been built. Six drinking water wells have been renovated. New culverts have been constructed. A Panchayat Bhavan and a Bal Mandir have come up. Work is in progress on a tubewell. 'Pucca' drains are being laid out for the entire village. More than 70 street lights have been put up. Thirty per cent of Balod's 1,155 houses have been electrified.

Much of the initiative has come from the Sarpanch, Haldhar Nath Yogi, who is in his early forties. But in fact everyone of the villagers can claim a share of the credit for the dynamic progress that the village of 6,000 people is making.

YOJANA

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

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Editorial

CROWD CONTAINERS

THERE are some 1,400 cities in the world with populations of more than 100,000. A third of them, Dr. A. N. Khosla of the Planning Commission recently pointed out, are in Asia. Asia has more cities than Europe and North America put together.

Is this a matter for pride? Should we not, on the contrary, feel disquiet at the haphazard urbanisation of Asia? The combination of large numbers and low social investment (because the Asian countries are poor countries) has led to crowded houses, slums, tensions bursting in violence, delinquency and proneness to epidemics. But can we check urbanisation? Especially when our aim is to create technological societies?

Cities have had their critics, the most eloquent being Thoreau, Ruskin, Nietzsche and Mahatma Gandhi. These remarkable men had their reasons. Many smaller people tend, more facilely, to idealise the village and condemn urban life, forgetting that the very word "civilisation" arises from "city". As Lewis Mumford puts it, "the chief function of the city is to convert power into form, energy into culture, dead matter into the living symbols of art, biological reproduction into social activity". The idea of government and of society was evolved in the ancient cities of Mesopotamia, Egypt and the Indus Valley which, through disciplined work groups, controlled floods, stored water and remodelled the landscape. They also created an internal fabric of order and justice. On the debit side, however, the cities contributed "war, slavery, vocational over-specialisation and an orientation towards death".

In the new cities of Asia, growing as fast as tumours, this death-orientation is pronounced. One has only to read Dr. S. N. Sen's "City of Calcutta" to know what happens when the population of a city grows much faster than its houses, hospitals, schools, parks, transport, drainage and water supply.

Sociologists and architects have spent much thought on how the cities of our age should be built and organised. But lack of money and the force of set ways condemn us to helplessness. An article in *Yojana* some time ago spoke of how, even if we had many times the money we require for all the Third Plan projects, we would still not be able to house all our people decently. Nor should we think that housing alone is the answer to all our social evils. Man lives in both home and the world. He lives as much in the school and the temple, the meeting-hall and the market-place as in his house. That is why housing nowadays is not the concern of the engineer and the mason alone. House-building is part of building a community, a city, a region. In our own country, despite dazzling experiments and beginnings in modern house-building and town-planning, we do not know enough about the psychological and economic problems of housing and urban life. We have had ancient cities—Ayodhya, Mathura, Hardwar, Kanchipuram, Ujjain, Dwarka, Kashi, Prayag, Madurai, Puri, Patali-putra, Sravasti. The noble Rajagriha was 25 miles in perimeter and Takshashila was built to the *Arthashastra's* specifications. Earlier we had Mohenjo-Daro and Harappa. Even they had their problems. We may be proud of Harappa and its thoroughness, but if we are to believe Professor Stuart Piggott, life there was dismally monotonous and ruthless: no exuberance, no art, no faith, but a dead level of mercantile mediocrity. And Harappa even had 'coolie lines'.

In our age of technology we cannot let cities be mere crowd-containers and space-eaters. And we cannot also perpetuate the distance between city and village. As Dr. Khosla said, speaking to engineers and housing experts, the only corrective to the frightening growth of cities is to disperse more of industry in the rural areas and to make the villages themselves attractive by providing them with modern amenities such as electricity, water supply, roads, transport and marketing.

SOAP AND GLASS, SWEETS AND BISCUITS

WASHING, looking through and munching. Queer combination, you might say. But soap, glass and biscuits are demanded in larger quantities as we make progress. All of them are common consumer goods, although glass has in addition a wide range of industrial uses.

In 1960-61 we were using about 3,70,000 tons of soap. The Third Plan aims at increasing the production to 5,00,000 tons by 1965-66.

There are now 91 organised units manufacturing soaps in the country, besides many smaller and cottage units. Nearly a third of the organised units are in Maharashtra. West Bengal is second with 21 units.

The soap manufactured in the cottage sector is generally not up to the same mark as that produced by the large factories. The Development Wing of the Commerce and Industry Ministry thinks that 2,30,000 tons of soap are produced in the organised sector. This would really be equivalent to about 1,60,000 tons of factory-made soap of average strength.

Imports of soap, except some medicinal soaps, are virtually banned. Even these special soaps are soon to be manufactured in the country.

The raw materials that go into the production of soap are vegetable oils and tallow (including rosin), caustic soda, sodium silicate and perfumery. The requirements of oils and fats to reach the production target of 5,00,000 tons of soap by the end of the Third Plan have been placed at about 2,30,000 tons. The oils used are mainly coconut oil, palm oil, groundnut oil, hydrogenated vegetable oil and Mahua oil. Coconut oil is expensive, and is in great demand for use in the kitchen. It has been recommended, therefore, that the use of coconut oil should be considerably reduced in the total requirements of oils for soap manufacture.

THE highlights of the development of the glass industry during the Third Plan are the setting up of a public sector optical glass plant at Durgapur with Russian aid, the establishment of 30 new glass factories and the expansion of capacity in 18 out of the 97 existing ones.

Completion of all these schemes will result in increasing the production of glass from 2,25,000 tons in 1960-61 to 4,40,000 tons in 1965-66.

The glass factories are making bottles and vials, tableware, sheet glass including plate glass, lampware, scientific glassware, thermos flasks, shells for lamps and miscellaneous glassware.

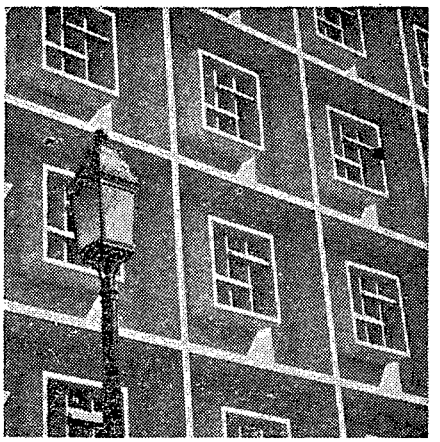
The 97 factories in the country are distributed as follows: Uttar Pradesh 28, West Bengal 24, Maharashtra 22, Madras 6, Bihar 4, Gujarat, Orissa, Punjab and Delhi two each, Rajasthan, Kerala, Andhra Pradesh, Madhya Pradesh and Mysore one each. Several new lines of production were taken up during Second Plan such as coloured glass sheets, glass wool and fibre glass, glass building blocks, glass syringes, synthetic stones and glass chatons. Imports have decreased from Rs 171 lakh in 1956 to Rs 120 lakh in 1960.

A pilot project was taken up in the Central Glass and Ceramic Research Institute, Calcutta, to experiment with the production of optical glass. This having shown good results, the Institute will start the manufacture

of optical glass on a commercial scale in the Third Plan. The project, which will be aided by Russia, will cost about Rs 2.6 crore, of which foreign exchange will amount to Rs 2 crore.

THE country produces all her requirements of biscuits and confectionery. Import of these items was banned long ago. In the organised sector there are 40 factories capable of producing about 30,000 tons of biscuits a year. Their production in 1960 was 24,000 tons. This is expected to go up to 40,000 tons by 1966. By then we shall also be exporting 1,000 tons.

As for confectionery, the organised sector consists of 44 factories with a production capacity of 50,000 tons. The production, however, has only been about 17,000 tons a year. By 1966, it is expected to go up to 25,000 tons. A small export market has already been developed in the Middle East, East Asian and African countries. It is hoped the value of these exports will go up.



THE FORTNIGHT IN YOJANA BHAVAN

Up to May 31, 1962

THE Planning Commission held a series of discussions between May 17 and 31 with many of the Union Ministries. The purpose of these discussions was to seek the Ministries' counsel on the measures and policies required for speeding up the implementation of the Third Plan, removing possible bottlenecks and ensuring closer co-ordination among related fields.

The Ministries with which discussions have already taken place are: Steel and Heavy Industries; Commerce and Industry; Railways; Irrigation and Power; Education; Works, Housing and Supply; and Health.

Similar discussions are to take place at a later date with the Ministries of Transport and Communications, Food and Agriculture, Mines and Fuel, Community Development, Information and Broadcasting, and Scientific Research and Cultural Affairs.

MEANWHILE the work on the drawing of a long-term plan, in particular the Fourth Five Year Plan, has moved into a new stage.

It has been decided to set up a number of planning groups which will deal with steel, coal, power, transport, machine-building, chemicals and fertilisers and technical education.

These planning groups will consist of the small units which have already been at work on these subjects in the Planning Commission and in the concerned Ministries, besides experts outside the Government.

14 NEW FERTILISER PLANTS

THE Third Plan expects to increase the production of nitrogenous fertilisers to one million tons. To achieve this, 14 new fertiliser factories are being established, and the capacity of the existing ones is to be increased. The details are given in the "Programme of Industrial Development 1961-66" to be published soon by the Planning Commission.

Of the 14 new fertiliser projects, four will be in the public sector, and the other ten mainly in the private sector. In a few cases, the State Governments will collaborate.

When these projects are completed, there will be at least one fertiliser factory in every State in the country except Jammu and Kashmir. But even that State is actively considering proposals to set up a factory.

The new projects in the public sector are:

The Trombay Fertiliser Project designed to produce 16,000 tons. It will use the gases and naphtha, produced by the Trombay oil refinery. Half of the available ammonia will be converted into urea by partial re-cycle process; the other half is to be used for the manufacture of nitro phosphates.

The Assam Fertiliser Factory: Located in Namrup it will produce 325,000 tons of fertilisers using the "associated gas" produced from the Nahorkatia oilfields.

The Gorakhpur Fertiliser Factory: It will produce 80,000 tons by using petroleum naphtha from the Barauni refinery in Bihar, only 200 miles away.

The exact place for locating the fourth public sector project has not yet been finalised. The project, the provision for which is included in the Third Plan, will produce 80,000 tons of nitrogenous fertilisers.

The capacity of the Fertilisers and Chemicals, Travancore (FACT) is to be stepped up by 30,000 tons. The by-products of the steel plants will also yield some fertilisers.

Of the ten new factories in the private sector, Andhra Pradesh and Madras will have two each, and Gujarat, Mysore, Madhya Pradesh, Rajasthan, Maharashtra and West Bengal will have one each.

The two Andhra Pradesh factories are to be located at Kothagudam and Visakhapatnam.

The two factories in Madras State will be at Madras and Tuticorin. The Madhya Pradesh factory is likely to be located at Itarsi or any other suitable location in the State. The Rajasthan factory, however, will be based on gypsum, which is found in the State in good quantities. The West Bengal factory will be located at Durgapur and will be operated by the private sector in partnership with the State Government.

In Gujarat, the proposed factory will have a capacity of 96,000 tons and will be run by the private sector in collaboration with the State Government.

The factory allotted to Mysore State is expected to be located at Mangalore, and the factory for Maharashtra will be in the Koyna area.

The Third Plan provision for putting through the fertiliser programme is Rs 230 crore, with a foreign exchange component of Rs 105 crore.

New Careers for Women

Mrs. Baxi giving instructions to Ajgar Singh, a carpenter in the National Museum.

Mrs. KRISHNA DAS GUPTA

IT is possible to argue that the biggest beneficiaries of Indian Independence are the women of India. Through participation in the freedom movement they exorcised the hold of centuries of social degradation. With the achievement of Independence, nothing seems to be beyond the range of possibility for them. The pace of change in social attitudes is unbelievably rapid. Whereas even a decade or so ago, a daughter was regarded as decidedly a liability for the family, it is common experience now for parents to give the same rights due to the son and, in turn, for grown-up daughters to assume responsibilities that were expected only of sons.

While women in India have long been in the forefront of politics, and have notably taken to medicine, teaching, nursing, they are now out to capture new fields. Engineering, architecture and town planning, law, aviation, nuclear physics, all believed to be man's strongholds, have now begun to be invaded by women. To be sure there are difficulties even now to be faced by women seeking unusual careers. But as more of them come forward to demand admission to these professions they will no longer be treated as intruders and will be accepted ungrudgingly.

As illustrative of the spirit of new India let me write about three women who have chosen careers which even now are somewhat uncommon for women. I met all three of them and they were good enough to talk to me about their hopes and problems.

AN ARCHITECT

FIRST of all Mrs. Smita J. Baxi, who is an architect. She looks after the display in the National Museum. Her designation is Keeper, Display, and the Museum has three other keepers, all men, who are in charge of archaeology, anthropology and art.

I met Mrs. Baxi at her home in Dev Nagar, New Delhi—a quiet, warm, unpretentious, typically Indian home. Mrs. Baxi lives there with her two children and her mother and in-laws—her husband being away in the United States for higher studies.

Mrs. Baxi received me with a sweetness and informality which people do not always associate with successful career women. She told me about her education—a five-year course in architecture at Bombay's J.J. School of Arts. Later she did her post-graduate studies in Holland, there being no post-graduate course in architecture in India.

To afford to go to Europe, did she come from a well-off family? Not really. Smita was a fatherless child. Her mother had to take up job to support her and her sister. So Smita was keen to start earning a living as soon as possible. Her mother wanted her to be a doctor. But medicine was an expensive and time-consuming thing. There was a neighbour who was studying architecture, and Smita decided to take up this profession. Even in progressive Bombay it was unusual for a girl to study architecture. There had been only one other girl candidate in this subject in the J.J. School.

"Is there anything in architecture which makes it more suitable for men than women?" I asked. "Nonsense!" Mrs. Baxi exploded. On the contrary, according to her, women can design a house better than a man does. And as for interiors, women had a better understanding of what were needed in a home. And they had a natural aptitude for decoration besides a natural appreciation of function.

Smita had herself seen how, in Germany and Holland, women, whether in government or private jobs, were doing first-class work as architects. In India, however, the myth of architecture being a man's profession still prevailed. Architectural firms were still reluctant to employ women architects and contractors had a holy horror of giving assignments to them.

So a woman architect had either to open a private office, if she has resources, or fall back on a government job.

Smita Baxi likes her work in the National Museum, although it does not give scope for all her skills. As Keeper, Display, she has to design the right kind of furniture that the exhibits require, and has to think of lighting, interior decoration, etc., But she does not

have to do either the planning or actual building of structures—two important facets of architecture. But since adjustment to realities is the essence of living, and is particularly true of architecture, Mrs. Baxi manages to derive the best contentment from her work.

Asked about the problem of house-keeping, she said with a smile that between her work and home, she had her hands more than full. She was able to manage her children, a boy of five and a girl in the cradle, only because her mother helped her out.

A LAWYER

I FOUND Mrs. Eluri Udayarathnam, the only practising woman advocate of the Supreme Court, a person of remarkable courtesy, self-possession, and dignity. I met her in the room of the Bar Association. Learning of the purpose of my visit, she took me downstairs, to her chamber, so that we could have a quiet talk.

Law is in Mrs. Udayarathnam's blood. Her father was a lawyer and then a judge in the South. Law was more than a profession to him; it was almost his religion. He did not, however, want his daughter to be a lawyer. But the example of the father was such that she felt compelled to choose law. Two of her sisters have done likewise. One is enrolled in the Andhra High Court, and the other in Madras.

Mrs. Udayarathnam began practising at the Calcutta High Court in 1951, getting her degree in Law from Lucknow. Completing seven years there she joined the Supreme Court in 1959.

Being a woman in the legal profession had its advantages, as well as disadvantages, Mrs. Udayarathnam said. There was still a prejudice. Women were regarded as being less learned than men—what a fallacy! Then they were supposed to be browbeaten easily, despite the legend of Portia. Seniors were reluctant to take women as juniors. Their conservatism did not allow them to be reconciled with the idea of a woman putting on the gown.

How did she herself feel about her work? Fascinating, said Mrs. Udayarathnam. The more the challenges the more interesting the work became. And a lawyer, whether a woman or a man, can make a reputation only by hard and devoted work.

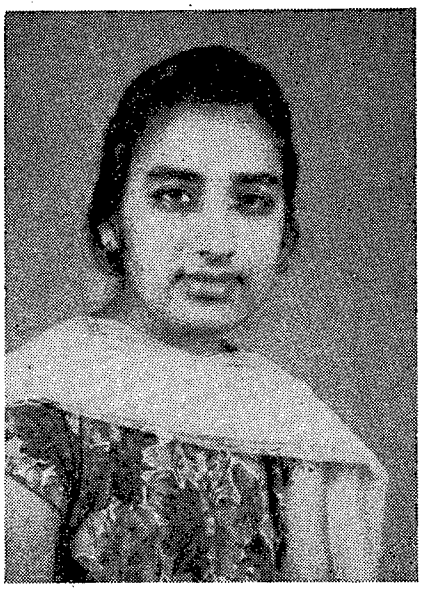
In the last ten years or more, Mrs. Udayarathnam has handled a variety of cases, including income-tax cases, and now believes that the legal profession is ideally suited to women.

"Who are your clients mostly, men or women?" I asked.

Mrs. Udayarathnam pointed out how in India the women, as such, rarely were litigants. Foreign women, if they had to go to a court, normally consulted a woman lawyer. In Calcutta she herself had a few such clients. With the recent reforms in Hindu Law Indian women had earned more and more rights. To assert their rights, at least in some cases, they would have to have greater recourse to litigation. Women lawyers would certainly be in greater demand in the near future.

Knowing how the mornings and evenings of most lawyers are mortgaged to their clients and their case-books, a question worried me. How did Mrs. Udayarathnam reconcile her work and her home life?

She said she made it a point not to see any client in her home. The chamber is the place for consultation. "I must have some peace at home," she said with some firmness. "As it is, it is quite hard work, looking after the home and the profession as well." She has one daughter, who is doing her B.A.



AND A FLYER

SURINDER Gill is a charming young woman—hardly out of her teens. She is so shy and restrained in her dress and make-up that one is rather taken aback to learn that she holds the pilot's certificate from the Aero Club of India. Miss Gill actually does gliding: after the B.A. Examination she intends to take to flying as well.

She joined the Air Rangers in her college and through it she got deeply interested in flying and gliding. She herself joined the gliding club and started gliding in 1958. Since then she has come to hold the 'A', 'B' and 'C' Certificates for gliding and also the passenger-carrying certificate. She was given the silver 'C' Certificate for gaining more than 5,000 ft. in height. For this feat, she won a prize at the International Air-Rally. The highlight in her gliding career so far has been the receiving of the first prize, a cut from Mr. Nehru, in the competition in 1960 for spot-landing. She topped all the candidates.

I asked Miss Gill what her other interests were. Movies? Other forms of entertainment? "No," she said. I could well believe her, seeing the passion with which she talked about flying. All her leisure time is spent at the gliding club, which is almost next door to her house in Chanakyapuri, New Delhi.

What about the prospects? She sounded less certain. Civil aviation gave a woman no chance here, she said. All she could hope to become was a commercial pilot.

It has not all been smooth sailing for Miss Gill. The risk inherent in flying makes her parents concerned about her. "What is the quality most valuable in a flyer?", I asked. "A keen mind, and scientific precision," she said, and invited me to share a flight with her in her glider.

As I left her I didn't want to spoil her morning by asking her the conventional question of what her thoughts on marriage were. "Let her soar in the sky", I told myself. "Good that our girls have come to the take-off stage."

Our Country For Everyone

THE only wall decoration that the office of *Yojana* has is a wall map of India. It catches the attention of almost everyone who comes to see us. It is a beautifully printed map, five and a half feet by five feet, the work of the able men of the Survey of India. We know of some visitors who break off in the middle of a sentence and walk across to the map.

Maps are always fascinating things. A good map of one's own country never fails to quicken one's heart-beat. Seeing it is like hearing the national anthem or catching a glimpse of the flag fluttering from a proud mast-head.

"Where can one get this map?" I have often been asked.

"Try the Government bookshop on Janpath."

"I went there once, but drew a blank. This sort of map should be on sale in every bookshop."

I have had many conversations like these. And I was reminded of them when, wandering round Connaught Place bookshops last fortnight, I saw a title which read "School Atlas"—blue letters on a chocolate-brown surface. I picked up the book, was excited by it. It is printed beautifully. The colours and the lettering and the layout are all of the very first order.

At the outset there are plates illustrating geographical terms and methods. Next come maps of the world and of the continents—both political and physical. Then, from page 20 to page 46, are maps of India. The first shows the physical features. The second depicts the different States and Union Territories in the various colours of the rainbow. (An added attraction, it also shows the new dams and reservoirs of free India—Govind Sagar, Hirakud, Nagarjuna Sagar, Tungabhadra and Gandhi Sagar.) After that follow maps showing the roads and the air routes, and the railways and sea routes. Soils, population, forests and irrigated areas, archaeology and tourism, and rainfall are the subjects of five other maps. Then there are 46 smaller maps—four to a page—which give temperatures, geology and minerals, distribution of individual crops and the location of major and minor industries.

What follows is an even more valuable section—detailed maps of the different regions and States (incorporating the latest changes of name and spelling).

An excellent idea on the part of those who planned the atlas is to devote three pages to the maps of our neighbouring countries—Ceylon, Nepal, Burma, China, Afghanistan and Pakistan. This is followed up by another feature deserving congratulations—a two-page spread which is called "The Great Himalaya" showing the entire region from the Salt Ranges in West Pakistan to the Trijunction (point where India, China and Burma meet) in the east. Here, for all Indians to see, is where we exactly stand when attempts are being made to nibble at our territory.

THIS is the kind of map that should be in every school—and every family. The Survey of India's motto is "Asetu Himachalam", and the atlas should be found in every place between the sea in the south and the mighty mountains in the north.

Most people keep a book down where the narrative ends, but as a professional I have a habit of peeping into all sorts of details in a book—like the copyright label, the imprint, the forme signatures printed on each new forme and so on. So, after running my eye down the excellent, ten-page index, I turned to the back cover. A small group of figures at the foot of the page caught my eye. I found the following words: Reg. No. 6814—HD '59—15,000'61.

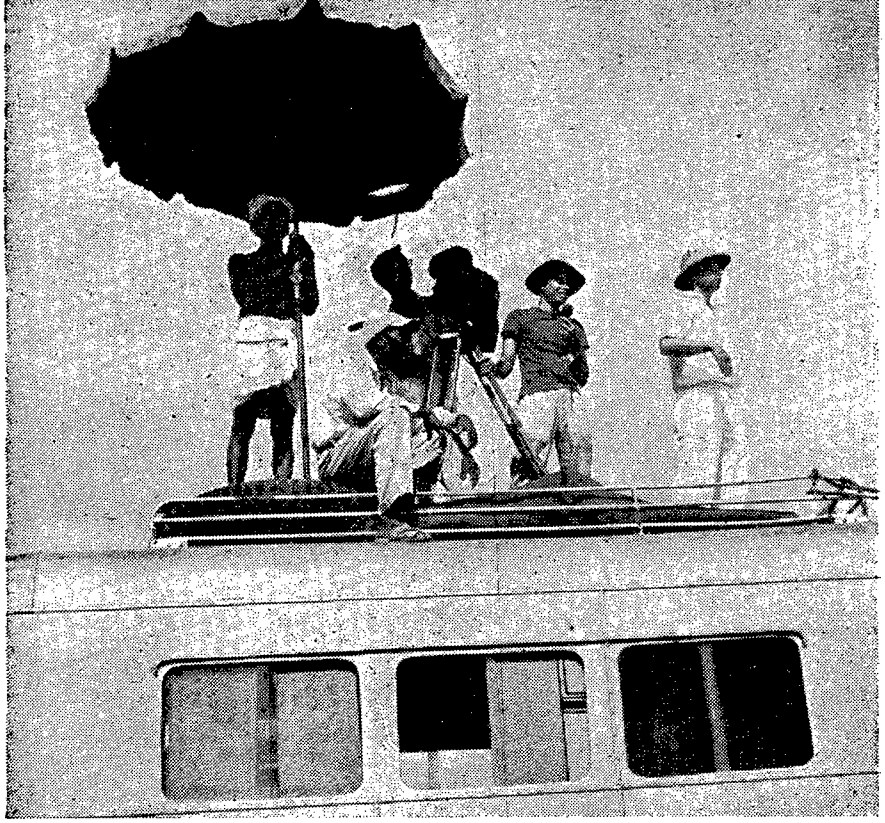
This came as a shock. It meant that only 15,000 copies of this very valuable atlas had been printed. Mind you, it is the first edition, very new—finalised in 1961 but probably put on sale very recently. On an impulse I telephoned someone who knows a good deal about publishing in India. "Have you seen the new atlas?" I asked him. He hadn't, and so I gave him the details: how neat it is, and what an excellent job the Survey of India has done. Then I asked: "How many copies do you think it can sell at Rs 5?"

