

yojana

80 Paise

Improving Tribal Agriculture

Trends in Industrial Growth

Employment Potentialities in
Silk Industry

Performance of Public Sector

Innovations in Rural
Development

Highest Priority to Agriculture

PUBLICATIONS DIVISION

Some of Our Outstanding Publications

Wall Paintings of the Western Himalayas by Mira Seth

A product of years' painstaking research, this handsomely produced book is sure to attract the scholar and the general reader alike.

Pages 122. Colour plates 32 and monochrome 86 Rs. 100

Birds and Animals in Indian Sculpture by C. Sivaramamurti

An Album produced in rich elegance on the birds and animals in Indian Sculpture. Profusely illustrated with 5 colour and 76 black and white plates. Silk bound.

Pages 44 Rs. 45

The Heritage of Indian Art A pictorial presentation by Dr. Vasudeva S. Agrawala

Covers a vast field of Indian architecture, sculpture and painting from the earliest times to the 19th century.

Pages 186. Cloth-bound with dust jacket. Rs. 25

The United States and India 1776-1976 by M. V. Kamath

A unique document on the relations between the two greatest democracies of the world. Profusely illustrated.

Pages 226 Rs. 85

Eighteen Fifty-seven by Dr. Surendranath Sen

An authentic account of the first war of India's Independence by an eminent historian with maps.

Pages xxv+468 Library edition Rs. 25
Paperback Rs. 22

Some Eminent Indian Scientists by Jagjit Singh

Contains articles on some of the most eminent Indian scientists and their contribution to the advancement of scientific knowledge.

Pages 193 Rs. 15

Selected Works of Raja Rammohun Roy

This volume contains a representative selection of writings on number of subjects covering almost the entire gamut of his activities.

Pages 332 Library edition Rs. 20
Paperback Rs. 15

Speeches of President V. V. Giri Vol. II

Covering the period from January 1972 till he relinquished office in 1974.

Pages vii+376 (Illustrated)
Library edition Rs. 25
Paperback Rs. 22

Speeches of President Rajendra Prasad Vol. III

Covering the period from November 1965 to May 1972 when he laid down the office.

Pages ix+397 (Illustrated)
Library edition Rs. 25
Paperback Rs. 20

The Handbook of India

Gives basic information about India, its important tourist centres, air and sea routes, internal travel, Government regulations, etc.

Pages 216+Tourist Map Rs. 12.50

**POST FREE SUPPLY
RUSH YOUR ORDER TO:**

**The Business Manager
Sales Emporium
PUBLICATIONS DIVISION**

New Delhi
Patiala House OR 2nd Floor, Super Bazar,
Connaught Circus
Bombay
Commerce House, (2nd Floor)
Currimbhoy Road, Ballard Pier
Calcutta
8, Esplanade, East
Madras
Shastri Bhawan
35, Haddows Road

YOJANA

Volume XXII Number 17

16 September, 1978

26-Bhadra, 1900

Published on behalf of the Planning Commission in Assamese, Bengali, English, Gujarati, Hindi, Malayalam, Marathi, Tamil and Telugu.

Yojana seeks to carry the message of the Plan but is not restricted to expressing the official point of view.

Chief Editor

P.C. Roy

IN THIS ISSUE

| | |
|---|----|
| TRANSFORMING TRIBAL AGRICULTURE —B. L. KUMBHAR | 5 |
| WOMEN ARE SEPARATE —DEVAKI JAIN | 9 |
| INDUSTRIAL GROWTH —CHETAN CHADHA | 11 |
| ROLE OF SILK INDUSTRY IN SOLVING UNEMPLOYMENT —DR. L. C. KHULLAR | 13 |
| THE CASE FOR EMPLOYMENT SUBSIDY —SUBASH J. RELE | 15 |
| FISCAL POLICIES IN DEVELOPING COUNTRIES —LAJJA RAM | 17 |
| FOUNDATION OF NATIONAL ECONOMY—PUBLIC SECTOR —S. M. AGARWAL | 18 |
| HIGHEST PRIORITY TO AGRICULTURE —VIRENDRA AGARWALA | 21 |
| THE CONCEPT OF INTEGRATED RURAL DEVELOPMENT —HARPAL SINGH | 23 |

Editor : N. N. Chatterjee

Assistant Editors : P. Perumal

B. N. Rajbhar

Senior Correspondents :

AHMEDABAD : Raman Patel

BOMBAY : Avinash Godbole

CALCUTTA : S. K. Ray

HYDERABAD : B. N. Murty

MADRAS : Poornam Viswanathan

TRIVANDRUM : Rossote Krishna Pillai

Photo Officer : K. S. N. agraj

Editorial Office : Yojana Bhavan, Parliament

Street, New Delhi-110001. Telegraphic Address :

Yojana, New Delhi Telephones : 383655, 387910,

385481 (extensions 402 and 420) Circulation :

Business Manager, Publications Division, Patiala

House, New Delhi-110001.

Subscription : Annual—Rs. 18. Two Years—Rs. 30.

Three Years—Rs. 42. Foreign Subscription : One

Year—£2.70 or \$5.50. Two Years—£4.50 or \$9.00.

Three Years—£6.30 or \$12.50. Single Copy—Twelve

pennies or \$0.25.

Editorial

Peoples' Participation

THIS GENERATION is working to develop the economy of this country with an idea to provide for better and higher standards of living for the coming generation. As a result India has made great strides in socio-economic fields and has achieved considerable success. This has proved that it is possible to accelerate the pace of economic development under a democratic system of government. In this great adventure of nation building as the country has achieved many successes, there were many formidable problems also. One of the most perplexing problems which has been faced by the country is lack of interest of the large masses of people in active participation and support for constructive work. In the past during the freedom movement a clarion call by any leader was enough to arouse enthusiasm of the common people for their active participation, but their response was negligible when the call was for their participation for a longer period. Our achievements in socio-economic fields would have been much more impressive if the same problem was not existing today.

In the democratic system of planning it is the people who assess their needs, decide what they should have and work to improve their lot. The authority is having certain resources to the will of the people. Unless all the people participate in it actively successful implementation of all the projects is not possible.

There has been considerable thinking and research for securing active participation of the people in various developmental projects. Few individuals have occasionally achieved here and there remarkable successes. Non-official organisations have also come forward under the leadership of some selfless workers, but sustained enthusiastic support of common people in developmental activities has not been encouraging.

The willingness of the people to accept sacrifices without allowing them to cover up their lives depends upon the credibility of the performance of the government and on the lead given by the leading members in society. This willingness on the part of the people also depends upon the degree of their participation in the process of planning.

The Revised Minimum Needs Programmes have no doubt received the general appreciation of the people from all walks of life. But to remove the centuries old low standard of living in the midst of high rate of population growth India will need huge financial resources, and for which there are limitations. People's active participation on the other hand can secure much higher rate of growth without much strain on the country's financial resources.

Planning in democracy is like democracy itself—of the people, by the people and for the people. As such peoples' active participation is one of the conditions for the success of planning in democracy.

Programme of the present Government has given importance to changing the faces of the so long neglected villages. This programme has given a chance to the leaders at the local level to help the people to take the opportunities offered by the Plan to change their socio-economic condition. With the establishment of Gram Panchayats direct democracy has now percolated even in countryside. The members of these Panchayats should give the lead by selfless service to the people and by organising the people to participate actively to achieve better results than in the past.

ARDC Made Good Progress

The Agricultural Refinance and Development Corporation made good progress during the year ended June, 1978. Its commitments totalled Rs. 321.49 crore under 1,794 schemes during the year against 307.15 crore under 1,653 schemes in the previous year. Disbursements were also higher at Rs. 234.30 crore against Rs. 220.82 crore. Since its inception till the end of June 1978, the corporation has committed Rs. 1757.88 crore under 6,224 schemes. Its total disbursements have been of the order of Rs. 1049.32 crore. The disbursements represent a ground-level investment of Rs. 1,200 crore under various agricultural development schemes.

The performance of the ARDC in 1977-78, though well above the original anticipation of Rs. 216 crore projected in 1973, was slightly below the revised expectation of Rs. 260 crore. This was attributed to reduced lending programme of state land development banks due to the financial difficulties created by drought situation in the earlier years. Another reason was that the disbursements envisaged under the three IDA assisted dairy projects did not materialise, as the project authorities were in slight of alternative resources on more favourable terms and conditions.

During 1977-78, commercial banks drew a larger sum of Rs. 121 crore from the ARDC against Rs. 93 crore in the previous year, while the total refinance availed by land development bank was lower at Rs. 111 crore against Rs. 127 crore. A sum of Rs. 131 crore was disbursed during the year under the World Bank assisted projects, entitling a drawal of about dollar 80 million from the World Bank and IDA. Under the second ARDC credit project with \$ 200 million IDA credit, which became effective in August 1977, disbursements amounted to Rs. 105 crore spread over 19 states and three Union Territories making eligible for a drawal of \$ 68 million by the end of June, 1978.

Increase in Power Supply

Power supply in Punjab during the months of May and June was 60 per cent more than the supply made during the same period last year, according to the Punjab State Electricity Board and its revenue had increased from Rs. 61.67 crore in 1976-77 to Rs. 68.71 crore in 1977-78.

The Board would be able to achieve the target of energising 37,500 tubewells during the current financial year. It was admitted that the progress in this direction had been slow during the last three months on account of short supply of material. As many as 66,000 applications for tubewell connections were pending with the Board. The total number of power-run tubewells had gone up to about 2 lakh and the owners of another 3 lakh tubewells at present run with diesel engines were waiting to switch over to power.

It was calculated that the tubewells accounted for nearly 60 per cent of the total power consumption in the State and the loss of power during transmission and distribution had been reduced from 24.39 per cent in 1976-77. This meant an additional revenue of about Rs. 1.7 crore. In pursuance of the campaign against pilferage of power the Board had realised penalty totaling Rs. 42.96 lakh during the last year and Rs. 4,25,000 during the last three months.

MSFC'S Impressive Performance

Maharashtra State Financial Corporation (MSFC) exceeded its performance in sanctions and disbursements in the first four months of 1978 (April to July) by Rs. 90 lakh in sanctions and by Rs. 70 lakh in disbursements over the corresponding period preceding year.

The sanctions amounted to Rs. 5.44 crore and disbursements Rs. 3.88 crore from April to July 1978 against Rs. 4.54 crore and Rs. 3.17 crore respectively in the corresponding period last year.

Regions of Nasik, Pune, Nagpur, Goa all handsomely and Kolhapur marginally exceeded their results in sections over the same months in the previous year, while in disbursements, Bombay-Konkan, Aurangabad, Goa, all handsomely, and Pune marginally improved on their performance over corresponding period last year. Disbursements reached over 71 per cent against sanctions as against 79 per cent.

MSFC has also started giving sanctions and making disbursements for seed capital, that is the scheme to assist units which cannot bring the full percentage of margin money against the percentage of the loan sanctioned.

Socialism in Railways

Government has decided that all new long-distance trains to be introduced, would be single-class trains with improved amenities and facilities. Some such trains have already reduced the disparity between upper and lower classes. All the coaches have padded cushions on the berths, seats and backrests. Each coach has arrangement for storing cool drinking water. There is a pantry car to serve hot food and a lending library too. These near-first class facilities have been provided at the second class fare only. 'Janata Khana' is now available at Re. 1 per packet on about 70 long-distance trains. The facility of bed rolls at Rs. 1.50 for each second class passenger has been extended on most of the long-distance trains. More trains are proposed to be covered shortly. To eliminate malpractices in reservations, arrangements are being made to employ women to man reservation and booking counters in metropolitan cities. To streamline the complex operation involved in reservation of rail accommodation on trains and to eliminate malpractices, the feasibility of introducing computers for reservations in Delhi area, is being explored. This system will be enforced in the four metropolitan cities where demands for reservations are very heavy.

For the first time in the 125 years history of the Indian Railways promotional avenues have been opened for Class IV employees by giving them selection grades. This will immediately benefit over 50,000 Class IV railwaymen. Five hundred Class III posts will be upgraded to Class II. Quota for promotion of Class II officers to Class I will be increased from 33-1/3 per cent to 40 per cent. A decision has been taken to confirm all the 1080 temporary officers. An additional sum of Rs. 15 crore to be spent on the welfare of the staff and their family members, Rs. 10 crore have already been provided in the Budget for 1977-78 for the improvement of staff quarters and colonies, provision of educational, medical and recreational facilities and on construction of additional staff quarters.

Transforming Tribal Agriculture

B. L. KUMBHAR

IT HAS BEEN widely accepted that the fruits of new strategy of agricultural development, generally termed as "Green Revolution" have been confined only to the areas and people, with well developed resource base. The benefits of these developmental efforts have not reached to a desired extent to the weaker sections and backward regions of the country. More so, the tribal population, which is an important segment of the society, has been left out of the mainstream of this development process, aggravating the problem of economic disparities and regional imbalances.

No doubt, the need of the development of tribal areas were realised since the beginning of the Fourth Plan and certain programmes were also started for the socio-economic amelioration of tribal people under the 'area development approach', but, however observations suggest that inspite of the working of Tribal Development Blocks with a fairly large financial outlays, the tribal agriculture could not witness any technical break-through. In fact, tribal agriculture is still traditional in many ways. Much remains to be done to raise the low level of agricultural development in tribal area. Actually more concentrated efforts are needed with their specific suitability to tribal people and area.

Guided by the wider social objective of industry's role in reducing economic disparities and regional imbalances, the Gujarat State Fertilisers Company Ltd., played an important role in transforming tribal agriculture by undertaking 'Leap Forward Project' on an experimental basis, in some of the villages of the Chhotaudepur Taluka of Gujarat State, with the objective of promoting scientific agriculture and farming to increase agricultural production and prosperity of the tribal farmers..

THE PROJECT AND AREA SELECTED

The G. S. F. C. has been undertaking a number of service-oriented activities to promote scientific agriculture and farming among the farmers of backward regions. 'Leap Forward Project' was one of such experiments carried out by the Company for Rathawa Adivasi farmers. The area selected for this experiment was Chhotaudepur taluka of Baroda district in Gujarat State. With 83 per cent of its population as tribals, this area has all those tribal features such as hilly and terrain topography, poor soil, low level of natural resource endowment, overhead facilities and social and economic institutions.

The inhabitants of this area are socially and economically backward is evident by the bare fact that as large as 77 per cent of the total tribal population live below poverty line. Illiteracy is rampant among them. Ninety-six per cent of their population is being retained as illiterates (1971 Census). Primitiveness and poverty are common features of tribals dominating their life and style.

PROJECT FRAME AND ITS OPERATION

The L. F. Project was carried out in a tribal area with the primary objective of creating awareness and confidence among tribal farmers about the adoption of scientific farming through use of package of practices and modern input-mix like improved seeds, fertilizers and plant protection materials for raising agricultural productivity.

While formulating the project programmes many steps were taken keeping in view the specific problems of tribal area and the people.

Table-1

No. of Participants and area covered under L.F. Project

| Year | Crops | Season | No. of Old | New | participants Total | Area Covered in acres |
|---------|-------|--------|------------|-----|--------------------|-----------------------|
| 1973-74 | Maize | Kharif | .. | 77 | 77 | 124 |
| 1973-74 | Jowar | Rabi | 21 | 47 | 68 | 100 |
| 1974-75 | Maize | Kharif | 57 | 93 | 150 | 174 |
| 1974-75 | Paddy | Kharif | .. | 60 | 60 | 50 |
| 1974-75 | Jowar | Rabi | 102 | 62 | 164 | 154 |
| 1975-76 | Maize | Kharif | 139 | 73 | 212 | 200 |
| 1975-76 | Paddy | Kharif | 19 | 38 | 57 | 50 |

Table-2

Per acre average yield of Maize and Paddy Crops in different villages in 1975-76

(Yield in Kgs.)

| Village | P/NP | Maize | | Paddy | |
|-------------------|------|--------------|------------------|--------------|------------------|
| | | As L.F. Crop | As non-L.F. Crop | As L.F. Crop | As non-L.F. crop |
| Mandalva | P | 1344 | 508 | .. | 525 |
| | NP | .. | 50 | .. | 50 |
| Zoz | P | 1675 | 300 | .. | 490 |
| | NP | .. | 380 | .. | 189 |
| Vachali Bhint | P | 1497 | 936 | .. | 464 |
| | NP | .. | 83 | .. | 107 |
| Total Maize Tract | P | 1490 | 659 | .. | 502 |
| | NP | .. | 164 | .. | 167 |
| Chisadia | P | .. | 145 | 554 | 117 |
| | NP | .. | 40 | .. | 69 |
| Nani Sandali | P | .. | 218 | 1035 | 147 |
| | NP | .. | 65 | .. | 36 |
| Total paddy Tract | P | .. | 193 | 826 | 131 |
| | NP | .. | 62 | .. | 51 |

Note : P for participants and NP for non-participants.

