

BULLETIN

MADRAS DEVELOPMENT SEMINAR
SERIES

VOLUME VIII No. 8

AUGUST 1978



79, SECOND MAIN ROAD, GANDHINAGAR,
ADYAR, MADRAS-600 020.

MONTHLY BULLETIN

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EDITORIAL—SOME HIGHLIGHTS

I General Economic Scene

State :

Climate, Relief and Prices: June continued the hot spell of May for the greater part of the month, with the South West monsoon breaking in the South Western parts of the State and benefitting particularly the hydel reservoirs in the Nilgiris area. Mettur had a good storage position in the early June at 21,000 million cubic feet, with a good inflow of 11,000 cusecs and a level of more than 57 feet as against 49.30 feet with an inflow of 2,621 cusecs during early June 1977. At the end of the month, the water level was 75.5 feet with the storage at 37.5 tmc feet. The daily inflow was 31,000 cusecs. It is likely the water for irrigation would be released from early July to avoid evaporation on account of dry conditions in the rivers and to ensure that water is supplied continuously and adequately to meet the needs of tail enders, which means releasing 30,000 cusecs per day during the first week or 10 days. Here there is a difference between the farmers and the government. The farmers want Mettur water from early June to help them start raising seedlings for the kuruvai, while the government believes that these

preliminary operations can be carried on with filter points and that the release of water in July has never affected the extent of the kuruvai as seen in 1964, 1966 and 1967 and even in 1974 when the Mettur water was released as late as on July 20. The area irrigated under the Cauvery and Vennar systems is 9 lakh acres and that by the Grand Anicut Canal system is 2 lakh acres. On the cyclone and flood relief side, the union government announced in early June an additional grant of Rs. 14 crores (in addition to the Rs. 33 crores given in the first instalment). In addition the Indian Red Cross is building 25 community shelter halls in the cyclone-prone districts at a cost of Rs. 2 lakhs each, the Red Cross and the state government sharing the cost of 50:50. The state government has identified 37 places in the cyclone hit areas for building these community evacuation shelters which could also be used as cultural and other meeting places for the villagers. Shelters in Nemisal in Pudukottai district and Akkaraipatti in Thanjavur district are being built and five more are to be built in South Arcot. The Red Cross has also adopted 19 villages in the districts of Thanjavur, Tiruchirapalli, Madurai and

Pudukottai for repairing damaged school buildings, providing water supply and other amenities. Further a cyclone warning radar with a range of 400 kilometre is being installed in Karaikal, the radar being fabricated by Bharat Heavy Electricals Limited. A similar radar is being erected at Masulipatnam and in Port Blair and with radars already installed in Vishakapatnam, Paradeep and Calcutta, the entire East Coast which is vulnerable to cyclones will be continuously monitored as the storm approaches the coast during the monsoon season, giving timely warning to people living on the coastal belt. Prices during June remained stable with some fall in the price of foodgrains and oil and a rise in meat and vegetable prices.

Power: The power situation in the State during June (usually the most critical month every year) was satisfactory. Heavy rains in the Nilgiris area led to increased inflows into catchment areas of the Kundah hydroelectric station which was the equivalent of 7 million units. The generation from hydel stations was good at 10.2 million units, and the thermal stations accounted for 8 million units. Ennore was generating 280/300 MW, Neyveli feeds 7 million units into the Tamil Nadu grid and Kerala supplies 6.9 MU. The State power demand is 1,500 MW and the energy generation was 28 million units. The two factors causing anxiety were the continuing strike by some of the Kerala Electricity Board workers, (which however was settled at the end of the month), and the inadequate supplies of coal which maintained Ennore Thermal coal stocks at low levels. Discussions were held during the month with Singareni Coal Board authorities and the railways for

wagons to expedite the supply of coal to the State thermal plants.

For the country as a whole, the power situation continued in June with serious shortage in states like Karnataka, Delhi, Uttar Pradesh and Maharashtra and comfortable in other areas. Power output in May is reported to have increased by 18 per cent over May 1977. Thermal generation was the same as May 1977, hydel generation increased by 61 per cent. The 200 KV single circuit Idukki-Mysore line was energised providing a direct link for the transfer of power from Kerala to Karnataka. The Kerala power workers strike led to damaging of lines on the Kasargod-Karnataka border, Cannanore-Kasargod and in fact in the entire north region beyond Kozhikode: with the commissioning of the 400 KV high voltage transmission line from Sultanpur to Lucknow and the 400 KV Lucknow substation, the country entered the 400 KV power system. The multi-disciplinary power projects renovation have completed work at Bhatinda (110 MW), Faridabad (60 MW), Panki (110 MW), Kothagudam (110 MW) and Santaldih (120 MW). The groups have taken up the work on 14 power stations, involving 31 units, aggregating 3,000 MW. Gujarat which estimates a peak power demand of 1,550 MW, has a total installed capacity of 2,330 MW and is planning to increase its generating capacity by 1,300 MW. To do so, 3 units at Wanakbori and those at Ukai and Kadena will be completed by 1980, 1981 and 1983 respectively. 755 MW would be added to raise its generating capacity to 3,055 MW. North East India will be tiding over its power crisis by 1981-82 and there after have adequate power for its development. Power shortages in the North East at present are due to the

delay in the commissioning of the Goktak hydel project in Manipur and in establishing the North Eastern grid. During the coming five years the existing generating capacity of 273 MW will be increased by 622 MW which will meet the region's power demand of 595 MW by 1983-84. CEC has given techno-economic clearance for the proposed super thermal power station at Farakka to be installed by the National Thermal Power Corporation with an initial capacity of 1,000 MW (5 units of 200 MW each and later to be expanded to 2,000 MW). Kerala's power development programme which is of vital interest to Tamil Nadu and Karnataka earmarks Rs. 12.53 crores for generation schemes (Idamalyar, Idukki III, Sabarigiri VI unit, Kakkal) Rs. 15 crores for transmission (110 KV lines and substation and 66 KV lines and substations) and Rs. 11 crores for rural electrification—about 20,000 pumpsets. In regard to the special power problem faced by Karnataka, a recent study by scientists in that state call attention to (a) the uneven power consumption distribution—the state average per capita consumption is 13.3 units, Bangalore city's per capita consumption is 66 units, Mysore city 42 units and Bidar, Bijapur and Belgaum are 4 units, (b) the HT load is concentrated and used for longer hours resulting in further larger disparity in total consumption, (c) the average cost of energising a pumpset is Rs. 16,000 which can only be justified if it is part of a local integrated development programme and (d) the growing industrial power consumption of Bangalore city which receives 50 per cent of the industrial licenses granted annually in the state. Power supply of 100 MW from Kerala to Karnataka was resumed from June 1 and continued with some interruption due to the damage to the

Kerala-Karnataka lines referred to earlier. It was with relief that the southern states received the information of the settlement of the strike at the end of June. The Karnataka government announced in June plans to take up power development projects in the Cauvery basin, which will involve cooperation with Tamil Nadu for the Hogenakal project. Another state which faced a serious power crisis in June was Bihar due to the recurring breakdown of the units of the Patratu thermal station. The Barauni thermal station was facing coal shortage. In fact since January, thermal stations throughout the country were facing a precarious coal stocks position. In some states coal stocks had dwindled to 1 day or nil. The Railways are now giving priority to movement of coal, the power department is tightening its monitoring of coal stocks, the coal department is to concentrate on increasing the production and supply of coal, leaving its movement to the Railways. The power department has suggested keeping 15 days' stock at the pithead power stations, 30 days, stocks for stations within 350 Km of a colliery and 45 days stock for stations beyond the 350 Km limit. Now the three departments—Power, Coal and Railways must translate those sound targets to operating and actual stocks.

Restructuring Madras Corporation :

The report of the Sattanathan committee on the restructuration of the Corporation of Madras was submitted to the government in June. Among its major recommendations to avoid the problem of false muster rolls, corruption and nepotism were: (a) the establishment of a Planning Cell to assess periodically civic needs and evolve schemes in advance of their execution; (b) to close the gap

between its receipts of Rs. 18 crores and expenditure of Rs. 30 crores per year, an octroi should be levied in a phased manner, including collection of the duty at the warehouse point instead of at the checkpoints to avoid corruption and slowing down of the flow of trade: (it estimates that the levy will result in a revenue of Rs. 10 crores per annum): (c) as a consequence the somewhat inequitable property tax can be lowered or at least stabilised particularly for the lower income brackets, that is exempting properties with annual rental of Rs. 300 and less and levying a surcharge of 10 per cent on those above, (d) the leakage of collections from profession tax, advertisement tax and other duties are to be stopped and the cost of collection lowered through a number of measures suggested, (e) tax relief for owner occupied properties should be for those with annual rental of Rs. 5,000 or less and should be placed on a statutory basis, (f) the Karnataka system under which the government collects the profession tax and distributes the proceeds to the local bodies is commended and the definition and tightening of tax collection from the self-employed doctors, lawyers, traders who should each be given an account number is recommended (this will yield Rs. 1.5 crores per annum in place of the present Rs. 50-60 Lakhs): (g) timber tax should be raised to 5 per cent of the value of the timber, while tax on animals should be abolished, (h) a number of non-tax sources of revenue is suggested such as hiring cold storage space, constructing markets and shopping complexes and acquiring vacant land along main road and using them for public purposes, (i) supervision of road laying by a competent engineer and their maintenance at a cost of Rs 35-40 crores, (j) limiting its education responsibility to pre-school and primary education and vocationalising its

existing high schools, (k) shifting of cattle outside Madras under a phased programme, (l) partial mechanisation of some work in the Revenue and Accounts Department, (m) increase of compensation from the motor Vehicles Tax receipts for the wear and tear of city roads, (n) decentralisation of powers by creating "circles" which will carry out the corporation tasks. This rather important set of proposals needs further detailed expert study—particularly the fiscal proposals. The detailed recommendation on expanding the profession tax and making it more progressive is sound: it raises the question of amending article 276 of the Constitution which sets a ceiling of Rs.250 on taxes on profession, calling and employment: various taxation committees have recommended raising the ceiling from Rs. 500 to Rs. 2000 depending on the income: it also raises the question of its relation to the income tax paid and its being a deductible item. The most serious question raised by the Committee is with regard to the octroi levy. Here the latest enquiry—the Jha Committee on Indirect Taxation (see Vol VIII p 136) has come out firmly against the levy as being difficult to administer—if the goods have to be weighed, a lot of time is lost, and there will be need for skilled personnel: there is the possibility of corruption which is met to some extent by the proposal to collect it at the warehouse. But the socio economic defects of the tax on slowing down trade, causing a great deal of wear and tear of the truck and vehicle, have been fully documented by the Jha Committee. The tax raises today Rs. 250 crores in the various states, and its abolition will call for help from the union government. But surely the state which does not have it, should not go in for the octroi which was discribed in the last National Budget as an "obnoxious levy."