"A lakh easily", he said. I too had thought so.

Here is something which our Government should think about. In text books and school material a sort of Gresham's Law operates. The bad drives out the good. And when the good product is not brought out in enough numbers, the bad product finds it even easier to flood the market. A good atlas has of late become unbuyable: some foreign atlases have rightly not been allowed to be sold in the country because they either show Kashmir as a "territory under dispute" or magnanimously give parts of Kashmir to Pakistan. The result is that all sorts of mushroom map-makers spring up, print sorry stuff and make money. The best way to end such a situation is to make available the right type of product in large numbers. Parents and teachers are waiting for this to happen.

This is only one part of the story. There is another. We talk of emotional integration. We say the people of one region should know more about the people of another. A sure way of achieving this is through the wise use of the song, the flag and the map. The young boy bending over and peering into a map travels in his imagination all over the country. If he is from Satara he hops to Simla. Each lad in his mind does what Sankaracharya did a thousand years ago physically—touch the four corners of the country. That will give him a feeling that all the land is his, all parts of it. He will bathe in all the rivers, climb all the hills, see the waterfalls, swim in all the beaches, roll in the meadows, wander in the forests, ride the elephants of Assam, frolic with the lions of Gir and pluck the flowers beside the Dal Lake. A good atlas is a present that boys treasure most, and intelligent elders know it. But if a mere 15,000 copies are brought out, a fine tool is wasted, and an opportunity is lost.

H.Y.S.



PEOPLE

Crew of a Films Division unit shooting a documentary

IN spite of a decade of planning, lack of plan-consciousness is widespread among our people. This fact underlines the need for more sustained efforts on the part of the mass communication media to convey to the people the importance of the Plans.

To evoke positive support for the Plans from everyone of our 438 million people is not an easy task considering the differences of language, creed, economic interest and level of literacy. Nevertheless, all our people have one thing in common: they want immediate results and they feel that there is a gap between promise and performance.

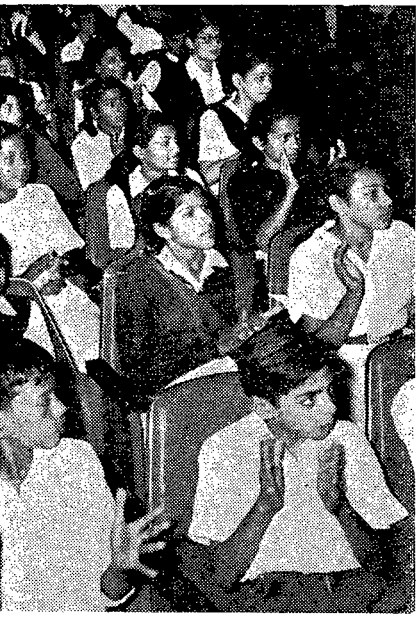
It would not be right to find fault with the people for their habit of grumbling; even though their scepticism places the Plans at a disadvantage. Rather, this should be taken as a challenge demanding a rational approach to publicity. A good deal of dissatisfaction can be traced to absence of information. The right sort of publicity is bound to remove it. Communication built on positive fact is bound to carry conviction and evoke enthusiasm. Such communication need not all be official. Non-official media, like the country's press and films, will probably be able to do this work even better than the Government, because they will arouse less consumer resistance. However, official publicity machinery, both Central and State, has a very important part to play. The Union Ministry of Information and Broadcasting, through its various divisions, carries the brunt of plan publicity. There is a Field Publicity Directorate with 14 regional offices and 76 field units, which hold meetings and arrange cinema shows. The Films Division produces several documentaries on the Plan and its projects. The Directorate of Advertising and Visual Publicity and the Publications Division bring out and distribute millions of posters and folders and lakhs of booklets and pamphlets in the various languages. All India Radio, besides regularly broadcasting features of Plan interest, also runs more than 2,000 radio farm forums.

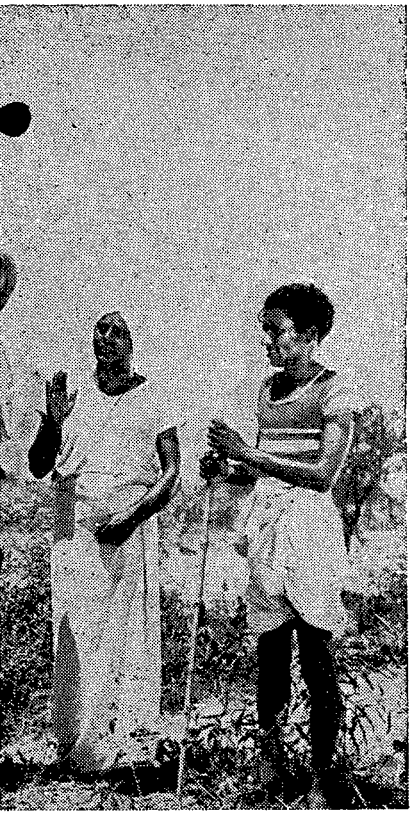
Dr. Rikhab Dass Jain

Statistically, Plan publicity work in the past ten years has been impressive. If the desired effect has not been achieved, it is not so much owing to any basic flaws in the approach as to the fact that no mass

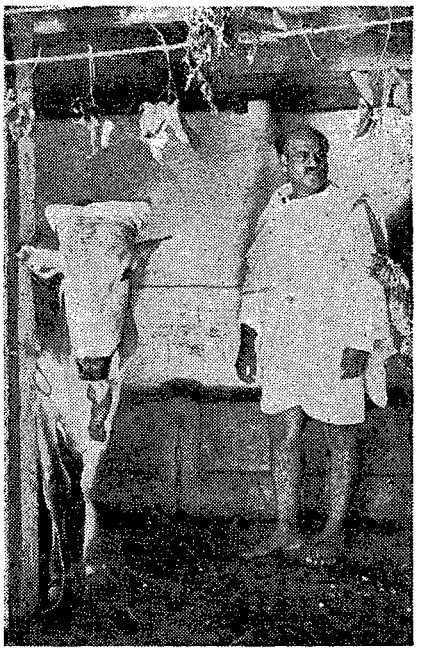
Top—Children enjoying a film specially Nallathu", a feature-type publicity the work of the Community Developm from

FILMS and Their Participation in the Plan through





for them. *Above*—A scene from "Oorukku Tamil made by the Films Division on vement. *Right Corner* : A village elder me film.



medium in our country can be still rightfully called a 'mass' medium. When only 23 per cent of the population is literate, when only four people out of a thousand have radios, it is only the cinema that can come somewhere near a 'mass' medium. But the pity is that the Indian cinema little realises this.

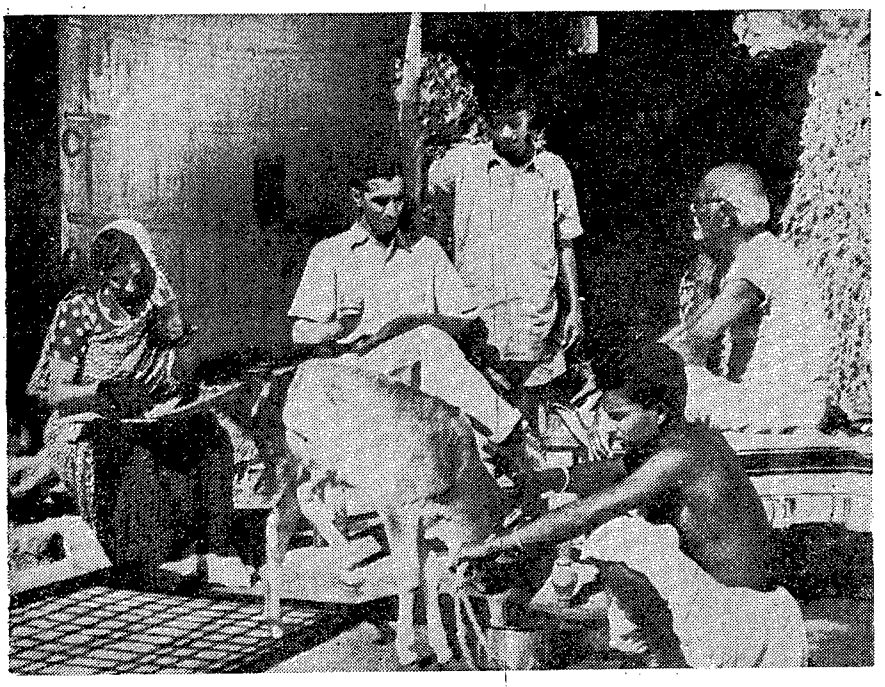
THE cinema in our country is, and has been since its birth, the most important form of public entertainment. This, however, does not diminish its potentiality as a powerful agency of mass education. Various factors call for the active participation of the film medium in stimulating and sustaining Plan-consciousness among the people. To state the most significant, (1) to most of our people 'seeing is believing'; films can project, demonstrate and interpret our progress; and (2) they draw people without special effort.

The Indian film industry has had its share of encouragement and help from Government out of the Five Year Plans in the shape of a Film Finance Corporation, a Film Institute, a Children's Film Society, a raw film manufacturing plant and so on. By implication it has a reciprocal duty to perform in heightening national self-awareness. This can be done without the least sacrifice of the artistic values in a film.

The art of cinematography is the mirror of our age. Like other arts, the cinema has a social function. No longer does any serious-minded thinker subscribe to the 60-year old shibboleth of art for art's sake. In our country, especially, films can claim to be taken seriously only if they are imbued with social awareness and committed to social change. Indeed some of our best films in the last forty years have espoused the cause of reform. Now, with the stress on economic and social improvement through self-help, films have to bring home to the individual the urgent need to be useful and self-reliant and to put forth his best.

There is no denying the common criticism that the generality of our films, like films in some other countries, are mainly escapist, lacking both in moral elevation and in artistic integrity. This is not to argue that there is no place at all for the feature film that does not entertain. However, there must be a fair balance between such films and films that turn our thought inwards. The trouble with many of our films is that they depict a non-existent, fanciful society utterly divorced from reality. There may be differences on whether the Government has the right or the duty to force the industry to become conscious of its obligations to society but opinion is near-unanimous that the Government should help in creating conditions in which better films can emerge.

One of the ways in which the Government is creating such a climate is through the institution of film awards. A gifted and conscientious film maker can now be sure that his work is going to be appreciated by the 'fit audience though few' even if it does not win box-office success. The film awards have already had a beneficent influence. The example of the Central Government is being followed by some State Governments also. Some time ago the Government of Maharashtra offered an award for the best film on the subject of untouchability. Many producers came out with films on this problem and a few of them also proved very popular at the box-



Scene from a documentary on the general election produced by the Films Division

office. There has been one film, in particular, showing how unity among the people can be fostered and how the energies of the masses can be channelled into national reconstruction programmes. But such attempts have not been many.

APART from the major social problems, there is need for specific problems to be tackled by films. I can name one film as an example of what I mean—'In Your Hands', produced under the auspices of the International Planned Parenthood Federation. It is a half-hour film dealing with family planning. It depicts graphically the difficulties and dangers of an over-large family of Bombay. Although this film has been shown successfully in many foreign countries, it has surprisingly not enjoyed wide exhibition in our own country despite the fact that we are one of the few countries to have adopted family planning as a national policy. The theme and treatment of the film constitute a lesson and a challenge to our film producers. A difficult subject has been tackled in all its aspects on the screen without giving any cause for the censors to object. More producers can certainly be attracted in this direction by sympathetic treatment and guidance.

A vast change has come over our rural people because of our projects and the Community Development programme. But this change is yet to find adequate expression in films. If only our producers go with open eyes and hearts into the countryside, they will come across many human and heroic stories in natural, picturesque settings. Numerous films can be produced which will be off the beaten track and rich in visual effect. There is no longer any justification for the synthetic stuff doled out by our film makers. A few courageous producers and directors should take the plunge. Their handiwork will have a profound impact on people's minds. They will herald the change from a psychology of indifference to a psychology of dedication.

Quotation Box

One is frequently assured by men who have no doubt of their own wisdom that old age should bring serenity and a larger vision in which seeming evils are viewed as means to ultimate good. I cannot accept such a view. Serenity, in the present world, can only be achieved through blindness or brutality.....Murderous humbug, such as would have shocked almost everyone when I was young, is now solemnly mouthed by eminent statesman.

—Bertrand Russell on his 90th birthday

If an artist were to give a realistic representation of the educational scene in India, he would probably portray examinations in the form of a huge giant gripping students, teachers, schools, colleges and universities in his hands and squeezing the life out of them.....All students now want to compete for the examinations for all-India services held by the U.P.S.C. and courses of studies for bachelor's and master's degrees are more and more being so modelled as to enable students to make suitable choice of compulsory and optional papers at the U.P.S.C. Examination. The U.P.S.C. is emerging as a kind of super-university imposing a uniformity which is quite antagonistic to the aims and objects of university work.

—Professor D. D. Karve writing in "The Times of India"

Rickshaw-pullers in Chandigarh will, it appears, be entitled to charge 25 nP above the fare for finding the way to a particular house; and the circumstances suggest that they will have earned it. House numbering there seems, indeed, even odder than elsewhere. An example cited was "9F/3C/7B", which, being interpreted, apparently means: "The ninth type of house designed by Mr Maxwell Fry, being number three in C Street of the B Segment of Sector 7". This puts even New Alipore or the New Delhi Defence Colony in the shade, which is saying a good deal.

—An editorial in "The Statesman".

The Defence Minister Krishna Menon said yesterday that "unemployment" was the rule rather than the exception in India. He said Ministers, officers and everybody else was under-employed. A Government servant on an average worked for about 2½ hours a day, he added.

—A report in "The Hindustan Times"

In New Delhi it is taken for granted that no file can move or a case disposed of unless somebody 'knows' somebody else in the department concerned. Industrial projects and business ventures cannot indefinitely wait in the queue; hence the stampede manoeuvres and subterfuges to get across to the top by hook or crook. Hence also the growth of the intricate and elaborate system of 'contact men' with bottom less expense account. Women, I am told, are doing extremely well in this new line, as they are said to be more efficient and effective in putting through a deal. This also explains the scramble for the services of retired government officials on the part of the private industrial houses.

—Mr D. R. Mankekar in "The Indian Express"

Poison Pedlars

EVERYBODY knows the story about the grocer and the sailor. The grocer, learning that the sailor's father and grandfather died at sea, said the sea must be a dangerous place.

"Where did your father and grandfather die?" the sailor asked.

"At home."

"Home must be a dangerous place then".

Home is, in fact, a dangerous place. The World Health Organisation's magazine some time ago ran a feature on the types of accidents that could —and do—take place at home. Little Michael, for example, might

want to examine broken glass, climb a ladder, taste the things in little blue bottles, try an electric plug, fondle a neighbour's dog, get into water, go too near the fire, open doors and boxes, get up trees. Not Michael alone but everyone at home is surrounded by danger. Grandma likes knitting by the fire. Grandpa might run on a mat and slip. The dog likes the table cloth. The cat likes the flex. Michael's little brother might do mountaineering in the drawing room. Then again, wet hands plus electric current. Telephone, stairs, new shoes and hurry.

The perils of home are not just these. A spokesman of the Consumers' Association of our country, which has its headquarters in Delhi, has just been telling the press how we are being cheated, poisoned and pushed towards death by unscrupulous traders. Probably in no country of the world do food adulterators have such a chance as in ours. Because of our income levels, we all look for things which are low-priced, and give little thought to quality. And the cheap things we buy turn out worse than cheap. The electric goods dealer gives us irons and stoves which are shockingly assembled. Thinking only of prices, we buy bad soap and get skin disease. The retailer gives us turmeric which has been mixed with lead chromate, a poison. Foul fat in *ghee*, stones in rice, tamarind-seed powder in coffee, chalk in tablets and water in phials of supposedly effective medicines.

What is the way out? Self-help of course. The Finance Minister told Parliament that there was great need for a powerful movement of consumer co-operatives. Its benefits will be several. We'll be able to get clean stuff at correct prices. But the first thing is to shake off what could be called 'consumer inertia'. We must become a little more choosy. Let us remember that in respect of household goods at least there are no scarcities. It is time we picked up the habits of a buyers' market. We must begin looking for the I.S.I. seal. The Indian Standards Institution, within its limitations of staff, has done a fine job of fixing standards. It is right to demand that the Government enforce the standards. But where does the real sanction rest? In all of us, in our ability to say no to a shoddy product. If we don't insist on good things, why will municipalities bother to inspect restaurant kitchens, barbers' shops, wayside eating stalls and vegetable markets, and why will Government bother to catch and quarter the food adulterators and poison pedlars?

Moscow Book-Hold

ONE of the world's great libraries, the Lenin State Library, completes a hundred years in July.

The Library has 22 million books (according to the Soviet News agency *Tass*) besides rare manuscripts, magazines and newspapers. It started with a nucleus of 100,000 books collected by the 19th-century Tsarist statesman Nikolai Rumyantsev. By the time of the Revolution of 1917 the collection had risen to 1.2 million books (roughly what our National Library now has). In 1924 it was named for Lenin, and it has been growing at a breath-taking rate since. Each year a million books are added, which need 14 kilometres' length of shelves. The library has 184,000 registered, permanent readers. Its 22 reading rooms are visited by 2,200 people every day.

Which are the other great libraries of the world?

The U.S. Library of Congress, founded in 1800, had in 1960 as many as 38,863,000 items, including 12 million books, 16 million manuscripts, 2.5 million maps, 2 million pieces of music and 3 million photographic negatives. The Bibliotheque Nationale, Paris, has more than 6 million books, 5 million engravings and prints and 400,000 maps. The British Museum Library, the New York Public Library and the library of Harvard University each have more than 6 million books. And no-one really knows how large is another famous and fascinating library, that of the Vatican.

IGNORAMAN

Wants to Know

Why the Belgaum and Krishna Water Disputes Can't be Handed over to the State Trading Organisation !

Changes in the Direction of Budget

By ARUN CHANDRA GUHA, M.P.

Economic Policies & Socialist Goal

OUR system of public finance has three features of special interest—(1) the evolution from a colonial economy into a free, democratic economy; (2) the transformation of a budget which was almost entirely centralised until 1921 into a federal budget; and (3) its interlinking with democratic planning that aims at rapid development.

When, in 1947, India emerged from the bondage of colonialism, she immediately found herself saddled with the responsibilities of a big, modern power. It would not be wrong to say that India today stands on a separate footing from all the other recently liberated Asian and African countries. This task of being a great, modern State causes a heavy strain. If, despite this burden, India has been able to build up her industries as also her welfare services, and if her efforts in this direction have attracted the notice of students of politics and economics all over the world, we may indeed take legitimate pride in the achievement.

The transformation of a unitary financial structure into a federal one was mentioned at the outset. It was only after the British Crown took over administration from East India Company in 1858 that some semblance of financial power was given to the provinces of British India. James Wilson, who might be called the first finance minister of India and who first introduced income-tax, gave the provinces a share of the revenue in 1859. Then, in 1877, Lord Mayo gave further financial powers to the provinces. But no further significant step in that direction was taken until the passing of the Reforms Act of 1919. After the inauguration of Mont-Ford Reforms, the Meston Award transferred some heads of finance to the provinces. It was only then that the provinces began to have considerable revenues of their own. Even that, however, was far from the financial autonomy which the provinces gained, despite the numerous restrictions, under the Constitution of India Act of 1935. The Niemeyer Award, which extended the scope of the financial resources of the provinces, was in force until the attainment of Independence.

After Independence, there have been four awards on the sharing of Centre-State finances—the Deshmukh Award and those of the three Finance Commissions of of 1952, 1957 and 1961. Each Finance Commission has recommended further financial devolution in favour of the States. The Third Finance Commission's recommendations have been accepted by the Government of India; and under its recommendations Rs. 35 crore more are to be given to the States. The States now have a sizable, statutory share in the income-tax and in the excise duties.

The gradual evolution of federal finance is thus an interesting subject. The Central budget now reflects the federal nature of our Constitution. It incorporates the over-all financial position of the country—including that of the States. Besides providing the sinews for the Central Government's activities it has also to see that the States have enough revenue to carry on their development programmes. This aspect is of great importance, as the welfare services which form a very significant component of development, belong to the sphere of the States, not of the Centre, except in the Union territories.

Change without Violence

THE third feature, the part played by the Central budget in the country's development through democratic planning, may now be examined. As has been stated in the Second Plan report, "the democratic system of planning eschews direct commandeering of resources". We do not expropriate anybody's property in India. We do not compel agricultural and industrial production to be surrendered to the State. We do not fix arbitrary prices for any commodity, irrespective of cost of production. We try to control the price of commodities through price policies openly arrived at—although not always very successfully. For marshalling of resources, we do not commandeer men, money or services. We try to achieve that through taxation, voluntary savings, popular collaboration and through the price mechanism. For effecting social justice, we do not liquidate any sector of the people; we have recourse to recognised fiscal and monetary measures. In this way the old order is being replaced by a new one gradually.

The achievement of rapid economic and industrial development is an obligation the Government owes to the people. We must judge the method of democratic planning we have adopted in the light of the fact that we are to achieve through it what the industrial revolution took nearly two centuries to accomplish in England. We all know how much the industrial revolution cost England in human suffering and misery. It was that suffering and misery that served as material for Karl Marx in writing his 'Das Capital'. The uprooted peasantry of England thronged the streets of London and other cities in destitution. In the language of Marx they were "free to sell their labour power". The agriculture of England had been completely ruined. But England could afford it all because of her vast colonial possessions.

Re-enactment of such an industrial revolution in India in our circumstances would have been economically disastrous and morally shocking. That is why we have opted for planned development. The first two Plans have been more or less successfully implemented. The national income has increased from Rs. 8,800 crore in

1950-51 to Rs. 12,700 crore in 1960-61 *at constant prices*. The per capita income has risen from Rs. 247.5 in 1950-51 to Rs. 292.05 in 1960-61 at constant prices. Agricultural and industrial production has also increased considerably. The Third Plan, aiming at taking the country nearer the self-generating stage, requires as much outlay and investment as the first two Plans together. Our progress has now to be quicker.

The Plan has been defined "as an attempt to improve upon the results that can be achieved under unregulated and unco-ordinated play of private decision". It involves certain restrictions and incentives, exertions and sacrifices. In the course of development, the existing social equilibrium (which is one name for stagnancy) is upset and a new and more equitable social balance is created. Already a number of social disparities are on their way out, even if they have not been totally obliterated. This is due more to the welfare services made available through the Plans (—education, health facilities and transport) than to the new factories and dams that have come up.

Acceptance of Obligations

Reduction of the disparities is the true measure of the social revolution achieved. Those who have seen the nursery and primary schools, the Balwadi homes, the health centres and the tube-wells operating in rural areas must have noticed how children from the lowest levels of society are getting amenities and opportunities which their parents would never have dreamt of. They are being trained in the same school or treated in the same health centre as children of richer and socially better-placed people. Formerly an officer in a rural area thought it was his privilege and duty to strike terror and awe in the hearts of the rural people; his simple wish would be taken as a command. Now, through the community development movement and more recently through Panchayati Raj, the rural people have become accustomed to dealing with the officers more or less on equal terms. The social hierarchy in rural areas is also breaking down. Zamindars and other intermediaries have been dispossessed of their surplus lands and a land-ceiling is being enforced.

In towns and urban areas also, with the spread of industries and technical education, the children of higher and lower classes are rubbing shoulders together as trainees, apprentices and workers in the same institution or factory. With the spread of general education, young men belonging to the so-called lower castes are coming into white collar jobs in large numbers.

In short, we are passing through a revolution. It is only because it is peaceful and smooth that we some times do not appreciate the revolutionary nature of the changes around us. Our acceptance of the socialistic pattern puts us under an obligation to understand the process and in particular to help the public sector investment. The country's budget, or more generally our financial policy, is to be considered against the background of the need to reach the socialist goal quickly and surely.