1. Since the tribal farmers are very poor, they are unable to purchase modern agricultural inputs, hence, it was decided to provide, in the first year, all the required inputs free of cost to the participant farmers and for the subsequent years, when they are convinced about the benefits of scientific farming, they will be charged, 1/4, 1/2, 3/4 and full cost of the inputs during the 2nd, 3rd, 4th and 5th years of the project.

2. Since improved agricultural practices were quite new to the tribal farmers, it was, therefore, thought essential to provide technical know how in the fields from time to time, right from selection of fields upto harvesting of the crops. Each field operation would be supervised by the trained staff of the company and necessary scientific advice provided to them right on the spot.

3. Supply of required inputs, which includes, improved seeds, fertilisers and pesticides would be made available to the participant farmers at their door-step. Further, to avoid misuse of these costly inputs, they will be applied on the farmers' fields under the constant guidance and supervision of the project field staff.

4. In order to pay for seeds, fertilisers and pesticides, arrangements will be made to provide finance from the banks or cooperative sector.

5. The farmers will also be imparted training for the adoption of improved practices by organising demonstrations, training camps and meetings.

Initially, the L. F. project was started in the Kharif Season of 1973-74, in Mandalva village, with maize (Hybrids and Local) crop and covered an area of

124 acres on 85 Kathawa Adivasi farmers fields. In the following Rabi season the project extended its operational coverage to two more villages, namely Zoz and Vachalibhint and Jowar Crop was taken up on 100 acres, on the fields of 68 farmers in all the three villages.

Though, in the beginning of the project, some difficulties, were faced by the project authorities in its execution, because of suspicious nature and traditional outlook of the tribal farmers, but, gradually, these difficulties were overcome with the help and close co-operation of the local leaders and social workers. The extra-ordinary results achieved in the very first year of the experiment also helped considerably in creating a favourable response from the tribals.

In the next agricultural year i.e. 1974-75, besides, maize and Jowar, paddy crop was also included in the programme. Alongwith, above mentioned three villages, three more villages, namely Dhori Samel, Nani Sandali and Chisadia were covered under the L. F. Project. In the subsequent year i.e. 1975-76, the project extended activities to four more villages. Thus upto the end of Kharif season 1975-76, in all, ten villages were covered by the project.

The statistics relating to the year-wise, progressive coverage of crops and area under L. F. Project is given in Table-1.

The data presented in the table-1 clearly reveals that upto the end of the Kharif season 1975-76, the L. F. Project had covered 3 seasons for maize and 2 seasons each for jowar and paddy crops. Thus from the beginning of the project in Kharif 1973-74 to the end of Kharif 1975-76, in all, 450 adivasi farmers and 856 acres of their land could derive the benefits of

scientific farming in all the ten villages. The experiment was conducted on 498 acres of maize, 258 acres of Jowar and 100 acres of paddy crops on participant farmer's fields.

BROAD RESULTS

It has been mentioned earlier that the primary objective of the L. F. Project was to popularise modern agricultural practices among tribal farmers to raise their low-level of agricultural production and thereby increasing their prosperity. Hence, to study the changes in the level of production and profitability as influenced by the operation of this project; an evaluation study was conducted by the Agro-Economic Research Centre, Vallabh Vidyanagar, at the instance of Gujarat State Fertilisers Company Ltd. Major findings of this study on Level of Crop productivity, income earned and cultural practices are summarised in the following paragraphs. (For more detailed socio-economic implications of the introduction of L. F. Project, please see the report).

For this study, 70 participant households, were selected from five villages, out of ten villages. Selection of villages and households were made on the basis of their relatively longer period of participation in the programme. 30 households not covered by the L. F. Project were also selected at random from the same villages so as to facilitate the comparison between the cultural practices of the participant and non-participant households.

The data collected from the sample households brings out the following facts and figures about the impact of L. F. Project on the agricultural production, profitability and cultural practices.

IMPACT ON PRODUCTIVITY

Cultivation of coarse cereal crops was the outstanding feature of tribal agriculture, because of its subsistence nature. Hence, coarse cereal crops like maize, Jowar and paddy were included purposively in this programme.

The data relating to yield levels of maize and paddy crops grown on L. F. Plots as well as non L. F. Plots by participant and non-participant households in 1975-76 are given in Table-2.

The table-2 shows that the yields levels of maize as well as paddy crop were substantially higher on L. F. Plots than the yield rates of these crops grown on non-L. F. Plots of participant farmers and of non-participant farmers. In the maize tract, average grain yield of maize on L. F. Plots was more than double of the yield level of maize achieved on the non-L. F. Plots of the participant households. The yield level of paddy was as much as six times higher as compared to the yield level of non-L. F. Plots in paddy tract—The comparison of yield levels achieved by participant and non-participant households on plots not covered by L. F. Project also brings about remarkable differences in the results. Per acre yield of maize was 659 kg. on non-L. F. Plots of participants as against only 164 kg./acre on the plots of non-participants. Similarly the grain yield of paddy crop on non-L. F. Plots of participants was nearly three times higher than the yield rates obtained by the non-participant households in the paddy tract.

The yield level of jowar crop could not be included in table-2, because, jowar was expected to be grown in the Rabi 1975-76. However, it was noted that average yield of jowar in Rabi 1974-75, was nearly 100

percent more than the yield realised by local methods.

NET INCOME FROM CROP

It is however, obvious that acceptance of new farm innovation by the farmers largely depends on its relative profitability viz-a-viz traditional method. Therefore, the level of net return obtained by the participant and non-participant farmers, from cultivation of crops covered under L. F. Project are examined here. The relevant data on this aspect are given in Table—3. next page

The data presented in Table-3 show that in the maize tract, the per acre net income earned by the participants from maize plots covered by the L. F. Project was Rs. 1133, which was more than six times higher than Rs. 177 obtained by the non-participants from the cultivation of the same crop. In the paddy tract, net return obtained by the participants from paddy crop on L. F. Plots was Rs. 522, against a mere Rs. 52, obtained by the non-participants from the same crop. The above results, thus suggest that the net return obtained by participants from maize as well as paddy crop grown on the plots covered under L. F. Project was substantially higher than the net return obtained by them from the same crops grown on other plots and as compared to the net return obtained by the non-participants.

It is worth noting that the per acre net returns obtained by the participants from the non-L. F. plots were also considerably higher as compared to the net return obtained by the non-participants in both the tracts. It is also evident from the table that per acre net returns were higher in the maize tract compared to that in the paddy tract. This may be because of relatively longer period of the operation of the L. F. Project in the maize tract.

CULTURAL PRACTICES

The extent to which the L. F. Project has been instrumental in initiating a process of change in modernising tribal agriculture by adoption of improved farm practices can be studied by examining the differences between the local cultural practices with those recommended by the L. F. Project authorities. Our observations on this aspect suggest that there was not much difference in the local practices with those recommended so far as numbers of ploughings of land and inter-culturing operations are concerned. But however, they differed widely in terms of (a) quantity and quality of seeds used, (b) maintaining difference between the rows and plants and (c) balanced use of fertilisers and plant protection materials.

In the local methods law yielding *desi* variety seeds of early maturing nature were used. The average seed rate was also higher. It was about double of that recommended. Keeping the distance between the rows and plants was not followed strictly because maize cropping and broadcast sowing were the common practice adopted by the tribal farmers in traditional method. The balanced use of modern inputs like fertilisers and pesticides were practically negligible in traditional methods. What they were, all the more using was farm yard manure. The application of Farm Yard manure was also limited to the Wada—a plot attached to the house-site. The use of fertiliser and F. Y. M. was almost nil on other plots.

Per acre gross and net Income from Paddy and Maize crops in 1975-76

(Figures in Rs.)

| Village | P/NP | L.F. Project Area | | | | Non-L.F. Area | | | |
|-------------------|------|-------------------|------------------|--------------|------------------|---------------|------------------|--------------|------------------|
| | | Gross Income | Maize Net income | Gross Income | Paddy Net Income | Gross Income | Maize Net income | Gross Income | Paddy Net Income |
| Mandalva | P | 1506 | 1067 | .. | .. | 553 | 441 | 442 | 396 |
| | NP | .. | .. | .. | .. | 230 | 176 | 210 | 202 |
| | P | 1720 | 1257 | .. | .. | 315 | 249 | 536 | 434 |
| Zoz | NP | .. | .. | .. | .. | 497 | 428 | 227 | 209 |
| | P | 1557 | 1102 | .. | .. | 981 | 892 | 398 | 199 |
| Vachali Bhint | NP | .. | .. | .. | .. | 115 | 92 | 119 | 83 |
| Total Maize Tract | P | 1584 | 1133 | .. | .. | 701 | 604 | 438 | 337 |
| | NP | .. | .. | .. | .. | 215 | 177 | 195 | 174 |
| Chisadia | P | .. | .. | 569 | 232 | 178 | 69 | 124 | 94 |
| | NP | .. | .. | .. | .. | 60 | 114 | 110 | 64 |
| | P | .. | .. | 1080 | 745 | 241 | 194 | 168 | 144 |
| Nani Sandali | NP | .. | .. | .. | .. | 83 | 55 | 46 | 24 |
| Total Paddy Tract | P | .. | .. | 858 | 522 | 220 | 152 | 145 | 119 |
| | NP | .. | .. | .. | .. | 81 | 36 | 75 | 52 |

Note : P for participants and NP for non-participants for deriving net income, the variable costs of cultivation have been deducted from the gross income.

On the whole, higher average yield levels of various crops, higher gross and net return per acre and gradual increase in the proportionate area under cotton, vegetables and other single crops on participant compared to non-participant house-hold, are enough proofs of the impact of L. F. Project on the overall farm economy of the tribal farmers. Also, tribal farmers could, at least, know something about scientific farm practices like soil testing, performance of hybrid seeds, application and impact of balanced use of fertilisers and pesticides, methods of use and the equipments required. The introduction of Rabi, Jowar, raised by conserving moisture in the soil has also raised new hope of tapping the potential of existing natural resources in the tribal region.

The vast variations in the average yields and net

returns of participants over non-participants, convincingly show that hybrid seeds have responded extremely well to the fertilisation and other cultural practices in tribal region. This leads us to assume that a scientific and judicious per unit of investment in agricultural sector is likely to provide better returns even in backward region.

Second, but no less important thing emerges out of this experiment is that mere provision of subsidised modern agricultural inputs is not enough to raise the low-level of agricultural development in tribal areas, but an exhaustive and dedicated extension work is equally essential to convince the traditionally blank tribal farmers about the benefits of scientific farming because they usually believe what they actually see. □

Mr. T.G. Shivaraj is Krishi Pandit

Mr. T. G. Shivraj of Sathanur village Karnool district in Andhra Pradesh has been declared first with a yield of 17.54 tonnes of paddy per hectare in the all-India crop competition in paddy organised during kharif 1977-78. The second position has been won by Mr. Pandhari Lakhaji Lichade, tehsil Gondia in district Bhandara in Maharashtra with a yield of 16.49 tonnes.

The third has gone to Mr. Gauri Shankar Tiwari of village Nawapara Khurd, district Raipur in Madhya Pradesh with a yield of 15.47 tonnes. In addition to cash prize of Rs. 5,000 the first prize winner Mr. T. G. Shivaraj will be entitled to a certificate of "Krishi Pandit". Mr. Pandhari Lakhaji Lichade and Mr. Tiwari will be awarded a cash prize of Rs. 3,000 and Rs. 2,000 respectively.

Women are Separate

DEVAKI JAIN

IN THE DEVELOPING world, where most countries suffer from poverty, unemployment, scarcity of financial resources, unequal distribution of income and wealth, and perhaps the added touch of an oppressive political regime, there is a tendency to subsume women into the general basket of issues whether at the level of ideology, policy or programme, or data collection. To most policy makers the rationality of this aggregation seems obvious.

Many women too find it awkward to single themselves out in these circumstances. Like the slogan "development is the best contraceptive", floated in Bucharest, they would like to believe that "development is the best equalizer" or conversely that the problems of inequality are problems of poverty.

But this is a mistake. Aggregation has not only concealed inequality but exaggerated it. Development can perpetuate inequality and, in fact, foster worse exploitation. It is not development but the kind of development—and what goes before and with it—that ensures some form of distribution justice along with increased growth. Apart from the old issue of ownership of the means of production, there are other more critical ones such as *what is produced for whose consumption, using what technique.*

And then to make things more complicated there is the fundamental issue of non-material needs such as liberty, rights, dignity. In other words a social political order that ensures human rights and dignity.

ARE WOMEN A CLASS ?

Let us consider whether "women" can be seen as a global, identifiable set. It has become common to talk of "the poor" as if they were an income class. One can refer to them in documents—as well as project designs. Can "women" also be deemed a "class" distinguished by sex ?

My answer is yes. Women do have strong reasons for arguing that their most relevant boundary is provided by biology, and not economics.

The majority of women are undeniably linked to children—to being responsible for their sustenance, and also that of the family, its food, health even shelter. This has very serious consequences on a women's health, her use of time, her mobility, her nervous system. Men by the very nature of their biology, do not experience these consequences.

A man can move around alone from house to house making repairs or artificially inseminating cattle in a dispersed rural areas. In many societies, it is difficult to visualise a young woman being allowed to do the same without being molested or defamed.

Early marriage of girls, seclusion and all those uncomfortable customs in "old" societies are a response to this vulnerability, the man is as much an enemy as a friend to a woman, the man can injure as much as can protect. It is the circumstance that makes the difference.

For this and other related reasons women, in the distribution of economic, social and political power, are discriminated against. While women amongst the poor may be the poorest, they are women and need something more than the eradication of poverty to liberate them.

If women then can express solidarity as women at global levels, what can they use this "power" for ? For recognition as equals, they have to seek the same thing the blacks fought for—attitudinal change.

ROOTS OF INEQUALITY

If this is the case of women then, they should not ask to be included in documents like the NIEO, nor liken themselves to the poor ; but they should work for a new socio-political order. In fact, they should dissociate themselves from documents like the NIEO or the Basic Needs Strategy as these approaches gloss over the institutional, legal and political aspects of inequality.

Women, their condition and their predicament provide the paradigm for understanding the roots of inequality the characteristics of oppression, the meaning of vulnerability. The story of women illustrates more supply than through the investigation of any other set of the population that *satisfaction of material needs is not a sufficient condition for emancipation or individual liberty—even if it is a necessary minimum condition.*

Women's role as mother and home-maintainer has been given a secondary place, if not a degrading place in the eyes of most societies. Hence, many liberation movements focus on getting women of reproductive and home-maintenance roles. They realize that this is the root of the trouble. But getting out of these roles—for example doing everything that a man does with equal mobility, and no home duties—is not getting equal recognition. It is just suppressing a separate identity and merging by imitation. It is a defeat. *The real struggle should be to keep the identity and get recognition.*

With what instruments can recognition be achieved ? One would be collective assertion of power—a women's movement power against what ? In the case of woman it could be power for certain types of strategies, policies, choices, which would lead to a just social order. Another instrument would be to use the development experience of women illustratively, illustrative of injustices based on absurdity, on prejudice, selfishness, ignorance and violence.