Water: In June negotiations on two water agreements were carried forward. The first related to the Krishna waters for Madras. Agreement was reached on broad features of the project by the Andhra Pradesh and Tamil Nadu Chief Ministers with technical details left to be worked out by appropriate units. Work is to start simultaneously on taking Krishna waters from Srisailem to Somasila and from Somasila to Madras city via the Kandaleru reservoir. Before the Kandaleru reservoir is completed, a by-pass is to be constructed to provide speedy water supply to Madras. This means that Andhra Pradesh will supply its share of 5 tmc feet of water directly from Somasila to Madras city without waiting for the work between Srisailem and Somasila to be completed. The Kandaleru scheme is meant to provide additional storage to give water to Madras City during the off flow period. Andhra Pradesh engineers will take up the survey and investigation and this will be reviewed periodically by liaison teams every two months. An investigating circle with headquarters at Hyderabad has been set up which will go into the sharing of costs of this project between the two states. The other project was the state's request to Kerala for the supply of 14 tmc feet of water from the Pandiyar-Punnapuzha which was the subject of discussion between ministers of the two states and the discussion on which is to be resumed in July. The issue is that under the 1965 agreement, Kerala had agreed to the diversion of Pandiyar-Punnapuzha for generation of power, on the understanding that the waters would be taken back to Kerala. Tamil Nadu wants that their surplus waters should be diverted to Moyar to irrigate Palladam and Avinashi taluks in Coimbatore. It is this request which is being negotiated.

Transport: In June a survey of goods traffic on national highways and other roads in Tamil Nadu has been started by Rail India and Economic Survey Limited as an input into the transport policy being developed by the Union Planning Commission. During the month, the survey will be completed at the check posts in Tambaram, Puzhal, Poonamalle and Avadi and at Salem, Ayodhyapatnam, Cuddalore, Kumbakonam, Madurai and Tirunelveli roads. Karnataka and Tamil Nadu met at the ministerial level at the end of June and reached agreement on increased reciprocal operation of stage carriages on inter state routes. Subject to parity of routes, the two State Transport undertakings could operate any number of routes longer than 25 km with in each other's territory. The existing 1,500 permits for public carriers is to be increased to 2,250 both ways and private carriers from 50 to 150 vehicles. 200 taxis will be allowed to ply as inter-state taxis instead of the present 100. It was also decided to hold a transport ministers conference of the southern states at which the problems of Pondicherry and Goa would also be considered and solved. In relation to the coal shortage faced by the state thermal plants and the Railways, two coal ships arrived in Madras in mid June, unloading 16,632 tonnes. About half is for the railways and the rest for the thermal plants. Madras port received a large number of ships diverted from Bombay on account of the monsoons and the bunching of their arrivals. Though Madras has fewer berths than Bombay, its stream lined operation enables speedy discharge and turn around of vessels. Imports have increased and port earnings now average Rs. 2.8 crores per month.

Urban Development and Railways:

Road works in the city was completed in June at a cost of Rs. 82 lakhs both in developed and under developed areas. 100 slums are being provided with amenities at a cost of Rs. 150 lakhs. Mosquito control and mechanised conservancy work are underway, together with an intensive city cleaning campaign. The Southern Railway announced in June that it will acquire 38.5 acres of land for the expansion of the Madras Central Station, which means it will be taking over the Zoo, Moore Market and adjoining areas. These will provide the ancillary facilities such as additional platforms and lines which the Madras-Trivellore and Madras - Gudur electrification projects call for. A survey is underway for increasing the line capacity between Madras Beach and Villupuram by providing an additional metre gauge line between Madras Beach and Chingleput.

Farmers' Agitation and Tribal Welfare:

In June, the Action Committee of the Tamil Nadu Agriculturalists Association restarted the farmers agitation for further concession (see Vol VIII p 258). Relay fasts in front of government offices, plans to prevent supply of vegetables and milk from village to urban centres, no tax campaign and the courting of arrests are the manifestation underway by this group. The movement is limited to a relatively small group and the government on its side is unable to offer further concession on power rates and prices of inputs etc. The state government has formulated a Rs. 1.56 crores crash programme for tribal welfare which will develop infrastructures in the tribal areas, extend credit for agriculture, dairy farming and other occupations. The

government has also sanctioned construction of 5,600 houses for harijans, each costing Rs. 6,000. A further provision of Rs. 40 lakhs has been made for providing these houses with water, electricity and other amenities.

National

Economy and VI Plan: GNP growth for 1977-78 at 1970-71 prices is now estimated at 6 per cent instead of the "about 5 per cent" of the Economic Survey (See Vol VIII p 209) due mainly to the revised foodgrain production estimate at 125.5 million tonnes for the year. (In the later agricultural production section an even higher production of foodgrain is estimated). Industrial growth is however estimated at a low 4 per cent compared to the 10.4 per cent in 1976-77, due to the slower increase of steel, coal, and cement and power and the accompanying decline in investment, power shortage and slack demand in some sectors. For the Fifth Plan the average growth was 4 per cent, above the trend rate of 3.5 per cent in the first four plans. The prospects for this year, 1978-79, will depend on agricultural performance which in turn will depend on the monsoons which have started well in Maharashtra and Central and Southern parts of the country. Even with a good monsoon, agricultural growth will not show a major increase because of the record output in 1977-78. Unless industrial production gains momentum to rise by 7 to 8 per cent, the overall growth rate will not be comparable to that of 1977-78. The VI Plan which started on 1 April, 1978 has been a good start. Foodgrains and foreign exchange reserves are at high level, the wholesale price index is 2.5 per cent less in June 1978 than at June

1977, there are no constraint on resources and yet demand is in excess of supply in some sectors like steel, cement, coal and power, while in others demand is slack in relation to supply and capacity. There is need for the tempo of investment to pick up which involves new investment and higher capacity use, but also institutional charges which will place purchasing power in the hands of the mass of the people who now do not represent effective demand.

Prices and Anti-inflation: The whole sale price index for May showed a rise of 0.8 per cent for the month at 182.6 on May 26. The major price rise was in oil seeds (2.3) sugar (2.1), basic industrial chemicals (2.1), pulses (1.8), edible oils (1.7), non-electrical machinery (1.4), cereals (0.8) and transport equipment (0.8). On the other hand the May index shows sharp fall in jute (-7.6) and small declines in electrical machinery (-0.5) and cotton textiles (-0.1). As noted earlier, for the year there was a decline of 2.6 per cent, the sharpest declines being sugar (-27.6), oil seeds (-15.7), edible oils (-13.1) and fibres (-12.7). On the anti-inflation front, there were no fresh moves by Reserve Bank of India or the Government except one. The union government has established guidelines for fixing the prices of industrial commodities of mass consumption which will be distributed through the public distribution systems; (a) in the case of agricultural commodities, the recommendations of the Agricultural Prices Commission will be followed, (b) for industrial commodities, the Bureau of Industrial Costs and Prices will follow the following lines: (i) the rate of return should be calculated on the net worth of the company, not the capital employed which will remove the

bias given by borrowed capital and concentrate on the rate of return on shareholders' equity which will attract investible resources to mass consumption goods industries: (ii) minimum bonus should not be considered part of cost of production but should be included in calculating the permissible net return of the company: (iii) prices should be fixed on the basis of average costs of the more efficient firms, dealing as individual cases with loss making firms: (iv) prices should be fixed on an average debt-equity ratio obtaining in the industry concerned: (v) interest should be part of costs: (vi) the rate of return should consist of a basic minimum which would be uniform as between industries and a variable component varying with risk, priority, growth prospect, need for internal generation of funds and obsolescence of capital structure etc.; (vii) the basic minimum element above may be the interest rate on five year deposits minus rate of corporation tax: (viii) a cost variation formula should be worked out by the price fixing authority for major raw materials inputs which are a part of the cost: (ix) the problem of excess profits could be dealt with either through a system of pooling in capital intensive industries which are small in number or by being placed into a reserve to be used for expansion, replacement and modernisation with the permission of an authority: (x) price determining bodies should fix cost reduction measures: and (xi) suggest public distribution measures for the commodities in question. On June 15, the union government announced 3 new central loans aggregating Rs. 400 crores, with subscription list opening on July 1. Against the budget provision of Rs. 1,830 crores of gross borrowing, the loans issued so far amounted to Rs. 1,190 crores. One disturbing inflationary element is the growing budgetary deficits of the states,

which is now estimated at Rs. 762 crores on March 31, 1979. At the beginning of the current financial year, their opening net deficit was Rs. 682 crores and the transaction envisaged in the 1978-79 budgets would lead to a further deficit of Rs. 334 crores, taking the total to over Rs. 1 000 crores. It is assumed that additional taxation measures, economy in expenditures and buoyancy in revenues will result in Rs. 184 crores and a further Rs. 71 crores will accrue from the additional receipts from the union government. It is imperative that measures to meet the gaps in resources for the state's annual plans for 1978-79 including the opening deficits should be part of the consultation between the states, the Finance ministry and the Planning Commission. Number of states are running overdrafts with the Reserve Bank—West Bengal (Rs. 119 crores), Uttar Pradesh (Rs. 142 crores), Punjab (Rs. 60 crores), Rajasthan (Rs. 83 crores) and Madhya Pradesh (62 crores). This should be corrected in establishing their plans and resource allocations. The effect of Gold auctions on government resources and prices must also be considered.

Gold Auctions: For the third auction on May 31, the Reserve Bank of India received 1,501 bids out of which 598 bids were accepted for 1,204.4 kg. of gold at prices ranging from Rs. 631 to Rs. 655 per ten grammes. On June 2 the finance ministry tightened the gold transactions rules prohibiting the sale or disposal of gold auctioned by Reserve Bank of India by licensed dealers to other licensed dealers. This order which came into effect immediately superseded the April 29 order which authorised licensed dealers to buy Reserve Bank of India auctioned gold and trade among themselves with it. This order will have to be enforced but

when it is, it should certainly get gold to the goldsmiths, which it has not been doing so far and bring gold prices down. On June 14, Reserve Bank of India held its fourth auction for which it had received 1,598 bids, out of which it accepted 1,004 bids for a total quantity of 15,04,900 grammes of gold at higher prices than at the third auction between Rs 641 and Rs. 675 per ten grammes. The list of successful bidders included six joint bids handed by goldsmiths from different parts of the country. The price of gold in the Bombay market on that day was unaffected at Rs. 688. The entry of goldsmiths in the bids was due to June 10 relaxation by Reserve Bank of India of the terms and conditions of the fourth auction under which the minimum and maximum quantity of bid was halved from the previous 1,000 grammes and 5,000 grammes to 500 and 2,500 grammes under the relaxation. Five licensed dealers or certified goldsmiths were allowed to submit joint bids for this minimum and maximum. Out of the 7.5 lakh self-employed goldsmiths in the country, 1.8 lakhs are certified and are entitled to enter the auction. And so it is expected that there will be even greater participation by goldsmiths in the fifth auction which will be held on June 28. This will lead to wider disposal of gold and bring down prices. The market price is Rs. 686 for 10 grammes while the international price is Rs. 510. So far prices have gone up rather than down. In the first auction it was Rs. 650-663, in the second Rs. 650-675, in the third Rs. 645-655 (a decline), and Rs. 675 in the fourth. But the bidding has been diffused. In the first auction there were 108 Bombay bidders out of 229, in the second there were 240 Bombayites out of 648, in the third there were 74 Bombay bidders out of 522. The spatial

distribution is also growing. In the first auction with 108 Bombay dealers, 29 were from Pune, 14 Ahmedabad, 13 Madurai, 11 Madras and Bangalore 9. In the second auction Bombay 240 bidders, Pune 64, Hyberadad 57, Madras 41, Delhi 39, Chandigarh 26, Madurai 24, Baroda 22, Calcutta 17. In the third auction, Madras took the first place with 104 bidders, Bombay 76, Madurai 64, Chandigarh 52. Hence there is a good chance that gold auctions will at least peg down gold prices, contract money supplies and increase public resources.