YOU ASK US

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

VIGYAN MANDIRS

QUESTION from Mr P. Sripathi Rao, Gaurisapattam, Trivandrum-4.

What are Vigyan Mandirs and how do they function? How many Vigyan Mandirs have so far been opened?

ANSWER : The Vigyan Mandir seeks to carry science to the villages. It enlightens the villager on the methods of science and makes him familiar with the scientific principles involved in his day-to-day life, including problems of agriculture, crop protection, sanitation and so on.

Each Vigyan Mandir has a small museum and a laboratory for conducting simple analyses of soil, water and food. The museum contains specimens of flora and fauna, minerals and other materials found in the area and things of general information. The Mandir is also expected to have facilities for plant pathology, investigation of pests and insects and imparting education in rural health and sanitation.

The scheme of Vigyan Mandirs was introduced in 1953 and by the end of the Second Plan there were 38 Vigyan Mandirs all over the country. By the end of the Third Plan there will be a Vigyan Mandir for every two districts throughout the country.

A committee headed by Mr Balwantrai Mehta went into the working of Vigyan Mandirs recently. Its report has stressed the need of this institution for rural areas and has suggested various ways of making it more useful to the people.

I.M.F. LOANS

QUESTION from Mr. H.C. Jain, Sagar University, Sagar (M.P.).

What are the amounts of loans received by India from the International Monetary Fund? How have these loans helped our economic development?

ANSWER : India has so far borrowed Rs 148.33 crore from the International Monetary Fund. Of these Rs 90 crore were borrowed during the Second Plan (Rs 55 crore in 1956-57 and Rs 35 crore in 1957-58). In July 1961, a further loan of Rs 119.04 crore was taken; but as Rs 60.71 crore were still to be paid against the earlier loans, the actual amount received was Rs 58.33 crore against this fresh loan.

These loans were taken on short terms for meeting the deficit in the balance of payment and hence utilised for payment in foreign exchange. They have thus indirectly helped India to buy essential capital goods and equipment from the foreign countries for our economic development.

BETTER CATTLE

QUESTION from Mr S.S. Sinha, Arya Nagar, Lucknow, U.P.

What is the Key Village Scheme?

ANSWER : The key village scheme aims at improving the breed of cattle in rural areas. The scheme was launched during the First Plan period and continues in the Third Plan.

Under the scheme a village is selected as a centre for improving the cattle breed in an area of three or four villages, covering about 500 cows over three years of age. In this area, breeding is controlled and confined to three or four bulls of superior quality specially maintained at the centre for breeding purposes. The unapproved bulls are removed or castrated. At every centre records are maintained of pedigrees, milk production, feeding and disease control. The technique of artificial insemination is also adopted so that quicker progress can be made with the help of a limited number of bulls.

During the First Plan period 146 key village blocks with artificial insemination centres and 25 *gosadans* were established. During the second Plan period, 196 new key village blocks were taken up and 114 key village blocks established in the First Plan were expanded.

Government has also started 125 cattle breeding farms to supply quality bulls. They produce about 5,000 bulls annually. The Third Plan provides for the setting up of 11 bull-rearing farms in the breeding tracts and for subsidising the rearing of about 30,000 bull calves. A number of new livestock farms are also to be established.

A scheme for the progeny testing of bulls required for key village areas and cattle farms was initiated in the Second Plan with the Hariana (Punjab) breed of cattle and the Murrah breed of buffalo. It is now proposed that the progeny testing scheme should be introduced for all important breeds. The scheme is presently being extended to the Ongole breed in Andhra Pradesh and the Kankrej breed in Gujarat.

COAL ANALYSIS IN 10 MINUTES

The Central Fuel Research Institute, Jealgora, has evolved a process for the rapid analysis of coal to determine its ash and moisture content. samples can now be analysed in ten minutes instead of eight hours taken by the earlier known processes. Another advantage of the new method is that it is also applicable to wet coal which emerges from coal washing plants.

* * *

The Government of India has asked the State Governments to set up Flood Co-ordination Boards at district level to co-ordinate the working of the flood warning system, keep proper vigilance at vulnerable points, take suitable precautions for evacuating the population to safer places, and meet all situations which might arise as a result of floods during the coming monsoon. These boards, in turn, will establish committees in towns and villages, with representatives of the local people and others conversant with the local flood problems.

AS THE PLAN MOVES

MANY STEPS TO IMPROVE EDUCATION

Four standing committees are to be set up—one each for primary, secondary, university and social education—to advise Government on the formulation and execution of educational policies.

The Union Education Minister anounced this in Lok Sabha. He also outlined the various other measures proposed to improve the quality and social impact of education. To improve the pay-scales of primary teachers, he said, the Planning Commission had agreed to provide 50 per cent assistance to States.

Scholarships, he said, were being increased. Bright students requiring financial help for university studies would be given loans repayable in easy instalments after they began earning.

All Scheduled Castes and Scheduled Tribes students were receiving scholarships. But since their numbers were growing fast, a means test was being introduced.

BRIGHT SPOT

Granaries Are Full

THE granaries are full. Production of food has never been so good in the history of our country.

This cheering announcement was made in Lok Sabha by Mr S. K. Patil, Union Food and Agriculture Minister, replying to the debate on his Ministry's demands for grants.

With the announcement, Mr Patil combined a warning that if anyone tried to push up prices Government would enter the market and keep them down. He said that not only wheat and rice but the whole range of agricultural commodities would be protected from now on.

Prices had ruled moderately over the last two years and the success of the Second Plan in the final phases had been due to this fact, Mr Patil said.

He pointed out that there had been an excellent crop of jute—80 lakh bales. Groundnut production had also risen by 300,000 tons. Storage capacity was being expanded. By 1966, the country would be having three million tons of modern scientific storage capacity.

Snippets of Plan Interest

The Bhakra Dam will be complete this October. Mr O.V. Alagesan, Minister of State for Irrigation and Power, told Lok Sabha that 99.44 per cent of the concreting work had already been completed by April.....A team of engineers, headed by Dr A. Nagaraja Rao, Chairman, Heavy Engineering Corporation, has left for Soviet Russia and Czechoslovakia for discussions on the heavy machine-building and coal-mining projects at Ranchi and Durgapur.....In March, 1,172,000 metric tons of iron ore were produced—14 per cent more than the previous March..... Imports in April 1962 amounted to Rs 83.85 crore, exports to Rs 49.02 crore and re-exports to Rs 2.4 crore, leading to an adverse balance of trade of Rs 32.43 crore.....The Atomic Energy Establishment, Trombay, has designed and built a Caesium-137 teletherapy unit which is of use in curing tumours close to the skin in the head and neck. It will be installed at the Cancer Institute in Madras..... Heavy Electrical Limited has signed an agreement with Messrs Prommashexport of the Soviet Union for preparing a detailed project report for the heavy electrical plant to be set up near Hardwar in Uttar Pradesh.....The third blast furnace of the Durgapur Steel Works went into action on May 18. Durgapur now has three blast furnaces at work, each with a rated capacity of 1,250 tons of iron per day..... The Union Government has sanctioned loans of Rs 70 lakh to Bihar for the Kosi project and Rs 30 lakh to Orissa for the Chiplima power-house (stage II of the Hirakud project).....Three lakh technical terms in Hindi which had been evolved until December 1960 have now been compiled and released under the heading, "A Consolidated Glossary of Technical Terms, English-Hindi".....The State-owned Indian Oil Company, which now markets only two oil products (kerosene and high speed diesel oil), will begin marketing almost the complete range of petroleum products, including quality lubricants.....The Governments of India and the United States concluded an agreement in New Delhi on May 17 providing for the sale to India of 180,000 bales of long staple cotton valued at Rs 13.4 crore under U.S. Public Law 480. This will help our textile industry. Payment will be in rupees.....Production of kharif pulses other than 'tur' during 1961-62 is estimated to be at 15.32 lakh tons—72,000 tons or 4.9 per cent more than the output last year.....The country will be free of smallpox, malaria, trachoma and goitre by the end of the Third Plan, according to the Union Health Minister, Dr Sushila Nayyar.....The first tyre manufacture in Kerala by the Rs 2 crore private sector tyre factory set up by the Premier Tyres rolled off the assembly line on May 27.....The total authorised capital of new companies in 1961-62 was Rs 37.8 crore higher than the capital authorised in the previous year. But there was a slight fall in company registrations. Only 1,614 companies were formed in 1961-62, as against 1,683 in 1960-61.

New Loan Agreements

Five new agreements have been signed with the United States. Under these America will give grants totalling Rs 33.9 crore out of P.L. 480 funds for education and health programmes. Of this sum, Rs 15 crore will go for malaria eradication, Rs 3 crore for establishing 1,000 primary health centres in C.D. blocks, Rs 2.9 crore for expanding medical education, Rs 1 crore for smallpox eradication, and Rs 12 crore for extending primary education.

Two loan agreements have been signed with the British Government. The first loan for £ 22 million (around Rs 30 crore) is meant for expanding the steel works at Durgapur. The second loan for £ 10 million (around Rs 13½ crore) will be used to pay for a large number of imports from Britain.

Teachers' Pension

Primary teachers in Maharashtra are to get the benefit of pensions. Details of the scheme are to be worked out.

A provident fund scheme has already been applied to primary teachers in the State. When the pension scheme comes into force, teachers can choose between the two.

* * *

Delhi Administration has planned to rehabilitate 10,000 families of slum-dwellers by the end of 1962-63 at a cost of Rs 13 crore.

* * *

A special cell is being created in the Union Home Ministry to ensure full representation of Scheduled Castes and Scheduled Tribes in public employment.

* * *

A health laboratory is to be set up in Delhi to test medicines, foodstuffs and other edibles to check adulteration.

* * *

The Central Scientific Instruments Organisation (CSIO) has compiled a National Register of Scientific Instruments.

Book Review

Techno-Economic Survey of Orissa: National Council of Applied Economic Research; Rs. 20

A paddy field of Orissa. Rice is the State's main crop.

Orissa—Classic Example of Unutilised Resources

THE backwardness of Orissa claims special notice in the techno-economic survey issued in March by the NCAER. The remedies suggested are many and expensive. But it must be remembered that Orissa appeared as an independent entity only in 1936 and the scars of the nineteenth century famines and of the feudalism of the Eastern States Agency have not been erased fully. The background may be omitted from a blueprint presented for the future. That Orissa has no population problem and that Oriyas can migrate to Bengal is not ignored in this statistical account of a region that contains the great Pagodas of Konarak and Puri, but little else (except, now, Hirakud, Rourkela, etc.). The poverty of Orissa may be reduced by efforts to improve agriculture and fishing. To supply Calcutta with more fish from the Chilka lake may be quite desirable on account of the crisis in the Calcutta fish market last year.

The signs of backwardness are listed. The reasons too are hinted at but one thing needs mention here. Orissa has so far produced no local business community to take care of economic needs and plans. The failure of the human element to meet the challenge must not be overlooked by the careful observer who might also argue that brave new plans for coal mining must not lose sight of the fact that mining in Orissa has been fraught with little advantage to investors, for instance, in Talcher or Hungir Rampur.

The dawn of a new era is glimpsed by an optimistic team who feel that iron ore shipped *via* Paradip may transform the economic life of Orissa. The minerals are considerable but local capital is very scarce and the three paper mills owe their existence to the money and skill of major Calcutta interests. That the ex-Princes are expected to put up money for large enterprises may occasion surprise to those who are aware that Mayurbhanj is tuned only to Calcutta, not Cuttack.

The techno-economic survey offers solutions—better roads, more veterinary doctors, and rail links from the coast to the major mining areas. The fact that tribal people make up a part of the population and their uplift will entail expenditure yielding no direct return is not to be forgotten. Again on the subject of non-tax revenue the survey errs on the side of optimism and the Central Government is expected to be generous to Orissa because it is a weak unit in the Union. But to get Rs. 538.6 crore for investment in industries for Orissa between 1961 and 1971 is a tall order and the election success of the Congress has made no difference.

The survey admits that Orissa must rely for long on rice exported to West Bengal and the higher yield per acre can be got from using better seed in the irrigated areas. Since the figures as to employment, etc. are based on the 1951 Census, exact or immediate value of the survey may be questioned by some but it establishes the potential of Orissa in which cement and refractories manufacture has been successfully established. The survey also draws attention to the bamboo forests, their careful use and regular renewal. Pulp is now vital for rayon-making as well as paper production and the forest wealth of Orissa may become important for the State Railways also. The statistical comparisons made between Orissa and other States in regard to consumption of electric power, mineral output or industrial establishments may illustrate the fact that Orissa offers a classic example of unutilised resources. But it is Orissa's iron ore that has made Jamshedpur possible and the low productivity of local labour is due to an unhappy tradition of exploitation, a conclusion perhaps warranted by the endemic labour trouble in Rourkela. The opening of a big steel plant in Bonagarh is urged. The Fourth Plan means more steel but Madras or Mysore may put up claims against those of Orissa. Information about Orissa available through this new handbook is welcome because community development, for example, must give attention to the backward region in which backward classes are conspicuous. Though backward is not a term of opprobrium in India at present the consequences of being backward are not always agreeable.

—R

OVER TO YOU

PREVENTING FLOODS

IN 1961, thousands of people were rendered homeless all over the country and millions of acres of land devastated by the floods. This has happened every year, and it is likely to happen in the future also if floods are not prevented. And floods are not uncontrollable if measures are taken in time, nor are large funds or big equipment necessary to check them.

As prevention is better than cure, steps should be taken to prevent floods rather than coping with them after they occur. The best way to prevent a flood is to retain the raindrops for some time on the land where they fall before they form a flow. Secondly, the flow should be properly channelled. Instead of allowing it to rush down with high velocity, the flow should be made first to jump down, then go slowly and then spread over the neighbouring surface before taking the next leap at the place specially designed for this purpose along the longest valley line.

This training of the rain water does not require high technological know-how or heavy equipment. Men and women with common-sense, combined together in a common cause, can easily do it with ordinary tools and some labour. Of course, they need some guidance.

This easy and cheap method has been tried by me and proved successful. The experiment was carried out in different conditions of rains—ranging from 67 inches to 40 cents, under various handicaps and opposition, at Rajgad Vana Niwas on Narsapur-Velhe road near Poona. Those who are interested may visit the place and see the results for themselves. Further information about the method can be had from the following address. If a topographical map of an area with full particulars, is supplied, a general outline of the possible scheme of flood control measures will be furnished.

Rajgad Vana Niwas
Post Gunjawane
Poona District (Maharashtra) — S. R. BHAGWAT

* * *

SWADESHI DOGS

I WAS fascinated to see the picture of Rampur hounds in the feature on Subedar Naginder Singh in *Yojana* of April 29.

I am writing a book on Indian breeds of dogs and have collected information right from Vedic times.

As you know, there are many good breeds of Indian gogs, but unfortunately they are in a neglected state today. The present tendency of the people is to go in for foreign breeds which I personally hate. Hence I desire to put forth before the general public and the Government that if some of the existing indigenous species could be properly looked after and bred well they can beat any foreign breed. Such a trial is being given in Madras for an Indian breed to work as police dogs and the experiment is almost successful. I have dealt with these points in my book.

I would be grateful to those who supply me information about Indian breeds, together with pictures, to the address below. Every help will be acknowledged in the book.

Patilvadi,
9, Ranade Road Extension
Dadar, Bombay-28 — MAJOR DR. W.V. SOMAN

* * *

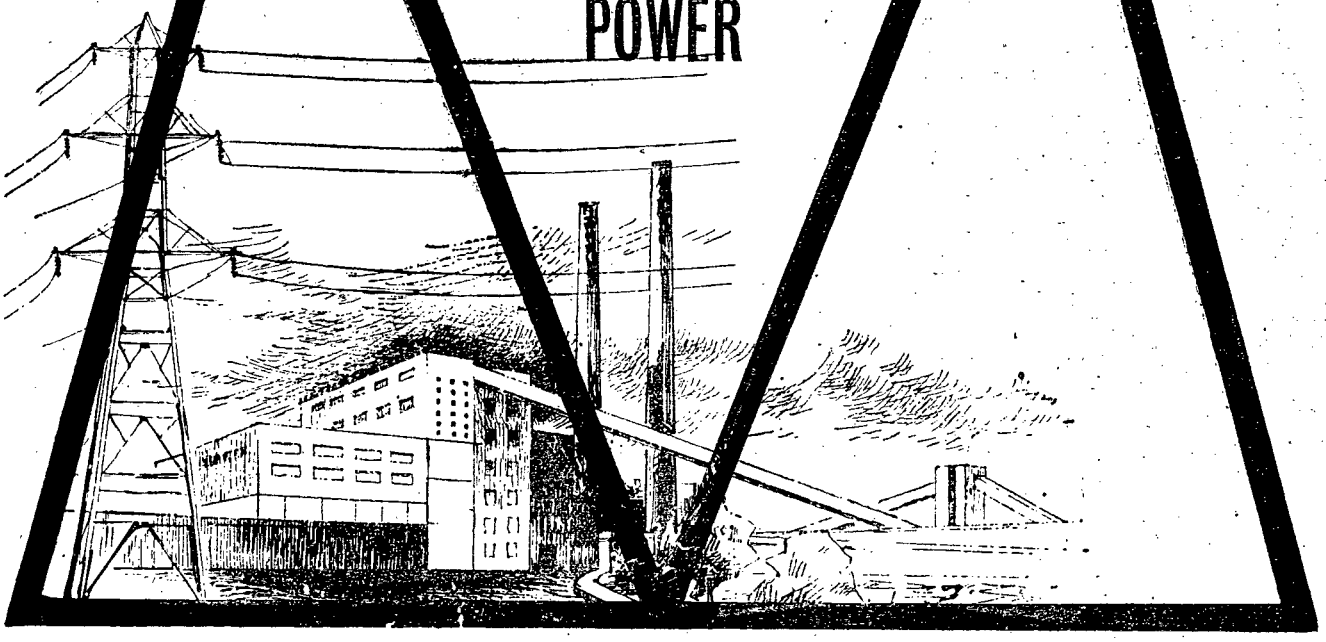
'NANDIS' IN INDIAN TEMPLES

IN the *Yojana* dated May 13, you have written about 'Nandis' in some of our temples.

It will be informative to many of the readers if I bring to their notice another 'Nandi' in the Suchindram Temple in Kanya Kumari district of Madras State. The Nandi is similar in dimensions to the Nandi on the Mysore hill, but is unique in that it is purely white in colour and is very well finished. The Nandi ("Maakalai", as the people of Suchindram call it) is juxtaposed with Lord Siva (known to the people there as Sthanumoorthy) to whom the temple is dedicated.

New Delhi — N. SUBRAMANIAN

DELHI will have more THERMAL POWER



AVB's newest assignment: to supply high pressure boilers for the Delhi 'C' Power Station of the local Electric Supply undertaking.

These modern steam generating units, designed to deliver 960°F-steam at a pressure of 1300 lb. per sq. in., will drive two turbogenerators with a total capacity of 125,000 kw. There will be provision for increase to 187,500 kw. in the near future. Low grade coal, the primary source of energy for the power plant, will be processed in the latest Babcock Type 'E' Pulverisers and burned under the surveillance of automatic combustion control equipment.

The Delhi installation is the latest in a distinguished series of contracts entrusted to AVB in Maharashtra, Madhya Pradesh, Uttar Pradesh and other parts of India.

In providing much-needed thermal power for Delhi, AVB will make yet another contribution to the development of Indian industry...the all-round progress of the nation.

An outstanding example of international collaboration, AVB brings to India the varied and extensive knowledge of three leaders in industry—India's Associated Cement Companies Ltd., Britain's Vickers Ltd. and Babcock & Wilcox Ltd. These famous enterprises have joined together in establishing at Durgapur a large and modern heavy engineering works to 'tailor-make' cement-making machinery, high pressure boiler plants and heavy equipment for mining and other industries.

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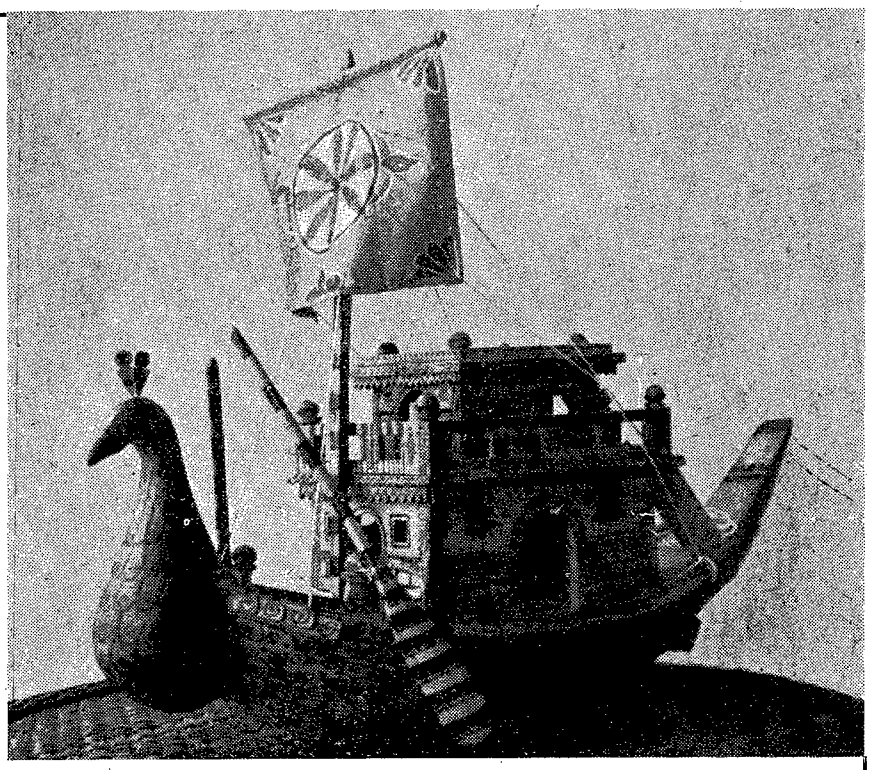
REG. NO. D-876

Pride of Place

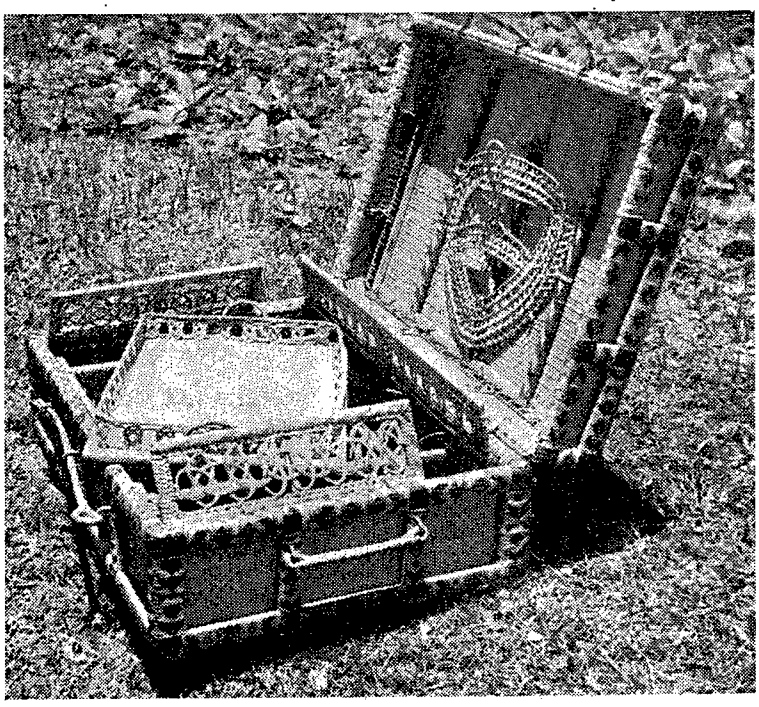
WHEN we speak of palms, the stately coconut, the scaly date or the slender areca come to our mind—all tall gentlemen with a thatch of green. But how many know that the botanists also describe the cane creeper (or rattan, from which the backs of most of our chairs are made) as a palm?

Although scientifically they are palms growing in tropical forests, the 390 species of canes (collectively called calamus) really are climbers. In the words of *Wealth of India*, they "scramble or twine over forest trees with the aid of hooked spines".

Nearly 30 commercially valuable kinds of cane or rattan are grown in India—mostly in the Himalayas, Assam, Kerala and Mysore. Some of these have stems which are nearly 300 feet long. As we all know, these stems are strong, smooth and flexible.