At a Symposium held in Trivandrum in July 1976, twenty-six economists gathered to discuss "Concepts and Measurement of Rural Unemployment". Existing methods of measuring unemployment in India as well as employment schemes were criticised for failing to bring into the mainstream of concern, analysis and action the problems of the most socially oppressed and economically depressed sections of the labour force. The existing concepts and measuring techniques could handle only one kind of labour force, namely wage labour—and even here it could do nothing more than measure it.

But the major part of the labour force in India participates in work which does not necessarily get exchanged for a money wage. This part of the labour force is closely associated with the lowest income groups. The Indian National Sample Survey (the only source of elaborate data on unemployment in India)

seemed to presume that the labour market and the labour force in India was similar to those in advanced economies where there would be only employed or unemployed people measured generally by income. The whole grey zone of the household sector where people work and do not get paid, where people weave in and out of work depending on strains imposed upon by the family, depending on reward offered, depending on the bounds imposed by feudal and social institutions, seemed to have been bypassed.

It became clear during the symposium that the issue of female unemployment, its measurement as well as its amelioration, served as a sharp illustration of the neglect by the existing system of data collection of categories of people who had constraints, which could not be understood by the existing tools of investigation. Attempts to understand these constraints whether they applied to women, men or children would illuminate the condition of the poor and the oppressed.

A second illustration is provided by the discussion on employment planning for women, currently in process in India for the Sixth Plan (1977—82). It was considered necessary to identify economic activities/sectors/industries where women are employed with more than average intensity female labour prone and encourage expansion of employment opportunities through additional investment in these activities.

Several experts also felt that the most suitable work for women was part-time work. The hunt began to identify part-time work possibilities. It seemed that in the female section there were very limited areas for this kind of work. Primary and nursery school teaching seemed almost the only important one.

FEMALE-PRONE WORK

But looking at the actual work patterns, the occupations that women are engaged in the economy, another set of issues emerged. It was not only sectors and industries that were female-prone; it was the form in which the work was organized. For example, the dispersed factory system could make the production of any goods or services female-prone.

Home-based production has the characteristics of part-time work. The women can choose work at their convenience interspersed with household work. Home-based work can be either self-employed or "factory"-employed. It could produce "individual" goods like handicrafts or "mass produced" goods like watches and shirts. The Hong Kong garment industry the beedi industry in India, the cooperative dairy organisation at Anand in India, apart from the famous watch industry of Switzerland, are some examples of this system. But examples abound of this type of organization. Therefore, a case was made for decentralized production.

Congestion, pollution and other undesirable characteristics associated with cities are attributed to "centralized production, namely factories. Modern development strategies look for means of keeping the population away from the city in developing economies of the continental variety, like India.

Rural development therefore, becomes a vital effort, but its effectiveness in keeping people in rural areas at a higher level of living, would work only if industries, in fact all forms of production and distribution of goods and services are decentralized—dispersed into rural homes, villages, rather than clustered in towns, which later become horrid cities. This was in a sense the core of Gandhi's economics.

Hence once again the case of women had highlighted and emphasized the case for a certain strategy for development whose impact would have wide-ranging but beneficial consequences on over-all development, not only women.

WOMEN AND TECHNOLOGIES

The third illustration could be provided from the area choices of technology for certain production processes.

There is a strong lobby against labour-intensive technologies—that they are of low productivity, low-surplus generating and stagnation-making in the long run. It is usually suggested that labour-rich economies taking this path are likely to find that it leads them to mirage rather than the oasis of full employment and growth.

In the same discussion on women's employment mentioned earlier, a case was made that certain technological choices were not only labour specific in that they might use or dispense with units of labour, but that they were female-labour specific, in that they might absorb male labour and at the same time disemploy female labour.

In a case study it was shown how in Jammu and Kashmir, a predominantly Muslim state in India, partially United Nations Development Programme funded project with the unquestionable objective of upgrading quality in woven woollen cloth was likely to disemploy 20,000 Muslim women from their only means of livelihood. Since the Kashmir valley (where these women live) is snow bound for four months in a year, there is no work in agriculture, which is otherwise the primary source of employment. Also Muslim practice precludes women from work in factories because of purdah.

In this region, the work in weaving is allocated in such a way that men operate the loom but women and children spin the yarn and prepare the loom. In the new project, yarn is to be spun with machines in sheds to prove its quality as well as increase output. Some of the pre-weaving jobs also were to be done in these sheds. Hence women's work is eliminated.

Another illustration was provided from a study of the time disposition of men and women in rural households in two agro-climatic zones in India (Rajasthan and West Bengal). Here it was found that the majority of women of working force age group earned a steady income from weeding of fields which they did as a part-time activity—say four hours a day.

Improved agriculture associated with modern inputs, like chemicals for fertilizer and weed removal, while widening the horizons for male employment and possibly increasing the output from the land would take away this source of income for rural female labourers. Using these illustrations it was suggested that rather than engineer such massive displacement of labour from existing sources of income (employment) even if it at low wages (under-employment) it might be "cheaper" to upgrade the skills, the technology used by those workers, in order to improve the quality and volume of output, rather than introduce technological changes that would thrust them out from being underemployed to naked unemployment.

Also there is no guarantee that the package of modern inputs necessarily leads to higher yields in agriculture. It is now empirically established that it takes more than technology—it takes land reform and other institutional/legal changes to increase land productivity.

Hence the experience or case of women sharply illustrated the weakness of blindly opting for so-called high productivity technologies. In countries with very large numbers of poor, it may be more rational first to absorb the unemployed by strengthening existing sources of employment, using, labour-intensive techniques and so forth and then, in the second stage when destitution and below poverty forms of existence have been eliminated, to transform methods of production by using "higher" technologies. The challenge to the technologists then is to produce technologies which would improve productivity and the quality of home-based production, traditional skill-based production and so on, rather than dislocate people.

Once again such a view would strengthen the case for decentralised industrialisation and environmental preservation.

The impact on women of femalization of customary relationships and laws, is another illustration of injustice.

Women in a forest area in Karnataka (South India) refused to elect a particular representative to their Assembly as she had fought against a forest preservation law which had eliminated their means of livelihood. They were making and selling baskets out of palm leaves, from palm trees growing in forest. The forest authority had permitted timber loggers and paper manufacturers to use the forest on licences—but since these women were indigenous forest people who had no formal existence or form of economic activity, and therefore no licence or allocation, they suffered while the "better off" got away with more chunks of the

forest.

This kind of injustice constantly operates against those who have no formal "modern" legal rights to property or occupation.

In fact, formalisation of informal customary laws/codes of conduct has often led to weakening of the position of not only women, but all sections of the population whose economic and social position was based on customs. Examples can be given from India, Africa, Jamaica and elsewhere.

These examples are given to illustrate how the development experience of women could be used to change conventional theories, to reject conventional approaches to development, not only to production and growth, but distribution; in fact to show that even problems like the so-called conflict between growth and distribution are wrongly posed. There is no case for lamenting or even shouting that in stereo-typed documents like the NIEO. By making such a demand the case for women, unintentionally, becomes non-existent.

Thus it seems the strategy for women is to unite on the basis of sex as it gives them not only different perceptions and experiences in existence, but different options, at the global level. At the same time they should use their experience at the local/specific or activity/specific levels to illustrate the insensitivity of some of the existing social and political structures and attitude, the built-in discrimination in some of the economic systems, and to press for a new world order. Their tasks would then be as much local and domestic as international.

Industrial Growth

CHETAN CHADHA

A STUDY OF recent trends in industrial production, made by the Union Industry Ministry, has shown that the growth rate in this sector of the economy, which had been lagging last year, has been revived during the first four months of the current financial year. The industrial growth rate, which had been only 3.5 per cent in 1977-78 was estimated to be about seven per cent between April and July this year.

This doubling of the growth rate is heartening as it indicates that the various constraints, which had kept the tempo of industrial activity at a low ebb last year are now receding thus paving the way for a significant increase in output this year. At the same time, it reflects the success of the various steps initiated by the Government to arrest the deceleration in industrial growth witnessed last year. If the present trend continues, there is no doubt that the target of seven to eight per cent in industrial production set for the current year will be achieved.

It would be pertinent to recall that the rate of industrial output had shown a spectacular increase of ten per cent in 1976-77, there were misgivings and misapprehensions about the economy's capacity to forge ahead in the new liberalised political atmosphere.

The fact, however, remains that despite the fall in industrial growth rate, the overall growth in the economy registered a marked increase last year—thanks to the spurt in agricultural output. Against a meagre economic growth rate of 1.4 per cent in 1976-77, the achievement in 1977-78 was about six per cent. This means that the agricultural sector more than made up the lapse in the industrial sector last year. The picture was quite the opposite in the last year of the emergency, when despite a ten per cent increase in industrial production, the overall growth of the economy could not be more than 1.4 per cent. This was because of fall in agricultural production during 1976-77. Grain output, which had reached 121 million tonnes in 1975-76 came down to 112 million tonnes in 1976-77. But last year it touched the all-time high of 125 million tonnes.

STABILITY IN LABOUR SITUATION

THE UNION Government was, however, so much worried over the slump in industrial growth rate that it did not blow any trumpet for its overall achievement on the economic front. Nor did others care to analyse the situation and give the new Govern-

ment the credit that was due to it. There were, indeed, definite reasons for the deceleration in industrial growth rate last year. The first and foremost was the emergence of the widespread labour unrest. Having been denied their rights during the emergency the workers came out to assert their demands with a vengeance. This was an aftermath of the suppression of labour during the emergency. But through persistent negotiations and persuasion, the Government has been able to stabilise the labour situation to a considerable extent. The minimum bonus, which had been withdrawn during the emergency, was restored. A new comprehensive Industrial Relations Bill was formulated after detailed negotiations with the representatives of both the employers and the workers, Labour's confidence in the new Government revived slowly and several protracted strikes were called off as a result of effective intervention by government leaders. All this, however, took time and today the comparative stability in the labour situation is an important factor in increased industrial production.

Industrial growth had also been affected last year because of power shortage. But the genesis of this shortage again can be found labour unrest. Production and movement of coal slowed down because of the strikes in the collieries in the eastern region. This affected coal supplies to thermal power stations as well as to major industries.

Apart from removing these bottlenecks, the government has been able to break a big barrier in industrial growth by liberalising import of raw materials, components and other industrial inputs. The liberalisation of imports has been possible because of the continued growth in foreign exchange reserves. These reserves, which were about 2860 crore of rupees at the end of the emergency are now around 5000 crore.

The overall investment climate has also improved in the past one year. Initially, there were several uncertainties about the Janata Government's economic and industrial policies. But by now the picture has become clear to a large extent. The Government's decision to step up public investment has also been a contributory factor in giving a fillip to the economy. The demand for steel, cement and other intermediates is reported to have picked up.

But apart from these macro-level measures, what seems to have made all the difference in changing the industrial scene lately is the earnest effort to tackle specific problems in various key industries. A sub-committee of the Union Cabinet has been meeting almost twice a week to monitor production in various important industries and to ensure that timely corrective steps are taken wherever needed.

Earlier this year, the Ministry of Industry held extensive consultations with other economic ministries on an action programme for accelerating the growth of industrial production. As part of this exercise, detailed analysis of demand, capacity and output levels was carried out for more than 150 industries, which together account for 90 per cent of the weight in the index of industrial production. These exercises showed that a rate of growth of 7 to 8 per cent in 1978-79 was feasible and consistent with the prevailing demand situation.

THE MAIN features of the strategy to raise the rate of growth of industrial production included, achievement of targets already set in respect of crucial industries like power, coal steel fertilizers, and nonferrous metals. The strategy also provided for higher

targets of output for certain major industries where demand conditions justify this higher output. Among these are : paper, cement commercial vehicles, wagons and textiles produced by mills of the National Textile Corporation. It was decided to have advance planning of imports and buffer stocking of crucial inputs in order to ensure that production in industry is not disrupted due to fall in production in one or two units. Such a thing had happened last year in the case of explosives for coal mining.

Constant monitoring and coordination for achieving the targets was another important feature of the strategy. While the overall industrial production during April to July this year has risen by seven per cent, power generation has shown an increase of 4.5 per cent over the corresponding period of the last year. As a result, except for a few states there has been improvement in the power availability for industry and agriculture in different parts of the country. Production of cotton textiles, which had shown a decline in the first quarter of the last year has also shown improvement with cotton yarn production increasing by 5.8 per cent and cotton cloth production including belended, increasing by 2.7 per cent in the first quarter of the current year. Production in a number of other consumer goods like dry cells, refrigerators, blades and lamps has also shown improvement. Sugar production in the current sugar season has crossed 64 lakh tonnes as against 41.7 lakh tonnes in the previous sugar season.

Production of steel and coal was affected in the earlier months of the current financial year due to various problems, including strike in Singareni Coal fields and shortage of power in the Durgapur region. In the month of July, however, production of coal was estimated to be 8.2 million tonnes as against an average production of about 7.8 million tonnes in the previous year.

STEEL PRODUCTION INCREASED

PRODUCTION OF saleable steel in integrated steel plants has also been increasing progressively. The total saleable steel production in July, 1978 was 570,000 tonnes as against 550,000 tonnes in June and 520,000 tonnes in May. The Ministry of Steel expects further improvement in production in the remaining part of the current year because of the action taken to improve performance of plants and availability of railway wagons for supply of coal. In any case, because of the decision to import sufficient quantity of steel to meet domestic shortfall, the effect of production losses in steel plants on other steel-using industries has been minimised. Thus, production of industrial machinery, particularly transport equipment, commercial vehicle and tractors, registered substantial increase in the first quarter.

The Ministry of Railways has also taken measures to improve availability of wagons for movement of essential raw materials for industry and for reducing the turnaround time. As a result, in the month of July, there was improvement in wagon availability for movement of essential goods. For example, in the movement of coal for cement industry, 100 per cent of the requirement of wagons from Singareni and Central Coal Fields to cement factories was met. Total wagons available for movement of coal increased to 9520 per day in July as against 8837 in June and 8590 in May, this year. In order to reduce the burden on railways, Government have also taken steps to move coal by road over short distances.

Industries for which production targets have been raised include cement, paper, commercial vehicles, textiles and railway wagons. However, while all these measures are expected to help in achieving the industrial growth target of seven to eight per cent this year, the increase in production will be achieved mainly through greater utilisation of existing capacities. To sustain this order of growth over the coming years, fresh capacities will also have to be built. This, in turn,

will require prompt decisions at the planning level followed by expeditious licensing of new capacities as well as suitable financial and fiscal policies.

In view of the renewed emphasis on the development of small-scale industries, all necessary facilities will need to be provided, so that these industries make a significant contribution in maintaining a high industrial growth rate in the future. □

Role of Silk Industry in Solving Unemployment

DR. L. C. KHULLAR

INDIA IS THE only country in the world producing all the four commercially important varieties of natural silk, namely—Mulberry, Tasar, Eri and Muga. Amongst the Commonwealth countries, India is the only major producer of raw silk. She ranks third among the non-communist silk producing countries and fifth in the whole world contributing a little over five per cent of the total world output of mulberry raw silk. However, in Muga silk, India holds the world monopoly, being the only privileged country producing this variety of silk—produced only in Assam State. In Tasar silk India is the second largest producer contributing about 10 per cent of the total global tasar silk production.

The Indian silk industry accounts for an annual production of about 3000 metric tons of raw silk of all types. The entire production is consumed by the indigenous weaving industry comprising 1,41,000 silk weaving handlooms and 4,100 power looms producing about 450 lakh sq. mts. of silk fabrics valued over Rs. 100 crore per year.

Not many people know that silk industry is the second largest employer in India (next only to Handloom Industry) employing nearly 32 lakh persons. Of these, about 30 per cent belong to economically weaker sections of our society like scheduled castes and scheduled tribes. The distribution of employment in different

sectors of silk industry is shown in Table 1.

The level of employment in silk industry is expected to go up to 38 lakh by the end of 1978 as shown in table 2.