Industry and Small Industry: The index of industrial production for March stood at 154.9, which was 0.8 per cent higher than that of March 1977. The growth rate for January-March 1978 over the first 3 months of 1977 was 1.9 per cent and for 12 months ending March 1978 was 3.5 per cent. These marginal increases were due to increased production of chemical, food manufacturing and machinery industries. This is still not anywhere near the 10 per cent attained in 1977. The ministry of industry is working on a blue print outlining its strategy to be followed by different industries to achieve a growth rate of 7 to 8 per cent this year. This involves setting production target for coal, cement, railway, chemical, commercial vehicles and others where the growth rate can be increased and for which certain policies are to be followed. These include an additional outlay for the production of 1,000 more wagons, excise relief to increase the demands for commercial vehicles and more liberal credit to ensure greater use of capacity in key industries. Only with these measures and the institutional changes to spread purchasing power will the 7-8

per cent growth rate be achieved. What is not helpful is the government's optimistic assessment seen in its June statements that the investment climate in the country is fast improving, based on the somewhat outdated fact that cement and steel consumption increased by 7 and 14 per cent in 1977-78, and that capital goods industries show a growth rate of 10 per cent. First this is a sectoral phenomenon and secondly this is more replacement of inventories and a response to reduction in supplies than an indication of an improvement in the investment climate. With regard to small industries, Jammu and Kashmir, West Bengal and Bihar have set up District Industrial Centres in all their districts. At a conference of states ministers of Industries, it was decided that all 460 District Industrial Centres will be set up in all states by the end of the financial year, which is 3 years in advance of what was set forth in the industrial policy statement (see last issue p. 323). In view of the difficulties faced in obtaining credit for the centres from the commercial banks, it is proposed to set up a separate All India Financial Corporation to meet the credit needs of the small and tiny industrial units. The first task of the Centres will be to nurse back to normal operating health the small sick units. The centre should be manned by entrepreneurs with drive and experience and not only by state officials. In connection with sick units, Reserve Bank of India has introduced a system of monitoring by scheduled banks of sick units which have credit limits of Rs. 1 crore and over in order to rehabilitate them. It defines a sick unit as (a) one which has cash losses currently and likely over the next 2 years and (b) one which has an imbalanced financial structure such as a ratio of less

than 1:1 and worsening debt-equity ratio. At September 30, the number of such sick units was 2,701 involving aggregate bank finances of Rs. 773.70 crores. Each case will be examined for concessional treatment such as interest holiday, funding of interest and rescheduling of repayments. A competent authority has been established to approve merger of sick units with healthy ones. The industry break up of the 270 sick units among them are : Engineering 72 (Rs. 211.26 crores), Iron and Steel 19 (Rs. 40.40 crores), Textiles 68 (Rs. 230.30 crores), Chemical 15 (Rs. 78.98 crores), Cement 3 (Rs. 10.90 crores), Rubber 4 (Rs. 21.10 crores), Sugar 23, (Rs. 33.40 crores) and others 37 (Rs. 74.06 crores).

Public Sector Performance : The Department of Heavy Industry reports that the total production by the 15 public undertakings during April was Rs. 45.60 crores which was an increase of 36 per cent over their product in April 1977 (Rs. 33.46 crores). Bharat Heavy Electricals Limited increased its production by 12 per cent at Rs. 21.07 crores, HEC at Rs. 5.04 crores and Bharat Pumps and Compressors at Rs. 1.01 crores had increased their output five times, HMT at Rs. 6.17 crores increased by 111 per cent, Jessop by 155 per cent (Rs. 3.42 crores), Arthur Butler by 60 per cent (Rs. 8 lakhs), Triveni Structural by 24 per cent, MAMC by 17 per cent and Richardson and Cruddas by 17 per cent. On the banking side, the James Raj Committee has recommended that because of its size and operation, the State Bank should be split into 5 zonal subsidiaries and the State Bank of India made a holding company. It also recommends that a public sector bank should be permitted only 1,500 branches and to

cater to the needs of northern, north eastern and central regions of the country, 3 new public sector banks should be established. It has recommended new norms for encouraging banking in rural areas, e.g. banks with 40 per cent of branches in rural areas should have ratio of 2 in unbanked, 1 in metropolitan and 1 in banked areas, whereas those with 35-40 per cent rural branches should have a ratio of 3:1:1. The report of the Indian Institute of Management, Ahmedabad aimed at improving the functioning of public sector institutes recommends that the directors of STC and MMTC should not be only government officers but internal executives from the companies, particularly those heading corporate and execute functions. STC should concentrate on a few areas with potential for development which are leather products, marine products, processed goods and readymade garments and should sell these within the country also. This will compensate for the decanalisation of other items that are recommended. MMTC should retain its product grouping while maintaining full control over their managements.

National Production Front:

Steel: Steel prices were increased by Rs. 175 per tonne as a result of a Cabinet decision on May 30. There is to be flexibility in pricing, if supply suddenly declines as a result of market prices being higher than the selling prices, the difference will go to the industry and not to the trade, through the ministry approving temporary increases in steel prices. Also the prices of imported and indigenously produced steel are to be pooled so that both sell at the same price. On the non-priority categories, there will be a surcharge of Rs. 100 per tonne. This

increase is over and above the 1973 increase of Rs. 75, the 1975 increase of Rs. 80 per tonne and the various handling charges which have been arbitrarily increased. Stockyard price for a number of steel sections are much higher than JPC prices. While JPC price for plates is Rs. 1,541 per tonne, the stockyard price is Rs. 2,188. The JPC price for joists is Rs. 1,465 while stock yard price is Rs. 1,917. In general the difference was wide for priority items and narrow for non-priority items. Thus while steel plants could not raise prices, stockyards could. It meant that those large producers who could buy steel by large quantity could buy at the lower price at steel plants, while small units had to pay higher prices at stockyards. In fact, the government has reduced the price of steel supplied to small Industries Development Corporation by Rs. 150 per tonne and at 4.2 lakh tonnes for 1978-79, it amounted to a relief of Rs. 6.3 crores for small units. It is time there is a detailed cost study in steel production on the basis of which price increases, which in this case will affect prices all round, can be determined. Another problem on the demand and marketing side is the need for decentralization to meet regional demands. For instance in the northern region the demand is for pig iron and rerollables, in the western region it is for hot and cold rolled steels and sophisticated items, in the south where there are both fabricators and foundries the demand is mixed and in the east it is a different mix. Also there are several fabricators in different regions of items like galvanised sheets and tin plates, with different terms and transportation lags. Further with the reduction in the difference between stockyard and steel plant prices to Rs. 35 per tonne, (though SAIL branches are

resisting this), stockyards became more important. Thus the cost for viable self-contained regional structures for assessing the demand for different items in each region and meeting them is clear and strong." Meanwhile with some revival in the demand for various steel items, SAIL is watching market trends to meet the emerging domestic demand fully. This may involve cutting back the export target for the year from 8 lakh tonnes to 5 lakh tonnes and importing 6 lakh tonnes against last year's 3.5 lakh tonnes. Further there may be an element of speculative stock piling in the rising demand which has reduced stocks on April 1 to 8.1 lakh tonnes against the April 1977 stock of 13 lakh tonnes, decreasing the stock further to 5.7 lakh tonnes in May 1978 and 5.3 lakh tonnes in June. In some items like structurals and plates and CR sheets and coils, there is a genuine rise in demand but not in GP and GC sheets and pig iron, where speculative stock piling is being used as a hedge against future possible shortages. This is where SAIL will have to watch, analyse and control the demand. Bokaro reports shortfalls in output in April and the first half of May but also meeting in full the export orders for HR coils to the US and CR sheets to the Soviet Union. IISCO reports a technological break through in the production of ductile iron spun pipes, which is a culmination of over 2 decades of its exports in the diversified multi works. Commercial production starting with 1,000 tonnes per month will be initiated in August.

Crude: The Petroleum Ministry announced plans for this year for the import of 15 million tonnes of crude oil (compared to last year's 14.5 million tonnes) at a cost of Rs. 1,700 crores. In spite of the fact that by 1982-83,

Bombay High will be producing 6 million tonnes a year and north basin one million tonne, imports in that year will increase to 17.65 million tonnes. With total offshore crude production of 9 million tonnes and onshore production of 9.04 million tonnes, total indigenous production in 1982-83 will be 18.04 million tonnes as against 14.02 million tonnes in 1978-79. For this year the import of petroleum products will be 3 million tonnes, which is the same as that of last year. The recoverable reserves of the country's crude oil is estimated at 439 million tonnes, which is regarded as suboptimal and so the national strategy in VI Plan is to quicken the rate of discovery of oil and build up additional reserves on the one hand and also conserve domestic oil resources on the other. To this end, the Oil and Natural Gas Commission has been asked to reduce by half the Akleshwar output by 1980-81 from the present 3 million tonnes per annum, to restrict the production from the Eastern oil fields to 2.25 million tonnes during the whole Sixth Plan, to cut down Oil India's production from 3.1 to 2.8 million tonnes, and to limit offshore production to 9 million tonnes per annum instead of the planned 12.5 million tonnes. This means limiting onshore production to this year's 5.95 million tonnes and offshore production to 8 million tonnes. In turn, this will increase the total imports by 3.6 million tonnes—from 14.02 million tonnes this year to 17.62 million tonnes in 1982-83, but will ensure that crude production will last on the basis of the present reserves position for around 25-30 years. On current production, Oil and Natural Gas Commission reports that it has commissioned platform F for Bombay High by the target date of June 5 and as a result crude began to flow through the sub sea

75 cm trunk pipe line from June 11 direct to the coastal refineries. It also announced on the same date that associate gas from the offshore oil field started flowing through the sub sea 75 cm trunk pipe line to the shore terminal at Uran which is at a distance of 203 km. The US drilling ship, Gettysburg, started at the end of June drilling in the Cauvery offshore basin in the Karaikal coast upto a depth of 2,500 metres. Oil India has asked for an additional Rs. 8 crores to undertake drilling operations in the Mahanadi delta structures on the basis of its completed seismic survey whose preliminary assessment holds promise of oil. In January 3 exploratory wells are to be drilled at a cost of Rs. 19 crores. On the takeover of Oil India by the government, it is reported that a package deal for the takeover of both Oil India and Assam Oil Company is under negotiation wherein the liabilities of AOC will be set off against the compensation to be paid for Oil India. The former's liabilities are Rs. 9 crores and the compensation for the latter is Rs. 24 crores. It is expected that in July the negotiations will be completed.