Cane Articles of Tripura



Some are so strong indeed that they are used in the place of ropes, particularly for suspension bridges above mountain gorges.

The main commercial use to which cane is put is in the making of furniture. After the cane stems are cut and dried, they are split into thin strips which are woven in many patterns to give us attractive chairs, sofas, settees, screens and footrests. Another commercial use is the making of baskets. Because of the lustre, which is due to the deposits of silica, cane makes more attractive wicker-work than willow or grass or bamboo.

Many parts of India are famous for cane articles. But in few places are such attractive things turned out as in Tripura. Alongside is shown a basket made in this beautiful region and above a little ship. They demonstrate that cane makes not only for utility but also for beauty.

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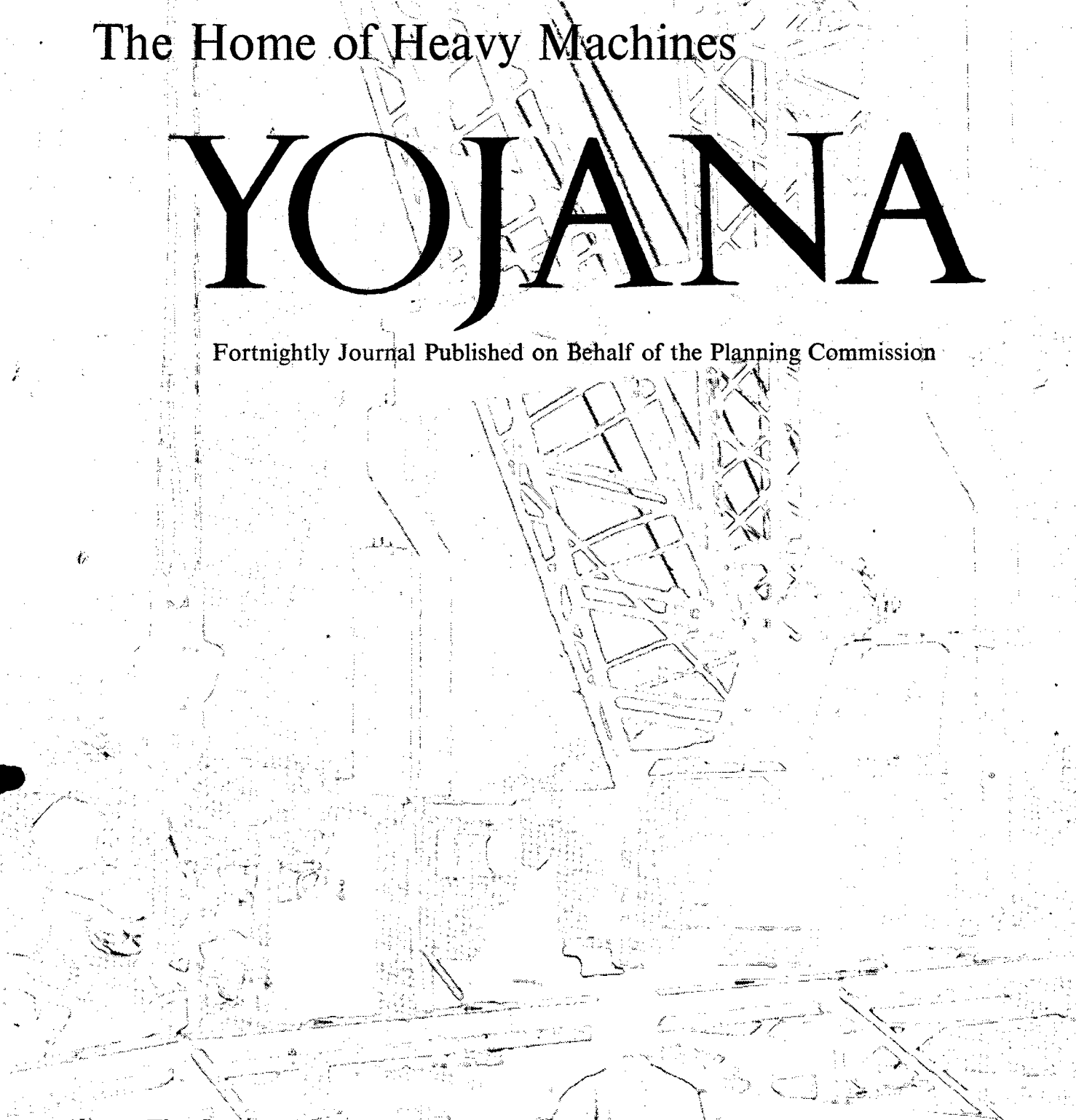
The Home of Heavy Machines

YOJANA

Fortnightly Journal Published on Behalf of the Planning Commission



Also in This Issue:

Vol. VI No. 12 June 24, 1962 Asadha 3, 1884 25 nP

RANCHI—Home of Giant

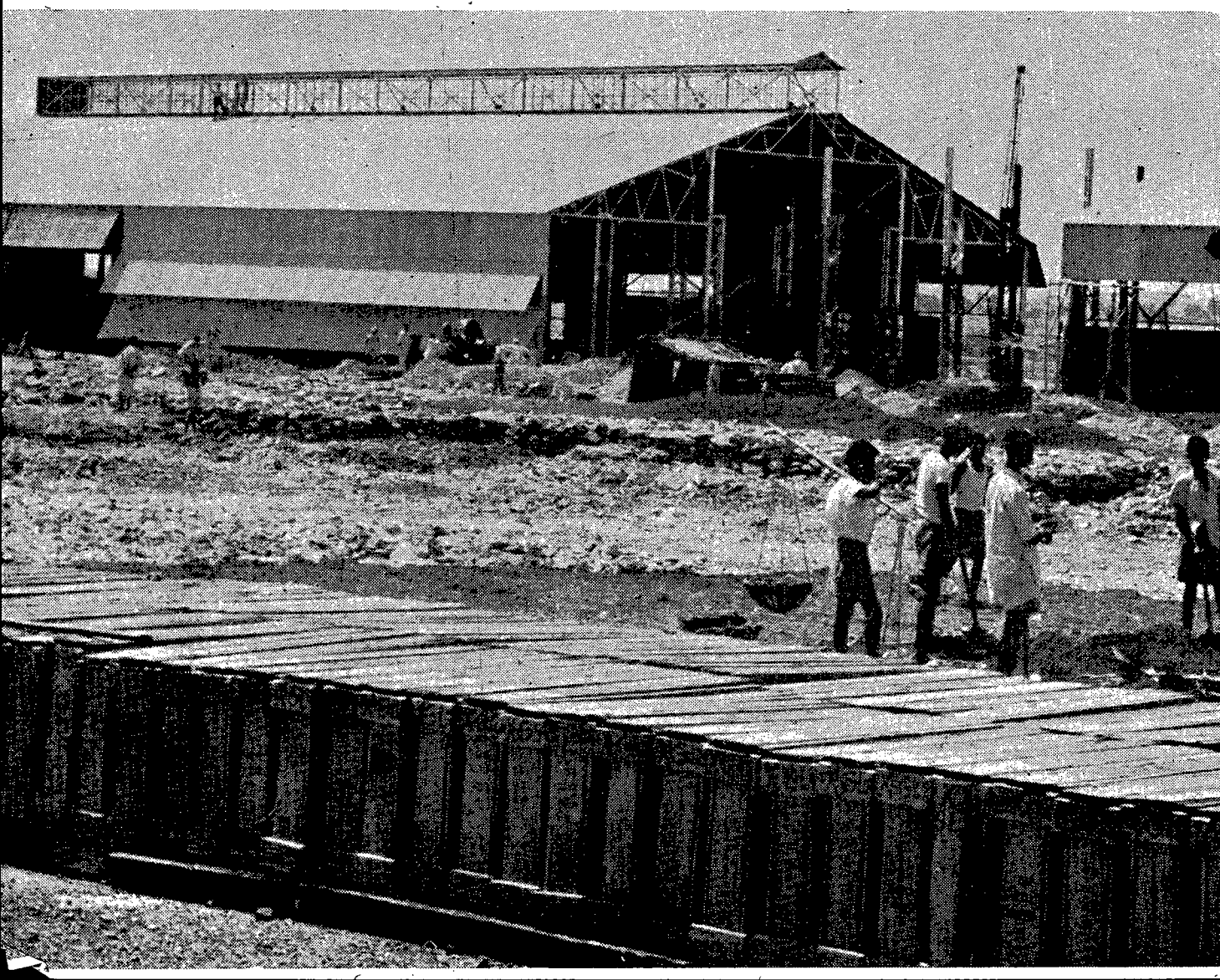
RANCHI in Bihar is going to have a big say in our drive to attain industrial self-sufficiency. The Heavy Engineering Corporation, the second largest industrial undertaking of the Central Government, is building three big plants there, which will produce most of the heavy machines needed for building large industries such as steel mills, chemical and other factories.

These plants, which are situated at Hatia, four miles south of Ranchi, are: (1) a heavy machine building plant, (2) a foundry forge plant and (3) a heavy machine tool plant.

The Corporation also has a fourth project—a plant to manufacture coal mining machinery. But that will be located at Durgapur in West Bengal.

The heavy machine building plant, the machine tool plant and the foundry forge plant go hand in hand. The foundry forge will supply the requirements of the other two. Its design and development are tailored to suit their needs.

THE **heavy machine building plant** will produce the mammoth-sized machinery and fixtures primarily required by the iron and steel industry—such as the equipment for coke ovens, blast furnaces, by-product plants and rolling mills. According to the present plans, the



Machines

plant will every year be able to produce onehalf of *the machinery required for erecting a steel plant* of one million tons' capacity.

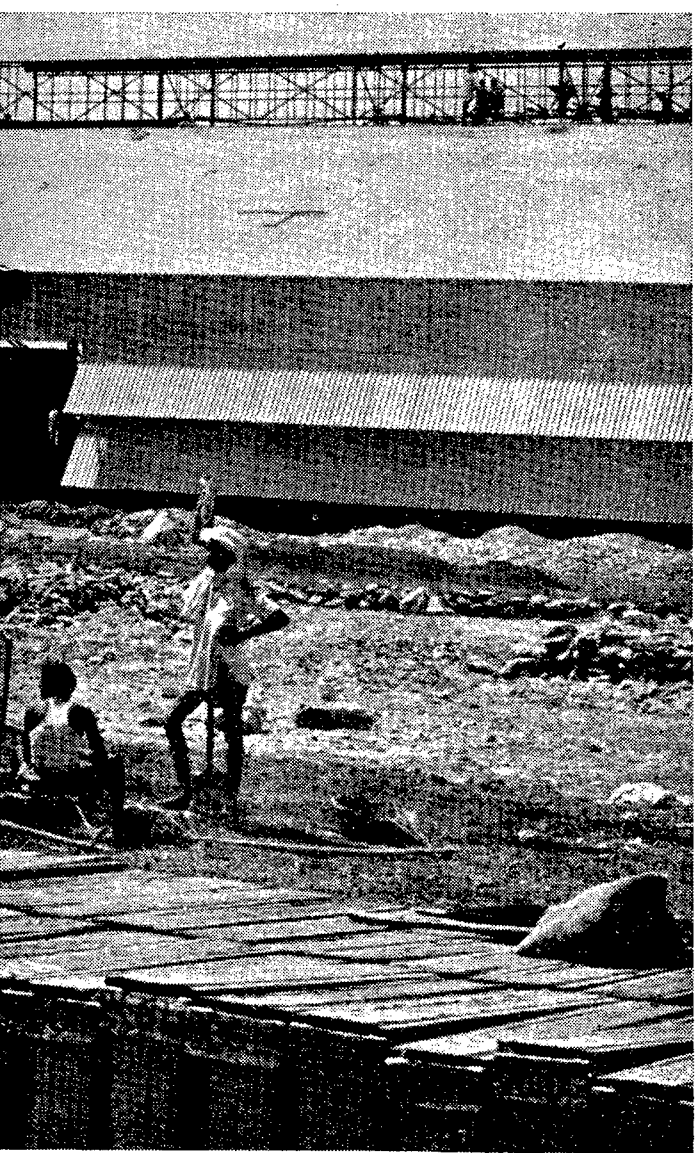
Besides, it will produce cranes, excavators, heavy oil drilling rigs and other kinds of equipment for mineral, engineering and chemical industries.

The heavy machinery plant and the foundry forge plant at Ranchi and the mining machinery plant at Durgapur were all sanctioned and started in the Second Plan, with a total allocation of Rs 80 crore. These projects have now been continued into the Third Plan. As work proceeded on them, a programme to expand them during the Third Plan at a cost of Rs 40 crore was also drawn up and the necessary funds and foreign exchange secured.

The heavy machine tool plant is a new, Third Plan project estimated to cost Rs 11 crore. The external credit required for it has also been assured.

The capacity of the machine building plant has been fixed at 80,000 tons on completion. The value of the machinery will be Rs 42 crore. Production is expected to begin by the end of 1963, tentatively with imported material till the foundry forge plant comes into its own. The plant is being set up with the technical collaboration of the Soviet Union. Besides making machinery according to Russian specifications, it will produce such machinery as required by the customers.

The foundry forge and the heavy machine tool plant are being set up with assistance from Czechoslovakia.



They Will Help Us to Set up Steel Mills and Other Industries All on Our Own

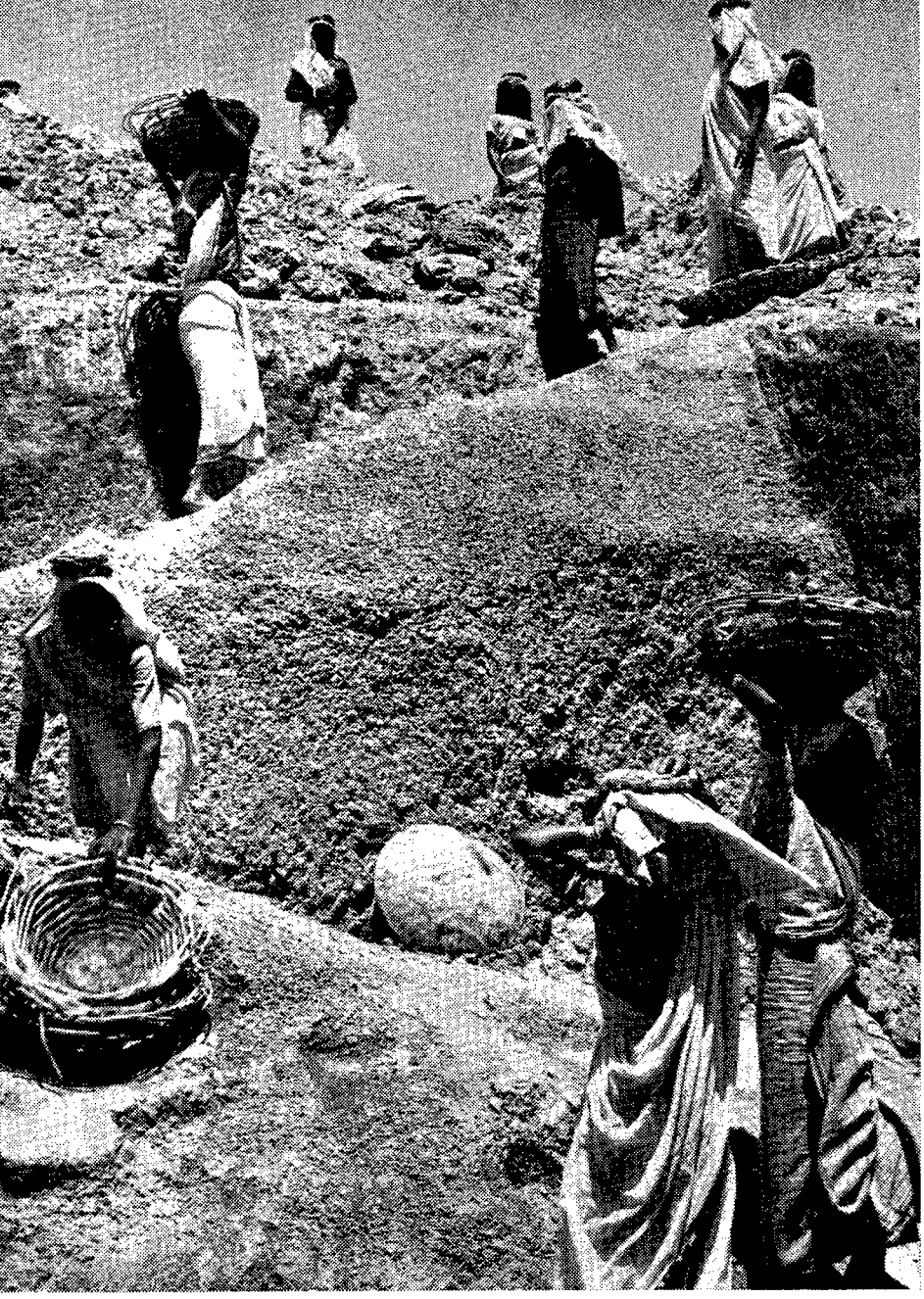
Above : **Some of the hundreds of draughtsmen and designers at work in Ranchi.**

Left : **Equipment arrives every day to be moved into sheds (background).**

Top Centre : **A surveyor connected with construction of railway lines.**

Cover Page : **A 100-tonne crane being erected at Ranchi**

Pictures by K.S. NARAYANASWAMY



Work goes on to build a housing colony for Ranchi's labourers.

THE manufacture of giant machines is a stupendous task involving a number of processes. Several parts of machines are cast in molten metals or pressed and hammered to precise sizes, shapes and strength before they are assembled into complete machines. The making of castings from the molten metal is the function of a foundry. Similarly, the pressing and hammering of the parts is the work done in a forging plant. The **foundry forge plant** at Hatia will undertake both these jobs. At present there are over 2,000 small and medium iron forging plants, some 30 steel forging plants in the country, but none of them can make the huge castings and forges required for the heavy machines that are going to be manufactured in India for the first time.

The castings will be made from grey (that is, pig) iron, steel and other metals. The Hatia plant will be able to produce *iron castings* weighing a hundred tons each—this is equal to the weight of 1,600 men put together, presuming that the average weight of a man is 140 lb. The weight of the largest *steel casting* will be 90 tons and that of the largest *steel forging* 30 tons according to the present programme. It will be increased afterwards. Pilot production is expected to begin by 1964.

The foundry forge will be a breath-takingly large plant, covering 13 lakh square metres. Nearly 40,000 tons of machinery will go into its erection. Some of the structures will be as high as a ten-storey building, about 130 feet, with chimneys rising to 240 feet. Each of its six production units will be as large as a factory by itself.

The total capacity of the plant will be 2.54 lakh tons. The Third Plan envisages the total production in the country at 12 lakh tons of grey iron castings, 2 lakh tons of steel castings and 2 lakh tons of steel forgings. The production in the country, according to an unofficial estimate for 1960-61, was 8.96 lakh tons of iron castings and 36,000 tons of steel castings. The plant will also have a press with the pressure capacity of 6,000 to 8,000 tons, the biggest so far in India.

Surplus capacity has been provided in all the six units for further development in future.

Considering the magnitude of the machines to be produced in this plant, it is amazing to think about the precision that will go into their casting and forging. In making a casting, the molten metal—more than a roomful at a time—has to be poured into the moulds all at once so that there should be no unevenness in the temperature. Similarly, a forge has to be pressed and hammered to its correct size and shape before the red hot metal piece loses the requisite heat. If a 'bit' is about 30 tons one can imagine the dexterity that is required.

* * *

THE heavy machine tool plant will produce 10,000 tons of certain types of heavy machine tools larger in sizes and types than those which are at present being produced in the country. The average weight of each machine will be 25-30 tons. Some might be as heavy as 180 tons. This capacity is likely to be doubled at a later stage.

According to present plans, every year 278 complete machines of seven different types with 22 different capacity models will be turned out. The plant is expected to go into production by 1965.

Scientists and Government

by J. P. Chaturvedi

WE MUST REVISE OUR RECRUITMENT POLICIES

THE Union Home Minister has recently sent out a circular to government departments in which he has suggested that persons with a scientific education who have been assigned to duties other than scientific should be changed over to jobs that require scientific or technical education. But the problem is not only that people with scientific qualifications are made to do jobs which are non-scientific. It is, even more, that scientific personnel do not get adequate chances of promotion—a fact which was highlighted some time ago by the unfortunate suicide of Dr Joseph, an agricultural scientist.

A paradox about qualified personnel, particularly at higher levels, is that while the Government complains of a shortage, the private sector does not experience difficulty in finding them. (Indeed the private sector has a great deal of fascination for a certain class of Government officials that it is practically a seller's market for them when they retire.) On the one hand most young men want to get a Government job; on the other, the Government keep posts unfilled on the ground that there is a lack of trained personnel. As a result many projects remain behind schedule. This remains a puzzle to the common people.

The key to the puzzle is that governmental rules, pay structure and functioning are not conducive to the development of scientific personality. Two Pay Commissions have considered this problem and come to the conclusion that better financial rewards and conditions of service should be given to the scientific personnel. The Second Pay Commission said:

> "The Varadachariar Commission had recommended the same scales of pay for scientific services as for others; but in practice the arrangement has worked differently for the two sets of services. While in most of the Class I non-technical, and also engineering services, the junior scale tends to become merely a training grade, and the normal career is provided in the senior scale, in the scientific services there is, with one or two exceptions, no provision for regular promotions from the lower to higher scale. It is not only that the relevant rules provide for direct recruitment to posts in the higher grades, but our enquiries have revealed that such recruitment has, in fact, been a regular feature, and that, for instance, in one of the main departments employing scientific staff out of 129 appointments made during the first three years to Class I posts in grades above the junior scale, about half went to outside candidates. We do not consider this to be an unsound arrangement. The nature of scientific work requires infusion of fresh blood and new ideas at practically every level, and it would be harmful to restrict direct recruitment to the lowest grade of the scientific services. It is also desirable that at least in some scientific fields, such as agriculture and animal husbandry, the Centre should be able to draw scientists from the States. These direct recruitments at higher levels have, however, to be borne in mind in comparing the career prospects of those who enter the Class I scientific service in the junior scale, with those who enter the other higher services at the same level; and it will be found that the career prospects of young scientific officers are not very attractive, and also that the proportion of posts in the highest grades is lower than in the other cases".

Organisations of scientific workers have demanded that the scientific personnel be placed on a par with other Government employees, especially in Class I service. At the time of the Pay Commission's Report, the number of scientific workers totalled 7,126 of whom 2,811 were employed in research, 456 in survey and 3,859 in scientific development, extension, etc. They are so few in number, compared to the total size of Government employment, that they are not in a position to influence the general pattern of Government machinery. The salary scales of these scientific and technical workers are generally decided by persons who are not themselves scientific or technical people. Belonging to the Administrative Officers' class, they have such an exalted notion of their duties that they think that others who do not do their kind of work ought not to be regarded as their equals. In the Central Administrative Services, the beginner starts, soon after graduation, at a salary of Rs 350 and he can go up to a salary of Rs 3,000. On the other hand, a scientific officer, who is at least an M.Sc. and often has research experience, starts on Rs 250 or Rs 275. Even if he were to rise to be a director of a national laboratory or a research organisation, he would not get more than Rs 2,250.

Bias Towards the 'Practical'

The Second Pay Commission unfortunately did not agree with the suggestion made by the panel of the Planning Commission that "scientists and technical personnel should at least be placed on par with those in Administrative Service as regards their scales of pay and other conditions of service". It did not even accept the proposal of Dr D.S. Kothari that there should be a wage structure like the Scientific Civil Service of the United Kingdom. On the contrary it came to the conclusion that an assured, long wage-scale would induce a feeling of complacency inimical to a high level of scientific work. As a result there are several scales in which direct recruitment is permitted and a scientist who enters Government service at a lower level has limited chances of promotion into a higher scale.

This is one important reason why those who have technical and scientific ability and who desire a good career seek avenues in private employment rather than 'rot' in Government service as research assistants

or even junior scientific officers. There is yet another factor at work. Nowadays there is such a great emphasis on technology that not enough first-class science graduates come forward to devote themselves to research in pure science. Only those who fail to get admission to institutes of engineering, technology or medicine take up pure science as a career. In this way are restricted the chances of our country showing work of originality and note.