LESS INVESTMENT MORE RETURN

The average capital investment required to provide a job in sericulture industry is estimated around Rs. 500 is against Rs. 10,000 in the cement or steel industries. It is thus possible to employ more people at a less cost in a country like India which is deficient in capital.

From the data which has been collected from Central Silk Board and Sericulture Departments, it can be safely concluded that "a farmer who will plant dwarf mulberry in an acre of land will be in a position to rear about 200 kgs. of cocoons in a year will earn about Rs. 2,800 and will find this (silk) profession very lucrative". Not only that, the experts have claimed only recently that Indian Silk Industry which has a tremendous potential can be more profitable than even horticulture. From 1200 dwarf trees that can be planted in an acre of land, a farmer, it has been estimated can easily earn about Rs. 10,000 per year. This would be in addition to the income that would accrue from inter-cropping. Similar encouraging re-

Table-I

Employment Distribution in Silk Industry

| | No. |
|---|------------------|
| 1. Mulberry cultivation and silkworm rearing | 23,50,800 |
| 2. Silkworm seed production | 1,05,000 |
| 3. Cocoon Marketing | 10,600 |
| 4. Silk reeling and spinning | 3,17,100 |
| 5. Silk marketing | 10,600 |
| 6. Silk throwing | 21,200 |
| 7. Silk dyeing and printing | 10,600 |
| 8. Handloom silk weaving | 2,11,400 |
| 7. Powerloom silk weaving | 21,200 |
| 10. Miscellaneous workers in the silk-waste and spun-silk sectors | 10,600 |
| 11. Zari industry | 1,02,200 |
| 12. Other ancillary industries | 21,200 |
| | <u>31,93,200</u> |

Table-2

Estimated Statewise Employment in Silk Industry by the end of 1978

| S.No. State | Estimated Employment at the end of 1978. (Lakh persons). |
|--------------------|--|
| 1. Karnataka | 21.00 |
| 2. West Bengal | 5.00 |
| 3. Assam | 5.18 |
| 4. Bihar | 1.25 |
| 5. Madhya Pradesh | 0.70 |
| 6. Jammu & Kashmir | 0.60 |
| 7. Orissa | 0.15 |
| 8. U.P. | 0.11 |
| 9. Tamil Nadu | 0.90 |
| 10. Andhra Pradesh | 0.82 |
| 11. Manipur | 0.25 |
| 12. Others | 1.98 |
| | 37.94 |

port also comes from Central Sericultural Research & Training Institute, Mysore, Karnataka.

In view of the facts that unemployment/under employment and poor standard of living and poverty are the biggest problems of our country—the role of Silk Industry cannot be undermined, more specially when it guarantees a full-time job at an investment of Rs. 500 only plus reasonable standard of living out of Rs. 10,000 per year which a farmer can earn from dwarf trees that can be planted in an acre of land.

The Janata Government is pledged to the eradication of unemployment within 10 years. The magnitude of this problem is revealed by the National Sample Survey findings that four million people are 'chronically unemployed, 10 million currently unemployed (unemployed during a short period of one week) and 62 million underemployed'.

The magnitude of solution of the problem of raising the standard of living of the poorest sections of society is equally difficult to achieve. According to a recent estimate, the percentage of population below the poverty line in 1977-78 was 48 per cent in rural areas and 41 per cent in urban areas. According to the draft plan, the total number of the poor people in India so defined would be about 290 million.

There is no doubt that the job of our planners is very tough if they are to tackle the problems of unemployment/under-employment, poverty and poor standard of living of the masses within a specified period of ten years. However, Silk industry in India if given due consideration by all those who matter—can certainly go a long way in easing if not solving these problems.

Finance Corporation Doing Well

The West Bengal Financial Corporation's disbursement of loans to industries has gone up to Rs. 454.67 lakh during 1977-78 compared to Rs. 416.80 lakh disbursed during the previous year. The numbers of loan applications to the corporation during the year has, however, come down to 247 valued at Rs. 994.78 lakh compared to 363 projects valued at Rs. 1152.22 lakh received in the previous year. The WBFC sanctioned 172 proposals valued at Rs. 543.60 lakh as against 314 projects valued at Rs. 1028.07 lakh sanctioned in the previous year. The corporation earned a net profit of Rs. 35.73 lakh during 1977-78 compared to Rs. 24.80 lakh in the previous year.

It had a carry-over of 38 applications for Rs. 132.51 lakh but at the turn of March 31, 1978 the corporation was processing 65 applications for Rs. 274.32 lakh. During the year 75 sanctioned cases involving Rs. 186.68 lakh were treated cancelled or withdrawn owing to legal and other difficulties of the entre-

preneurs.

The WBFC has financed 158 new projects during the year which included 141 small-scale units and 17 medium-sized units valued at Rs. 338.57 lakh. It had loaned 46 units for expansion and diversification valued at Rs. 146.10 lakh. Industry wise advance of finance of the corporation to engineering textile, chemicals, pharmaceutical, cold storage, paper, flour mills and rice mills and hotel industries accounted for 64 per cent of the total disbursement. The total employment to be generated by the WBFC sanctioned projects has been estimated at 4030 persons.

Although Calcutta and adjoining districts continued to receive more assistance of the corporation, during the year it sanctioned Rs. 282.82 lakh to 94 units in the backward districts and disbursed Rs. 275.48 lakh. The corporation's investment by way of underwriting of both preference and equity shares amounted to Rs. 59.50 lakh for 18 units.

The Case For Employment Subsidy

SUBHASH J. RELE

CREATING EMPLOYMENT potential in rural areas is the corner stone of Government's new economic policy. It is now being realised that rapid industrialisation cannot take place by the setting up of a few large and heavy industries. This can happen, by and large, by the development of small and cottage industries in rural areas. On account of the peculiar social and economic conditions prevailing in India, economic development can be ensured only by the co-ordinated growth of large and small industries which should be complementary and supplementary without being competitive. It is now argued that since 80 per cent of our people live in rural areas even with a rapid increase in their purchasing power, creating market for industrial goods, the scope for industrial development would remain restricted. Moreover, in a capital scarce country like India, it would not be possible to go in a big way for large-scale industrialisation for creating full employment conditions. As the rural and household industries are highly labour-intensive in nature, they can offer job opportunities for a large number of persons with a small capital investment. They have many other advantages too. By using local resources and local skills, they meet local needs as well as requirements of far off cities apart from earning valuable foreign exchange in some cases. Being household industries, they do not require much training in the sense that professional skills are handed over from the father to the son. Participation of the women folk in this sector is high. From the point of social costs they have obvious advantages over large-scale industries. They do not pose the problem of urbanisation and concomitant problems of social housing, health, transportation and other problems of social and economic nature. These household rural industries enable to develop local initiative, co-operation and a spirit of self-reliance in the economy. Again, their gestation period is negligible. They also make for the dispersal of industries and thereby reduce regional imbalances.

STIMULATING ENTREPRENEURSHIP

Years ago, the Administrative Reforms Commission made out a forceful case for rural and small-scale industries. According to it their potential for creating employment opportunities and for stimulating entrepreneurship on a wide base and for bringing about a more equitable distribution of income and wealth is enormous. Spelling out the present policy of the government, Shri Morarji Desai, the Prime Minister recently observed : "it is the villages and the villagers who must feel the glow of change for the better. What is more we must reverse the process of villagers coming to cities in search of labour and employment. Instead, it is the townfolk who must go to the villages for an open life combining it with service to the people and making their contribution to the economic build-up and prosperity of rural areas and through it, that

of the country; our people constitute a tremendously rich and varied resources if put to work." He further continues : "The Government affirms the right to work and will refashion economic programme and priorities in order to maximise employment. Household and small industry can generate untold wealth and harness the productivity capacity of millions of people through appropriate technology, especially in supplying wage goods for mass consumption. The big cities, the big machine and big science have their place. But they cannot claim a prescriptive right to preference and dominance."

HOUSE-HOLD INDUSTRIES

About fifty years ago Gandhiji visualised growth of Indian economy on the basis of own resources endowment and our own technique or techniques evolved to suit our condition of scarce capital and redundant labour. The choice of an appropriate growth strategy is to be conditioned and determined entirely by what our country possesses. The ultimate objective of employment policy is not just to provide any kind of programme or jobs, but to provide work that is economically productive and yield enough income for a reasonable standard of living. Here household industry assumes crucial importance. The concept of household industry as defined by the 1961 census has been accepted now. It is defined as an industry conducted by the head of the household himself and/or mainly by the member of the household at home or within the village in rural areas. Household industries are accepted to supplement and raise income and thus raise standard of living by providing secondary occupations. The handloom industry is one of the household industries whose importance has been recognised by the Government. It is good to know that, though belatedly, the Government is now giving all the encouragement for its promotion. The Bidi industry is another household industry, but one fails to understand why it is not being shown the same amount of sympathy and consideration when it employs 30 lakhs of persons, nearly 2 per cent of the working population of the country. Again, it is the only industry where no foreign exchange, machinery, electric power or any other infrastructure is required. Not many in New Delhi are fully aware of the contribution the Bidi Industry has made to the nation and its economy particularly to the national exchequer and also in terms of employment. The Central Exchequer earns by way of income-tax alone Rs. 35 crore a year, while the State Governments get about Rs. 5 crore per year by way of sales tax. The Excise Duty recovered on account of the sale of Tobacco consumed in the Bidi Industry is about Rs. 25 crore. The Excise Duty recovered on branded Bides is to the tune of Rs. 65 crore. The employment potential of Bidi Industry is unlimited.

Understandably, the Government has recently given several concessions and incentives to small and cottage

industries in the rural sector. Several new schemes are being worked out. The Finance Act (No. 2) 1977 has introduced tax incentives in the Income-tax Act with a view to encouraging co-operatives and co-operative societies to involve themselves in the work of rural welfare and uplift by giving a direct stimulus for setting up industries in rural areas. Most of the concessions by-pass the existing household industries which face some of the toughest problems.

SUBSIDISING EMPLOYMENT

There is an urgent necessity for a fresh look at some of the current practices and policies to suit our long-term objectives. The policy of subsidising capital investment in an economy in which capital is scarce and labour abundant needs a change. We have been giving income-tax concession on capital investment in the form of development rebate, investment allowance and even depreciation. While loans on easy terms are offered for such capital investment, the working capital needed for rural industries to support employment-oriented industries, is it not illogical to subsidise capital investment? The Government policy should promote, by all possible means, the development of more labour in industries, new and old, by employing labour intensive techniques. There is no reason why Government should not introduce a sort of employment rebate or subsidy on the pattern of development rebate and even earmarking the softest available financing tied to wage paid. It is often overlooked that employment oriented industries where workers are employed, they have to be provided with all sorts of amenities. It has been proved that manpower employed in house-

hold sector or a factory shed erodes with the advancing years. The productivity of labour declines, so also the quality of work and products produced suffer but the wage and other burdens on the employer keep on increasing. In this context, the recent fall-back wage demand made by certain vested interests in the Trade Unions sounds unrealistic and totally absurd. Again, to offset several disadvantages of employment oriented rural industries, the Government should consider a subsidy based on persons employed or percentage of wages so that this acts as an incentive to employ more people.

The major problem of rural industries is inadequacy of working funds. Even with the existing norms of banks, they cannot meet the working capital requirement of rural industries. Some State Governments have veered around the view that this sector can be taken care of only by special financial institutions at taluka, district and State levels which can be linked to the national apex body. A Rural Industries Refinance Corporation could be created on the lines of the Agricultural Refinance Corporation. Another suggestion worth a scrutiny is a Rural Development Allowance for income-tax purpose to commercial banks and financial institutions which can divert funds for development of rural industries. It must be remembered that planned development of rural industries cannot be considered in isolation from development efforts in other sectors of the rural areas. Their development cannot acquire momentum unless the development of rural infrastructure and their supporting activities are co-ordinated properly □.

WITH THE COMPLIMENTS

OF

TATA ENTERPRISES

FISCAL POLICY in developing countries aims not only to raise resources but also for achieving various socio-economic objectives of State policy. The special problems of these countries are however such that a more integrated and pragmatic view of things than very often taken, is needed for bringing about a synthesis of resources and objectives.

The problems presently faced by these countries are multi-dimensional, complex and difficult. They are not amiable for easy and ready-made solutions. The accumulated backwardness of centuries weighs heavy upon them. The growing gap between developed and developing countries on the one hand and between privileged few and less privileged majority of people on the other is adding new dimensions to existing problems.

The resources of developing countries are meagre while needs of development are unlimited. It is, therefore, necessary that priorities for development are fixed after careful consideration. Targets need to be realistic. The short term and long term needs of the people should be properly evaluated so that scarce resources are not frittered away in unproductive channels. Moderation and economy should be exercised in all fields and for all purposes. Proper infrastructure should be organised before hand to monitor different development schemes so that there is no gap between objectives, resources and achievements.

In an economy where even a nominal tax is taxing for the tax payer, where income is a question of daily bread and price of goods is really a price for existence, it is very essential that tax instrument is used with care and compunction.

In situations where sizable segment of society live below poverty line, there are constraints in raising resources through direct taxes. Few who have the privilege to earn to spare can pay tax on income but their number is small. Their capacity is also not without a limit. At the same time forfeitary rates generate black money which is cancerous to growth and tend to disintegrate the moral and cultural fibre of society.

EFFECTS OF TAXATION

Commodity taxation can contribute sizable revenue but its role in redistributive justice is limited. Its indiscriminate use also becomes counter-productive. While some items can be tagged as essential items of common consumption, majority of the goods enter into common consumption of both poor and the rich. The production of items which generally cater to the needs of the rich is small and no worth while revenue can be collected from them. There are also limitations in fixing rates of duty at an unduly high level. It may either kill the industries already established; or may encourage evasion and corruption.

In developing countries there are few people who could be really considered rich. A large majority of the rich are those who were poor till the other day. They alone know with what sacrifice, devotion and hard work they have reached that stage. Their long outstanding dreams of possessing few glittering things of life need to be seen with sympathy and understanding. It puts limitations in fixing high rates of duty on items which are in the nature of consumer durables or whose

purchase and possession adds to family pleasure.

In view of constraints in raising resources through tax measures, it is necessary that along with balanced play of direct and indirect taxes, more attention is paid towards non-tax resources. Savings need to be encouraged. Hoarded wealth should be brought into circulation. The resources in which these countries are otherwise rich should be fully tapped but with care, keeping in view the immediate needs and long term perspective.

In developing countries goods are usually produced by small establishments. They need to be encouraged as they generate more employment and help in equitable distribution of wealth. Big industries should not, however, be frowned upon. In certain critical sectors it is economical to produce goods on a large scale. Besides some key industries like petro-chemicals, steel, fertilisers, cement etc. cannot be established in the small sectors. Fiscal policy on its part should attempt to arrange matters in such a way that economic power is not concentrated in few hands and fruits of progress and prosperity are shared by the largest segment of society. Conditions should be so created that all economic entities—public sector and private enterprises, big houses and small units—strive for general good. At the same time reasonable disparities should be tolerated as a normal feature of free society.

State activities have grown manifold. Immediate concern of each functionary is limited to a "part". In the process no one is responsible for the "whole". Emphasis is on specialisation. It has compartmentalised the needs, planning and process of development. In such a situation very often "totality" is the casualty.

The majority of the farmers of public policy and those responsible for its execution are concerned with one or the other aspect of a particular state activity. There is growing emphasis on specialisation in various fields. The need is for harmonious blending of specialisation and generalisation so that while details are adequately taken care of, the final shape of things is not missed.

In the matter of reforms it needs to be ensured that the form and substance of the measures contemplated fits in with the needs of the country. The pattern of production, accounting system, level of tax compliance, etc. should be duly taken note of before deciding to go for a new tax structure.

Due to paucity of resources, the developing countries are finding it difficult individually to undertake fundamental research in tax policy, tax planning procedure and organisation. It is, therefore, desirable that the knowledge, facilities and experience of different countries are shared mutually. Developed countries can play significant role in imparting proper direction and motivation to these countries for achieving their individual and collective objectives.