Coal: Coal distribution and availability as noted earlier under the power and industry sections presented a crisis picture in May and June. On the one hand Coal India's production target for the year has been fixed at 100.5 million tonnes against the 1977-78 performance of 88.93 million tonnes. The additional coal production of 11.57 million tonnes has been distributed among the 5 companies at rates varying from 12.03 to 13.86 per cent over that of last year. Coal stocks at April 1 are reported at 9.94 million tonnes. There is an imbalance in the requirements of grade and size wise steam coal against its availability, which will have to be met by

use of grade II coal to the tune of 1.44 million tonnes. BCCL reports pit head stocks of 30.47 lakh tonnes on May 31 and a comfortable supply position. The department reports that during the first 2 months of this year, coal production amounted to 15 million tonnes and with the production tempo being maintained, the target of 100 million tonnes will be met with little difficulty in meeting the demands of railways, steel plants, cement units and electricity boards. On the other hand, acute shortage of coal supplies from the ECL has crippled industrial units in two eastern regions, where it is reported the offering of steam coal from ECL dropped from 1,389 wagons in February to 1,378 wagons in March to 1,198 wagons in April, 964 wagons upto mid May, with the possibility of the coal shortage being worsened during the monsoon season. Again textile units in the north complain about the irregular supply of coal and the 50 per cent reduction in their quotas. In mid June, 12 thermal power stations report having coal stocks for only 2 days. Kothagudam reports that it is receiving 200 wagons loads a day against its actual need of 300 wagons loads. On top of this the Department of Coal contrary to its earlier optimistic reports, announced in mid June a sharp drop in pithead stocks from 13 million tonnes to 9.8 million tonnes, which is critical and made worse in light of the incentives granted to two large consumers—fertilisers and cement units. In this situation the decision to leave coal marketing to CIL and its newly created marketing and distribution division and assigning responsibility for arranging for wagons will not help. What is needed is for the coordination committee to become operative. Its meeting in Calcutta in mid June attended by coal producers, steel plants, electricity boards had one important element,

railways missing. Its major decision to ensure uninterrupted power supply to the coal mines is right and it needs to ensure working along side with the railways to ensure adequate availability of wagons to carry coal to the customer. The plan needs to be operationalised without delay.

Copper and Minerals: The Geological Survey announced the discovery of large copper deposits in the Baster district of Madhya Pradesh. Along side, tin deposits have also been located. The copper project in Khetri faced serious problems of power shortage in May and June. During May, despite the power shortage and heavy voltage fluctuations, the complex produced 1.03 lakh tonnes in its concentration plant. Production of blister copper after the end of the strike was 600 tonnes from May 10–31. Also during May the production of superphosphates at Khetri was 4,000 tonnes. The Indian Bureau of Mines reports that tests carried out in its laboratory showed that the phosphates found in the Jhamar-Kotra mines in Udaipur indicated that they were usable in fertiliser production. Using a local flotation process for concentration by employing special chemicals and acids, the quality of rock phosphates produced is as good as and cheaper than the imported varieties. A full fledged beneficiation plant is to be set up in Jhamar-Kotra which will later be expanded to a full fledged one with a capacity of 1.1 million tonnes and 5 lakh tonnes concentrates at a cost of Rs. 70 crores. The proved rock phosphates in the region are 50 million tonnes.

Cement and Sugar: The production of sugar during the current crushing season will be 6 million tonnes, which

together with last year's opening stock of 1.6 million tonnes will make the total availability of sugar for the 1977-78 season 7.6 million tonnes. If internal consumption goes up from 3.7 million tonnes to 4.5 million tonnes and 6.5 lakh tonnes are exported, the total offtake will be 5.15 million tonnes, leaving a closing stock of the 1977-78 crushing season of 2.45 million tonnes against 8 lakh tonnes at the end of 1975-76 and 1.6 million tonnes at the end of 1976-77. Sugar releases are being increased, for July 3.71 lakh tonnes are to be released (2.71 lakh tonnes levy and 1 lakh tonnes free). It is also reported that about 1/6 of the sugarcane crop in parts of Haryana and Western Uttar Pradesh may remain uncrushed despite the prolonged crushing of sugar cane by the factories. The cane is drying up in the fields so that a cart of sugarcane which weighed 150 quintals before the summer season, now weighs only 40 quintals, leading to heavy loss for the farmers. The total sugarcane production is around 165 million tonnes compared to 154 million tonnes in 1976-77. The latest Uttar Pradesh estimate is that about one million tonnes of sugarcane valued at Rs. 13 crores will be left uncrushed in that state. There is the possibility that part of the cane would be destroyed in the field and part left in the field for the next season's crushing. It is in this context that a suggestion has been made to create a buffer stock of one million tonnes of sugar from free sale, on the lines of foodgrains buffer stocks. This is worth further examination. On the cement front, it is reported that the 56 plants in the country with a capacity of 22 million tonnes produce around 19 million tonnes, against a demand of 22 million tonnes which will increase to 35 million tonnes in 10 years. The

demand for cement is fast increasing as a result the spurt the construction activity and its price is rising also due to the shortage of railway wagons to transport it. The government is encouraging the setting up of mini cement plants with a workable technology with a good deal of savings in transport charges as Muduvathur in Tiruchirapalli demonstrates, where the mini cement plant saves Rs. 40-45 per tonne on freight charges.

Pulses and Edible Oil: The Union government announced procurement of 32,000 tonnes of pulses as part of the programme to support the proposed public distribution system with buffer stocks. The National Agricultural Cooperating Marketing Federation holds 21,800 tonnes while the National Consumers Cooperative Federation holds another 10,000 tonnes. This year 10 per cent of the production has been procured, which will become 20 per cent next year and 30 per cent the year after. In addition around 15,000 tonnes are to be imported. Similarly a buffer stock of edible oils is being created for the public distribution system. Government agencies have procured groundnut oil, groundnut and mustard and imports of 9.5 lakh tonnes have been arranged through STC. This makes the edible oil position in the public distribution system relatively comfortable.

Rural Debt: Reserve Bank of India's March 1978 Bulletin in an analysis of the situation on rural indebtedness points out that as at June 1971, 19 lakhs of artisan households accounted for 1.4 per cent of the total debt of all rural households of Rs. 3,848 crores, against 4.7 per cent for farm labourers and 6.2 in the case of other non-cultivators. In 1971-72, 39 per cent of rural artisan

families were in debt, compared to 36 per cent of agricultural labourers, 32 per cent other non-cultivators and 46 per cent of cultivators. The average debt of the artisan household was Rs. 287, of the cultivator household Rs. 605, of other non-cultivator household Rs. 293 and of the agricultural labour household Rs. 161. Agricultural money-lenders and professional money-lenders accounted for 50 per cent of the debt, the government providing 2.7 per cent, cooperatives 1.7 per cent and commercial banks 0.3 per cent. Out of Rs. 12 crores of debt for production purposes of artisans, Rs. 10.5 crores (88 per cent) was for expenditure on non-farm business and 64 per cent was for household expenditures. The largest aggregate debt was borrowed by the asset group of Rs. 2,500- Rs. 5,000 and the largest production and institutional debt by the highest asset group of Rs. 10,000 and above. The marginal and weaker artisans borrowed 74 per cent from friends and relatives, 74 per cent from non-institutional agencies and 4 per cent from institutional sources. Nearly 57 per cent of their debt was at 12.5 per cent interest and above, and only 13 per cent was at nil rate of interest. For the weaker sections, 74 per cent of debt was for household expenditure, 14 per cent for non-farm and 2 per cent for farm business. Of their total cash debt nearly 91 per cent was unsecured, mostly for household expenditure and from non-institutional agencies. It is this group which requires debt relief more and concessional finance facilities for both production and consumption purposes.

Land Distribution and Fertilisers: In the Sixth Plan one of the key instruments for the removal of poverty and generation of employment is distribution of surplus

land among landless labourers. The Union ministry of agriculture estimates that as at July 31, 1977, the surplus land is 2.13 million hectares, of which 1.61 million hectares have been declared surplus and 0.4 million hectares actually distributed. The Planning Commission on the other hand points out that the 26th round of NSS shows that the surplus land is 11.95 million hectares (8.60 million hectares from those owning 12 hectares or more amounting to 23.12 million tonnes, and 3.75 million hectares from those owning 20 hectares and above amounting to 10.75 million hectares). It is important that the precise surpluses be estimated and this can be done speedily by setting up village committees in which the landless labourers should be represented as provided (but not implemented) in the various state Acts. These committees can correct land records, identify true surpluses and draw up and implement redistribution plans in each village.

Agricultural Production: The Union Agricultural Ministry in early June reestimated total foodgrains production for 1977-78 at 128 million tonnes, which is 3 million tonnes more than the estimate it made a month ago (see last issue p. 327). Analysing the trends in the open market arrivals of wheat during the current marketing season, it estimates that rabi production has exceeded 50 million tonnes. In this context, the announcement by the ministry that there will be no grain import this year is not surprising. The reference to wheat arrivals in the market made earlier is related to the estimate of government procurement of wheat which is expected to exceed 6 million tonnes from the rabi crop. By June 1, 4.6 million tonnes had been procured and support price operations of

Food Corporation of India and the state governments were in full play. Thus once more the problem of storage has come to the fore. Food Corporation of India reports having moved 2.8 million tonnes out of the producing states and having stored 80 to 85 per cent of the procured grains in godowns to protect it from the coming monsoon. Estimates of arrivals and purchases show that 98 per cent has been procured by Food Corporation of India and state agencies and 2 per cent by private trade, mainly of quality wheat to meet the demands of distant purchasers. Also a substantial portion of the produce of better quality wheat has been held back by the farmer for his own consumption. The storage problem faced by Food Corporation of India is urgent, as its losses cost 1 per cent—Rs. 35.66 crores in its sales and purchase operation last year due to poor storage and natural causes such as heavy rains, floods and cyclones in Andhra Pradesh and Tamil Nadu. The bulk of the damage has occurred for grains stored in CAP (cover and plinth storage), where 5.1 million tonnes out of a total of 14.3 million tonnes are stored. Even so CAP storage cannot be completely abolished now as it has saved several lakhs of tonnes of grains from damage. It is against this background that the Union ministry has set forth a 4 point plan urging the states to set up on a massive scale improved storage structures. The plan comprises (a) protecting foodgrains at the farm levels by state department of agriculture, (b) decentralising production of metal bins or pucca building with the help of agro-service centres, (c) an all out drive to improve existing storage structures and (d) organising disinfection work on a custom bases and providing storage pesticides and fumigants to farmers. June saw an invasion of locust swarms in Gujarat, Punjab and

Haryana which the Plant Protection Organisation was able to deal with. States are readying themselves for kharif sowing. Maharashtra reports that it has geared its machinery to achieve a record of foodgrains production in the kharif season at 11 million tonnes, increasing the output of oil seeds and pulses. Himachal Pradesh is readying itself to produce 2 successive crops of paddy in the lower hills. With timely rains, the 1978 kharif sowings were in full swing in June. The Union ministry is popularising the nutritional gardens movement whereby vegetables, fruits and other nutritional crops are grown in the kitchen gardens or as intercrop or in school and community land. Andhra Pradesh reports that with the glut in VFC tobacco and the hardship caused to the growers, the current season's production is being reduced by 30 per cent. No license is being given to growers in saline soil areas and the cultivation itself is being limited to the existing 49 villages. One of the problems which the Union ministry has called the attention of states is the problem of recovery of mounting cooperative overdues. Over the past 5 years overdues have doubled and the trend of mounting overdues has spread to all areas of the country. This traces back to the proper organisation and functioning of the cooperatives and the grant of loans for production purpose, in which case the overdues problem can be speedily solved. With regard to fertilisers for the year, the Railways have programmed to move 9 million tonnes, while the amount that must be moved to meet the demand is 11 million tonnes—four million tonnes of imported and seven million tonnes of indigenous fertilisers. This is the reason why the imported fertilisers are lying uncleared in Vishakapatnam and Madras. More seriously, the Fertilisers Association of India reports that though the con-

sumption of potash fertiliser nearly doubled in 1977-78 compared to the previous year, the present consumption ratio of nutrients is still heavily in favour of nitrogenous fertilisers. Hence the NPK ratio is nowhere near the ratio considered agronomically desirable. For every tonne of potash, the consumption of nitrogenous fertiliser is 5.79 tonnes and that of phosphatic 1.74 tonnes. It should be 4 tonnes of nitrogenous and 2 tonnes of phosphatic fertiliser for every tonne of potash—particularly so as the potassium deficiency in soils is widespread in the eastern states, in Kerala, Uttar Pradesh, Jammu and Kashmir and in pockets in all states. Even areas not now deficient will not remain so. Hence the consumption of potassium nutrients must be pushed forward. The problem of fertiliser storage can be solved by Fertiliser Corporation of India and State agencies speedily unloading the wagons and increasing their turn around. In June, the Union ministry also announced that in order to encourage and develop minor irrigation, small and marginal farmers would be given a subsidy and other facilities. The scheme will no longer be restricted to SFDA, and DPAP areas but will operate over districts chosen by the states.