Position Abroad

Last year I was in Moscow. We went to visit the office of the *Pravda* where I happened to meet Mr Moyovasky, its Foreign Editor. The *Pravda* has among the largest circulations of the world's newspapers, and about its influence in the politics of the Soviet Union there need be no doubt. The discussion somehow turned to the emolument of journalists in the Soviet Union, when Mr Moyovasky told us that his wife was a scientific worker and therefore drew a much larger salary than he did. The remarkable progress made by the Soviet Union is principally due to the fact that the scientific worker is ranked as the highest in the Soviet economy and has the best working conditions. He is entitled to respect by the highest in the State and he enjoys the best financial reward.

In the United States also, scientific workers, whether engaged by universities or by research organisations, have the maximum of autonomy, lucrative earnings and pleasant surroundings to work in. It is said that no Government servant in U.S. is provided accommodation except the President. Another exception has been made. I found that the workers of the Los Almos Atomic Laboratories have some of the finest living quarters in a picturesque locality in New Mexico.

If we want our scientific and technical workers to make discoveries and inventions of a far-reaching nature, we shall have to assure them of complete freedom from worry and want. As Bertrand Russell has said, while the artist may produce some of his best work in a mood of dissatisfaction and conflict, the scientist can prove useful only when his worldly needs are completely satisfied, leaving him with enough time for not so material pursuits.

It would not be unfair to say that the entire structure of government service is one that does not greatly favour maximum development of strong and original character. The plum jobs in our country's government service are the Indian Administrative Service, the Indian Foreign Service and other Central Services, You enter them while young, and entry depends on personality (which in turn is influenced by family background) and on marks obtained in subjects which have very little to do with the future events. A person who can score high marks in subjects like sanskrit, mathematics and philosophy has much better chances of recruitment to the Indian Foreign Service while another student who has studied international affairs, politics, history, economics or diplomacy at college might really be much more suitable for such a job. One is sometimes surprised to find among the former I.C.S. officials a large number who have a very good knowledge of Sanskrit. One reason is that Sanskrit was a subject that gave the largest number of marks and was thus a gateway to Government service.

'Safety First' Won't Do

"Catching them young" may be a catchy slogan, but only a small number of people are mature before 25—the maximum age for entry into these services. Those who have a good capacity for learning on the job, those who get experience beyond the qualifying age, and those who rise on account of merit proved in the course of work, find the doors barred, at least to the main hall of service. But 'growing on the job' is almost the rule in private business and industry. Government servants who have to deal with things totally different from what they learn at college find great difficulty in coping with the genius of these private sector executives, whether it be a case of tax evasion or a case or gaining concessions from the Government. Government service still rests on the myth that one who attains a first class is really a first-class person who can deal with every situation everywhere. Events have shown that many first-class students have turned out to be poor officers.

The rules and traditions of Government service are also a hindrance to the development of initiative. Till yesterday a Government servant was deemed to be good if he was safe, if he avoided censure from high authority and went from step to step according to seniority without being detained at the efficiency bar. Initiative means risk and a Government servant fears nothing so much as risk. The few bold individuals soon find that they are not appreciated. Often people higher up feel that these officers could have maintained efficiency but avoided the trouble. So long as this concept that safety is superior to advance persists, the Government of India's work will be lethargic and the people with drive will either be pushed out or become frustrated. If in spite of the total insecurity in private service there are efficient people in the private sector, it is for two reasons. Their work gives them more confidence in themselves, which makes them prepared to take the risk of job insecurity. Secondly, they also feel that there is enough scope for their talents. These two conditions will have to be established in Government service also if the better type of individual has to come into Government and remain there.

Men of Foresight

It is necessary that at least for those services where we have to increase production, where quick decisions are needed and drive is essential, choice of candidates should be open and not confined to those below 25 years of age. This is even more true of scientific and research workers. Their selection cannot be left to a body of a few elderly men who will look at them for a few minutes before hiring them for life. With our plans for technological advancement we need more and more of scientists. As Sir Charles Snow has obsrved in his "Science and Government" the presence of more scientists will have a beneficent influence on government because "partly by training and partly by self-selection they include a number of speculative and socially imaginative minds". The best of administrators, in his words, are masters of the short-term solution, while we need men with foresight.

Use of Improved Farm Tools

HOW TO ENSURE WIDESPREAD

By D. N. Kherdekar

IN the First and Second Plans the work of popularising improved agricultural implements did not receive enough attention. In the Third Plan, however, more stress is being laid on it. Apart from the Research-cum-Testing Centres being established under the Indian Council of Agricultural Research, a large number of projects for popularising the new tools have been taken up. It has also been decided to open at least one workshop wing in each of the Extension Training Centres in the country.

In some of the major States, State-owned workshops have been (or are being) established for mass manufacture of improved agricultural implements for distribution within the State as also in near-by regions. The names of these workshops are:

1. The Government Central Workshop at Talkatora, Lucknow.
2. The Government Central Workshop at Nagpur, Maharashtra.
3. The Government Workshop at Jaipur, Rajasthan.
4. The Industries Department Workshop at Tiruchirapalli, Madras State.
5. The Nahan Foundry, Nahan, Himachal Pradesh (Government of India concern under Commerce and Industry Ministry).

Production in these workshops is steadily growing as the demand for improved agricultural implements is rising. However, the workshops are facing some difficulties which we might examine.

Need One: Exchange

These workshops undertake manufacture of implements on a mass scale, and they therefore require some heavy machinery not available in India. The import of such equipment entails foreign exchange. The workshops find it difficult to have foreign exchange sanctioned for such import. I suggest that priority should be given to providing foreign exchange from the agricultural quota for purchase of such equipment which is the base for manufacture and use of improved implements in India. The amount involved is not forbidding—probably not more than four to five lakhs of rupees per workshop. The work on improved implements should not be allowed to suffer because of this sum.

Need Two: Training

Trained and experienced agricultural engineers are not available in enough numbers in India. There is a need to revise the syllabus of the existing courses and to start a few more institutions which would give degree courses in agricultural engineering.

It is also necessary to train our agricultural engineers in foreign countries, particularly in countries like Japan, and to revise the scales of pay to attract better agricultural engineers. Only trained and qualified agricultural engineers should be employed for any post that concerns agricultural engineering. Since three colleges giving degrees in agricultural engineering have been started in the country, the practice of employing mechanical engineers with or without some training in agricultural engineering could now be put an end to.

Need Three: Steel & Coal

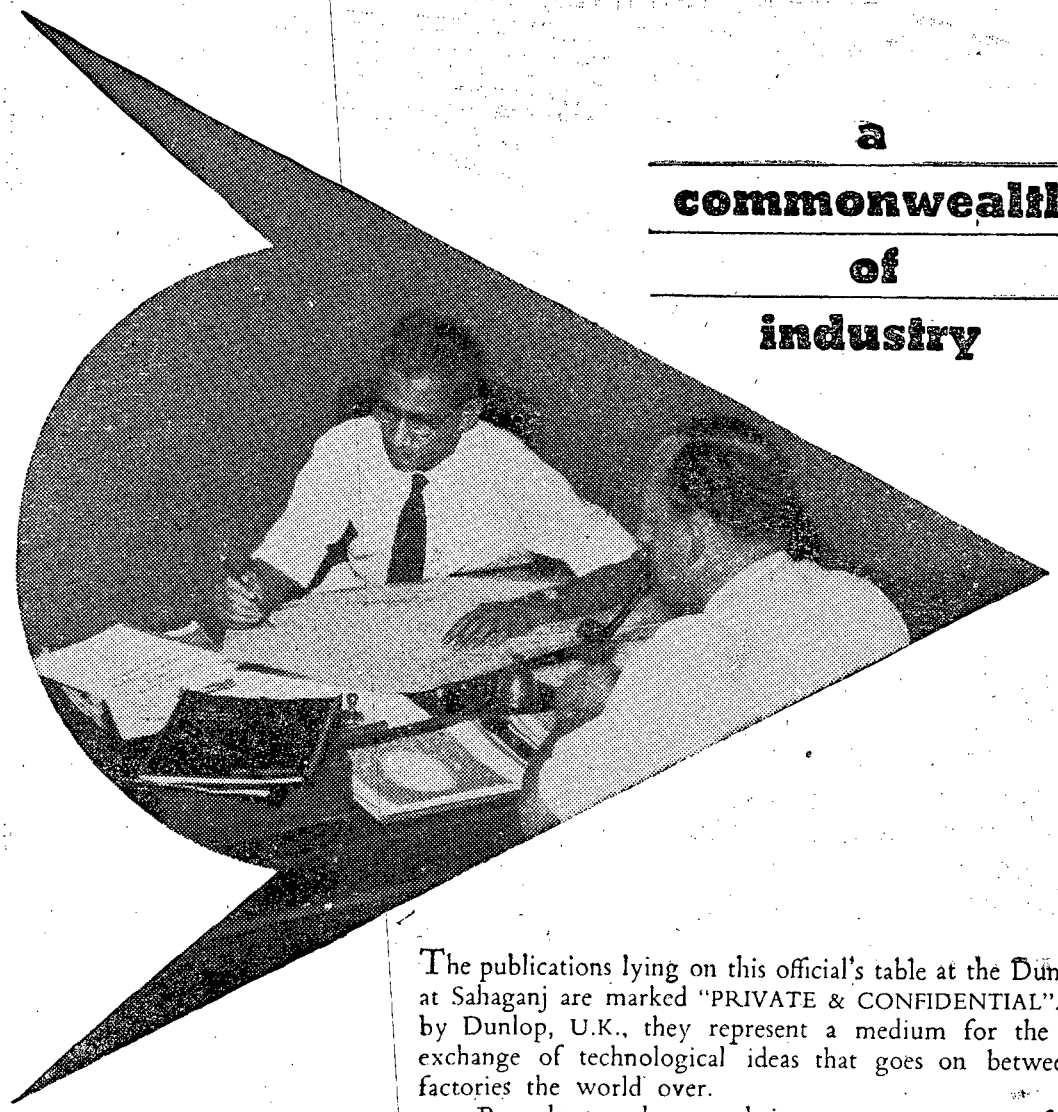
Considerable difficulty is being felt in getting enough steel for mass manufacture of implements. Some items are not readily available. Those that are available cannot be used for manufacturing the implements without increasing their weight or cost. Sections that are most suitable for manufacturing improved agricultural implements should be made available in sufficient quantities to the workshops. Supply of coal is also one of the difficulties hindering the work.

Need Four: Mobility

In the field, demonstrations of implements have proved successful wherever the work has been done on a well-organised basis employing a trained and experienced agricultural engineer with suitable staff. Pockets where notable success has been achieved are Mahewa area (Etawah district) in U.P., Ambala in Punjab, Ahmednagar in Maharashtra and Tanjore in Madras. One of the difficulties felt by the organisers is lack of transport facilities to carry the implements to villages and give demonstrations. If the work is to progress rapidly there is need to provide a jeep with trailer or a truck to every district. Most agricultural implements are heavy and bulky. They have to be shown with all their attachments if demonstrations are to succeed. Hence the need for quick transport. The initial expenditure on such transport will be fully justified by the results.

Most agricultural operations are seasonal, and the implements should be demonstrated at least a few weeks before the season starts. For instance, the winnowing fans or the

(*Continued on page 10*)



a commonwealth of industry

The publications lying on this official's table at the Dunlop factory at Sahaganj are marked "PRIVATE & CONFIDENTIAL". Published by Dunlop, U.K., they represent a medium for the continuous exchange of technological ideas that goes on between Dunlop factories the world over.

Brought together on their pages are reports of important developments at various Dunlop factories. What has Kobe done to reduce tyre abrasion ? How is Hanau strengthening tyre casings ? Or an idea from Sahaganj to reduce cord friction in tyres.

Every item of information is given careful attention at Sahaganj, every suggestion is considered worth studying, for it is not known which will spark off a train of new ideas, start a new chain of developments that will result in a better Dunlop product.

There are also frequent training and refresher courses arranged by Dunlop companies in other parts of the world, where participating technicians from India come across fresh ideas which they can put into use in their own factories. It is this constant international exchange of ideas which makes the Dunlop organisation truly a "Commonwealth of Industry".

DUNLOP

have the longest tyre manufacturing experience in India

DC-567A

Prompter Work on Plan Projects

MEASURES OUTLINED

THE measures that have been adopted for speeding up implementation of the Third Plan programmes and for achieving more effectiveco-ordination between related sectors have been outlined in a Note prepared by the Planning Commission for the meeting of the Consultative Committee of Members of Parliament which was held on June 12. According to the Note, the Ministries have been asked to complete the preparation of outstanding projects for the Third Plan by the middle of 1962.

In regard to the programme of power development, the additions to generating capacity during the Third Plan would be of the following order: 1961-62—678 mW; 1962-63—711 mW; 1963-64—887 mW; 1964-65—1,989 mW; 1965-66—3116 mW. As regards transport for coal, the Railways will be loading 6,295 wagons a day on an average during 1962. The total quantity moved by rail and road in 1962-63 will be 58 million tons, meeting more or less fully the requirements of almost all the major industries.

The Note also says that in 1961-62 the estimated outlay under the Plan was Rs 1,148 crore, comprising Rs 550 crore in the States and Rs 598 crore in the Centre. The 1962-63 outlay has been placed at Rs 1,446 crore, of which Rs 688 crore will be in the States.

The relevant portions of the Note dealing with measures for greater co-ordination and speeding up implementation are given below:

Co-ordination

(a) *Power:* A team from the Ministry of Irrigation and Power and the Planning Commission visited all States during September-November, 1961, and reviewed carefully the programme of power development, identified the factors which tended to cause delay and prepared a realistic schedule of works to be undertaken project by project. In the discussions with States stress has been placed on co-ordinated action within each project as between its various components. Such question as delays in procurement of steel, explosives, cement, coal and other materials are being attended to. A programme of investigation of power projects has been drawn up and progress is being watched. Most of the power projects in the Third Plan are already assured of foreign exchange and power generation schemes are being pushed forward with the utmost despatch. Progress in the construction of transmission lines has to be watched, so that the benefits of new generating capacity are secured speedily. State Governments are being given additional assistance in order to accelerate power development programme.

According to the programme drawn up with the States, the additions to generating capacity during the Third Plan should be of the following order: 1961-62, 678 mW; 1962-63, 711 mW; 1963-64, 887 mW; 1964-65, 1989 mW and 1965-66, 3116 mW. This schedule is, however, subject to many conditions, the most important being supply of equipment in time. The need for more even and continuous growth in the expansion of power has emerged clearly from the review which has been undertaken.

The increasing pressure for power in several parts of the country is due in part to the issue of industrial licences. The Ministry of Commerce and Industry have informed State Governments that they should not recommend for licensing any project requiring more than 2,000 kW unless they are in a position to make the necessary power available under their approved Third Plan programme.

(b) *Transport for Coal:* The Railway development programmes have been reviewed and the Railways have been authorised to undertake certain additional line capacity works which are required largely in connection with the movement of coal. The Railways will undertake additional doubling of 275 miles over certain sections so as to be able to move coal over these sections in keeping with the demands anticipated by the Coal Controller and the Ministry of Mines & Fuel. They have also been authorised to accelerate the work on certain electrification programmes with a view to making available the increased capacity as early as possible. The additional funds required by the Railways on the basis of a larger physical programme are being found on an annual basis.

The wagon-building programme has already been stepped up to a considerable extent and arrangements are being made to meet the requirements of the Railways for steel castings and other materials, both from indigenous sources and imports. As a means for speeding up the movement of coal, the Railways are extending the use of box wagons. These require complementary facilities on the part of collieries and users, such as the provision of bunkers and dumps. The Ministry of Mines and Fuel are taking steps to assist in this programme.

The Railways have introduced a revised system of allotment of wagons from January 1962 which takes into account the capacity available in different directions. It has been agreed that during 1962, the Railways will load on an average 6,925 wagons per day. Loadings in the above-Moghalsarai direction have been increased from 1,900 wagons to 2,100 wagons per day (in terms of four wheelers) and are likely to increase further by about 100 wagons per day from July 1962. During 1962-63, the total coal movement by rail and road is expected to be of the order of 58 million tons, corresponding to gross production of about 62 million tons. On present expectation, the Railways expect to meet during 1962-63 more or less fully the requirements of coal of almost all major industries, but the position in respect of supply of soft coke, brick-burning coal and coal for other small industries for which priorities are controlled by State Governments may remain difficult.

The transport requirements and other aspects of the movement of coal during the Third Plan have been recently studied by a Working Group, which included officials from the Ministries of Railways, Mines and Fuel and the Planning Commission. The Working Group is now engaged in making a year-to-year assessment of the demand for coal and requirements of transport.

(c) *Requirements of power in the coalfields* : This subject has been recently studied by a special group. The report of the group is under preparation.

(d) *Producing coal in appropriate grades and quantities* : A series of measures are being taken by the Ministry of Mines & Fuel with a view to ensuring that coal becomes available in the appropriate quantities and grades. These include price concessions and other facilities.

(e) *Manufacture of machinery* : The production programme of the Heavy Electrical Plants and of the Heavy Engineering Corporation are at present under study in relation to the programmes of power development and steel.

Speeding up Execution

Among the measures taken for speeding up implementation since the publication of the Third Plan reference may be made to the following :

(a) *Project management :* The Committee on Administration, which was constituted last year with the Cabinet Secretary as chairman, has been studying problems relating to project management and the necessary instructions have been issued by Government. Efficiency and economy in project management depends largely on the care taken at the planning stage. Project groups have been advised to indicate at the earliest stage possible the magnitudes and phasing of the likely requirements of power, transport and managerial, technical and other trained personnel, so that parallel action can be taken by the other Ministries and agencies concerned.

Ministries have been asked to complete the preparation of outstanding projects for the Third Plan by the middle of 1962, and to be in a position to present the broad scope and preliminary project reports needed for the Fourth Plan by early 1964,

The Ministry of Finance are engaged in strengthening of Project Co-ordination Cell, the functions of which are :

(a) to keep under review the working of public sector units,

(b) to provide reference and "consultancy" services during the various stages of the establishment of industrial units,

(Continued on page 25)

YOJANA

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

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

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IN THIS ISSUE

NEXT FORTNIGHT

NEYVELI

A Spot Report

*

CHANGES I WOULD LIKE TO SEE

Starting a New Series

*

PAPER INDUSTRY

(Held over from this issue)

Editorial

CLEAN WELL-SPRINGS

ONE of the most injurious concepts that prevail in our country is that of 'sons of the soil'. It is a concept loaded with passion and prejudice. The implication is that 'sons of the soil', those who belong to *our* province, are more honest, more talented and more deserving of consideration than people of other provinces. With loyalty to one's own tribe goes hatred for all other tribes. So all 'sons of the soil', who are good people, are supposed to unite against "intruders, aliens and *pardesis*", who are bad people.

When we fought for freedom we desired the freedom of not this or that province but of the whole country. After achieving freedom we gave ourselves a Constitution that recognises a single citizenship for the whole land. And just as we are one country, we also are an economic unity. The Plans give concrete shape to this idea. For the purposes of planning the whole of India is one unit. And every Indian has the same economic rights wherever he lives in India. There can be no legal bar or discrimination against the man born in any part of India from going to school, opening business or finding employment in any other part of India.

Yet such is our misfortune that some parts of the country have been laggard in disowning the legacy of bad laws and rules that show extra favours to 'sons of the soil', often at the expense of merit and national advantage. Let alone entry to Government service; even entry to universities is subject to such discrimination. This latter is doubly unfortunate, for it is through the clear waters of the centres of learning that the dross and dirt of provincialism and other evils can be flushed out. It is natural that universities should occupy a special place in the various efforts now being made to overcome interprovincial and other prejudices. If the universities are healthy, all will be well with the nation. The National Integration Council has, therefore, done well to recommend that "admissions to the universities should not be denied on considerations of birth, residence, caste or creed (except in so far as any reservation was required under provisions of the Constitution)". What has been said about admissions should also be extended to university appointments.

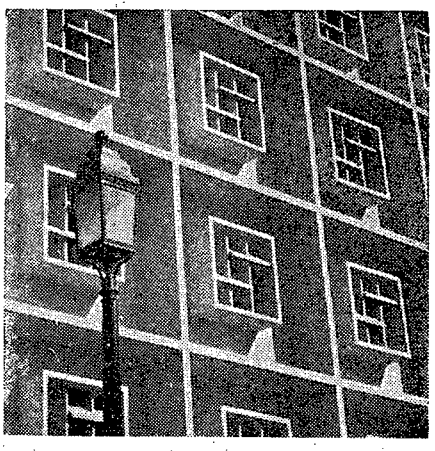
ASKING FOR A PROP

THIS is the story of an under-secretary of Madras. He sat on a high chair and he was probably a short man. To be level with his work he could do one of three things: grow taller, cut the legs of the table by a few inches, or ask for a footstool so that he could feel his feet firmly planted. The first being impossible, and the second involving needless loss to Government property, he adopted the third course and applied for a footstool.

Days, weeks and months passed. No footstool came. Let us hear what happened from the Chief Secretary of Andhra Pradesh (who told the story to a Seminar on "Work Methods"). Forty copies of a letter were made out and sent to various departments asking whether a footstool was available. A letter was also sent to the P.W.D. The Finance Secretary meanwhile wanted the financial implications of supplying a stool to every officer to be worked out. Another letter was written to the Director of Medical Services seeking his opinion whether a stool was justified on grounds of health.

All this got to be known to the Chief Secretary. He sent for the concerned under-secretary and showed him the file. Since the essential virtue of an under-secretary is to rise to occasion, our man quickly replied that he had already solved his problem by using a biscuit box.

ECONOMIC DEVELOPMENT AND NATIONAL INTEGRATION



THE following note on the subject of Economic Development and National Integration and the removal of regional economic disparities was prepared by the Planning Commission for the consideration of the National Integration Council which held its first meeting in New Delhi on June 2 and 3:

In the course of the statement issued on behalf of the National Integration Conference held in September-October, 1961, it was stated that—

> "The Conference recognised the importance of regional balance in economic development as a positive factor for promoting national integration. It is true that regional inequalities in economic growth have diminished to some extent after the advent of political independence and as a result of the Five Year Plans for economic development; but the disparities that remain are substantial. The Conference felt, therefore, that a rapid development of the economically backward States and backward regions in any State should be given priority in national and State plans, at least to the extent that a minimum level of development is reached for all States within a stated period. Removal of regional economic disparities also requires the removal of all barriers to the free movement of skilled labour and managerial personnel between the different States. More attention has to be paid to economic development in rural areas and to greater decentralisation and dispersal of economic activity. There should be a periodic review of the progress made."

These recommendations are in line with the approach of balanced regional development set out in the Third Plan. The objective put forward in the Plan is that over a reasonable period all regions in the country should realise their potential for economic development and should attain levels of living not far removed from those of the nation as a whole.

2. In recent years, efforts have been made in a number of directions to secure more balanced development in different parts of the country and, in particular, to extend the benefits of economic progress and diffusion of industry to the less-developed region. Thus, the plans of States have been drawn up and implemented so as to ensure that programmes like agriculture, community development, irrigation, specially minor irrigation, and social services could cover all areas with the shortest possible time. Facilities for power, transport and communications have also been made available extensively, although over large parts of the country they need to be expanded further and in some the demand for these services has been greatly intensified. In drawing up the Third Plan considerable care has been taken to provide for larger outlays for development in those States which had earlier lagged behind. This is reflected also in the measure in which Central assistance for implementing the plans of States is being made available. In planning for such fields as education, health, development of communications and small industries, particular care has been taken to assist the less-developed States. Within each State an attempt has been made to mark out the extremely backward areas and to indicate separate allotments and programmes for them, at the same time providing machinery for implementing the programmes and following up the progress achieved.

3. The Third Five Year Plan has emphasised the close inter-dependence between rapid growth of the national economy and measures to achieve balanced development in individual regions. This inter-dependence can, however, be fully realised only over a period of time. In the short period the need of the economy as a whole may call for greater concentration of resources in some directions than the others. Economics of scale and location acquire even greater importance as planned development proceeds. In preparing the long term plan of development for the next 15 years, therefore, every effort will be made to take into account the needs as well as the possibilities of development in different regions. The Planning Commission has recently constituted a high-level Committee on Natural Resources and a Special Division for undertaking studies relating to the resource potential of different parts of the country. The studies and surveys which it is proposed to carry out will be of material assistance in mapping the resources of different States and regions and preparing their long-term plans as part of the perspective plan for the country as a whole.