To conclude, issues before developing countries are complex, difficult and important. On their solution depends the future of mankind. It calls for understanding, sympathy and commitment on the part of all, whether concerned directly or indirectly. An enlightened fiscal policy can play an important and effective role in leading humanity to the path of progress and prosperity. □

Public Sector :

Foundation of National Economy

S. M. AGARWAL

OVER THE years the public sector has grown up and emerged as a catalyst in the national economy. It has recorded remarkable expansion over the years and today accounts for 65 per cent of the employment in the organised industrial sector and for over 30 per cent of the net domestic product. In fields like mining, banking and insurance the public sector's share is over 78 per cent. There has been a progressive change in its managerial culture, from a secretariat-orientation to greater professionalisation, combined with increasing operational autonomy.

Before independence the public sector had very little to say in the national economy. Its activities were confined to few sectors namely—military, post and telegraph, communication, railway and some multi-purpose river valley projects. During plan era its activities cover a number of multifarious fields. Now it has a dominant role in the heavy industries sector where large investment outlays are needed. In more recent years, among others, the coal industry has been added on to it ostensibly as part of the strategy. However, without a clear delineation of its role the public sector has tended to emerge basically as a provider of subsidised inputs for the rest of the economy as is obvious in the case of irrigation and power. Not only with respect to pricing, but also in the pattern of output—the investment preference for production of steel required for durable goods or the unevaluated supply of credits—the public sector would seem to have entered the prevalent structure of the economy instead of changing it or even modifying it. With respect to such vital goods as fertilisers or pharmaceuticals too the public sector has yet to play a viable role.

PERFORMANCE

There has been a continued increase in production potential both through expansion of existing capacity and setting up of new units. Fifteen new units have been added since 1975-76. In the last four years the total investment has nearly doubled, turn-over nearly tripled and the net profits have increased more than five times.

This has been made possible largely because of a constant increase in capacity utilisation, lower inventory, higher value added, more exports, greater import substitution and larger generation of internal resources helping to finance a substantial share of the gross block pricing policies have also helped the process. Fresh investment has benefited all groups of public sector enterprises except those concerned with industrial development and technical consultancy services and development of small industries. Fresh investments have mainly helped expansion of crude oil supply, steel, coal, other minerals and basic chemicals.

The achievements of the public sector are shown in the next page table. An overwhelming majority of the public sector enterprises has come of age as they have now reached a level of operation where they would compare on their inherent strength with the undertakings in the private sector. The 135 operating industrial and commercial undertakings of the Central Government collectively earned a net profit before tax aggregating to 236.58 crore, the profit tax amounts to Rs. 239.59 crore. This compares with Rs. 129.11 crore net after tax in 1975-76 and a net profit of Rs. 183.55 crore in 1974-75. On the capital employed of Rs. 10,861 crore as on March 1977, the gross profit after providing for depreciation and deferred revenue expenditure amounted to Rs. 1,053.51 crore. The return on capital employed worked out 9.73 in 1976-77, while net profit after tax as a percentage on year end paid up capital was 4.6 per cent as against 2.9 per cent in 1975-76. The total investment amounted to Rs. 11,097 crore as against Rs. 8,973 crore in 1975-76. The preceding year is worked out at 23.67 per cent as against the annual rates of 24.8 per cent and 16 per cent in 1975-76 and 1974-75 respectively. In the first three years of the Fifth Plan the internal resources generation was Rs. 1825 crore, this was higher than the target.

There has been an improvement in the capital utilisation in the manufacturing group of industries. In 1976-77 Seventysix units recorded capacity utilisation of more than 75 per cent as against 69 in the previous. The capacity utilisation in 24 units was ranging between 50 to 75 per cent in 1976-77 as against 18 in the previous. Only 17 units operated below 50 per cent capacity utilisation during the year as compared to 15 in the previous year.

The public sector provided employment to 15.7 lakh people in 1976-77 as against 15.05 lakh in 1975-76. In 1976-77 the public enterprises earned Rs. 2248 crore in foreign exchange as against Rs. 1536 crore in the previous year.

CHARISMATIC EXPORT

The export earnings of the public sector have contributed in a big way to the overall export growth of the country. To put the trend in brief, between 1968-69 and 1974-75, the percentage share of public sector in India's export went up from 20.05 per cent to 33.89, and according to quick estimates, the percentage veers around 38 per cent in 1976-77. The growth rates performance of the public sector has also been particularly impressive compared to national export

Ten Indicators of Performance of Public Enterprises

| | 1972-73 | 1973-74 | 1974-75 | 1975-76 | 1976-77 |
|--|---------|---------|---------|---------|---------|
| 1. Investment Rs crore | 5571 | 6237 | 7261 | 8973 | 11097 |
| 2. Turnover Rs crore | 5299 | 6777 | 10217 | 11688 | 14542 |
| 3. Gross profit Rs crore (before interest & Tax) | 245 | 273 | 559 | 668 | 1054 |
| 4. Net profit Rs crore before tax | 83 | 149 | 312 | 306 | 476 |
| 5. Net profit Rs crore after tax | 18 | 64 | 184 | 129 | 240 |
| 6. Internal resources generated Rs crore | 260 | 387 | 580 | 526 | 719 |
| 7. Return on capital employed (percent) | 5.1 | 5.2 | 8.4 | 7.6 | 9.7 |
| 8. Return on paid up capital (per cent) | 0.6 | 1.9 | 4.9 | 2.9 | 4.6 |
| 9. Employment No. lakh | 9.32 | 13.14 | 14.08 | 15.05 | 15.75 |
| 10. Expenditures Rs crore | 582 | 802 | 1133 | 1441 | 1503 |

growth trends. Public sector exports jumped from Rs. 272 crore to Rs. 1,119 crore between 1968-69 and 1974-75. Furthermore, it has been claimed that the public sector accounted for as high as 53 per cent of India's incremental export earnings during 1974-75. The major export sectors are steel, heavy engineering, transport equipment, and above all industrial development and technical consultancy services.

UNPRODUCTIVE EXPENDITURE

The public sector is being criticised due to its unproductive expenditure habits. The data furnished by the 100 undertakings show that their average annual expenditure on foreign travel increased from Rs. 77,000 in 1974-75 to Rs. 2.30 lakh in 1976-77. Four of these undertakings alone incurred annual expenditure on foreign travel exceeding Rs. 10 lakh with the number of trips by the executives by each of them in 1976-77 ranging from 77 to 115. Public sector undertakings have been lavishly spending on furnishings, fittings and air-conditioning of the head office buildings owned by them. The total expenditure on 42 such buildings during three years ending March 1977 amounted to Rs. 3.32 crore. At least 12 of them spent more than Rs. 5 lakh each on this account and in case the expenditure on furnishings and fittings alone worked out to Rs. 152 per square foot of covered area which is about double the cost of civil construction work. This shows that there is no cost consciousness in their mind.

Many of the undertakings also pay exorbitant rents

which in the case of one undertaking amounted to Rs. 51.47 lakh. Concentration of a large number of public undertakings in the metropolitan cities has led to severe overcrowding and scarcity of office and residential accommodation. Dispersal of head offices to work sites has been recommended.

Despite the overall achievements, however, the need for greater stress on professionalism, better utilisation of resources and productivity of men and materials, and improved financial and materials management has been suggested in the annual report. Efforts to reduce inventory in certain industries, such as engineering and metals and minerals including coal, will depend on the progressive recovery of the nation's economy from the existing stage of continued stagnation in investment. This is also true in this respect of problem capacity utilisation in these areas. The major constraints in this respect are power shortage, low demand, and inadequacy of raw materials, maintenance and in some cases of management also. As far as profitability is concerned, there is need to strike a suitable balance between social needs and national pricing. Unless this balance is achieved, it will be difficult for the public sector to fulfil effectively the role assigned to it of a market regulator, development of ancillaries, and transfer of technology and management expertise to small units. Unthinking reorganisation of major units likely to affect managerial efficiency and day to day operational autonomy should also be avoided. Every effort must be made to help the public sector maintain and improve its creditable performance. □

Swadeshi does not mean
drowning oneself in one's own
little puddle, but making it a
tributary to the ocean, that is,
the nation.

—Mahatma Gandhi

Block Level Planning

Dr. (Mrs.) Mumtaz Thaha

INTEGRATED RURAL Development is the accepted strategy for the development of rural areas, in the sixth five year plan. The dual objectives of rural development which have been underlined by the planning commission are: (i) increase of production in agriculture, and allied sectors, and (ii) generation of employment. Special emphasis has also been laid in the current plan on the development of target groups comprising of small and marginal farmers, agricultural labourers and rural artisans who either do not own land or have inadequate land in their possession. In order to achieve the above objectives, optimum utilisation of land, water and human resources have been emphasised. Further, in view of the wide variation in the spatial distribution of resource endowments, location specific area plans have been proposed to be prepared at the grass-roots level.

GRASS ROOTS LEVEL

IN THIS context the general consensus is to adopt the Development Block as the planning unit and to integrate the block plans with the district and state level plans. It is also government's policy to dovetail the ongoing programmes in 3,000 and odd blocks with the Integrated Rural Development programme depending on their relevance to the areas. At the first instance, 2,000 blocks have been proposed to be taken up for planned development and in addition every year 300 blocks will be added to this. Thus, by the end of the sixth plan about 3,500 blocks will be brought under IRD programme. In this connection, it is worthwhile to make a critical review of the criteria adopted in the selection of planning units and the approach to planning.

The block with its average population of one lakh and covering about 100 villages in an area of 100 sq. kms. is an administratively manageable and economically viable unit for planning particularly in a "multi-level planning" framework. The compact area and small size of population will make it easy to understand the problems and potentialities of the area leading to the preparation of realistic location, specific and "target group" oriented plans of local importance. The activities and functions of regional importance, however, need to be planned at their respective levels, i.e. District and State. To be more clear, National Highways and State Highways can be planned at the state level, district roads at the District level and other roads at Block level.

SECTORAL PLANNING

BLOCK LEVEL planning which is proposed to be done on the lines of area planning have to be essentially an inter sectoral planning focussed on spatial allocation of resources. It becomes necessary, therefore, that all sectors of economy should

be planned simultaneously. It has been rightly mentioned by the Chairman of the Planning Commission that primary, secondary and tertiary sectors of economy and all such economic activities which effect rural life will be taken up for planning and development. Thus agriculture, horticulture, animal husbandry, piggery, fishery, forestry, industry, health, education, water supply, housing, roads, electricity etc. will be given due attention in the current plan period.

NEED FOR SELECTED GROWTH CENTRES

While planning for one sector, its repercussions on other sectors and vice versa have to be kept in view. Only then IRD can keep itself aloof from the major pitfalls of the Community Development approach. In the Community Development Programme this type of functional integration was tried to be achieved through bringing different departments under one roof and the consequences are well known. Another task in area planning would be to pinpoint the optimum location of all socio-economic activities. As such function needs a supporting population to sustain and owing to the limited financial resources at our disposal, uniform distribution of activities over space is not a feasible proposition. Hence we have to be selective in our investment policy and this calls for the development of functions at selected growth centres which will cater to the socio-economic needs of the hinterland.

Planning for rural areas without taking into account their functional linkages with the urban centres is a self defeating strategy. Hence to make IRD a practical proposition, the demands and supplies of the urban areas on their rural counterpart and vice versa has to be given due attention. Thus, the block plans should not exclude the urban areas falling within it.

ASSESSMENT

WHILE PREPARING a block plan, detailed assessment in terms of quality, quantity and spatial distribution of resources will form the first step. The second exercise would be the identification of target groups and an understanding of their requirements, and receptivity to changes. Third stage would be to study the current socio-economic condition of the area in terms of existing activities and facilities. Fourthly, suitable programmes have to be outlined for making optimum use of the local resources. Fifthly, these programmes, have to be checked up against the requirements of the area in general and target groups in particular. Finally, proposals have to be made to equip the man-power with the skills required for these projects. □

Highest Priority to Agriculture

VIRENDRA AGARWALA

THE GROWTH rate which the country can aim at in the near future should be close to what the economy can really achieve. India's food production increased by a compound growth rate of 2.8 per cent during the 25 years period from 1951—1975. During the last 25 years to 30 years, the country has been able to increase production by about 50 to 60 per cent. But what is required to be done in the next 25 years is of immense magnitude. To feed 900 million, the country is required to produce about 230 million tonnes of foodgrains as against the present level of 115 million tonnes which implies that production has to be doubled by the end of the century.

The estimated gross cropped area in 1977-78 is 173.92 million hectares including 142.32 million hectares of net sown areas and 31.60 million hectares sown more than once. The gross irrigated area in 1977-78 is estimated at 48.41 million hectares. This is likely to increase to 63.41 million hectares in 1982-83. This means that the gross irrigated area will be growing at the rate of 5.45 per cent per annum during 1977-78 to 1982-83 as against the past growth rate of 2.18 per cent during the period 1961-62/1973-74. The agricultural strategy depends critically on the achievement of the large Plan set-up in the growth of irrigated capacity. Sixth Plan projections show that in the next 5 years while the gross domestic product grows at 4.7 per cent, the gross agricultural output should grow at 3.98 per cent, mining and manufacturing output at 6.9 per cent, electricity generation 10 per cent, construction output 10.6 per cent and transport and services about 6 per cent per annum. It is estimated that we must have a compound agricultural growth rate of at least 3.4 per cent during the next 12 years if we have to feed our increasing population at slightly higher levels of food intake which should be made possible with the elasticity of demand generated by a somewhat higher rate of income growth during the next 12 years.

ROLE OF EXTENSION SERVICES

How do we propose to achieve this? During the sixties, the Government took the conscious decision to transform agriculture from subsistence to scientific and that agriculture must have a very strong component of management input and scientific input. India has made remarkable progress in reorganising its research efforts for agriculture particularly during the last 15 years. We do have a chain of agricultural universities at least one in each state. India's organisation of research is considered one of the best not only in the developing world but in the world as a whole and in fact many international organisations have shown tremendous interest in India's experiment. It is unfortunate that there has not been a corresponding development in terms of our developmental administration—our extension services. The basic framework of our extension services was laid about 25 years back when the Community Development Programme was conceived. At that time, we did not have a great deal in terms of improved scientific technology to offer to

our farmers; in fact our technology at that time was really geared to a rather low level of management. At present we have acquired a great deal of technological potential which unfortunately is not being translated to farmers' fields because our extension services have not kept pace with the research technology which is being generated so rapidly by the agricultural universities. Whatever be the achievements in our research, we have a lot of material for transfer to the farmer.

The overall rate of growth for the agricultural sector at 3.98 per cent should reasonably achieve the foodgrains production of 140.48 million tonnes, 188 million tonnes of sugarcane, 81.50 to 92.5 lakh bales (170 kg. each) of raw cotton, 85.60 lakh bales of Jute and Mesta and 112 to 115 lakh tonnes of oilseeds during the next 5 years. The main strategy to attain the required production levels should comprise among other, increase in irrigation, gross cropped area cropping intensity as well as a larger application of inputs. Emphasis should also be placed on improving the rainfed farming to bring about greater stability in production and increase in productivity. The strategy for securing a rapid increase in the various inputs for production should be supported by input of science and technology, assured availability of credit, a strong extension net-work and facilities for marketing, storage, and processing, suitable linkages should be developed and strengthened with other infrastructure systems viz. power, transport and communication for processing and marketing of the produce.