Exports: The Union ministry of commerce estimates that exports this year 1978-79 will grow by 7 to 11 per cent, earning Rs. 5,800 crores to Rs. 6,000 crores. The ministry thinks that despite constraints on the power and labour fronts, these rates can be achieved on the basis of the various incentives in operation. Those units which export half their 1977-78 production can have supplementary licenses without sponsoring recommendations. Registered exporters can directly import diamonds, steel, electronic

components etc. and cash assistance is available to various products. In 1977-78 exports are estimated at Rs. 5,252.67 crores, with a growth rate of 5.5 per cent. On the import side in 1977-78, there was a spurt in edible oils, from Rs. 65 crores in 1976-77 to Rs. 514 crores in 1977-78. Capital machinery imports did not increase markedly except power generation equipment which rose from Rs. 52.80 crores to Rs. 120.40 crores, when special machinery for projects declined from Rs. 208.40 crores to Rs. 151.28 crores. There was an increase in import of precious stones from Rs. 123 crores to Rs. 226 crores. On the export front the good performers were tea, coffee, spices, tobacco, cashew kernels, iron-ore, jute manufactures, carpets, chemicals, glasswork, metal manufacture, and machinery and precious stones. Reduced exports occurred in sugar, vegetable oils, leather goods, iron and steel, cotton textiles and marine products. To promote exports the government has decided to grant advance licenses to exporters having no export orders in hand. Among the new items, import of equipment and instruments needed by the gem industry are placed on the open general license (OGL), import of waste wool against export of shoddy blankets, export of turmeric powder are permitted. The exports of shellac has benefitted the growers in Bihar and West Bengal of sticklac whose price has increased from Re. 1 to Rs. 4.50 per kg. With the lifting of the ban on Bangladeshi cotton, it is expected that usual 1.5 lakh bales will be exported. The production of polyester yarns within the country is increasing from 4,500 tonnes to 7,500 tonnes this year, and hence there is an under utilisation of the replenishment licenses of this commodity and its import may well be discontinued. On the engineering front, SAIL has agreed to meet the requirement of 2.27

lakh tonnes of steel required by 70 engineering exporters against their high value export commitment of Rs. 191 crores during the next 4-6 months. Trade agreements between India and Afghanistan were signed in June which will result in a considerable expansion of trade between the countries, with Indonesia of the order of \$100 millions and about that amount also with Afghanistan. India and the Soviet Union agreed in June for the export of Rs. 11 crores of Indian textiles to the USSR. Electronic exports from SLEEPZ are picking up fast in April and May they amounted to Rs. 70 lakhs and will be Rs. 10 crores for the year. During 1977-78, handloom exports, however, declined by 25 per cent from Rs. 272.15 crores in 1976-77 to Rs. 202.99 crores in 1977-78. The declines were in handloom madeups, readymade garments, dhoties, sarees, shirting, Madras checks, bed spreads and bedsheets. Another negative element is the US Treasury ruling that various export promotion measures like cash assistance, rep licenses are illegal subsidy and this may reduce Indian exports to the US. An even less excusable factor affecting exports is the bad cans in which fruits and vegetable are being packed and which led to their rusting and their rejection by the countries. This can be corrected by opening more units producing cans of quality. Garment quotas have been established for Norway and Finland to increase the export of woven garments and knit-wear from cotton, wool and manmade fibre. The Union ministry of commerce has finalised the proposal for setting up an Export-Import Bank and it now awaits Cabinet's approval. The Bank will have an initial paid up capital of Rs. 40 crores, of which Rs. 16 crores will be from the union budget, Rs. 16 crores from the commer-

cial banks and Rs. 8 crores from LIC and GIC. It will be a development bank, a lead bank and a refinancing or rediscounting agent—all at the same time. It will also be an acceptance house for medium and long term export bills, provide credit insurance and guarantee facilities to exporters and commercial banks and centralised credit commercial intelligence service to all concerned. In June the government purchased 8 lakh ounces of gold from the IMF in a non-competitive bid at \$183 an ounce. As a consequence of the purchase, \$146 millions are added to exchange reserve of Reserve Bank of India.

Aid: At the Aid India Consortium meeting on 8 and 9 June in Paris, the countries and the World Bank pledged for 1978-79 total assistance of \$2,431 millions of which \$2,069 millions, would be project assistance. Of this total, bilateral assistance would be \$1,333 million and the World Bank and IDA would provide \$1,250 million and EEC \$48 million, compared to \$2,191 million pledged for 1977-78. The consortium made a few interesting comments on the country's economy: (a) India should continue its efforts to encourage private and public investment in industry by providing a more favourable climate for production: (instead of explaining that this is being done, it should be realised that this kind of advice which has a purpose is one of the prices of aid): (b) there were questions about the need for aid when there were growing foreign exchange reserves—an issue which was not fully answered by our representatives: (c) misgivings were expressed about the set back in Family Planning and this is a real national issue to which far more thought and attention should be given followed by action. In June, West

Germany and India signed an agreement for 290 million marks (Rs. 115 crores). Similarly Sweden and India signed an agreement for 270 million Swedish Kroners (Rs. 50.37 crores) together with another agreement under which Sweden wrote off all its past debts to India, amounting to Rs. 100.74 crores. In June also, the World Bank signed agreements with India for (a) a loan of \$ 120 million for development of the telecommunications system and (b) \$ 25 million for the Industrial Development Bank of India for financing the foreign exchange costs of goods and services of medium sized industrial projects in the public/joint sector. For each capital good export, the government has fixed a ceiling of \$ 4 million loan. IDA is (a) giving a credit of \$ 150 million for the National Dairy Development Project to increase milk production and rural incomes and (b) two loans for a total of \$ 33.5 millions for the national seed programme and shrimp and fish production in Andhra Pradesh. It is also examining a proposal for a Rs. 150 crores credit for mobilising the workshop of the wheel and axle plant of the Indian Railways in order to improve the economy and efficiency of maintenance of railway rolling stock.

International :

Bangladesh: The Indo-Bangladesh trade is in need of review and restructuration. The imbalance in the trade relations is worsening. In 1976-77 exports from Bangladesh to India totalled Rs. 6 crores and exports from India Rs. 54 crores. In 1977-78 Bangladesh exports to India dropped to Rs. 1.5 crores while Indian exports rose to Rs. 55 crores. The only substantive item of import from Bangladesh was 5,000 tonnes of paper.

There was no import of jute, the naphtha and furnace oil not of the desired quality and the price of molasses much higher than Indian prices. This situation is likely to continue in 1978-79. Hence the need for a high level trade review for the two countries.

Pakistan: Pakistan is making enquiries about importing iron-ore from India and proposes to start with 2 million tonnes this year. This mode of payment—barter or deferred payment—is currently under negotiation. Though the first Pakistan steel mill will be commissioned in 1980, adequate ore stock will have to be built up from now.

World Monetary Reform: In June, a meeting of Finance ministers of West Germany, Holland, Denmark, Belgium, Luxembourg and Norway decided to continue the monetary arrangement called "the snake", where in the currencies of the six countries are tied to each other and the US dollar within certain guidelines namely within 2.5 per cent of the US dollar or 4.5 per cent of other state's currencies. They also worked on proposals to increase European monetary stability through expansion or modification of "the snake."

World Food Council: The World Food Council meeting in second half of June in Mexico city approved a resolution presented by the group of 77 which commits the developed countries to supply financial aid equivalent to 0.7 per cent of their GNP in order that developing nations can attain a 4 per cent annual growth in their food production. This means at 1975 prices the financial aid will amount to an annual \$ 8,300 million of which the grant element will be

\$ 6,500 million. The Council agreed to establish an international emergency cereals reserve of 5,00,000 tonnes, a stable annual fund to be placed at the disposal of the World Food Programme. Noting the FAO estimate that more than half the population in the developing countries (43 nations including Laos, Vietnam, Nepal, North and South Yemen, and Balgladesh in Asia, Ethiopia, Somalia, Tanzania, Upper Volta, Mali, Niger, Chad, Senegal, Angola and Mozambique in Africa and Ecuador in Latin America) are facing serious food shortage it recommended that the governments that participate in the negotiations for substituting the 1971 international wheat agreement guarantee an annual reserve of 10 million tonnes of cereals to improve world nutritional capacity, and urged governments and international agencies to increase emergency multinational assistance to Africa. It urged that the protectionist practices of the developed countries be eliminated and multilateral trade negotiations be carried out in the spirit of Tokyo (see Vol III p. 714). It also emphasised the need to assign a part of the large resources now being devoted to armaments to financing multinational aid programmes in developing countries.

UN Special Fund: The UN special fund set up in 1974 (see Vol. IV p. 362) to aid countries most seriously affected by the world economic situation was wound up by its Board of Governors meeting on June 22 at the United Nations in New York. Only two countries, Norway and Venezuela, contributed to the Fund (a total of Rs. 2 crores), while the US and other industrialised countries successfully and totally boycotted it. In the absence of a political will to operate the Fund, the Governors

recommended to the General Assembly to close it, handover its resources to the International Fund for Agricultural Development and its functioning to some other body within the UN system.

World Trade: Negotiations on world trade or rather multilateral trade centred at Geneva is dominated by protectionist pressures. The 5 year old Tokyo round will be completed in mid July and with US economy facing a down turn and the OECD countries facing slower growth rates, there are no longer prospects of this round resulting in trade liberalisation without strings. The protectionist trend is ascribed variously to the oil price raise, inflation, rising unemployment and economic and monetary uncertainty. The result according to GATT is that nearly half of world trade is restricted by some kind of import curb. The total world trade volume is \$ 1,000 billion in 1976 and while 25 per cent of world trade was under protection in 1960, in 1974 it was 35 per cent and in 1976 it was 40 per cent. Between 1974-76 several new sectors came under the protectionist umbrella such as iron and steel, ships, textiles, footwear, cars, consumer electronics, and ball bearings. Thus led by EEC countries the ideal of free trade is being given by the industrial countries and so developing countries without the staff expertise to defend their interests are slowly losing ground to the protectionist forces. Thus the Multi Fibres Agreement (MFA) (see Vol. VII pp. 510 and Vol. VIII p. 83) which has been renewed upto 1981 is really a triumph for the protectionist forces as it accepts restrictions on imports of textiles from developing countries as its starting point. In view of the difficulties facing the industrialised countries in the textile and clothing industries, the MFA was made more

restrictive in its application by the inclusion of a clause allowing "jointly agreed reasonable departure from the arrangement" and in the protocol to this agreement the imposition of discriminatory restrictions on a selective basis on imports from developing countries were accepted. Even this diluted MFA will come under strain in the industrial countries when they protect their labour intensive industries. For the developing countries, the latest 5 year round of trade negotiations has been a setback.