4. The role of large industries in the development of less-developed areas has been fully recognised in the Third Five Year Plan. In recent years, the location of major projects in the public sector has been determined after careful consideration of relative costs as well as the need for dispersal of industries. Subject to essential technical and economic considerations, the needs of areas which have the necessary potential for industrial development have been kept in view in the selection of sites for all important industrial projects undertaken by Government. In relation to industrial schemes in the private sector also, to the extent feasible, the regional approach is being followed. The Third Plan also provides for 'industrial development areas' in several less-developed States in which it is proposed to make available basic facilities like power, water and communications and to develop and offer for sale or on long lease of factory sites for medium-sized industries and ancillary small industries. Thus, in the course of the Third Plan, it is expected that various regions will have a significant share in the country's industrial development.

5. Apart from implementing the development programmes provided for in the Third Plan as effectively as may be possible, the follwing are the main directions in which action to secure the more rapid development of the less-developed areas is being intensified:

(1) Markedly backward areas situated within each State which call for special measures for their accelerated development have been broadly identified by the State Governments. The Committee on Dispersal of Industries has also made an attempt to list such areas. Useful information has become available in the techno-economic surveys undertaken for different States by the National Council of Applied Economic Research. The Planning Commission will give such assistance as it can to State Governments in identifying the areas in question more precisely and in implementing development programmes for these areas.

(2) The rural works programme, which is additional to other programmes of development in the Plan and is intended to ensure that employment becomes available to all persons during the slack agricultural season, is being concentrated in areas which suffer from considerable unemployment and under-employment either because of high density of population or because of lack of develop-

ment of the available resources. This year, about 200 development blocks have been taken up, and the programme is to be extended to four or five times next year, its ultimate aim being to provide work to about 2.5 million persons.

(3) Many of the large projects are being located in comparatively less-developed areas. The Third Plan has stressed the need for regarding every major project as a nucleus for integrated development of the region as a whole. Through such development, the benefits flowing from the location of new and vital centres of activity or the creation of new sources of wealth can be greatly increased and far more widely distributed.

(4) One of the main objectives being pursued is to provide facilities for education, specially at the primary level, on a universal basis in all parts of the country. In the past the gap in education has been one of the most important factors in retarding the development of some areas in comparison with others. Similarly, greater emphasis is being placed on the provision of facilities for technical training.

(5) There has been considerable expansion of small industries in recent years and a large number of industrial estates are now being set up. It is realised, however, that the benefits of such development have not reached small towns and rural areas in sufficient measure. For this reason, a new programme for the intensive development of small industries in selected areas is being initiated. This year, it is proposed to undertake 40 rural industries projects, each covering a population of 3 to 5 lakhs. The emphasis will be on the co-ordinated development of agriculture, small industries, communications and social services. In the selected areas, the existing rural electrification programme will also be accelerated to the extent possible. It is hoped that in the course of the Third Plan, a much larger number of areas will be brought under this programme. The ultimate object is that over a period of ten years or so, each area should develop a reasonably diversified and balanced economy which can go forward largely on its own momentum.

(6) The Planning Commission and the Central Statistical Organisation have initiated a programme of work on the statistical aspects of regional development, which is being pursued in consultation with the State Statistical Bureaus. This includes the preparation of comparable estimates of State income. However such statistical studies will take time. At the present stage it is necessary to concentrate on those specific measures which will enable each region to identify the means by which it can develop most rapidly and realise fully its own growth potential.

the fortnight in yojana bhavan

MR T. T. Krishnamachari, Minister without Portfolio in the Union Cabinet, has been appointed a member of the Planning Commission

* * *

THE Planning Commission's Consultative Committee of Members of Parliament met on June 12 and reviewed the progress of the Third Plan programmes. The Deputy Chairman of the Planning Commission, Mr Gulzarilal Nanda, gave the Committee an account of the measures taken to speed up plan projects, co-ordinate the programmes more effectively and delegate more powers to the States and other executive authorities. (Please see page 7).

Reviewing the working of the different sectors in 1961-62, first year of the Third Plan, Mr Nanda said that owing to shortages in steel, cement, power and transport, the performance of different industries was rather uneven. Shortage of power, as also the difficult transport situation, was likely to persist at least in the earlier years of the Third Plan. But the additional resources necessary for increasing the Railways' haulage capacity would be found.

In the discussion that followed, members underlined the need for better co-ordination and suggested that the proposed State Planning Boards should be asked to pay special attention to this task. They also wanted the needs of backward areas to receive special attention. They suggested that special measures should be taken to increase the production of cotton and oilseeds so as to increase foreign exchange earnings.

* * *

THE Planning Commission is currently engaged in having a "second look" at the resources available to each State Government for implementing its Annual Plans for 1962-63.

The Annual Plan for 1962-63 of each State was finalised after discussions with the Planning Commission in October-December 1961. Since then the State Budgets have been presented giving more approximate figures of the resources available for them for executing the different Plan Programmes in 1962-63.

The award of the Third Finance Commission has followed, under which there has been some redistribution of the financial resources between the Centre and the States. All these developments have necessitated a review of the resource position of each State. This review which commenced with Rajasthan, Punjab and Andhra Pradesh in the first week of June is expected to conclude by the middle of July.

Earlier in the week, State Chief Ministers who were in Delhi in connection with the meeting of the National Integration Council had a meeting with the Planning Commission. Mr Nehru presided over the meeting at which there was a general review of some of the important aspects of financing and implementation of the Plan Programmes.

* * *

A COMMITTEE has been set up by the Planning Commission to promote close co-operation between India and Japan on studies bearing on long-range problems of economic development and exchange of information on techniques and experience of economic planning in the two countries.

Dr C. D. Deshmukh is its chairman. The other members are Professor P. C. Mahalanobis, Mr Bharat Ram and Mr Jagadish Bhagwati (secretary).

A similar committee has been constituted in Japan with Professor Ichiro Nakayama as chairman.

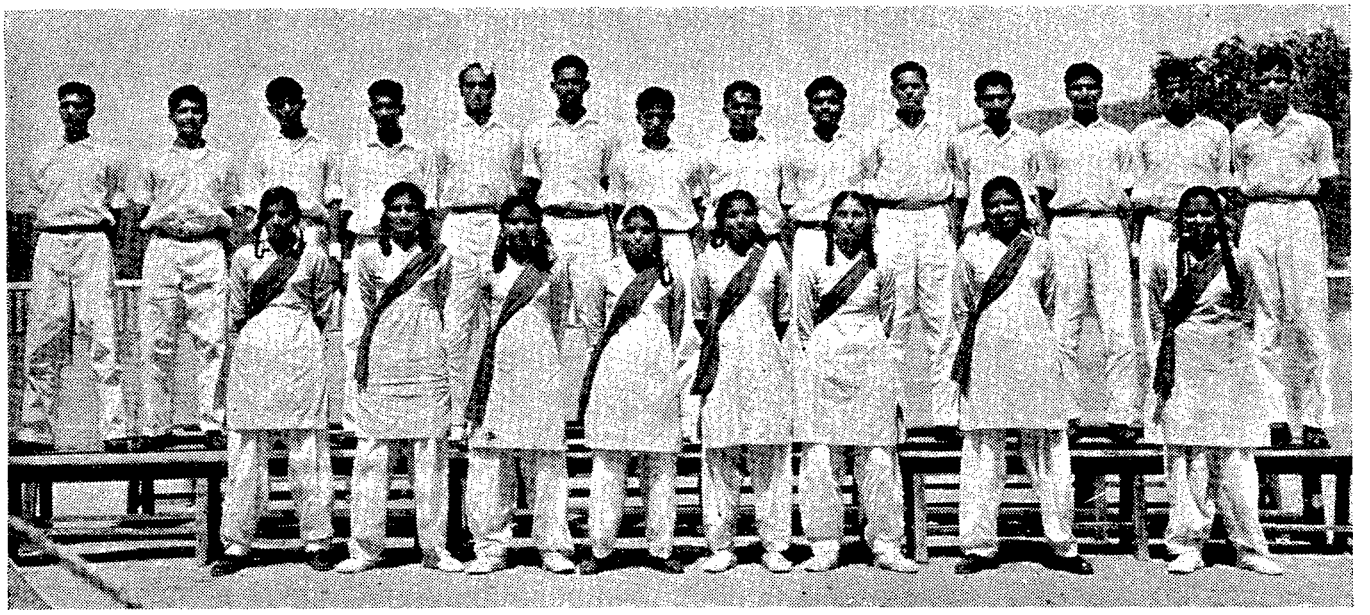
IMPROVED FARM TOOLS

(*Continued from page 5*)

Olpad threshers should be demonstrated before the season so that farmers can see for themselves their utility and buy their requirements on the spot. The village level worker is now required to do so many jobs that it is almost impossible for him to give attention to demonstration of agricultural implements, which requires special training as well as aptitude. The need to have a separately trained person, preferably an artisan, for this job is obvious. Trained artisans will be able not only to give demonstrations but also to repair the implements. They could be trained at Government or private farms.

A survey of the manufacturing units in the country shows that there has been a tremendous progress. The Government Central Workshop at Lucknow had a production of Rs 30,000 to Rs 40,000 in 1954. This year's output is estimated at Rs 10 lakh. The workshop could easily double the number of implements manufactured if steel, coal and foreign exchange are made available. Similarly, a private concern, Cossul and Co., Kanpur, has been able to push up its output to Rs 8 to 9 lakh in a mere six or seven years. Government-owned manufacturing units are having a salutary effect on keeping down the prices and maintaining the quality of the implements.

It would be necessary to provide the State Government with additional funds over and above the Plan provisions if the new tools are to be used on a fairly large scale.



Photographs by K. S. Nagarajan

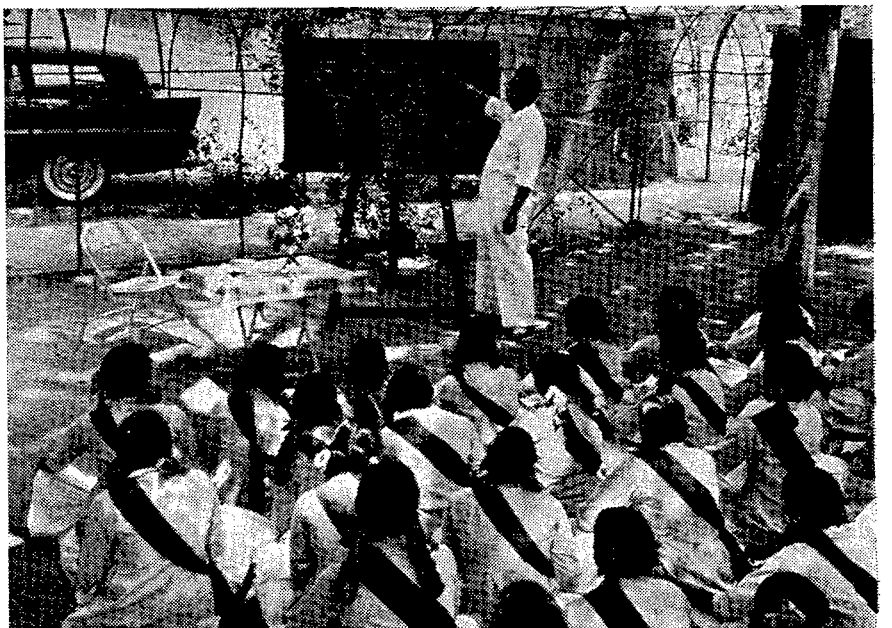
The Sariska Way to Discipline

SITUATED near Alwar in Rajasthan, amidst beautiful surroundings, is Sariska. The Maharaja of Alwar once had his hunting lodge there, proving the prowess of man over the beasts. For the past two years, however, this place has turned into a centre for developing the prowess of the man as a member of the human society. It trains instructors who, in turn, train the youth to become responsible citizens. At Sariska is situated the training centre of the National Discipline Scheme.

Trainees from different parts of the country come here to complete courses which will find the answer to a major national problem—the sense of drift and indiscipline on the part of youth. So far, the centre has turned out about 2,000 instructors and a fourth batch of about 640 is now under training.

Drill and physical exercise has long been regarded as the foundation of all discipline. Life at Sariska is also based on this belief. Team spirit and leadership are promoted among students through games and physical education. But since discipline in reality is an attitude of the mind, and is the result of a sense of duty towards fellow human beings, Sariska sees to it that mental training is given through lectures and other activities.

The Scheme was originally launched by General J. K. Bhonsle, then Deputy Minister for Rehabilitation, for the benefit of displaced children. Seeing the useful purpose served by the scheme, the Ministry of Education took it over at the instance of the Planning Commission.



HAMARA HINDUSTAN

The Economics of Persuasion

IN a period of eight days between February 18 and 25 a total of 118,809,536 voters—adult men and women of all ages and conditions above the qualifying age of 21—walked up to polling booths, stamped two bits of paper and put them in specially made steel boxes. It is true that of this number, as many as 4,658,315 ballot papers (or 3.92 per cent of the votes cast) were invalidated. But that makes no difference to the fact that the people who cast them were persuaded to make a choice and intended to do so. It is also true that voters in Kerala and Orissa each cast only one bit of paper. That, however, does not make too great a difference to the broad picture.

The Third General Election was a democratic operation so vast that its smooth running must rank as a miracle of administrative achievement. The sheer mechanics of it was daunting. Two hundred and ten million voters; 240,000 polling stations provided for them so that none need handle more than a thousand prospective voters in a nine-hour spell of voting time; 1,860,000 government employees taking time off their other duties to be trained and then faithfully follow the election procedure.

They got no extra wages; if they did, the cost would have been astronomical. It is impressive as it is. Mr. K. V. K. Sundaram, Chief Election Commissioner, indicated (in an interview at Patna, February 9) that the cost would exceed the budget allocation of Rs 55 million. This was due to the very large number of candidates. The excess over the estimated cost would be shared by the States on the basis of the number of candidates contesting from each State. The amount covered the cost of 100,000 steel boxes, the printing of 700 tons of ballot papers, the erection of temporary booths where proper covered locations were not available, and the overheads.

In any real cost accounting, there will have also to be included the emoluments of the government servants proportionate to the time spent by them on this work, a portion of the permanent expenses of the Election Commission, and the cost of the policing arrangements.

THIS, of course, is only a part of the money spent on the elections. Although in any national account keeping, it must be included, it was not this amount that Dr Rajendra Prasad had in mind when he referred to the cost of elections in his valedictory address to the members of Parliament at New Delhi on May 8. Dr Prasad referred to the three successful General Elections "on a scale unsurpassed in the world's history" and said that if this experiment in democracy was to succeed fully, efforts should be made to reduce the election expenses by the candidates so as to remove their dependence on political parties or groups.

Each candidate and each political party, too, has to incur heavy expenditure. Omitting the nominated seats and uncontested returns, there were at stake in the February elections 494 seats for the Lok Sabha, and 1,980 candidates in the field. For the State Assemblies, there were contests for 2,830 seats with as many as 12,764 hopefuls joining the fray.

It was with reference to these that Dr Prasad pointed out that India was a poor country, but the scale of expenses, even legally valid expenses, was high, and it was not possible for men of moderate means to depend on themselves and their own resources to get elected. "Therefore", the ex-President continued, "if you want to make this experiment successful, you have to find ways and means of curtailing the expenses. Heavy expenses do not mean only a heavy burden on the person who is seeking election. They may create a chain of undesirable and evil consequences."

He did not, in his brief address, spell out what these "undesirable and evil consequences" might be. The occasion was not appropriate for the purpose. But he did give a hint of what he had in mind when he said, "We may not forget that there are reports, there are murmurs of things which should not have happened and which should not have been allowed to happen."

THE Representation of Peoples Act permits the spending of Rs 25,000 by each candidate in a Parliamentary constituency in the States and Rs 10,000 in Union Territories. For the Assembly seats, the figures vary form State to State, between Rs 6,000 and Rs 9,000. In its report on the Second General Elections, the Election Commission said that the 1956 amendment of the Act in regard to expenses "had rendered the entire scheme of the Act on this subject nugatory.....Too many loopholes had been left in the law with the result that a candidate can easily evade the objectives of the law if he is so inclined". Later the report added: "However large the expenses actually incurred by a candidate in respect of his election may be, there is ample scope for him under the present law to manage to keep the portion thereof accountable in law down to a figure well below the permissible maximum."

The provisions, in the view of the Election Commission itself, are unrealistic. The British law in this matter—and British law is our model in many comparable spheres—is more sensible. It allows expenditure by each candidate of £ 350 PLUS two pence per elector in a rural and a penny and a half in an urban constituency. A candidate is also permitted to send one communication post-free to each of his constituents. (These figures are taken from *Elections in Britain* by Mr H. C. Heda.). Considering the large and uneven size of our constituencies (North Bombay, for instance, has 7,64,128 registered voters), a provision similar to the one in Britain would seem to be more realistic.

However, the important point is that in view of the permissible maxima fixed under the law, no true figures of actual expenses are available and we have to make do with guess-estimates. A correspondent of *The Statesman*, reporting on his tour of the Guntur district in Andhra wrote of an instance of an Assembly candidate who had reportedly spent Rs 100,000 ; and others in the field were forced to do something to match this effort. An ex-secretary of the Congress Parliamentary Party once told me that a Parliamentary candidate from a rural constituency, which is necessarily vaster in area, has to spend Rs 50,000.

Since then the race has got hotter, the costs higher. Still, assuming this figure as a modest average, the 1,980 Parliamentary candidates will have spent between them Rs 99 million. By the same token Rs 10,000 for an Assembly candidate appears modest. If each of the 12,764 men and women spent as much to reach their constituents, it works out to around Rs 127 million. That gives us a total figure exceeding Rs 22 crore.

This amount does not include the general campaign funds of different parties—partly used for lending to candidates and partly spent on direct, centrally-run propaganda. Report has it that what proved to be an unexpectedly high item on the expense bill was the payments to campaign "volunteers". Only a few parties now command the services of hundreds of dedicated men and women rendering genuinely voluntary service. The rest have to make do with paid "volunteers".

In the last ten days of the election campaign in North Bombay, I am told, an ordinary volunteer commanded anything from Rs 25 to Rs 30 per day for his services. This was his (or her) golden opportunity. The duties of such volunteers included sticking wall posters, distribution of election literature and candidates' cards to each voter on the electoral roll, joining the processions, shouting slogans, ensuring attendance at meetings and cheering at opportune moments.

Those doing specialised jobs naturally commanded higher wages. Among these were the organisers, cheer leaders, the *nara dene wale* (those who coin slogans and cry the lead, so the crowd can complete it), and above all the amateur announcers, who had to speak through amplifiers fitted to mobile vans. Judging by the hoarseness of their voices as polling day approached, most of them must have earned heavy overtime.

ALL this is apparently part of our democracy; the best means yet invented of expressing the will of the people. The individual voter who casts his two bits of ballot papers in a closed box feels that somehow he has contributed to the determination of policies and politics in the next five years. But is there not some way by which he can participate more effectively in policy making and do it a lot cheaper? That is the substance of the problem that Dr Rajendra Prasad posed in his address—a problem for which no quick or easy answer is possible.

G.N. ACHARYA

OIL PIPELINES

WHY pipelines? You have only to read the next sentence to get a quick answer. A gallon of crude oil from Nahorkatiya in Assam to Barauni in Bihar, a distance of 720 miles, will be transported through a pipeline *for less than the cost of mailing a letter* in the country. To transport a ton of crude oil over the same distance costs Rs 24 by pipeline and Rs 120 by rail.

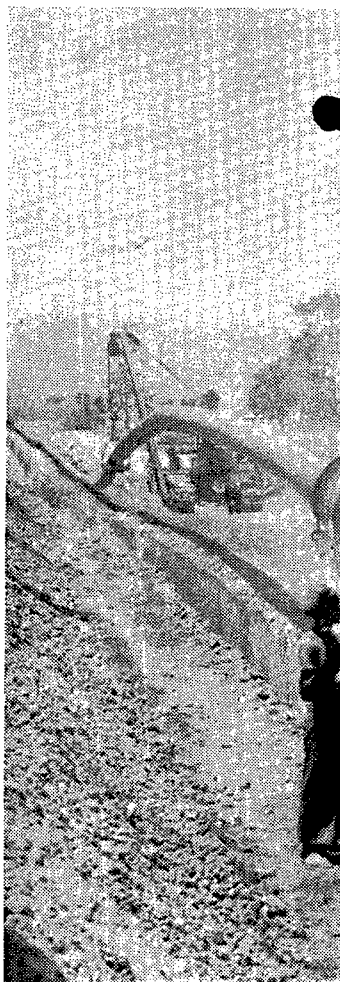
This explains why we are planning a network of pipelines in the country. The Rs 46-crore pipeline of Oil India between Nahorkatiya and Barauni is, moreover, the second biggest in the eastern hemisphere besides being among the most technically advanced crude oil transportation systems of its size anywhere in the world. The Government of India is also considering the laying of several more pipelines, one to move oil products from Calcutta to Delhi via Barauni, another to link Gauhati with Siliguri, a third to move gas from the Gujarat oilfields to thermal power stations and a fourth to carry crude oil from Kalol and Ankleswar to the refinery at Koyali in Gujarat.

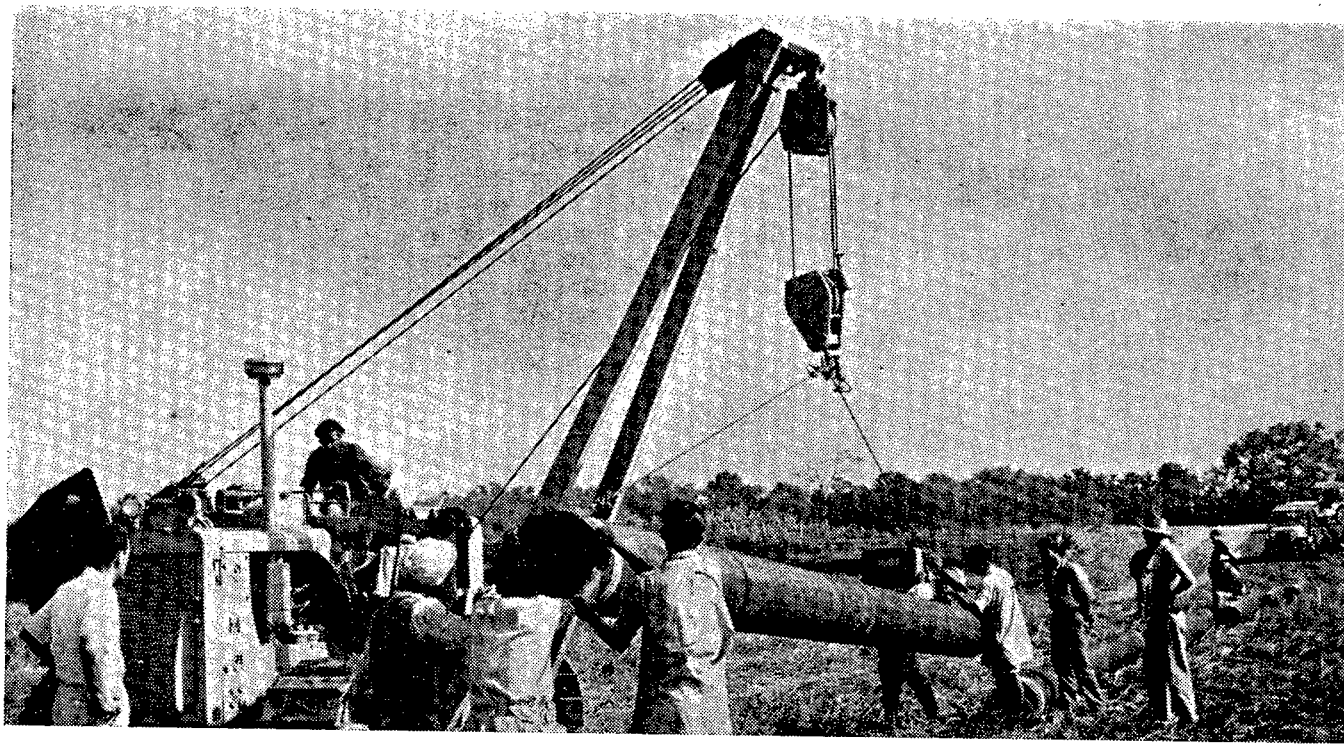
PIPELINE transportation of mineral oil was first introduced in the United States of America about a hundred years ago. It has now expanded to a point where today the United States has more miles of oil and gas pipeline than railway tracks. *A pipeline is container, road, and packing rolled into one and hence an ideal means of transport.* No wonder pipelines have grown with the oil industry and spread to many parts of the world. In fact, in the early days, pipelines saved the oil industry from what might have been a premature extinction. In 1860, it cost more than Rs 280 to transport one ton of crude oil from Pennsylvania oilfields to the refineries on the Atlantic coast. With refining and distribution charges added, the possibility of a large amount of crude oil being used as fuel at such a high cost was indeed remote. Demand therefore dropped

Oil pipelines are an ess of the oil industry. The Uni with 210,000 miles of th miles of oil-carrying pipeli world outside the Soviet U be considered the home of p

In India, a beginning made with pipelines in the f 720-mile Nahorkatia-Gauha pipeline now being la recently, the Government of announced plans for pi transport crude oil, products aiming, among other things, pressure on railways.