Consistent with the policy of according the highest priority to agriculture and rural development in the planning priorities and the strategy adopted for achieving a rapid growth of output and employment, the financial allocations need to be stipulated at a much higher level compared with the outlays envisaged during the Fifth Plan period. The total outlay proposed for agriculture, irrigation, and rural development for the five year plan 1978 to 1983 is Rs. 18,250 crore as against Rs. 8,528 crore for the fifth plan. Institutional finance will also play an effective role as a major supplementary source of financing of agricultural development such as exploitation of ground water for minor irrigation, land development and land reclamation, forestry, animal husbandry and fisheries programmes. In order that adequate institutional finance is made available, a much higher level of budgetary support to credit institutions is being contemplated. It is no use harping that 40 per cent of total plan outlay must be allocated to agriculture but a national consensus needs to be developed that agriculture development must be the first charge and the national exchequer which should necessarily imply that no programme would be allowed to suffer for lack of funds. In actual practice, the fact is that what has been allocated could not be utilised so effectively that we could produce the desired results.

LAND REFORM

A MORE EQUITABLE distribution of land resources through programmes of land reforms has consistently been a major policy objective since Independence. But the will to implement this policy has

been sadly lacking all along. The ceiling legislation would need to be enforced more vigorously so that the programme of distribution of ceiling surplus land could be completed during the five year period. It will be necessary to ensure that the land declared surplus to the ceiling is taken over by the State; it is distributed and physically delivered to the eligible categories expeditiously; the land records are mutilated to reflect the rights and the allottees are given adequate financial material and technical assistance to bring the land under productive cultivation. Priority in allotment needs to be given to the landless belonging to Scheduled Castes and Scheduled Tribes and they must be assisted in a variety of ways so that the land allotted to them becomes a source of gainful employment. Adequate institutional credit at reasonable rates of interest and where necessary on personal security need to be made available to the allottees to meet their requirement of both crop-loans and term-loans.

The updating of land records is crucial to the development of a healthy agriculture what is more, the records once prepared have to be continuously updated as otherwise they would cease to be useful after a few years. The revenue administration at the field level from village upwards also needs to be strengthened qualitatively so that it is not only impartial, efficient and public spirited but commands respect of the entire rural community. It is noted that farming operations are more efficient and modernisation of agriculture is more rapid in areas where holdings have been consolidated. The consolidation of holdings should now be key programme with priority for the irrigated tracts. For better implementation of land reforms, it will be essential to involve the beneficiaries by setting up of village committees. To make these committees more effective, the Government is required to take immediate action.

LAND USE

THE UTILISATION of limited land resources to be optimised with the eco system for attaining the required production levels and for improving the economy of the rural poor. It is also necessary to ensure that the productive capability of the land is continuously improved and maintained and its deterioration prevented. Land use planning needs to be based on a resource survey and production potential of land. The National Commission of Agriculture has indi-

cated that if cereal production is restricted to suitable lands then it should be possible not only to improve the production level but also ensure favourable economic return to the farmer. Marginal lands and areas having medium to low rainfall are best suited for mixed cropping of coarse cereals, pulses and oilseeds. While rainfall is scanty, a silvipastoral approach needs to be adopted. Our ultimate objective will have to be to grow that crop which is appropriate as far as climate and soil are concerned and at the same time will be remunerative.

In order to achieve the twin objectives of self-sufficiency in food and commercial crops and increasing the employment and income of the farming community, the strategy of crop diversification should be adopted. This will also ensure growth in gross cropped area and optimise the use of basic resources of land and water. Inadequate supply of seeds in respect of pulses, oilseeds, jute and cotton have been a constraint in enhancing their production. The deficiency can be removed by suitable seed production programme to be undertaken by National Seed Corporation as well as State Seeds Corporations. For major pulse and oilseed crops, price incentives have recently been given for larger production. Such support needs to be further strengthened. If we give a parity price and make suitable arrangements for the purchase of oilseeds and pulses, there is no reason why we should not be self-sufficient.

Stagflation is a major factor which has virtually made the economy stagnant. What we urgently need today is to ensure higher income levels to the farmer not only to have a little higher purchasing capacity for raising his living standards but also release such creative forces which could make agriculture a viable occupation for the farmers. As and when agricultural production increases, the Government must ensure the support price which helps the farmer to sustain his economy. The political will needs to be asserted to ensure at least that procurement price for the agricultural produce which not only covers adequately the cost but also takes into account the circumstances in which the farmers required to work and increase his produce. This can be a surer strategy to build a new infrastructure in rural areas which is considered absolutely essential to build a modernised and scientific agriculture.

For Your Copy of YOJANA

IN

DARBHANGA

Contact

M/s Bharati Pustak Kendra,

Tower Chowk,

Darbhanga,

BIHAR

AND

Shri Surendra Jha

Ajay Hostel,

Lal Bagh,

Darbhanga,

BIHAR

The Concept of Integrated Rural Development

HARPAL SINGH

THE COMMUNITY development as a model of rural development was defined more as a movement than a programme. It was based mainly on self-help and was comprehensive to include activities not only agriculture and allied but also education including adult literacy, health, drinking water, roads, cottage and village industries. The underlying philosophy which qualified as a 'movement' rather than a 'programme' or project and distinguished it from other specific and sectoral development efforts was the involvement of the people at the grass-root itself. In fact, the development of the community was sought essentially through the community itself. The 'movement' however, could never reach its targetted heights for being recognised as a movement or a silent revolution. And of late, it more or less faded out into insignificance. On the rubbles of community development have sprouted the special area and specific target group (weak and small farmers, tribals, etc.) development programmes. The relentless search for the evolution of an appropriate model of rural development however continued undaunted. The history of these efforts however, seems to have turned a full circle with the integrated rural development being the latest in the models of rural development. The old community and the new integrated rural development have much in common. Both are based on integrated development of all sectors and sections of rural population as distinct from narrow sectoral programmes like high yielding variety programme, minor irrigation and other such schemes. Both encompass different sections of the rural society and realise the significance of human self-help and mobilisation.

The lessons of the working of community development programme are therefore of considerable important and relevance to the Integrated Rural Development Programme (IRDP). Without going into the dialectics of why the C.D. movement failed, it can be summarised that the inability of the C.D. model to recognise much less reconcile and resolve the inherent conflicts in the inter and intra-target groups i.e., the big and the small farmer, landowners and the landless, the bureaucrats and the peasants, the city elite and the mass of rural poor contributed in a large measure to the failure of the C.D. The lack of mass participation (which was the basis of the movement), excessive bureaucratisation, central planning and the eventual strengthening of the existing social order in the village further, were some of the proximate causes of the failure. The response of the Government to create local institutions, e.g. the panchayats to democratise and decentralise decision making in an effort to move centres of decision nearer to the rural people, to encourage their involvement and check the bureaucratic control, however, did not succeed. Without dismantling the power structure in the village, the devolution of authority under democratic decentralisation, superimposed in a social system which was highly skewed in the distribution of economic, social and political power, consolidated the unofficial position of dominance of vested interests over the dominateds further and harder. These interests appropriated whatever additional power was developed to the rural areas among themselves. The result was a complete drying up of whatever motivation or total mobilisation of effort was there in the majority of rural masses. One is not sure as to how far the lessons of C.D. have been built into the IRDP. The rural community is not a monolithic whole and one is not quite sure if it can be termed as community at all. In any new model of rural development the various intra and inter-group conflicts within the rural society would need sharper recognition and reconciliation. The I.R.D.P. model hence should not seek shelter behind certain ambiguities on this score.

In addition, the I.R.D.P. should define 'development' as to what does it mean. Some have identified three approaches to development i.e. 'technocratic', 'reformist' and 'radical' or 'collectivist'. Essentially, however, the history of rural development in India contains enough evidence to suggest that a technological modernisation—and sophistication with its dehumanising emphasis on technology, science and management, can no longer form as to what is meant by 'development' to be meaningful and a continuing process has to be wider and comprehensive. It has to find its most convincing expression in the release of creative initiatives of the people of rural India. It has to be achieved as 'interactive' as different from 'directive' process of development. The process of Human mobilisation and motivation of vast masses of rural people is basic to rural development. No development and much less rural development is worth its while unless it includes the mobilisation and motivation of rural masses and liberation of their spirits individually and collectively to achieve whatever they decide is good for them. The rural man is already regressing under the burden of over-simplistic life-less and uni-dimensional models of economic growth and development with bureaucratic over-directions and half-backed experts, and imposed-guidance. These no longer stand the scrutiny of a pragmatist much less of an exacting humanist.

If the above definition of development is accepted, the concept of I.R.D.P. would essentially have a few special features. First of all, the I.R.D.P. should have 'flexibility'. No uniformity should be imposed on a situation which is essentially diverse, heterogeneous and does not lead to uniform method and paths of development. A simple example would illustrate the point. In terms of macro-level aggregative scene, there exists already an aggravated problem of unemployment and under-employment in villages. Employment generating, labour-using technology would be most welcome in such a scene. Contrary to this general picture, there are vast areas where labour for farm is scarce and costly and farming suffers on account of the non or less than the requisite availability of labour at peak periods of farming. The pockets of labour scarcity and abundance exist because of imperfections in labour markets and imperfect inter—and intra-regional movements of labour. As another proof, in these areas, the farm labour prefers 'casual' over the 'permanent' or attached type of farm employment. Contrary to the usual macro-interpretations, this is a welcome assertion of the farm labour's freedom and a reflection of the availability of assured and continuous employment throughout the year. In such a situation of labour scarcity, the general solution of offering labour intensive techniques would not hold good.

Another important feature of I.R.D.P. should be that the programmes and schemes be located and identified by the villagers themselves. These should be thoroughly discussed, modified, doubted and dissented by the villagers themselves. While an initiator injected from outside can initially act as a catalyst, the decision has to be a cent per cent local one. If it involves some cost in terms of slowing the rates of growth, it is worth it because of its beneficial effect on developing a potential and a cadre for sustained development, in future. It is no use first identifying and formulating a plan of rural development through exogenous agencies and then exhorting the masses to cooperate in its implementation. Such a division of role and sequence has not succeeded in the past nor does it hold any promise for the future. If plan formulation reverts to the Centre and it fails, those at the local level are re-inforced in their belief that people at the Centre haven't the least idea of rural conditions.

An I.R.D.P. should as well essentially have, as its central piece of approach to rural development, the spatial and sectoral linkages with the resource endowment of the concerned area including the most valuable of the resources—the human resource. Wherever necessary, the rural institutions including the higher level federal rural unions (higher only in terms of

including more village and population rather than for exercising 'directive powers') should hire respective technical experts to advise only.

As mentioned earlier, the single most test of success of I.R.D.P. should be the extent to which it releases the creative potentialities of rural masses. The educated unemployed youth and teachers could form the necessary cadre to organise the rural people around the developmental activity. This should be preceded by a full and free discussion in the various groups in the villages. These discussions could later be institutionalised and formalised. There are serious structural limitations to an expansion of the developmental efforts without a massive mobilisation of total human effort and creating conditions for necessary motivation which such a debate help inculcate.

The rural people are remarkably well educated about the facts that impinge upon their lives. One critical factor would bear mention in the context of I.R.D.P. The status of social and economic groups in the villages say the farmers, as seen by himself and the society at large, the attitude of community leaders and many other considerations exert a decisive influence on the degree of these groups participation in a development effort as the I.R.D.P. Farm incomes, for instance, must be sufficient to give to the farmer, pride and dignity in the way of living. The growth of local initiative in rural areas—the king-pin of I.R.D.P.—is closely connected with villagers expectation of the future of the community and society and his confidence in the realisability of these expectations through a rural development programme like I.R.D.P. To the extent, this had not been done, nay even recognised, the deficiency has to be made up.

Essentially, therefore, the I.R.D.P. has to avoid the pitfalls of community development movement. This model of rural development has to define 'development' as the release of creative initiative of rural masses in India rather than in terms of any narrow techno-economic goals. The inter—and intra-group conflicts have to be identified rather than glossing them over. The method has to be geared towards the people, their potentialities and motivation. The I.R.D.P. thus should build into its method the concept of flexibility, comprehensiveness, geographical and sectoral integration, widest discussions by the groups and sub-groups in the rural areas, and participatory process in development by a more massive than ever mobilisation and participation by rural masses. The target groups should be enabled to exercise protection to their own industries from competition from urban based industrial products wherever they consider necessary. The cadre of educated unemployed could be built o takeover responsibility. Only then would the I.R.D.P. prove worth its salt.

Railway Units Production Up

The total output of the three production units of the Railways—the Integral Coach Factory, the Chittaranjan Locomotive Works and the Diesel Locomotive Works amounted to Rs. 143.38 crore in 1977-78 as against Rs. 128.90 crore worth of production in 1976-77. All the three units set up production records

during the year. For the first time, the Diesel Locomotive Works turned out 140 diesel engines, the Chittaranjan Locomotive Works 94 electric and diesel locomotives and the Integral Coach Factory 671 fully furnished coaches and 644 shells.

District Industrial

Centres

Some Comments

M. K. BANNERJEE

THE INDUSTRIAL Policy Statement of December 1977 is characterised by its accent on rural and small sector industrialisation, the theme of the statement being development of the small scale sector, the "tiny" sector and the "cottage" sector. It must be acknowledged, that the medium chosen for translating small scale industrialisation into reality, viz., establishment of DICs, is a commendable action. Perhaps, the planners have profited from the experiences of Agriculture Extension Centres.

What is however not very clear is the excessive speed with which Government intends to implement the scheme. The Union Government wants the States to ensure functioning of DICs in every district within a year. In view of this, one may conclude that it is absolutely clear, not only on how each Centre should function, but Government has also determined exact projections on what each Centre can deliver in future. It is indeed difficult to comprehend how Government has decided to spend hundreds of crores of rupees on the implementation of the DIC Scheme without having observed the actual performance of some Centres, set up under a pilot scheme. But the following points should also receive consideration, before considerable amounts of money are spent on the scheme:

1. The stated objectives of DICs, is the spread of "rural industrialisation". But, are we clear on what "rural industrialisation" is? It could be one of several things; production of sophisticated components for the HMT Watch Factory in a unit set up in a rural area, or production of polythene bags in a rural area for ultimate sale by urban retail shops, or production of forest based produce used by the paper industry. If the pace of industrialisation of products and processes as exemplified above, is by no means rapid at present, it is not because of lack of adequate support from Government, but it is because of the setting up of several agencies by Government to hasten industrialisation, and which have no coordination between them. Rural Industrialisation could also mean organising the production and marketing of village pottery, Ghani Oil, Khandsari, etc. However, neither from the policy statement, nor in statements made by spokesmen for Government, it is clear how exactly Government proposes to organise the cottage sector by eliminating middlemen who exploit the primary producers of various village industries.

2. It is worthwhile pondering if Government will find it feasible to bring in legislation specifying location of new units in the tiny and cottage sectors for rural areas. For example, while it may be possible to legislate, prohibiting expansion of capacity of soap and match boxes in the large scale sector, how will Government bring in legislation prohibiting manufacture of match boxes in the "cottages" of Bombay?

3. Since the Centre is to provide not only the initial grant for construction of building, etc. but also 75 per cent of the recurring cost, with the State Government taking care of the balanced expenditure, what *control* will and can the Centre exercise in the functioning of the DICs? More important, what control will the States permit the Centre to exercise? In other words, who is going to be held *accountable* for the performance of DICs?

4. There already exist a plethora of organisations for the promotion of rural and small scale industries in every State. Most States, have Industrial Development Corporations, Small Industries Development Corporations, Industrial Investment Corporation, Handloom and Handicraft Development Corporations, Khadi and Village Industries Board and what not. Is the Government clear on what should the relationship between DICs and these multifarious bodies be, not only in the execution of its duties, but also in the sharing of executive and financial powers?

5. The scheme envisages appointment of seven functional managers, each solely in charge of (a) economic investigations, (b) machinery and equipment, (c) research extension and training, (d) raw materials, (e) credit, (f) marketing and (g) Khadi and Village Industries. Does this managerial pattern ensure development of industries? Will a person who intends to set up an industry have to approach all the seven managers in a Centre, not only for formulation of his project, but what is more important for its implementation? Who in this set up will be responsible for mundane but nevertheless essential activities of obtaining water requirements or power requirements from the Water Boards and Electricity Boards of the State? Why should there be a functional manager responsible for

khadi and village industry, when there exists not only a full fledged Khadi and Village Industries Commission with offices in most States, but also autonomous Khadi and Village Industry Boards in each state? What will be the function of the KVIC and the various Board's existing personnel? Perhaps a pragmatic organisation structure will be to man the DICs with three or four people to start with, each of them being responsible for development of a distinct set of industries and being accountable for development of all facets of an industry by providing all necessary inputs to an entrepreneur for his particular industry, be it credit or be it research extension. In this system, a scheme of rewards could be incorporated, the criterion being "maximum units started and performing satisfactorily".