UN Law of Sea: The seventh session of the UN Law of the Sea conference adjourned in June with the 156 participating countries still seeking agreement on the major issues. The seabed has been surveyed and photographed and shows (a) enormous amount of fish of which 70 million tonnes was the catch in 1975, (b) large quantities of petroleum, gas, with the petroleum recovered from the continental supply increasing from 18 per cent of world oil in 1972, to 25 per cent today and 35 to 40 per cent by 1983 and (c) manganese nodules in trillions of tonnes containing copper, nickel, cobalt and manganese—all of which point to the need to reach agreement on their use. The issue is now the sharing of the responsibility for the use between the Seabed Authority (the Enterprise) and private firms of the industrial countries. There is agreement now on the continental shelf (12 miles) and the economic zone (200 miles) and there is need for agreement on innocent passage of ships through the 116 straits of our world.

World Employment Balance: A recent ILO study on the employment effects in industrial countries of trade liberalisation shows that protectionism is no use to

its unemployment problem and that restrictions on developing countries imports can be lifted by them and the employment situation not worsened. There will have to be some learning of new jobs and skills but these will be marginal. A cut of 50 per cent in US tariff will cause a decline of 32,000 man years of employment by 1984 but all can be found alternative jobs even though the total impact on employment is small. Similarly free trade for developing countries imports would result in West Germany losing 70,000 jobs in the clothing industry between now and 1980 plus 23,000 in precision engineering 11,000 in optical equipment and 5,000 in leather. 80 per cent of the displaced workers will find employment in new export-oriented industries. In the UK, during 1970-75 there was an annual reduction of jobs of 6.1 per cent in textile yarn, 4.5 per cent in footwear and 2.4 per cent in clothing. But imports from developing countries had little effect on annual job losses—being 0.05 per cent in manufacture of textile yarns, 0.4 per cent in footwear and 2.4 per cent in clothing. This means that the volume of employment is affected more by technology, changes in demand patterns, increased productivity and commercial relations between industrialised countries which increased by 12 per cent in the 2 precession decade and dropped to 2 per cent in 1973-75. Against this background of employment shifts caused by such factors, imports from developing countries have very slight effects on employment. The report concludes: "the prosperity of the advanced market economies in an increasingly competitive world rests primarily on the ability and political will of governments, managements and labour to reshape the industrial map of the west." The World Watch Institute, Washington, calls attention to

the use of appropriate technology which is incompatible with emerging resources, energy and environmental constraints. It creates unemployment and widens income gaps between the rich and the poor. One billion new jobs will have to be created by 2000 AD and modern technologies cannot cope with this demand for work. It points out that it costs \$ 20,000 to create a modern industrial job, while the same sum invested in sugar processing in India can create 900 jobs or 10,000 jobs depending on whether one large plant or 47 small plants are built. A nuclear plant will create 36,000 jobs directly and indirectly, while a solar programme producing the same energy will create 2,41,000 jobs. Further simple technologies like improved farm implements, energy efficient stoves, wind driven water pumps can radically improve the status of the poor. No technology is appropriate if its impact on humanity and nature cannot be sustained in the long run. Developing technologies that are socially and ecologically sustainable will lead to greater technological diversity and that is what we must work for.

OPEC and World Oil: A meeting of the OPEC ministers in June decided to maintain for the balance of the year 1978 oil prices unchanged at the current \$ 12.70 per 42 gallon barrel. It also established a committee headed by Kuwait minister to study and make recommendations on how the OPEC countries can protect their revenues from erosion following from the decline of the dollar. A report of the Trilateral Commission comprising Europe, Japan and the US recommends that the industrial countries should sharply increase energy prices so as to conserve and develop alternative sources of

energy. It reports that current known oil supplies will meet oil demand up to early 90s.

World Food: Food and Agriculture Organisation estimates world wheat production at 405 million tonnes which is 5 per cent more than last year's output. Larger crops of wheat and coarse grains are forecast for all regions except North America and Latin America. World grain imports will rise by 3 per cent to 142 million tonnes in 1977-78 season, with wheat imports reaching a record 69 million tonnes—an 18 per cent increase. But in 1978-79 imports will fall to 64 million tonnes and coarse grains to 71 million tonnes due to good crops everywhere including USSR and China. In June, the world's leading wheat growing countries including India began negotiations on a world wheat agreement to replace the 1971 International Wheat Agreement, which had a 4 year period but has been extended annually because of the delay in reaching a new agreement. The complicating factors are EEC which is both an exporting and importing country and the Soviet Union which has emerged as an importer. The 12 member interim committee is now facing the issue.

World Ecology and World Population: The United Nations Environment Programme (UNEP) warns us about the harmful ecological effect of the increasing number of chemicals being introduced in the environment. Man has introduced into the environment some 4 million chemical substances and is adding several hundred more every year. About 1,000 chemical pesticides are used globally and 2,50,000 tonnes sold annually, which while contributing to increased agricultural production, are

causing unprecedented ecological damage. UNEP warns that it is not known what will happen to man if he is exposed to these chemicals at low levels for 20 or 30 years and refers to the adverse reactions of drugs which can cause cancer. There is need for research into the environmental impact of the rising annual number of chemical products. The United Nations Family Planning Agency (UNFPA) suggests that the rapid rate of world population reached its peak in early seventies, has since levelled off and is likely to stabilise itself around 12 to 15 billion in the last quarter of the 21st century. This is different from the earlier 18 billion prediction. By 2000 AD, out of 100 persons, 58 will be Asians, 13 Africans, 10 Latin Americans, 9 European, 5 Russians and 5 North Americans. Birth control and family planning can only prevent the problem from getting worse than the lower 12 billion prediction. There are clear signs of a decline in fertility. The excess of

births over deaths was 66 millions in 1965, 70 millions in 1970 and 63 millions in 1974. Zero population growth rates operate in both Germany, UK, Belgium, Austria and Luxembourg, it is down 50 per cent in Western Europe, 30 per cent in North America, 30 per cent in China, 10 per cent in India, 10 per cent in Indonesia, is falling in Latin America, with no change in Africa. UNEP estimates that in 2000 AD world population will be 6.25 billion (down from its previous estimate of 6.4 billion). It also reports that the Third World has 70 per cent of the world's people, 7 per cent of world's industry, and 10 per cent of world's consumption. As a child in industrialised countries lives 20 to 40 times more than in one in the third world countries, a small increase in the industrialised world population places 8 times as much pressure on world resources as large population increases in the third world.

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II Agricultural Development

Paddy and Other Crop Production :

With the start of the satisfactory rains in the southern districts, kharif paddy preparations and sowing have begun in Thanjavur, Tirunelveli, Tiruchirapalli and other districts. As noted earlier, farmers in the area are awaiting the release of Mettur water some time early in July.

As a programme to expand water shed management practices, the Department of Agriculture is operating 1,000 acre demonstration block in 24 dry areas in the state. In these areas 24,000 acres are being brought under this programme to popularise water shed management practices. New instruments for ploughing, sowing, inter-culture and harvesting

are being used and popularised among the cultivators. In two blocks large scale orchards are being developed to ensure better land and water utilisation. Particular attention is being given to increase pulses production for which field bunds which are the practice in Thanjavur district are being adopted extensively in other districts. The State Seed Farms besides producing and distributing quality seeds are also acting as demonstration centres for farmers in production technologies as a result of which, foodgrain production is expected to show a considerable increase. The District Plan for Salem will bring under improved varieties of paddy 1.6 lakh acres and under millets 1 lakh acres with a view to producing 2.1 lakh tonnes of paddy, 1.7 lakh tonnes of millets, 1.5 lakh tonnes of groundnut and 25,000 tonnes of pulses. To meet the farmers' demand for improved variety of paddy and other crops, 250 tonnes of paddy along with 18 tonnes of cholam, 13 tonnes of hybrid cholam and 19 tonnes of cumbu are being supplied. Farmers are being trained in treatment of seeds with chemicals and fungicides in order to produce super seedlings.

Research Results :

A new disease free variety of tapioca, developed at the Mullavadi Tapioca Research Station which is suitable both for table and factory use has been released and is being popularised in the state. The Cardamom Board proposes to establish a research station in the state to improve the growing cardamom. Research in the state on proper placement and efficient absorption of nutrients by the crop when placed at the root zone has led to the development of a gravitor applicator, which can be

operated by a farmer for placing the fertiliser at the root zone of the paddy crop, which in turn will result in increased production. Also the applicator limits fertiliser use to 50 per cent of the normal dosage with the output being the same as when the full dose is used. Similarly the gravitor is used for placing the pesticide at the root zone, as a result of which 25 per cent of the dose gives the same result as the full dosage. The savings in the cost of fertiliser and pesticide has been worked out at Rs. 117 per acre. The cost of the gravitor is only Rs. 50 and it is part of the low cost and high efficiency instruments now being introduced in the farm lands of the state.

Tractorisation :

Further to the studies on tractorisation in the state (see Vol VIII p 282), the need to increase the use of tractors in order to promote multi cropping and upgrade the skill of the farm labour is emphasised in further studies in the state. Tractors and Farm Equipment Limited in one of its report points out that against a licensed capacity of 1.27 lakh tractors and installed capacity of 70,000 tractors, actual production is only 42,000. Per hectare horse power to cultivate land is 0.27 hp in India, against 3.5 hp in Japan and 5.25 hp in Germany. The optimum horse power requirement is 140 million hp for the country, the present availability is 37 million hp. With its spread effect for the development of ancillaries, the tractor will not increase agricultural skills and production but also generate employment in the village. TAFE has put into production the manufacture of M-245 tractor, with 47 hp and its effect on increasing the farmers' productivity is not in question :

its effect on employment of the increasing mass of landless labour is still a question in both government and popular circles.

Dairy Farming and Animal Husbandry:

Under Operation Flood II, a group of seven more skimmed milk powder plants are to be set up in the state at a cost of Rs. 45 crores to be provided by the Indian Dairy Corporation. The Madurai plant has a capacity of 10 tonnes a day and three more are under construction in phase I. Under phase II more attention will be paid to developing and encouraging (and not placing obstacles in the way see Vol VIII p 151) along lines of the producers' cooperatives of the Anand pattern. Sheep breeding which is the major occupation of the poor section has had a checkered history in the state. Sheep is reared by 2.16 lakh families and while in 1966 the sheep population was 66.2 lakhs, it declined by 18 per cent till 1974 due to lack of pasturage, outbreak of rinderpest and increased slaughtering. From 1976 the Department has developed the Special Animal Husbandry Programme for sheep breeding under which a small farmer or labourer identified as a suitable participant receives a loan of Rs. 3,000—(Rs. 2,500 for buying 20 quality ewes, Rs. 250 for a ram, Rs. 150 for shed and penning and Rs. 100 for feed troughs and other accessories)—with a subsidy of 25 per cent for small farmers and 33 1/3 per cent for marginal farmers and agricultural labourers. Intensive veterinary help is provided to ensure health cover against parasite diseases. The breeders are trained in the economics of sheep breeding and regulate their grazing payments accordingly. The income from penning and sale of lambs which increased from Rs. 8 in the first year to Rs. 27 in the fifth year means sale proceeds of Rs. 880—

Rs. 3,125. The scheme needs to be spread rapidly. In the first year 1976–77, 49 units were established against the target of 1,000 and in the second year 1977–78, 650 units were started against the 1,000 units target. During the current year, 1978–79, the first 3 months has seen the establishment of only 34 units. This slackness is due to the tardy rate of loan sanction and this seems inevitable because of the banks' procedures. Hence there is need to devise other modes of finance such as group guarantee and other group formations to take the lead to make the scheme a reality and success for the poor.