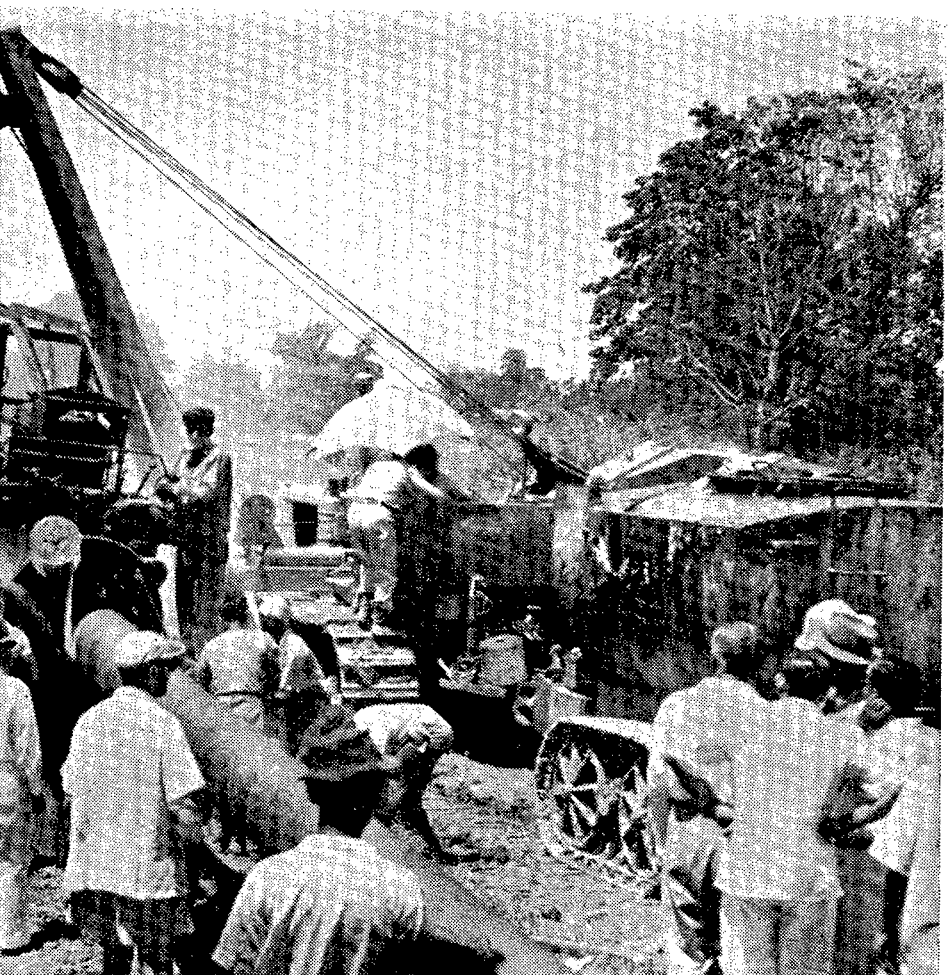
below the rate of produ there was a slump in oil p this stage the first modern line was laid in Pe which dispensed with the their horses and wagons i manual handling of crude pipeline was an immedia and the example spread. many as 632,000,000 tons oil products are moved b each year in the U.S. of transporting a ton, w





By P. R. GUPTA

Bureau of
Petroleum Information



Some stages of the pipelaying operation on the 260-mile 16″ sector pipeline connecting the oil fields at Nahorkatiya with the refinery at Nunmati, which was completed on April 26. This pipeline is the first stage of the 730-mile pipeline which is being laid by the Burmah Oil Co. (Pipe Lines) Limited for Oil India Limited, which is a joint venture of the Government of India and the Burmah Oil Company. *Left corner :* Machine makes a ditch to hold the pipeline. *Above :* Stringing of pipe along the route. *Alongside* : Wrapping of coated pipes with fibre glass and other protective material. *Photographs Courtesy :* Oil India Ltd.

Rs 280 in 1865, has come down to less than Rs 20.

HOWEVER, the economics of pipeline operation has several special characteristics. It is most successful where consumption of oil is high, as in the U.S. Unit costs of transport by pipeline are much less affected by distance than are costs by other forms of transport, which fall rapidly as the distance increases. Costs fall, on the contrary, when quantity increases. It follows that for a given pipeline to be economic it must be used to its full capacity.

The basic requirements of pipeline transportation can be summed up as follows: (i) vast quantities to be transported; (ii) quantities evenly

(*Continued on Page 25*)

Side Track

Q.E.D.

ONE of the discomforts in a modern State, whether of the welfare or of non-welfare variety, is the increase in the number of forms to fill.

A Bombay friend tells us how he went to the State Transport office to return a ticket he had bought for Mahabaleshwar. He was given a long printed sheet, which required, among other things, that he should state the reasons for cancelling the ticket. Our friend was at a loss, but the man at the counter said there would be no refund if a satisfactory reason was not given. After some thought our friend wrote "change of programme". The official conscience of the clerk was satisfied and he made the refund at once.

Indian Tortoise

IN reporting on whole continents *New Statesman's* Paul Johnson has few peers. His recent series on the politics and economics of Latin America had insight and thrust. Now he has written two articles on the three roads that are ahead of Asian nations—communism, socialism and capitalism. It is his view that China's Great Leap Backward and political aggressiveness have combined to dull communism's lustre to the eyes of Asians. The real race therefore is between the Indian socialist tortoise and the Japanese capitalist hare.

Johnson has immense sympathy for India. Yet he has tart things to say about our caution, smugness and lack of exhilaration, despite the fact that the only serious Asian experiment in socialist planning is taking place here. He contrasts our "unexciting certitude" with Japan which inspires brilliant doubt.

Is Planning enough, Johnson asks. Without a psychological revolution, without a readjustment in mental attitude, can we achieve the magic of self-generation? He taxes us for our neglect of education and agriculture and says our thinking on cow protection and cottage industries is all muddled. Throughout the underdeveloped world, in his opinion, the planners neglect the land, because its problems are more difficult than the industrial sector. "The pyramid of Indian bureaucracy immensely efficient at the top, crumbles at the point of impact with the masses... This fatal lack of contact between the planners and the villagers is perhaps India's greatest economic weakness." Somebody should examine how far this charge is true. Another of Johnson's statements is certainly not justified—that our agricultural complacency arises from our abject reliance on U.S. farm surpluses.

But let it not be thought Johnson throughout paints a gray picture. He is scrupulous in pointing out that the pace is slow mainly because of "India's absolute refusal to use compulsion". With compulsion we could have achieved more speed; but, as Johnson asks, if the element of consent is removed will the Indian experiment remain meaningful? As he sees it, consent may make for inefficiency but in the long run it guarantees success.

Paying and Parking

THE people of Bombay and Madras think of their policemen as being more efficient than those of Calcutta and Delhi. This is true at any rate in the thought spent on improving traffic. There is tremendous traffic congestion in Bombay; no doubt about it. But one doesn't get the feeling that it is insane or contrary to elementary rules as in the Capital, where cars can go merrily—and legally—on footpaths.

In their search for innovations the Bombay police now want to introduce something that is prevalent in most of the modern cities of the world—parking meters. This will mean that those who drive to work will park their cars in the back streets. The main roads will not be cluttered up with cars which will stay put at one place from ten to five. Those who have to visit the busy areas for work will be able to park their cars for half an hour or one hour. In return for the coin they pay, a policeman takes care of their property.

Since all advantages carry with them some disadvantages, let us look at the likely drawbacks in this idea. One, some car-owners will begin using the trains, already crowded. The side-streets in Fort area, already packed, will become even more impassable for the walkers. Also, urchins who now make a few coins minding cars will have a trade denied to them.

One of the main obstacles to traffic flow in Bombay is the tram—dear to the heart of the Mumbaiwala despite all its noise, and one of the cheapest modes of transport in the world. Trams have already been discontinued on several routes. An I.L.O. team is supposed to have recommended their scrapping on the ground they have led to a loss of Rs 5 crore in the last 15 years which has had to be made up by the BEST from the electricity collections. Trolleys have begun taking their place. When trams were abolished in London a few years ago, a newspaper wrote a moving obituary on the Streetcar Named Demise. How the Bombayites will react to the disappearance of trams is hard to tell. There will be less noise, and women in first-floor flats can go about their business with less of a feeling that they are being watched.

IGNORAMAN

Wants to Know

If those who help exports will be called Vanijya Nipunas, will those who talk on exports be called Vanijya Vaak Nipunas ?

Large Scope for CONSUMERS' CO-OPERATIVES

With a little more civic zeal we can ensure quality and prices of household goods.

In his budget speech the Finance Minister advised the country to build up consumers' co-operatives in order to hold prices in check. This article explains how the movement will help stability as well as progress.

BY A. K. NANDA

CONSUMER co-operative societies can go a long way in promoting growth and maintaining the stability of an economy. Whether the accent is on growth, as in the case of developing countries, or on stability, as in the case of advanced countries, consumption is the end of economic activity; and consumers can serve their cause much better through co-operation among themselves than through competition. Much of the helpless fate of the consumers in India can be improved if consumer retail shops are established on a co-operative basis and on a large scale. To be successful, such societies have to be assisted by the Government where necessary.

The idea of consumers' co-operation was first evolved by weavers in England as far back as in 1844. With its aid, weavers were able to prevent wages from going down and employment opportunities from shrinking. In India, however, the picture is one of consumer inertia. Something more than the Report of the Committee on Consumers' Co-operatives is necessary to displace it. Popular enthusiasm has to be built up systematically. It is distressing to know from the Report that *there were only* 4,255 *consumers' co-operatives in the country on June* 30, 1960, *and that only* 1,383 *of them were actually functioning*. The Committee attributes the poor progress "to a number of factors such as, weak organisational structure, uneconomic size, dependence to a large extent on distribution of controlled commodities only, inadequacy of funds and heavy working costs resulting in low margin of profit, lack of business experience of members of managing committees, inadequate loyalty of members, lack of trained staff and keen competition from private trade." These factors are not insurmountable. Since the aim of these consumer retail shops is not maximum profit but the distribution of consumer goods at a fair price—thus saving the consumer from the clutches of middlemen—it is necessary for such societies to acquire the skill of efficient management, particularly in terms of reducing overhead costs.

These apart, there is another cause of slow progress which the Committee has obviously lost sight of. The wide disparity in incomes between the lower middle class and upper middle class has hindered these two groups from coming together in the interests of the community in general. These two groups form two distinct classes of consumers, indifferent to each other's needs. Besides, the Indian consumers do not have a wide range of products to choose from as in the advanced countries and hence insistence on quality and fair prices is not widespread. With a slight increase in freedom of choice to the consumer, consumer co-operatives can make a better

showing, especially if the Plans succeed in narrowing the disparity of income between the upper and lower groups of the middle class.

WE noted, at the outset, that consumer co-operatives are needed as much for the growth of an economy as for stability. Accent on growth involves saving, sacrifice and a tightening of the belt. This is hardly possible within the narrow ambit of private trade which operates on the basis of profit. Whenever any chance turns up for high profit, private trade does not hesitate to create scarcity or exercise a monopoly over the supply. Economic planning does not end in the allocation of resources for production or in reaching the production target. Production is only a means to the end which is consumption. Planning includes all efforts to restrain certain kinds of consumption and the balancing of demand and supply of consumer goods. Consumers have to be guarded as far as possible against undue rise in prices; or else their income will be corroded.

EVEN in an advanced economy where the accent is more on stability than on growth, consumer co-operatives are a safety-valve against low standards of goods, adulteration and other unscrupulous practices. When consumers have a wide range of products to choose from, their choice tends to be guided by the rigid test of standards.

In the opinion of the Committee on Consumers' Co-operatives in India, we have to evolve a sound structural pattern if the movement is to develop in future. The Committee recommends a primary store at the base which may either be (*a*) a rural store, (*b*) a general store, or (*c*) a workers' and employees' store. The Committee also favours a wholesale organisation at the apex level in each State for the movement "to lend and support to existing ones". Since such a store would not be a sound economic proposition at present, the Committee suggests that the normal pattern should be to establish in each State a wholesale store at the apex level with at least 200 primary stores as members. Such an apex wholesale store should open regional branches at suitable places in the State, if necessary, or affiliate district and regional wholesale stores where these already exist or can come into being.

Government participation in the share capital of consumers' co-operatives has been recommended by the Committee on a matching basis up to Rs 2,500/- for a primary store and Rs 50,000/- for an apex wholesale store. Central co-operative banks, the Committee feels, should be given additional funds by the Reserve Bank and should be persuaded by the Government to earmark funds for financing consumers' co-operatives. Where central financing agencies are not in a position to finance these co-operatives, the State Bank of India should offer financial accommodation on the same terms and conditions as are applicable to marketing and processing societies.

Other measures of assistance suggested by the Committee include the appointment of additional staff for supervision and audit of consumers' stores with 50 per cent of the cost being borne by the Central Government. Managerial subsidy should be provided to selected primary societies up to Rs 1,800 and for an apex wholesale society up to Rs 18,000. The Committee has also favoured the payment of subsidy for building shop-godowns. Tax concessions and preferences in the matter of the sale of imported consumer goods are a few of the Committee's other suggestions.

IT has been questioned in some quarters, after a summary of the Committee's report was published in the February issue of the *Reserve Bank of India Bulletin*, whether it would be desirable at present to start consumer stores considering the large amounts of money involved in the promotion of these, particularly at a time when other more urgent projects are starved of financial resources. In other words, will the country get more than what it would forgo?

The Committee's findings that the progress of co-operatives which has been retarded on account of "heavy working costs resulting in low margin of profit" and also "keen competition from private trade" should not be taken to lend support to the argument that private trade is doing well in the field of distributing consumer goods and the co-operatives can do no better. If consumer co-operatives have not made much headway in India so far, it is not because the idea is faulty, but because of the inadequate organising ability in the past. The argument is often advanced on the mistaken belief that the facts which have hitherto prevented co-operatives from making substantial progress are by themselves enough to justify the slipshod manner in which consumers' co-operation has been treated in India. In fact, the interest of the consumer is no different from that of society as a whole. And if there are producers who tend to be anti-social, then it is in the people's interest that the consumers should put up an organised front.

If consumer inertia continues, the growth of co-operatives can only be slow and difficult. Once these co-operatives are on firm ground, however, production would be attuned to the demand for different classes of goods. Not only will that help better planning of production and the elimination of scarcities and gluts; it will also throw the parasitic middlemen out of business. We can guard ourselves against production scarcities as well as artificial scarcities which are mostly the doing of the distributors.

It is not money alone that is needed to promote such co-operatives but a conspicuous zeal and co-operative spirit among consumers. In England they started consumers' co-operation with as small a sum as £ 27 which in course of time grew up to be a massive enterprise. Those who argue against the promotion of consumer co-operatives on the ground that enough funds are not available do not know history.

NATIONAL FAMILY PLANNING INSTITUTE

A National Family Planning Institute is soon to be set up. It will undertake medical and biological research, statistical evaluation and training of workers.

This was announced by Dr Sushila Nayar, Union Minister of Health. She also said that a proposal to start a new National Institute of Health Administration and Education was being considered.

The State Award for outstanding performance under the family planning programme during 1960 has been won by Maharashtra.

Financing Growth

Problems of Monetary Policy in an Under-developed Country with Special Reference to India: J. D. Sethi (Asia, Bombay, Rs 15)

THIS doctoral thesis dealing with the financial aspects of economic planning is concerned more with India than any other country. Mr Sethi's analysis of market forces compresses three decades of Indian finance into a few chapters that lay bare the mistakes of inaction as well as action. The under-development of the Indian money market, its limitations, and the presence of an unorganised money market financing extra-level transactions are all fully grasped. The course of inflation has created a preference for commodities and real estate as well as bullion. There is both dehoarding and hoarding at intervals. And the authorities have been unable to eliminate the pressure of idle or black money to which controls contribute.

The remedy in Mr J. D. Sethi's view is the application of strict priority under planning, by massive official intervention with the supply of goods and credit. It is perhaps natural for an academic observer to think of controls as the *ultima ratio*. But controls too breed many evils to which none can be blind. The immaturity of the financial structure is reflected in the level of interest rates. Regional differences, say, between Bombay and Nagpur are, in a sense, inescapable and yet the outcome is undesirable for one and all.

The Reserve Bank's role in its first twenty years of existence has been that of a *roi faineant* as Mr Sethi suggests. The academic criticism of deficit financing and limited public borrowing, however, misses the point that the currency reserves had run down steadily. A new factor was the rise in imports, partially alleviated by foreign aid. That under-developed countries catch easily the infection of inflation is implicit in the whole argument. Credit restrictions, the impounding of bank deposits and penal rates of interest on loans made by the Central banking institutions are symptoms of the chronic disease.

But one point rightly emphasised in the whole book is that by ready purchase of Government securities offered for sale the Reserve Bank created in the banking system a liquidity preference of its own. The more important factor is the rate of economic growth, demanding more and more finance. The steady rise in bank deposits has not been equal to the situation and legislative regulations about interlocking of joint stock company interests create problems of a new type. If there is no reference to this aspect, there is yet a reference to the pervasive power of finance capitalism, and it must be remembered also that the public sector has not developed at all as expected. The lift in interest rates during the last decade is a result as well as a cause of disequilibrium. Mr Sethi's view of the stock market as an evil of sorts may be questioned, but it is patent that the permanent assertion of sentiment over calculation creates new problems. Those who have read Mr C.D. Deshmukh's lectures on Indian budgets and economic policy may be excused for thinking that foreign influences or developments had a real and patent effect on Indian policy. The current anxiety over U.K.'s entry into the E.C.M. will suggest as much. The close or apt initiation of British economic policy during the war has not been without effect on the country. The failure to follow it in the post-war period can be explained by reference to many things. But it must also be remembered that trade policy and fiscal policy have a close bearing on both the currency and credit system. The slowness of savings accounts for low investment and Mr Sethi admits that poor savings here and now coincide with high interest rates. And economic disparities like variations in income are only too obvious.

The modern ideal of equality is more than elusive and Mr Sethi's complaint that rural savings do not go regularly into investment is a consequence of the fluctuations in agricultural income and prices. The stability of grain prices achieved through U.S. aid has its effect on the banks' resources and attitude. The reader who enjoys rigorous mental effort can follow Mr Sethi through the gyrations of gilt-edged prices and the ascent of raw material prices. But the Reserve Bank has the power to deflate while the Government has a definite interest in keeping money comparatively cheap.

There is no reference to what has been done abroad in Canada or South Africa. And it must be remembered that in point of resources unutilised they are as under-developed as Australia where banking was nationalised only to be handed back to private interests. Yet the difference between India and advanced countries may lie in the relative failure to develop a flexible policy. The banks adopt British policy as evolved in the nineteenth century and do not care to copy Japan where economic recovery has been stimulated by a bold, new programme. There is certainly a reward for students of current problems in this book of 322 pages and if the author's comments on the management of public debt are astringent, the remarks on war-time financial measures and their results justify the view that increase in currency circulation represents a danger.—R.

HILL PEOPLE

Social Economy of a Polyandrous People by R. N. Saksena (Asia) 143 pages, Rs 15.

JAUNSAR-BAWAR is a sub-division of the Dehra Dun district in U.P. A hilly area bounded by Tehri, Bashar, Raiengarh, Tharoch, Jubal, Sirmor and the Doon Valley, it is watered by two rivers, the Tons and the Yamuna. The Jaunsaris live in this mountainous region. They have been identified by some scholars as the 'Khasas'—an early Aryan group of settlers. Their caste hierarchy has Rajputs and Brahmans at the top and, in the lowest strata, the Koltas and Doms who

are under connubial and commensal restrictions as elsewhere in India. Except that they have a polyandrous system of marriage they are Hindus like other hill peoples in northern India. It is their practice of polyandry that has prompted anthropology students of northern Indian Universities—Delhi, Lucknow and Agra —to write theses on them from time to time.

These theses would be more fruitful if they furnished some knowledge about the acculturation of these people, their development or otherwise in a specified time-period and in the larger context of India's development. Instead, they confine themselves to the old-fashioned ethnological accounts which start with habitat, people, social organisation, religion, material culture, etc., illustrated, when printed and published, with photographs of women wearing quaint jewellery, sketches of baskets, agricultural implements and musical instruments, and so on. Dr. Saksena's book is no exception. However, for a change, it is well printed and produced, with the usual photographs of smiling, bejewelled women.

The chapter on social organisation deals at some length with the polyandrous character of Jaunsara society tracing its origin to the practice of marriage between one woman and five to six brothers as it was with the Pandavas. Divorce is allowed among the Jaunsaris and when a wife divorces, her parents or the new husband has to pay compensation to the former husband. The amount demanded has increased in recent years. It is gainful for a husband to divorce a wife and get compensation, which can buy for him another wife. The new trend in marital relationship, observes the author, is increase in the plurality of wives and increased rate of divorce.

The chapters on land usages and practices and economic serfdom are of interest. The problem of indebtedness in this area is of considerable magnitude; it results in virtual serfdom of the Koltas (agricultural labourers) to the Rajputs and Brahmans. The impact of the culture of the plains-people on the Jaunsaris has been mentioned casually and—surprisingly—in the chapter on trade and transport.

Dr. Saksena's book will certainly be useful for Block Development Officers who have to have a working knowledge of people who come under a Community Development or a Tribal Development Block. A foreword by Mr. K. M. Munshi, written in conversational style, is perhaps of more interest than the body of the book. The reader wishes the publishers' blurb—that the book is the result of 'extensive research' and written from a 'sociological point of view'—were borne out.

KRISHNA DUTT

THE Fertiliser Corporation of India has declared a dividend of one per cent for 1960-61, the first year of its working. The Corporation earned a gross profit of Rs 3.94 crore during the year.

The Corporation controls the fertiliser factories in the public sector. The Sindri factory improved its output during the year. The Nangal factory, which started production in 1960-61, is expected to go into full production next month.

QUOTATION BOX

A man who does not love animals and trees will not love his wife either.

—Mr. S. K. Patil in Lok Sabha

Severe action has been taken against certain police officials of the Delhi Administration for enjoying free rides on Delhi Transport Undertaking buses, seeing free cinema shows and taking free drinks in hotels and other public places.

—A Report in "The Hindustan Times"

They (Indians) are determined to make India a better place to live in. I would be very happy to be a citizen of India—but very unhappy to be a citizen of mainland China.

—Mr. Averell Harriman, U.S. Assistant Secretary of State for the Far East.

On the first day of their arrival here for the recent trade talks, Pakistani officials were naturally asked by their Indian hosts how they would like to spend their time when the bargaining at the conference table was over for the day. The replies of Pakistani delegates were striking in their unanimity. All of them wanted to see as many Indian films as possible and all showed a keen interest in going to a particular cinema house which claims to have the largest and the most modern screen.

Around the conference table the next day, however, the Pakistani delegation firmly refused to allow Indian films to be imported into Pakistan.

—A report in "The Statesman"

If every father undergoes vasectomy after the birth of his third child our population problem will be solved in 15 years.

—Dr. S. Chandrasekhar speaking on India's population problem in Calcutta.

The truth of the matter is that nothing is secret in Delhi.

—Mr. Romesh Thapar in "The Economic Weekly"

All the misfortunes of the people of Delhi result from the decision in 1911 to shift the capital from Calcutta to Delhi, and the happiness, prosperity and gaiety of the life of Delhiwallas have been destroyed by the pace of urbanisation and the influx of population from all over the country.