6. What targets have been fixed, for the DICs to achieve? Is it going to be the usual pattern of exhausting budgets during each financial year and not being perturbed about who has received the money and for what? Has the Government any idea of what should be the average disbursement/employment or disbursement/wage earnings, for the country as a whole, leave alone what it should be for each district,

given the backward and forward linkages prevailing in a district? In absence of such guidelines, what would prevent DICs from providing funds for relatively high capital intensive industries such as manufacture of injection moulded articles or mini rice mills at the expense of setting up units manufacturing leather footwear or hand-made paper?

7. How many States have block development plans ready with identification of rural industrialisation complete, which could form the basis on which the functional manager in charge of "economic investigations" acts.

8. How will anything remotely resembling "appropriate technology" be incorporated in the functioning of the manager in charge of research and training, at a Centre, when there does not exist any Central body with the responsibility of either conducting or implementation of "appropriate research".

In conclusion, it should be evident that Government should exercise a great degree of caution before setting up District Industrial Centres, since if a well thought out scheme is not implemented effectively, we shall see continuation of the present system where the rich get richer and the poor poorer.

Kalahandi Enters A New Era

P. K. DEO

THE CHRONICALLY drought-affected areas of Kalahandi district in Orissa have been starving for the water of Indravati River which is the tributary of the Godavari for the last 40 years. This could be achieved as envisaged by diverting Indravati river water to the Mahanadi basin. The long-felt need of the area was accomplished recently with the laying of foundation stone on the Indravati Project by the Prime Minister of India, Shri Morarji Desai.

The Indravati originates as a small stream at Thuamul in Kalahandi. It collects the water of its catchment area in Southern Kalahandi hills (a part of the Eastern Ghats) where the annual rainfall is above 110 inches and flows to Koraput and Bastar Districts as a mighty river. Often the river causes heavy damage in these areas.

The erstwhile Maharaja's administration sent a local Engineer to the United States at State cost to have a higher education in IOWA University and practical training in the TENNESSEY Valley. In the mean time the preliminary report of the Indravati Project was prepared by the reputed retired Engineer, Mr. Baxter of Bombay Presidency.

After the merger of the State, the progress of the investigation of this project received a set-back until 1960 when Raja Sailendra Narayan Bhanja Deo of Kanika, then Minister of the Orissa Government created an Investigation Division at Bhawanipatna, the district headquarters to carry on a detailed investigation of this project. In 1969, the Orissa Government sent the project report to the Central Water & Power Commission of the Central Government for clearance. But, inter-state dispute among the riparian States regarding sharing of the Godavari water was sent to the Krishna-Godavari Water Commission for arbitration under Article 262 of the Constitution. Then all the projects in the Krishna—Godavari basin were frozen till the award of the Commission.

However, in 1975, at the initiative of the then Minister of Agriculture & Irrigation, major portions of the dispute among the contesting states was settled by agreement and many projects were cleared, including the Upper Indravati Project. The project has been included in the 6th Five Year Plan of Orissa, for which money has been provided in this year's budget.

The project which was estimated to cost rupees 89 crores in 1969 is going to cost Rs. 232 crore which will be operated over a period of nine years. The Indravati when diverted from the hills to the plains will fall from a height of 1200 feet and will generate hydro-power of 600 M. W. at the Power House at Jaipatna. The tail-water from the power house will irrigate 5,40,000 acres of land in Kalahandi district. It will not only meet the power shortage which the country is passing through but will contribute to a great extent to the food production of this country. Another redeeming feature of this project is that by the side of the Power house at a distance of 18 miles in the Bafalamali Parbat there is a vast deposit of 196 million tonnes of high grade Bauxite Ore as established by the Geological Survey of India. So an integrated Alumina and Aluminium Complex of one lakh tonne capacity can be established at Jaipatna, as an electro metallurgical complex like this will be requiring firm power to the tune of 224 M.W. which the Indravati Power house alone can supply. The location of the Aluminium Plant will have to be nearest to the power house to avoid loss of power by transmission.

But the impediment will be a railway line. In 1966 the South Eastern Railway surveyed a Railway line from Lanjigarh Road to Jagdalpur (in Bastar) and it was estimated to cost Rs. 16 crore, but had to be dropped due to financial stringency.

With the Indravati Project, Aluminium Complex and Construction of Railway line for which survey has already been done Kalahandi enters a new era of prosperity. □

The Outlook for Aluminium Industry in India

B. H. LALVANI

ALUMINIUM, ONE of the most abundant metals in the earth's crust has acquired a world wide importance only recently in terms of both volume of production and variety of applications. Among all the metals the rate of consumption of aluminium is one of the highest in the world and already the economists are talking of aluminium age succeeding the iron age.

U.S.A. which imports at present almost all the supplies of aluminium ore is considering creation of buffer stocks that could be increased during the period of low prices and made available when prices rose. Their higher prices of materials and continuing problems of growing tensions between environmental values and the availability of materials appear likely. High energy prices are making prohibitory expensive the recovery of some low-grade ores and forcing reconsideration of energy-intensive processing methods. Profound changes are also occurring in conditions affecting their supply of raw materials.

Among the new factors is a trend towards nationalisation around mining properties or other measures to give effective control over material resources to host country. The major tonnages of inorganic materials that are presently used are derived from abundant elements particularly iron and aluminium. Given time and energy technology and science can provide the necessary flexibility to gradually overcome scarcities of particular materials. At the same time it should be obvious that often as long as a decade or more must elapse before the system can adjust fully.

GENERAL USES

IN INDIA the per capita production of aluminium is 0.3 kg. as against 18 kg. per capita in U.S.A. Nevertheless the industrial and non-industrial use of aluminium is being made on an increasing and extensive scale. Electric industry accounts for about 55 per cent of total consumption of aluminium in India as against 15 per cent in developed countries. It is necessary that the production of E.C. grade aluminium be made in much greater proportions to cope with the rising consumption of this variety. Its use is being encouraged by government as it can replace copper which is imported and is expensive and services equally well as an electrical conductor. Again as much as 18 per cent of aluminium is consumed in household utensils and appliances due to its lower cost and corrosion resistency and as such it is replacing stainless steel in low-temperature applications. About three per cent is used in packaging industry. Polythene and polypropylene are strong competitors in this line.

Presently about 15000 tons of aluminium extrusions are manufactured per year as against installed capacity of 35000. The per capita of aluminium extrusions is extremely low compared to other countries. Research and Development should improve corrosion resistance—technique for joining aluminium—development of cheaper techniques to produce E.C. grades and improve powder metallurgy technique so that powder metallurgy of aluminium becomes economical

reducing the cost of fine-enamelled aluminium wires and improve the properties of aluminium castings so that they are comparable with wrought alloys. It should also improve absorbing capacity of alloys, conductivity of EC aluminium cheap methods of producing copper coated aluminium. Ten years from now one fourth of aluminium produced will go into new applications. Hence new materials systems, new fabricating techniques and new property concepts have to be devised.

PRODUCTION

The total world production of aluminium is estimated to reach 2000 million tons by end of this century and for India ten million tons. The growth of the industry has to be planned on an appropriate scale. The production of aluminium should be stepped up so as to reach atleast 5 million tins by 2000 and to increase the per capita production to 5 kg. It will be useful to have a comprehensive end-use picture in all the major non ferrous metals imported by India for selection of substitution research problems. Not only is it more economical but also unlike iron it has the advantage of not being dissipatingly lost in the atmosphere and can be reclaimed by recycling into 98 per cent at lower energy cost than for iron. Despite its manifold merits the fact that its use has remained limited is on account of the high cost of extraction of aluminium ore. For producing one ton of aluminium about 20000 k.w.h. electrical power is needed. The cost of electrical energy accounts for 40 per cent of the total cost of production. Two American firms have invented non-electrolytic process which cuts down the electricity required by 30 per cent to 50 per cent and uses non bauxite clay and proposes to set up plants producing 300000 tons per year in 1985. Alternative sources of aluminium such as non-bauxite clay of the kaoline type are available in abundance throughout the world. If it becomes economically feasible to extract aluminium from clay with non electrolytic process the supplies of aluminium could become unlimited depending upon the availability of capital. The U.S. bureau of mines is to undertake direct reduction of bauxite or clay during 1980 to 1990.

RECYCLING

Extensive exploration should be carried out to identify the deposits of clay and bauxite which are amenable to non electrolytic types of extraction so that atleast 25 per cent of primary production is achieved by this process by the turn of the century. It is expected that scrap recycling will account for 50 per cent of the primary aluminium production by 1985. There is scope for increased substitution of aluminium for steel in view of the low production of the latter here. Further development show that the production of aluminium is likely to be cheaper and less energy consuming. Hence not only we should make use of the new techniques at the earliest opportunity but also promote the use of aluminium instead of imported non-ferrous and ferrous metals whenever it is

profitable and possible.

SUBSTITUTION

A detailed study of substitution of copper by aluminium up to the year 2000 for U.S. shows that substitution of copper by aluminium could bring down the copper demand by as much as 30 per cent by 1990. A similar exercise could show the likely effect of substitution of copper by aluminium on the future copper demand in India. A aluminium information centre should be set up in the way the same exists for copper and nickle in India.

The use of the aluminium in the aircraft bodies give it a place of unique importance in this vital part of our tertiary sector. In the cable industry winding wire production is expected to reach 50,000 tons creating more demand on its use. In view of the diverse pattern of utilisation of this metal and pivotal place in the mineral economy of India now and in the coming years nothing less than grass-roots support from the government is called for to preserve our country's self-sufficiency in this metal for its impact on the overall prosperity of the country.

Speed up on Asian Highway

THE ASIAN Highway is not one highway but a whole network of arterial roads (the "A" roads) connecting the main population, industrial and tourist centres of the Asian land-mass. It was the brainchild of the United Nations Regional Organization for Asia, the Bangkok-based Economic Commission for Asia and the Far East (ECAFE), which put the scheme forward in the late 1950s.

The idea was to connect the major national highways into a transcontinental highway system, based on former caravan routes such as the Silk Route to China and the Grand Trunk Road of the Indian subcontinent. They planned to connect Bazargan on the Turkey-Iran frontier to Singapore and Saigon and to raise to a specified standard some 38,000 kilometres (23,750 miles) of Asia's roads.

While AI followed the main route through Tehran and Rawalpindi to Delhi, Dacca and on to Phnom Pena and Sargon, A2 traversed southern Iran and Pakistan, taking in Kathmandu and Rangoon before heading south down the Malay Peninsula to Kuala Lumpur and Singapore. Other routes connected Northern Afghanistan, southern India and Sri Lanka and Laos to the network, while the islands of Sumatra, Borneo and Java had their own designated road included in the system.

It was hoped that the linking of national highways would give a boost to intra-regional trade, especially with the landlocked nations and the hinterlands of other countries. In practice, port congestion has spread east-wards, particularly affecting Karachi (which serves Afghanistan as well as Pakistan) and Chittagong (which, under a new agreement with India, serves Nepal as well as Bangladesh), so the relevance of such a transit route has increased. Already the European truck and trailer business, the modern day caravan, has penetrated as far as Afghanistan and Pakistan.

The political realities of the 1960s perhaps caused ECAFE to underestimate the value of north-south trade in preference for east-west traffic. For while Pakistan has never shown an enthusiasm for upgrading its section of the Asian Highway it has embarked on a massive road building scheme to connect Karachi with the Sinkiang region of China via the 960 kilometre (600 mile) Karakoram Highway recently opened, giving China an outlet to the Indian Ocean.

Chinese road builders have already built road links with two of Asia's landlocked countries. A Himalayan road drives through the heart of the

mass to link the Tibetan capital Lhasa with Kathmandu in Nepal. Further east the province of Yunnan is linked by road to north-west Laos. With renewed interest between India and China in establishing trade relations, it may only be a matter of time before the famous trade route between India and Tibet, which passes through Sikkim and enters Tibet at Nathu La (pass), becomes a major highway.

All the main priority routes in the existing network have now been upgraded with help from the Economic and Social Commission for Asia and the Pacific (ESCAP) Transport Technical Bureau. The roads of Iran and Afghanistan in particular have taken strides forward.

UNDP supported the Bureau with S 1.5 m. from 1968-76 to advise national highway authorities on preparing road improvement studies and plans, including feeder-road links and equipping laboratories to test construction materials and soils, Training courses fellowships and seminars on highway planning, engineering, construction, maintenance and administration have been provided. Motor rallies to see if roads meet ESCAP standards have been organised as well as studies on handling international traffic and services, including motor vehicle registration, third party insurance and visas and the creation of an Asian Highway technical information service.

Major drawbacks, however, are that Burma's tightly regulated economy has sealed its frontiers so that the 3,110 kilometres (1,945 miles) of the Asian Highway that lie within remain closed to transit traffic and that without the Pakistan link east-west trade is suffering.

When the Asian Highway was first mooted, those who stood to gain most were the landlocked countries. Afghanistan, Nepal and Laos. It was these countries that emphasized their rights in international law to transport goods across a neighbouring country. Now the large trading nations have much to gain by opening up the road network and new markets.

Perhaps the greatest boost will come as the concept of traffic-free zones spreads. Already the Association of South-East Asian Nations (ASEAN) is negotiating agreements with the European Economic Community (EEC). Here, the value of speedy land routes between many countries involved would be immense.

Courtesy : DEV FORUM

A Villagenagar Called

Dharmanagar:

Saga of

Development

C. VASUDEVAN

THE NOMENCLATURE "Villagenagar" is used to denote an area which, while having the benefits of an urban area without the ill-effects of urbanisation, retains the rustic and sylvan nature of a village. Such a place is Dharamanagar which lies at the trijunction of the villages of Koliyur, Vorkady and Kodlamogru in Manjeshwar Block, Cannanore District in Kerala. A seven-mile drive straight east of Manjeshwar Railway station (the last one in Kerala State in the north on the Southern Railway) takes one to this spot. It also lies on the Manjeshwar-Puthur High Way Road.

A BARREN LAND

An area extending to about 200 acres, which was mostly grazing ground with undulating hillocks, it had a deserted look about 20 years back, except for the two beaten tracks crossing each other, along which the villagers used to go up the market and down their villages. The two-foot high thatching grass attracted both human beings and the cattle, the former cutting it to thatch their houses and the latter to fill their stomachs. The beaten tracks crossing at the centre of the valley attracted the attention of the gramasevak (V.E.-O) who devoted his time entirely for the welfare of the villagers. Where blades of grass alone grew, he envisaged that agriculture too could thrive. Where two beaten tracks alone existed, he envisaged that footprints of human beings on every square feet could be imprinted. He envisaged too that the rendezvous of livestock could be made permanent in the environments of happier homes to be built in the area, if it could

be converted into a colony without the bad effects of the urbanisation. Agriculture could be made a profession as well as a hobby for the farmers, the landless poor people and their children in this area. In the ultimate analysis, he envisaged agricultural institutions where the children of these farmers and landless poor people could be brought up in proper milieu without getting themselves 'tainted' with the so called Higher Education. But the ultimate idea, was to make this area a centre of an agricultural university not in the academic sense but in the sense that the education would be really both universal and agricultural simultaneously.

There was not a single building in this area, where the gramasevak's brain has not exploded this idea. No immediate source of water was there, though the Potentiality was immense. Without water neither man nor animal could live. A well was therefore, a desideratum. At the junction where the two beaten track crossed in the valley a well was dug, with a meagre grant of Rs. 750 coming from the villagers. This was the beginning of the developmental activities in this area. What a wonder this worked. Villagers treading this areas especially during summer used to stop here, draw water from the well, quench their thirst and then pause to discuss how to quench their thirst for development of this area.