Tea :

Tea exports in June showed two features. On the one hand the series of incentives offered to exports of value added items like packet tea, tea bags and instant tea were becoming effective. The incentives includes (a) cost assistance of 10 per cent of FOB value, (b) exemption of export duty of Rs. 5 per k.g; (c) drawback of excise duty and import duty on packaging materials for tea bags, (d) 65 per cent import replenishment and (e) import of the tea bagging machines being placed under open general license. In addition exporters of instant tea are exempted from *ad valorem* 10 per cent duty and an import replenishment of 5 per cent. As a result, against 5 exporters of packet tea in 1973, there are today 35, tea bag exporters have increased from 2 to 6, including the public sector Tea Trading Corporation of India. Foreign exchange earnings from these value added items have increased from Rs. 20 crores in 1975–76 to Rs. 23 crores in 1976–77 and to Rs. 44 crores in 1977 to February

1978. The West Asian and North African markets are the main consumers of packet tea, those countries plus East Europe and Asia are the buyers of tea bags and the US and UK are the main market for instant tea. The other problem is the disadvantageous position which Indian tea exporters are facing in London and European markets because their landed costs are higher than those of Kenya and Sri Lanka. The government has under consideration therefore the abolition of the export duty of Rs. 5 per kg.—particularly in view of the easing of international tea prices.

Rubber:

Rubber prices rose in June and towards the end of the month touched Rs. 1,000 per quintal. The government's minimum price remained at Rs. 665 per quintal (from August 6, 1977). Rubber production was 1.5 lakh tonnes in 1976-77 and despite the prolonged monsoons in September-October, production in 1977-78 is expected to be higher. From being an importer of rubber, the country has now become an exporter, the STC exporting 12,296 in 1976-77 and 11,778 tonnes in 1977-78 valued at Rs. 7.3 crores.

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III Industrial Development

BHEL :

Bharat Heavy Electricals Limited, Tiruchirappalli reports production plans for Rs. 650 crores in 1978-79, having orders for Rs. 750 crores booked in 1977-78. During that year the total value of production was Rs. 546 crores which was a 23.4 per cent increase over the previous year's. The 1977-78 orders include ten 210 MW thermal sets and boilers for the Singaruli super thermal power station, the third stage of the Tuticorin's power station, Bathrapur extension, Bhasuval extension. Anpara and Bakoro. BHEL is also expanding its capacity in all its units in the country to fulfil the Union government's national

power development programme of adding 25,000 MW in the next decade, with an additional marginal investment of Rs. 250 crores which will result in an annual output of Rs. 1,100 crores over the next five years. It has adopted the total energy concept to improve technology, design, quality and performance. Its research and development facilities are expanding, with Rs. 11 crores being expended this year and 3-4 per cent of its earning in future years provided specialists are available. It has developed new products like 500 MVA switchgear and is now working on a 750 MW switchgear. Also the world's first commercial "fluidised combustion boiler" was developed by BHEL and

sold to a Madras firm. The boiler can burn a wide variety of low grade coal such as is available in the country and has a much reduced pollution effect.

HPF :

Hindustan Photo Films has started manufacturing still camera film rolls in the 120 and 620 sizes to replace gradually the imported films. To begin with an average monthly production target of 12 lakh spools will be aimed at, expanding later to 15 lakh spools. The total annual demand is 140 lakh spools. Also emphasis is being placed on the promotion and development of ancillary industries related to HPF production. From July, HPF will directly sell raw cine films and X-ray films through its 20 marketing divisions.

Desalination :

The government announced plans for setting up a dual purpose desalination cum thermal power plant which will use coal as feed stock, to be undertaken by the Union government, the State Electricity Board and BHEL, using the process developed by the Bhaba Atomic Research Centre, Bombay. The State Electricity Board is financing the feasibility report. The BARC process—Long Tubes Vertical Evaporators—has been accepted as economical to convert sea water into fresh water. By combining and placing a distilling plant in the lower temperature portion thermal energy can be used more effectively.

Mineral Search :

The state government, the Indian Space Research Organisation and the National

Remote Sensing Agency have taken up a collaborative project for the application of remote sensing techniques in the mineral resources of the state covered by parts of Salem, South Arcot, North Arcot, Dharmapuri, Coimbatore and Tiruchirappalli districts. The project, which will be completed by December 1978, will establish a correlation of existing geological data on geology, tectonics and mineralisation from the chosen area with data obtained from the remote sensing techniques. This would help the exploration of other parts of the state by remote sensing methods. The State Geology Department will do the photo geological and allied work and ISRO and NRSA the computer processing and related studies. Current studies show uranium and thorium at Koratti near Tirupattur including radio active mineral pyrochlor, and brown mica and copper sulphide deposits in the Dharmapuri district.

Sugar and Alcohol :

The sugar industry in the state is crushing 56.8 lakh tonnes of cane and producing 4.8 lakh tonnes of sugar against the previous high of 55.83 lakh tonnes and 4.69 lakh tonnes respectively in 1973-74. Upto May 15, the mills had crushed 47.67 lakh tonnes of cane and produced 4.18 lakh tonnes of sugar, at a recovery rate of 8.7 per cent. The state mills are in a difficult position because this is the fourth year that they will be incurring a loss (unlike other mills in other states). The private sector sugar mills report that in 1974-75 they lost Rs.1.1 crores, in 1975-76 Rs.1.90 crores, in 1976-77 Rs.3.39 crores and they expect a similar loss for 1977-78. With an opening stock of 1.10 lakh tonnes and a production of 4.8 lakh

tonnes, the releases will be 2.01 lakh tonnes, leaving 3.89 lakh tonnes as closing stocks. Even at 12 per cent interest, the cost of financing these stocks will be Rs 6.34 crores. Hence the state sugar mills support strongly the proposal for a sugar buffer stock referred to earlier. Another industry facing a surplus is the 8 distilleries industry which though working to 50 per cent capacity do not have a market in the dry state. Except Chemplast, there is no alcohol based industry in the state, the export to other states has dwindled and so the demand is to export the alcohol to foreign countries. The problem has been aggravated by the record sugar production and the large quantity of resulting molasses. The government has permitted the export of 20,000 tonnes of molasses through STC and this will relieve the situation to some extent. Another possibility being examined by the Union government is mixing alcohol with petrol.

Ennore Foundries and Chemical Complex:

Ennore Foundries which fabricate castings like cylinder blocks and cylinder heads from its foundries is producing 1,031 tonnes per month and is planning the export of castings for which it requests in the joint action by the companies country to meet the specialised requirement of foreign buyers. In the Coimbatore area where there is a large concentration of textile and other light engineering industries and small scale industries which produce a wide range of goods from small electronic instruments to heavy machinery, pumps and motors for agricultural and other operations, it is proposed that a public sector chemical complex including drug

formulation units be set up to stimulate the industrial growth of the area and develop the backward taluks of Palladam and Dharapuram.

Paraffin Wax and Rice Mills:

A factory to manufacture five grades of paraffin wax from naphthenic slack has been set up in the small scale complex at Selavayal village, 10 km from Madras, using the naphthenic slack from Madras Refineries. The demand for wax in the state is around 16,000 tonnes per annum, of which the unit now set up, Bhattad chemical complex will supply 3,000 tonnes. The factory will also manufacture chlorinated wax used as a fire proofing material in synthetic tiles. The residual oil will be used to manufacture bana spray oil, a pesticide and K-2 a lubricant for 2 wheelers. As part of the Rs. 132 crores credit plan of Indian Overseas Bank for Thanjavur district, it is proposed to modernise 80 rice mills in the districts and establish another 145 small scale industries in rural areas.

Small Industry:

Small scale industrialists in the state face problem of restrictions in use of power, inadequate bank credit, shortage of raw materials particularly steel structural and metals. Raw materials purchased in the open market are at high prices. SIDCO needs to help and act both as an indenting and marketing agent for the small industrialist. Also SIDCO interest rates are higher than the banks so that the small entrepreneurs borrowing from it to purchase buildings and machinery have to pay 8 to 15 per cent. This rate needs lowering. Their power needs and the settling of their accounts by govern-

ment and public sector units should receive priority. In regard to the problems of the small units, the decision of the Coimbatore District Small Industries Association to start a Financial Corporation to help sick small scale industries is a sound one. Of 15,000 members of the Association, 1,000 are in the sick list, of whom 300 are urgently in need of financial help. The Association is raising equity capital from its members from Rs. 500 to Rs. 5,000. 500 members have already subscribed to the capital. The Association is also setting up a raw material bank to purchase raw material in bulk and supply it to small units at economic rates. It has sponsored an export house which has begun supplying products from the small units to foreign buyers. It is starting a technical cell for preparation of feasibility reports for starting small units in rural areas using local materials and resources. The State Planning Commission has suggested to the government that Rs. 1 crore which remains unspent in non-plan schemes could be diverted to plan programmes to start rural industries in the State. In late June, the first District Industrial Centre was opened at Kancheepuram, as a measure of promoting marketing and aiding small entrepreneurs.

Seri-Culture and Silk Exports :

Silk fabrics exports from India was a high Rs. 31 crores last year, with US and West Germany being the principal buyers. For this year the export target is Rs. 35 crores. The Union government is promoting intensive sericulture development programme in Tamil Nadu, Karnataka and West Bengal. For this year Rs. 50 lakhs have been allotted to Tamil Nadu. The Silk Board is paying

special attention to marketing of cocoons supplied by the sericulturalists and the raw material bank at Bangalore has established a minimum economic price to the farmers. Tamil Nadu State Co-operative Silk Federation is attending to cocoon marketing and the marketing of silk produced in the state. Cross breed graniage to meet the requirements of the eggs of the farmers in Salem and Tiruchirapalli districts is being set up at Yercaud. Training is being provided to youth and farmers in rearing silk worms and schemes are underway to advance loans with liberal subsidy for purchases of rolling units and accessories for silk worm rearing.

Handicrafts and Handloom :

Tamil Nadu Handicraft Development Corporation has established a target of Rs. 10 lakhs for exports in 1978-79. During April and May handicraft pieces worth Rs. 1.30 lakhs have been exported and the Corporation has on hand export orders for Rs. 5 lakhs — (for all of 1977-78 exports were Rs. 1.5 lakhs). The major importing countries, US, Australia and Germany demand utility articles. The new area it is entering is interior decoration, involving panelling and decoration, on which Madurai Corporation has given it an assignment at a cost of Rs. 50,000. To promote the crafts, the Madras design centre has 5 sections — cane furniture, kalankari, bronze and icons, lacquer ware and paper mache. The Corporation apart from producing handicraft pieces from individual artisans is maintaining a tie up with a 2 industrial cooperatives — one at Thanjavur producing art plates and the other at Modaiyur making soap stone articles. On the handloom side the state has drawn up a Rs. 14 crore scheme to

set up a string of handloom cooperatives throughout the state in five years. It will establish 150 industrial cooperatives including a few handloom complexes with a membership of 40,000 weavers who do not own looms. The cooperatives will centralise production planning, supervision, supply of raw materials, management and marketing and will arrange for production taking place under one roof. Also the state government has asked the union government approval for increase in the state production of Janata cloth from 17 million metres to 42 million metres as a means of increasing employment. Further handloom production is to be diversified in a big way to avoid periodic gluts in the handloom industry and to take advantage of the Union government's decision not to sanction further capacity in the mill sector. In early June, Rs. 25 crores of handloom cloth had accumulated and the government had to organise handloom exhibitions in every district and arrange for the Tamil Nadu Handloom Co-operative Society to buy at least half the accumulated stocks. Here diversification was initiated in the form of producing special export varieties of handlooms for which new model looms were installed in Madurai district and weavers trained in the new loom. Further out of the 5.6 lakh handlooms, 20,000 looms are to produce polyester fabrics. Additional emphasis is being placed on two by two and cambric varieties to meet changing consumer tastes. There is need for ensuring regular supply of manmade yarn by the mills to weavers using art silk yarn. The 85,000 weavers concerned are not receiving yarn under the voluntary scheme, and are being forced into the black market with its high prices.