—The Mayor of Delhi, Mr. Nuruddin Ahmed, quoted in "The Indian Express"

I see there is going to be a fresh committee to evaluate the progress of the Plans.....A stage will shortly be reached when there will be more planners than plans, and more plans than actual things to do.

—A columnist in "The Economic Times"

The National Integration Council appears to have overlooked one sphere of activity which should have contributed the most towards its objective but has failed to—sport. Much more serious than the communal aspect of audience-participation are the regional quirks or prejudices governing sports administrators and team selections.

—Mr. Vernon Ram in "The Indian Express"

The Union Government's socialism is like a classical raga in which the basic notes are prescribed but in rendering it there is adequate scope for improvisation.

—From "Political Commentary" in "The Statesman"

The effect of malaria on fertility is simply astonishing. When the fever stops the babies start coming.

—Ambassador Galbraith

A Sector by Itself

Question from Mr K. Sambamurthy Mudigubba, Anantpur district, Andhra Pradesh:

Does the co-operative sector come under the public sector?

ANSWER: As the Third Plan makes it clear (pages 7 & 8, 200 & 201), the co operative sector is part of neither the private sector nor the public sector but is in reality a third sector which combines the best aspects of both, namely freedom and opportunity for the small man with the benefits of large scale management and organisation. The values of co-operation are particularly relevant in a planned economy pledged to socialism and democracy. Hence the important and growing role assigned to it in agriculture and minor irrigation, small industry and processing, marketing, distribution, supplies, the rural electrification, housing and construction, transport and the provision of essential amenities for local communities.

SERVICE CO-OPS

Question from Mr S.S. Sinha, Arya Nagar, Lucknow :

What is a service co-operative and what are its functions? How is it distinguished from a co-operative farming society?

ANSWER : In November 1958, the National Development Council adopted a resolution on co-operative policy which stated that there should be a countrywide network of primary co-operative societies which would share, with the Panchayats, the responsibility for social and economic development at the village level. The National Development Council gave further thought to the question in September 1960 and decided that for every 3,000 rural people (or 600 families) there should be a co-operative society which should assist in the task of increasing production. The main functions of these co-operative societies, which are popularly called service co-operatives, would be to supply credit and marketing facilities, to undertake functions of distribution and supply and to attract local savings through share capital and as deposits. In operation the service co-operatives provide many of the needs of the farmers for increasing production namely credit, fertilisers, seed, implements and so on. All classes of cultivators, including marginal and sub-marginal cultivators and landless tenants, can become its members.

The purpose and functions of a co-operative farming society are different, although the principle of voluntary organisation for mutual benefit remains the same. In such a society, small peasants pool their lands, money and labour on mutually agreed terms to cultivate the land and reap the harvest jointly. The lands and other resources are pooled for a minimum period of five years.

"LAME DUCK"

QUESTION from Mr G. Das, Varanasi (U.P.):

Please explain the term 'lame duck budget'. Is it synonymous with Interim Budget?

ANSWER : The term 'lame duck' has been in vogue in the United States for nearly one hundred years. It is used to designate an office-holder who has not been re-elected. Mathews Dictionary of Americanism finds the first mention in a newspaper in 1863. "Lame duck" or a duck whose wings had been clipped apparently seemed a good description of the Members of Congress whose effectiveness was severely limited by not being re-elected.

For many years there was a so-called "lame duck" session of Congress which met in December after the November elections. Since newly elected Congressmen did not take office until the New Year, this session had many members who had not been re-elected. The twentieth amendment to the Constitution adopted in 1933 abolished this short session.

American journalists would certainly refer to the brief session of the old Indian Parliament that was held after the elections to a new Parliament had taken place as a "lame duck" session. It is true that the Union Budget of March 23, 1962, was presented to such a session. Even so, it would be inexact to describe it as a "lame duck" budget. The expression is yet to become part of the vocabulary of our politics.

ISLAND WEALTH

QUESTION from Mr D.H.S. Rao, Guntur, Andhra Pradesh.

What are the sources of information for (1) the survey of the available industrial resources and raw materials and possible industries in the Andaman Islands, (2) the aid and concession for private industries in the Andamans, and (3) the reports of the Advisory Committee for Andaman and Nicobar Islands?

ANSWER: The necessary information may be obtained from the "Report on Industrial Development Potentiality in Andamans and Nicobars" of the Development Commissioner for Small Scale Industries, New Delhi.

PLAN QUIZ

1. What is an 'Arjuna' award?
2. What is the proportion of defence expenditure to total Government expenditure in the country?
3. The total mileage of waterways existing in the country is: (a) 7,000, (b) 3,500, (c) 5,500.
4. Fill in the blanks:

   (A) During the second half of 1961, the Air India International flew————kilometres, and carried ———————— passengers, ————kilograms of cargo and————kilograms of mail.
   (B) During the stcond half of 1961, Indian Airlines Corporation flew————kilometres, and carried————passengers, ——————kilograms of cargo and ————kilograms of mail.

(Answers on Page 23)

COAL TO PAKISTAN AND COTTON FROM THERE

INDIA is to supply 1,30,000 tons of coal per month to Pakistan during the year ending March 1963. Pakistan in turn is to supply one lakh bales of cotton during the year valued at Rs. 5 crore.

This was decided at talks between India and Pakistan which were held in New Delhi to examine the working of the Indo-Pakistan Trade Agreement (1960-63).

It was agreed that the amounts not used in the last two years would be carried over into the third year. In addition the following ceilings were fixed: Rs 40 lakh for import of fruits by each country; Rs 210 lakh for import of cotton and Rs 40 lakh for import of jute cuttings by India; Rs 180 lakh for import of coal by Pakistan; Rs 70 lakh for import of iron and steel, *bidi* leaves, railway material, cement by Pakistan and Rs 115 lakh for each country for import of miscellaneous items.

SNIPPETS

Orissa has released 33,000 more acres of land to the Dandakaranya Development Authority in the Malkangiri zone. The work of reclamation has started. More than 2,500 D.P. families will be settled there when reclamation is completed..... For the Displaced Persons and adivasis in Dandakaranya an Industrial Training Institute is being set up at Jeypore at a cost of Rs 19.42 lakh. It will have 204 seats. Land for the institute is being given free by the Dandkaranya Development Authority .....Two more polytechnics are being started in Delhi. These will have an annual admission capacity of 450. One of them will be a women's polytechnic giving training in electronics, library science, laboratory technology, etc.....A nine-man committee with Professor N. R. Malkani as chairman has been appointed to advise on the improvement of working and living conditions of scavengers.....Schemes for setting up 21 cement factories in the private sector have been approved.....A Central Water and Sanitation Board is being set up to explore the full possibilities of increasing rural water supply.....A pilot programme for increasing groundnut production is to be worked in all the groundnut-growing States. Some 25,000 acres in each of the States will be chosen for intensified cultivation. This is being done in order to reach the oilseeds target of the Third Plan which is placed at 98 lakh tons.....A Central Fodder and Grassland Research Institute with five sub-centres is to be set up. Its object is to evolve improved varieties of fodder crops with high nutritional yield and to popularise fodder cultivation.....A new process for the manufacture of white cement has been developed by the Regional Research Laboratory at Hyderabad. White cement is used in making mosaic tiles, decorative fixtures and colour cement.....Twenty-six foreign universities and institutions are teaching Hindi.....The Yamuna bridge at Mathura linking the Delhi-Agra National Highway with the Grand Trunk Road between Delhi and Aligarh was declared open to traffic on May 30.

The Government has decided to move coal by road-and-river routes. This is being done to improve supplies to consumers. Proposals have been drawn up to move coal from the Bengal, Bihar coalfields by trucks to Monghyr, Bhagalpur and Bakhtiarpur on the Ganga. From there it will be moved to Allahabad by boats and barges.

BRIGHT SPOT

A TRAINING CENTRE TOO

Bhilai is not only producing the backbone for our industry—steel; it is also developing into a major training centre.

Under a new scheme, senior engineers and technicians will share their experience and skill with other workers. On the job training has already started in the steel milling shop.

Under the Colombo Plan, Bhilai will also provide training to 70 Ceylonese technicians. The first batch of 25 has already arrived at Bhilai. These trainees will later help the Ceylon Government in the steel plant to be set up near Colombo with Soviet help.

Steps To Boost Exports

The newly formed Board of Trade held its first meeting in New Delhi on June 9 and took a number of decisions to help the development of exports.

The Board came to the conclusion that while the long-term programme was important, the most vital thing at the moment was the export performance during the *current financial year*. The steps taken to promote exports and the work done by the export promotion councils and the Department of International Trade were explained. A full-time Director of Incentives and a Director of Transport and Freight, it was announced, had already been appointed. An export directory was being compiled to help embassies and foreign buyers.

The need to improve transport and raw material supply, the place of manufacturer-exporters and merchant-exporters and the importance of credit facilities were also discussed. The Board approved the establishment of a Quality Control and Inspection Council.

The Board expressed itself in favour of evolving a code for fair commereial practices and a system of exhibiting price lists. To study this point fully it set up a sub-committee under the chairmanship of Mr Shriyans Prasad Jain, President of the Federation of Indian Chambers of Commerce and Industry. The role of consumer co-operatives, fair price shops, stamping of prices and exhibition of price lists will also be studied by the Committee.

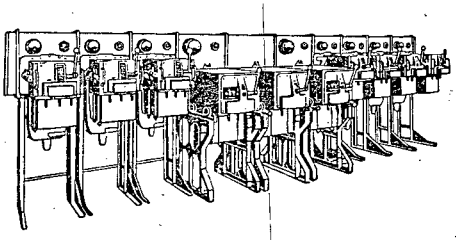
The next meeting of the Board is to be held in Calcutta on July 6.

ANSWERS TO QUIZ

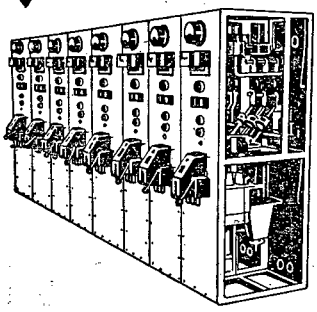
1. The Arjuna award was a special award to honour the sportsmen of the year 1961. Named after the epic hero Arjuna of the *Mahabharata*, the award was recommended by the All India Council of Sports. The sportsmen were selected by the Sports Federations concerned.
2. Defence expenditure forms 24.9 per cent of the Central Government's Budget this year, and only 14.5 per cent of the total Government expenditure, including that of the State Governments. The corresponding figures for the last year were 28 per cent and 15.4 per cent.
3. (c) 5,500 miles.
4. (A) 6,595,164 kilometres; 79,279 passengers; 2,587,452 kilograms of cargo and 543,274 kilograms of mail.

   (B) 15,809,284 kilometres; 418,906 passengers, 17,282,823 kg. of cargo and 3,399,159 kilograms of mail.

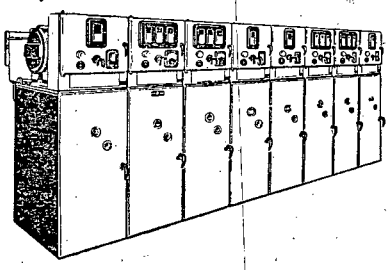
L.V. Unit Type Switchboard comprising three type HN3 units and seven type HN2 units.



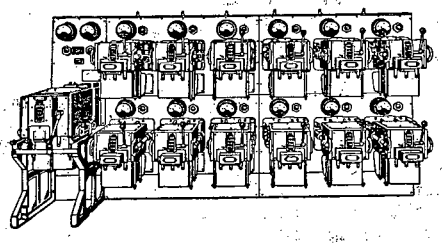
L.V. Industrial Cubicle Type Switchboard.



H.V.11 Kv. Metalclad Switchboard with air-insulated Busbars.



L.V. Double-tier Switchboard.



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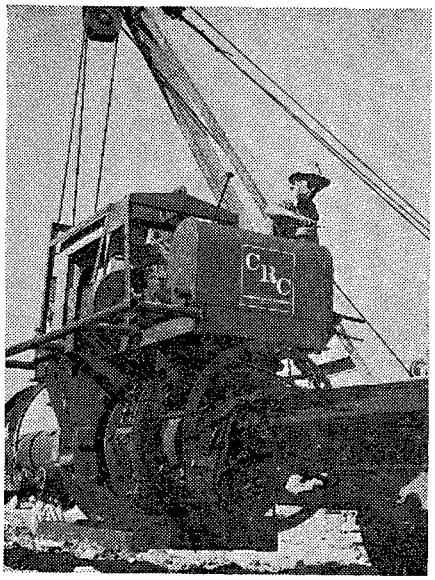


OIL PIPELINES

(*Continued from page 15*)

distributed over the year; (iii) continuous operation; and (iv) sufficiently long distance, with consumers located at vantage sites. If these requirements are met, a pipeline offers the following advantages: (i) a smaller operating staff; (ii) few repairs to the structure; (iii) almost no wear at all; (iv) low maintenance costs; and (v) the possibility of stepping up the capacity by simply increasing the pressure.

Because of all these reasons, the pipeline is usually the most economical method of transporting oil overland over a period of years, although the cheapest method of carrying oil (over a comparable distance) is by water. The comparative post-war costs of operating these various methods were estimated in the U.S.A. to be as follows:

	Dollars per ton/mile
Road	0.06125
Rail	0.01695
Pipeline (motor spirit)	0.00445
Pipeline (crude oil)	0.00344
Water	0.00082

But pipelines are cheaper than sea transport when they save mileage. An example of this is found in the Middle East. Sea voyage from the head of the Persian Gulf to Mediterranean ports is about 3,200 miles, and tankers must make the return trip empty. Compared with this total distance of over 6,000 miles, the longest of the new pipelines, Tapline, which takes off from the Saudi Arabian oilfields, is only about 1,000 miles.

THERE are pipelines and pipelines—even as in our own bodies we have a complex system of pipelines, the arteries and the veins. What is true of the arteries is true of oil pipelines, in the sense that the motive power for the flow of the fluid is provided by a pump. Pipes for transporting oil are made of special steel and are either seamless or welded. Pipes varying in size from two to six inches (mostly for crude gathering lines) and up to 36 inches in diameter are used. The wall thickness of the pipe depends on the pressure it must withstand, but it usually varies between one quarter and three-quarters of an inch. Power to move the oil is supplied by pumps, usually of centrifugal type.

A FINAL tabulation of the advantages and disadvantages of pipelines may now be attempted. The *advantages* are:

1. They are weather-proof.
2. They have a long life. For example, the Matadi-Leopoldville product pipeline laid in 1911 is still in operation.
3. The running cost and manpower requirements are low.
4. The material moves fairly fast.

The *disadvantages* are:

1. They involve high capital costs.
2. It takes about 15 to 25 years for a line to pay its way.
3. Pipelines have to be run at near capacity to be economic—when operating at 75 per cent capacity the cost rises by 25 per cent and at 50 per cent capacity by 80 per cent.
4. The lines have little flexibility as regards the route. Once laid, the route cannot be changed although the throughput can be increased by as much as 80 per cent by installing pumping stations at intermediate points.
5. They work out all right only when the quantities are really large.

One last question. What are the various elements that enter into the cost of laying a pipeline? The following break-down gives an indication of some of the major heads of expenditure estimated for the Oil India's Nahorkatiya-Gauhati-Barauni pipeline project:

Pipes	22.8 per cent
Main line construction and demarcation	19.0 per cent
Pumping and generating plants, etc.	17.0 per cent
River crossings	8.2 per cent
Telecommunication/ Telemetering and Cathodic protection	4.3 per cent

Plan Implementation

(*Continued from page 7*)

(c) to scrutinise key elements of selected projects and

(d) to pool experience of financial and management techniques

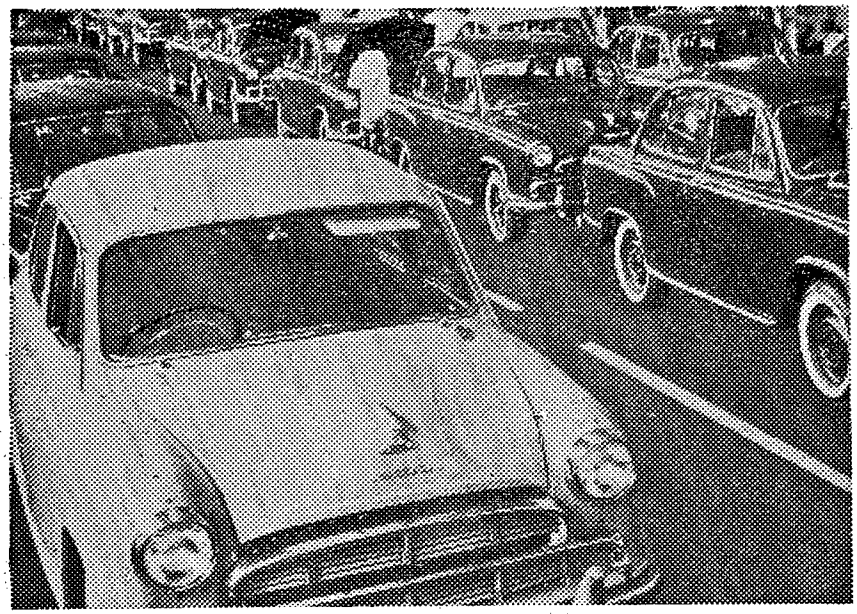
A Member of the Planning Commission is engaged in studying questions relating to management reporting.

(b) *Delegation of powers to Ministries* : To speed up implementation, the Finance Ministry has given to all Ministries at the Centre large financial powers including creation of posts, making posts permanent, re-appropriation of funds, sanctioning expenditure etc. In the case of sanctioned projects, excess expenditure up to 10 per cent of the estimated cost or Rs. 1 crore, whichever is less, can now be approved by Ministries. These delegations are accompanied by provisions for more detailed presentation of budget proposals and institution of arrangements for work studies within each Ministry.

(c) *Reduction in construction costs of major projects* : A technical group under the chairmanship of a Member of the Planning Commission has drawn up a Memorandum setting out a series of suggestions for achieving reductions in the cost of major construction projects. It is proposed that the head of each major project should have the assistance of a cost reduction unit. A committee for Reduction of Construction Costs, including heads of the principal construction organisations of the Central Government, is being constituted by the Planning Commission, under the chairmanship of a Member. Similar committees have been suggested to the States.

(d) *Patterns of Central Assistance* : To facilitate speedy implementation and execution of State schemes in an integrated manner, steps to simplify patterns of Central assistance were taken some months ago. The procedures are being further simplified and liberalised.

(e) *State Planning Boards* : The Planning Commission has suggested to State Governments that they may consider the setting up of State Planning Boards. Once the States have adequate planning machinery, many of the existing procedures connected with the drawing up of annual plans can be made simple and more flexible. State Planning Boards will enable States to participate fully in preparation of the long-term economic development plan for the country (covering the period 1961-75) and to view problems of development more comprehensively than individual departments can normally do.



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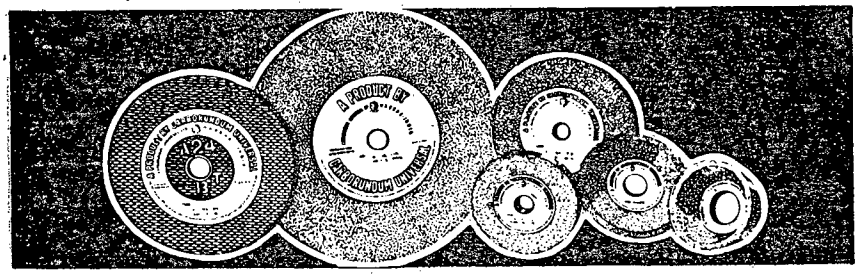

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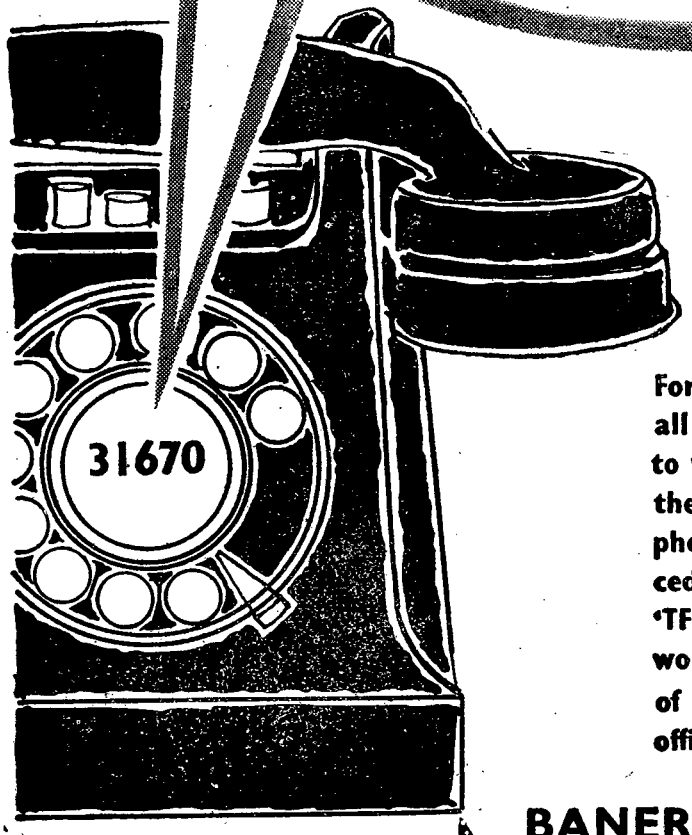

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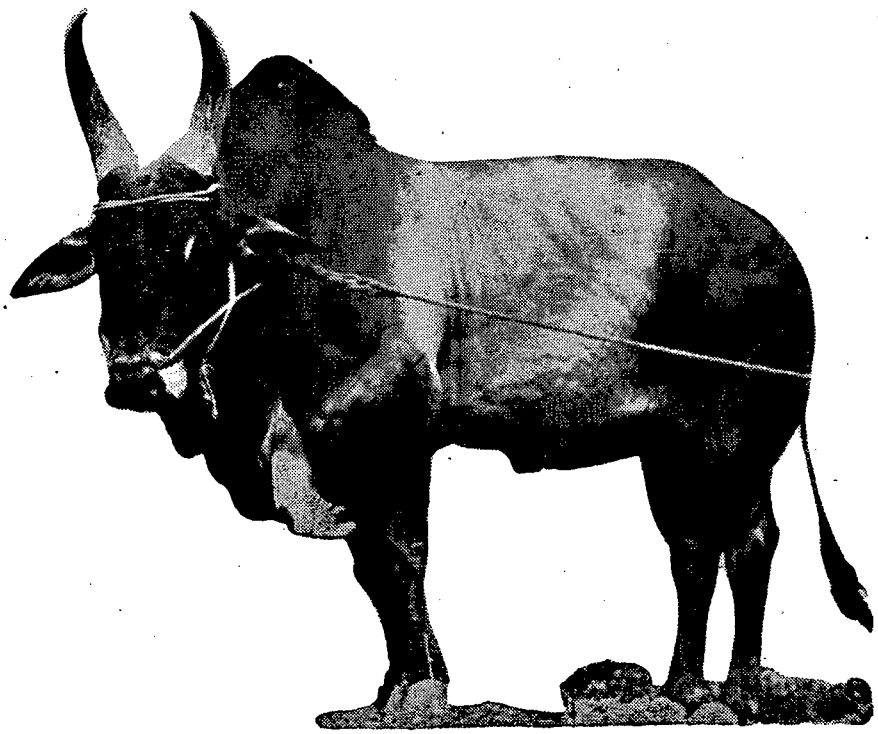

BULLS of KANGAYAM

THE Kangayam bull does not snort at you ferociously; nor is he too docile. He looks you level in the eye as though he is sizing you up. He belongs to a beautiful breed that has well-established characteristics —the horns are smooth and long and make a perfect pair of brackets, the face is intense and intelligent, the eyes dark and lovely, the hump fleshy and black, the trunk pale grey and muscular.

The chiselled symmetry, strength and the agility of the Kangayam bull makes him a much sought-after draught animal. He matches the massive Haryana or Sindhi flesh for flesh but he is sure-footed on the track. In build he is better than Hallikar. Kangayam, which is in the Coimbatore district in Madras (known in the ancient Tamil texts as Kangu Nad), has long been famous for these animals and despite the spectacular progress made by Coimbatore district in industry, the breeding of these bulls continues to be a favourite and highly remunerative occupation.

K. S. RAMANATHAN

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