SPIRIT OF DEVELOPMENT

Thanks to the Government authorities, 18 houses under the Poor Housing Scheme sprang up. Then came the distribution of Government waste lands under the Scheme of land for landless Agricultural Labourers. Pat came the scheme of Village Housing Project under which loans were granted to the persons to whom lands were given. The entire area under the technical guidance of the Rural Housing Cell of Kerala Government, was divided into residential plots of one acre each, with facilities for public amenities like pathway, common playing grounds etc. A Maternity and Children Welfare Centre was the next target which was achieved before the targetted date with a grant of Rs. 1000 only from the N.E.S. Block, while the cost of the building came to Rs. 5000. A common meeting place for the villagers whose enthusiasms was moving like an unseen force was absent except the open ground where they used to gather to discuss common matters. A community hall with a grant of Rs. 500 from the N.E.S. Block was constructed, the rest of Rs. 3000 coming from the villagers. Vorkady Panchayat which had no building of its own was allowed to use this building as its office, free of rent. The Grama Sevak was provided with quarters and also land to the extent of 1½ acres which served as a model agricultural demonstration centre. A well, a bathroom and a latrine for which there was no provision in the scheme were constructed with a public contribution of Rs. 500 and a block grant of Rs. 2500. A radio kiosk on the hillock where the villagers used to gather was a welcome one. The Panchayat runs it.

More important than all these, the arteries of the villages i.e. the village roads which were unknown in this area, were constructed with the full co-operation of the villagers. Like hubs in a wheel, several roads emanate from this centre to different areas. Within an area of 200 acres the length of the newly formed

roads, comes to 4 K.M. For all these the total cost came to Rs. 30,000 of which the contribution of the villagers was Rs. 15,000 in the form of cash and shramadan.

RURAL HOUSING PROJECT

The construction of houses under the Village Housing Project Scheme was, really, a saga. Most of the beneficiaries, being poor, they found it difficult to construct houses costing Rs. 3,000 (now it is Rs. 5,000) with a Government aid (loan) of Rs. 2,000 only. The spirit of community development alone, it looks as though—contributed its mite to complete these houses. So far, 40 houses have been constructed. Situated on both sides of the slopes gliding towards the valley, these houses provide a panoramic view, with casuarina trees fringing the compound walls (surrounding the houses) and several types of plants and trees adorning this area. That a community of people from different walks of life, like Brahimins and barbers, goldsmiths and carpenters, agricultural labourers and myriads still could be fused into one without much ado of preaching or patting, threat of compulsion or thrust of ideas, is what the real community development movement has achieved in this area of Manjeshwar N.E.S. Block.

SECULARISM

What has been conceived as utopian or only as one which can be achieved by compulsion elsewhere, has been spontaneously achieved here and the entire complex in this colony stands as an edifice of community development which will be edifying to many other centres too. That they should live as one community does not require a preaching here where Hindus, Muslims and Christians, Brahmins and Harijans live in one colony. The achievement of a professional goldsmith in raising a now-flourishing coconut and orchard garden on a barren slope will be the envy of agricultural scientists.

BANKS AGRICULTURAL FOUNDATION CENTRE

The potentiality of converting this area as an abode of an Agricultural Centre, with facilities to be provided to the farmer and their children, is immense. There are already two Young Farmers' Clubs. The Syndicate Bank has opened a branch and a wing called Farm Information Exchange club under the Syndicate Bank Agricultural Foundation which helps the agriculturists and promotes agricultural activities. This Foundation has already contributed a sum of Rs. 1,050 towards the construction of the Veterinary Dispensary and Krishi Vichara Vinimaya Kendra. The colonists who have been granted one acre of land each (wherein they have constructed their houses) have been granted additional three acres or dry land nearby, i.e. within a radius of 2 miles. The total extent of such lands come to 120 acres. For want of irrigation facilities and fencing they could not put the land to optimum use. In the colony itself there is scope for constructing a tank measuring about one acre in the valley. This would solve not only the problem of drinking water supply, but also irrigating the one acre plot where they stay. Out of the 71 acre plots into which this area has been divided only 40 houses have been constructed. More families can still be settled with a planned scheme. An extent of 40 acres has been reserved for public amenities like roads, etc. The population of this colony measuring 300 acres, is 750 which works out to 2250 persons per sq. mile. A sum of about Rs. 1,58,168 has been invested in such a small area

of 200 acres out of which the public contribution comes to Rs 50,000 i.e. nearly 32 per cent. In other words the per capita investment comes to Rs. 668 at the rate of Rs. 790 per acre. It is doubtful, whether in any other area (apart from urban centres and also centres where Government have directly invested large amount on a planned basis), such a large investment with such a large component of public contribution in such a small area with such a small and poor population; has been achieved.

INTEGRATED DEVELOPMENT

An integrated plan taking the thread from where it has now been left to supplement what has already been achieved so remarkably without fuss or furor is a desideratum. Progressive farmers just outside this colony are a source of inspiration to these colonists. Such farmers young and old, who have devoted their lifetime to the sole cause of the development of agriculture, without the concern whether this profession is loss or profit, will file the row of volunteers, if such a scheme is put into action. Though their yeoman service deserves stentorian praise, theirs is an over-working and never-resting toil with subdued silence. Mr. Seetharama Shetty a former ground engineer in the I.A.F., is now a progressive farmer who sticks on to the soil with an avarice for modernising agriculture. His arecanut farm is a veritable sage of his efforts in action. It serves as an Agriculture Demonstration Centre and Seed Farm.

DEVOTED WORK BROUGHT RECOGNITION

The much maligned C. D. movement and the C. D. staff require rehabilitation. That a handful of C.D. staff, with the enthusiasm and help of the loveable villagers could do much is manifested in this case study. That a gramasevak after doing much, resigned his job to do more may seem to be a modern myth. But that is what Mr. N. Venkatesh Rao the gramasevak of this area did after doing so much as explained above. That almost the entire credit for what has been done in Dharmanagar goes to Mr. Rao, needs no repetition. He was the man mainly responsible for planning the colony and monitoring the developmental activities when he was gramasevak in this area for nearly 12 years. As a true gramasevak he used to walk with the villagers and work with the workers. His insight into the minds and problems of the villagers, his anxiety for the welfare of the poor, his high ambition to make agriculture the only industry and his determination to put into effect what he conceived on these lines, made him resign from Government service and devote his time as a citizen to promote the welfare of the agriculturists. But, also, as in the case of many a well meant scheme, objections, obstructions and obscurantism made his dreamland a far reality. His acumen to discern real India in the villages and understand the problems of the villagers is something that can be made use of in research institutions. His native wisdom if it can be blended with the technical and academic knowledge of the experts, can do a lot of good to the villagers.

He has been granted an award of Rs. 1,000 for his work 'Janasakhthi, Janardhana Sakthi' which was adjudged the best in 19th prize competitions conducted by the Ministry of Education and Social Welfare, Government of India. □

BOOKS

A Baffling Problem

Unemployment in India : Policy for Manpower
by Dr. K. Puttaswamaiah, Oxford & IBH Publishing
Co., Janpath, New Delhi 110001 ; Pages 196 ;
Price Rs. 50

EMPLOYMENT IS that single economic term with which the high and mighty, the poor and the lowly have been equally concerned. Its absence is a threat to the existence of everybody, for different reasons, and may be to different extent. 'Removal of unemployment' and 'employment for all' have been the pet slogans which have moved the masses over the past scores of years and which continue to do so. This is a primary goal for the Indian government today, as it has been in the last 31 years. With this kind of appeal, the best brains of our time have spoken and written on the impediments in the way of full employment. There has been a large number of theories and larger number of solutions but the problem still baffles us.

Why another book, then, in place of some worthwhile action? I am afraid Dr. Puttaswamaiah's book does not come up with any new solution. But it justifies its presence by a very methodical, comprehensible treatment of the subject. After a theoretical framework in the first chapter, the author discusses agricultural industrial and educated unemployment in the following three chapters. Let me mention the main points he discusses, for instance, in one of these chapters—educated unemployment. These are: the nature of the problem, Growth of literacy, extent of educated unemployment: past and present, causes of educated unemployment in India, educational planning and palliative measures. The author then goes on to general employment situation, rationalisation and unemployment, national employment services, plans and employment policy. It is in the last chapter that we get a fairer glimpse of Dr. Puttaswamaiah's own philosophy and I cannot help but quote: . . . "In India, however, the idea of full employment is still considered fantastic and incapable of realisation. By contrast, the concept of social security seems to have become a kind of "blind spot" in the eyes of our planners. More and more attention is being paid to the granting of benefits and concessions to a sector of the population which already enjoys the security of livelihood, but no effort is being made to ensure jobs for those who do not have them.

"It may be better to employ people even in uneconomic or useless jobs than not to employ them at all, because those who would be taken in useless employment can, by what they earn and spend, give useful employment to others. . . ."

"While the present government is aware of the gravity of the problem which faces the country, its financial and economic policies often create a situation which is not at all conducive to fuller employment. The planning Commission, for instance, speaks vaguely in terms of aggregate investment. It forgets that the quantum of employment generated through investment of a given size is conditioned by a multitude of factors. . . ."

How one wishes there were a formula which could do the trick. In any case, I would recommend the book as a good, well written, general commentary on unemployment in India.

Kewal Soney

Training in Management

Management Trainee Schemes,
B. R. Virmani, Sultan Chand & Sons, 1978; Pages 50.
Price Rs. 20

MANAGEMENT' IN its pervasive sense is one of the most important inputs for not only economic development but overall social change, nay, comprehensive national reconstruction programmes. Trained professional management personnel can be bracketed with capital, material and other resources that go into industrial growth and running of national undertakings on sound scientific lines. With the rapid growth of professionalisation of management, in place of traditional familial or dynastic proprietor-management tribe, the cadre of management trainees has got a boost. These are the young set of people trained institutionally in various branches of management or fresh from universities but with high managerial proclivity, who are put through a vigorous round of tailor-made skill-accumulation and culturisation programmes, before being finally absorbed in the organisational mainstream as the company's future decision-making managers.

The study focuses the various dimensions of management trainee schemes in India, including management and selection techniques, their training and development programmes, evaluation systems, and career planning strategies. The book contains several suggestions for improvement of such schemes. The book should be welcomed by professional managers in the public and private sectors as evaluatory exercise of the existing schemes. The production aspects of the book have been well looked after by the publisher but the price seems a little on the high side for a book of this size.

Bata K. Dey

Books Received

1. **Behaviour of Prices in India 1952-70** by Santi K. Chakrabarti; The Macmillan Company of India Limited, Price Rs. 50.
2. **Principles of Economics** by P. N. Chopra; Kalyani Publishers, New Delhi, Price 14.40.
3. **Britain's Economic Problem : Too few producers** by Robert Bacon and Walter Elits; The Macmillan Press Ltd., London, Second Edition; Price £2.95.
4. **Advanced Economic Theory Micro & Macro Analysis** by P. N. Chopra; Fourth Revised & Enlarged Edition 1978; Kalyani Publishers, New Delhi; Price Rs. 32.

Development Notes

Backward Area Development Schemes

A sum of Rs. 40.00 lakh has been sanctioned for an integrated development of the backward area of Jhargram in West Bengal.

Among sectoral allotment, Irrigation, including minor irrigation, has received Rs. 15.00 lakh, Roads Rs. 10.00 lakh, Education Rs. 3.00 lakh, and Cottage and Small Industries Rs. 4.00 lakh. Some schemes are on their way to implementation under these heads. Schemes worth Rs. 10.00 lakh have already been taken up under irrigation, four new road schemes worth Rs. 5.00 lakh have been sanctioned while in the field of Education almost the entire sum of Rs. 3.00 lakh is being spent on Primary Schools, Junior and Junior High Schools and Adult Education Centres.

The Jhargram Development Board has recommended to the Public Health Engineering Department to extend water supply for the entire Jhargram town, Silda, Belpahari and Manikpara. The Irrigation Department has also been requested to prepare small minor Irrigation Schemes and town drainage scheme by the Country and Town Development fund.

A Milestone in Self Reliance

A milestone has been reached in the indigenous manufacture of motors required for industries in the country. This follows the successful design and manufacture of Country's largest AC Synchronous motor at BHEL's Heavy Electrical Equipment Plant at Ranipur, near Hardwar.

The motor, rated at 9,000 KW, 6.6 KV, 500 rpm, will be used in Motor-generator set for driving Rolling Mill motor at Korba Aluminium Plant of Bharat Aluminium Co.

BHEL-Hardwar built motor weighing 90 tons has been specially designed to have high degree of reliability in operation necessary for Rolling Mills. Other important design features are self-starting and reparability under assembled condition. Motor has robust construction to withstand arduous working conditions.

BHEL manufactures AC motors in capacities ranging from 100 KW to 15000 KW for a variety of applications in different industries, Mines and Power Plants.

Food for Work Programme

West Bengal Government has given a cash of Rs. 1,50,74,00 and allotted 17,235 MT wheat to fifteen districts under food for work programme. By implementing the central scheme, the State Government was able to give employment to numerous unskilled labourers in the villages of Bankura, Burdwan, Birbhum, Hooghly, Midnapore, Purulia, Howrah, 24-parganas, Nadia, Murshidabad, West Dinajpur, Malda, Jalpaiguri, Cooch Behar and Darjeeling districts. The programme expenditure was for four months from April 1978.

Tribal Development Works

The various development work implemented by the Dantewada Tribal Area Development Agency in Madhya Pradesh till April 1978 benefited 37,544 persons. The agency laid out Rs. 2,33,277 on providing

improved seeds, Rs 6,04,399 on providing fertilizers and considerable sums on other services to promote farming.

Four cooperative societies were extended assistance of about Rs. 2,30,000. Nine villages were electrified at a cost of about Rs. 15,00,000.

In addition, Rs. 32,60,175 were spent on the construction of three roads and Rs. 94,978 were provided to the farmers of the block for installation of 51 irrigation pumpsets.

Break Through in Indigenous Technology

India's largest D.C. Generator has been successfully manufactured at the Hardwar Factory of the Bharat Heavy Electricals Ltd. This is rated at 3200 KW, 900 volts, 500 rpm. This marks a milestone in the country's efforts at developing indigenous technology.

Two such generators have already passed all the rigorous tests at the Hardwar Factory. These generators will form part of a five-unit motor generator set for supplying D.C. power to the main drive motors of Cold Rolling Mill of BALCO Plant at Korba. BHEL will manufacture and supply six such generators to BALCO and two generators to Bhilai Steel Plant.

The design and manufacture of these D.C. generators has been carried out totally indigenously at BHEL-Hardwar.

Besides the above, BHEL-Hardwar will also manufacture and supply 4,000 KW and 6,300 KW twin drives of 3,600 mm. plate mill for Bhilai Steel Plant. Motors of such large rating are being manufactured for the first time in India.

'Operation Flood' Will Cover 10 Million Families

Over 10 million farming families would be covered under the operation Flood II programme which is already in its preliminary stages in several States. Union Agriculture Minister S. S. Barnala said that Rs. 483 crore would be spent on this massive venture within the next year. The basic concept of the programme was that every town with one lakh or more population would be supplied milk by creating milkshed areas around these towns. Under this programme 146 such towns would be covered all over the country in 15 States. The programme would be financed by the World Bank, the EEC and the Central Government. Preliminary work had already been taken up in some States.

India Fourth in Rubber Output

The area under rubber and production of natural rubber in India in the calendar year 1977 increased to 231,000 hectares and 152,000 tonnes respectively enabling it to become the fourth largest producer of natural rubber in the world. Sri Lanka, which held the fourth place, was pushed to the fifth position. Its area and production during 1977 were 228,000 hectares and 146,000 tonnes respectively. This was disclosed at the 25th assembly of the international rubber study group held in Washington earlier this month. The three places are held by Malaysia, Indonesia and Thailand.