Leather :

The June report on the leather trade was a mixed one. On the one hand an export study forecasts expanding demand and sales of leather garments abroad if the industry gears itself to meet this demand. To date it is not well organised and only 85 units in Madras, Bombay, Calcutta, Kanpur, Delhi and Srinagar are engaged in leather garments. India can meet the demand for medium and medium to high quality price market segments in the sheep skin garment area, which accounts for 70 per cent of the total demand. World imports of leather garments and accessories rose 10 fold from \$ 80 million in 1965 to \$ 774 million in 1974 and will touch \$ 1,000 million by 1984, 60 per cent of total imports being leather clothing. Indian leather garments have increased from Rs. 3.32 lakhs to Rs. 6.42 lakhs within a year. To increase exports, the supply base must be enlarged and the supply of suitable varieties of leather garments must be increased. To expand the production base, 50 small and medium units should be promoted, each with a capacity to fabricate 500 to 1,500 garments per month. This could be done by state governments creating such leather complexes around the tanneries—units which would produce leather garments. To meet sophisticated marketing requirements, collaboration arrangements can be encouraged with established importers. On the other hand, the target for the current year has been fixed at a lower level — at Rs. 330 crores — compared to last year's Rs. 340 crores target. This lowering of the target is due to fall in leather exports from Rs. 302.79 crores in 1976-77 to Rs. 257.92 crores in 1977-78 and a steep fall of 28 per cent in exports for April. Of the Rs. 330 crores target, ET tanned hides and skins are expected

to earn Rs. 115 crores, finished leather Rs. 150 crores, foot-wear Rs. 25 crores and leather goods Rs. 20 crores. To achieve the target, the Export Promotion Council for Finished Leather and Leather Manufactures plans to sponsor a number of sales and study teams to Africa, Middle East, Europe and North American countries. Towards the end of June, production of semi-processed and finished leather came to a stand still in the state because of the shortage of two crucial tanning materials—wattle extract and basic chrome powder. The former comes

from East Africa, which has cut back on supplies, and additionally shipping delays have aggravated the supply position. Chrome powder is produced by half a dozen firms in the country. Labour troubles in a major producing unit and a few others have sharply reduced supplies. Following these shortages, black markets have sprung up and added to the industry's problems. The Union government should now move in and arrange for imports of wattle extract from Latin America and even of basic chrome powder.

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IV Education, Science and Health

Educational Year and Events :

As noted in the last issue (p 343), in late June the results of 2.5 lakh students who sat for the 10 year SSLC were announced. 50 per cent of the students had been declared as passed, with once more all of the ten first places except one being taken by students from the moffusil. The one exception was the 8th place shared by a student from a school in Thyagarayanagar, Madras, with another from Thanjavur. The Education Department announced also that the total seats available in the first year of the plus two course is higher than the number who have passed the tenth standard. 15,275 seats are available in the city schools in class XI—12,800 in the general and 2,475 in the vocational stream. The

total number who passed the X standard SSLC from the city schools is 12,844. In June also the publication of PUC and undergraduate results and the admission procedures in the colleges were completed by the end of the month. Colleges in the Madras university area report an intensified demand for admission into the B.Com. course from both men and women students, because of the popular prestige value attached to the course. Both day time and evening college courses in B.Com. have therefore had the pick of the PUC students who have passed with a first class with Commerce as a subject. To some extent this is a current trend which reflects more the unemployment situation of undergraduate degree holders, wherein B.Com. degree holders are faced with less of unemployment at present than others.

The Kamban Trust has established an Institute in Tamilology at Karaikudi to be a centre of advanced research in Tamil culture, architecture, traditional mathematics, history, astrology, astrology and archeology. Similarly the union government is planning to establish a National Centre on Sanskrit Manuscriptology in order to identify and classify some 3 lakh Sanskrit manuscripts which are in the possession of private individuals and institutions at the Ganganath Jha Vidyapith at Allahabad. At the All India level a panel headed by Mr. Tarkunde and Mr J P Naik on behalf of Mr. J P Narayan has recommended a radical change in the system with a shift of emphasis from formal class room teaching to non-formal channels over the next decade. To correct the fact that 70 per cent of the city's school age children is untouched by the present education system and to counter the widening cultural gap between the educated elite and the uneducated masses, it is recommended that adult education, universal primary education, post elementary education, secondary education, university education, and research and administration and language policy should be completely restructured. Doubling the pricing of education is recommended, with post elementary free education being limited to the poor and more non-formal courses-postal, correspondence and condensed - being developed to meet the demand for education. It recommends the mother tongue as the medium at the elementary and the 3 language formula at the other stages of education.

Adult Education and Mass Media :

The Sixth Plan lays emphasis on AIR rather than on TV. The existing radio net work is to be expanded to cover the

border areas so that all of the country and the people can have broadcasting facilities. The Verghese Committee report is being processed (see Vol VIII p 293) and those recommendations not calling for restructuring are being executed, the ministry reports. The government is favourably considering university broadcasting stations for educational purposes starting with Pune. The government is also promoting greater interaction between the film industry and TV to improve TV programmes and is planning to strengthen the Film and Television Institute of India. The government announced in the Consultative Committee of Parliament that the National Adult Education Programme will be formally launched on October 2, Gandhi Jayanthi Day, and that the whole programme of making 10 crores of illiterate adults educated and self-reliant is estimated to cost Rs. 600 crores. Rs. 200 crores is provided in the education sector and the balance is expected to come from other departments and the states. The number of adult illiterates in 1977 is estimated at 261 million, which is the counterpart to the 38 per cent adult literacy of the country.

Technical Education :

The Randwa Committee on Agricultural universities has recommended that (1) union assistance to agricultural universities should be conditional on all research responsibilities in a state being vested in the universities : (in Tamil Nadu research facilities in 2 out of 14 districts only have been transferred to the Tamil Nadu Agricultural University resulting, according to the Committee in the university being handicapped in carryingout regional and location specific research and being compelled to establish new research stations thus duplicating the facilities :

this is also the case in West Bengal, Bihar, Rajasthan, Uttar Pradesh and Madhya Pradesh: in Kerala there is the same situation in extension education): (2) the notable progress by the Tamil Nadu Agricultural University, despite its handicaps noted above, due to its good leadership and sound infrastructure and project oriented research work is commended: the poultry farm, it suggests, should be shifted from Teynampet to Kattupakkam and the staff qualifications of its veterinary college should be improved; (3) the University of Agricultural Sciences in Karnataka is also commended for its impressive record of achievements and its pace setting activities: (4) the Universities of Kerala and Andhra Pradesh should be further supported by the state governments, with greater emphasis on plantation crops for the Kerala University and completing infrastructural development in Andhra Pradesh, before starting colleges in agricultural engineering and dairy sciences: (5) the agricultural universities should train professional farmers in modern agriculture to supplement the 6,000 annual graduation from the universities and the needs of 5.6 lakh villages: (6) a multiprolonged effort is needed by various union and state agencies to make self-employment of agricultural graduates a practical proposition, in which the universities should have a lead function: (7) each university should develop research on intercropping and mixed farming systems for different sizes of holding and different combinations of enterprises, including non-farming and ancillary occupations for adoption by self-employed graduates: this should become a compulsory part for agricultural graduates, education: a minimum area of 2 hectares should be given to a group of 5 students for this course along with the involvement of senior faculty

members: (8) the Indian Council for Agricultural Research should finance the building up of facilities within the next two years for practical training with sufficient land, sizable animal husbandry farms, well equipped veterinary hospitals, fish ponds and workshops, the state governments providing the additional land needed for instructional purposes: (9) ICAR should contribute initial capital for setting up a revolving fund from which advances could be given to students for operation of crop production courses and "earn while you learn" schemes: and (10) a compulsory course in extension educations involving all undergraduates staying in villages for at least 15 days, and internship programmes for veterinary students should be introduced. The Tamil Nadu Agricultural University in cooperation with ICAR proposes to establish farm science centres (Krishi Vigyan Kendras), one each at Dharmapuri, Koilpatti and in the Thanjavur or South Arcot coast to act as training cum research centres for farmers and school drop outs from farming families on farming techniques and dairy, poultry, bee-keeping and fisheries management. The first Centre has been opened in 1977 at Navalur Kattapattu village, 15 km from Trichy (see Vol. VII p. 165) and in June its school and hostel building were inaugurated. In the one year, it has run 21 courses on farm management, intensive scientific agriculture, bacterial inoculation to the seeds, reclamation of alkaline and saline soils, increasing productivity in groundnuts, package of practices for cholam, intensive rice cultivation and home vegetable gardens. ICI announces a teaching programme for providing post graduate and under graduate medical students on a practical and theoretical basis, the correct interpretation of auscultatory findings using a booklet, a film, a sound casset and a set

of slides. These are being made available by the Alkali and Chemical Corporation of India, Ennore, free of cost, on loan to all medical teaching institutions. The state government announced in June that it is reviewing the question of admitting women students to all polytechnics in the state in addition to those in Tiruchirapalli, Tuticorin, Salem and Pollachi where 25 women students each have been admitted. Also the number of polytechnic seats is being increased by 20 per cent to meet the demand from the 2 sets of SSLCs (the 10 and 11 year ones). This means an addition of 1,000 seats to the existing 5,000.

Science :

MERADO announced in June the design and development of an automatic machine for assembling various parts of latch knitting needle, which performs 25 operations in a coordinated manner for the assembly of one needle. IIT, Madras also announces the development of a new material using jute and polyester to build grain silos, village houses and fishing boats. The silos could be family or village units size and are water proof and heat resistant. Similarly a standard village house and small fishing boats are being made from the material. It is reported that the progress made by the Central Electronics Limited (CEL) in R and D in solar energy places this country next only to the US, France, and Japan in this vital area. Since the initiation of its large national project on photovoltaic conversion of solar energy during the latter half of 1975 to meet the growing energy crisis, CEL has set up a facility for fabricating solar cells, solar cell panels and other associated systems and has started fabricating solar cell modules capable of generating

7 peak watts for charging 12 W lead acid batteries. This is being applied to rural water supply, micro irrigation, educational TV sets and will also be extended to rural electrification. The Tamil Nadu Electricity Board has put forward a proposal to harness sea solar power to increase power availability in the state and the union ministry of energy is examining the proposal along with the suggestion for US aid in undertaking the feasibility study of the project. While Tarapur may at last get US nuclear fuel (see Vol VIII p 294), other nuclear plants are facing serious shortage of heavy water, which may delay the commissioning of the four nuclear reactors in Madras and Narora. According to its original schedule, the Baroda explosion in December 1977 means a delay of 18 months: the 71 tonne Tuticorin plant which should have begun production in 1974 but in January 1976 it had an accident, causing a delay: the 100 tonne plant at Kota which was to produce in 1975 is bedevilled by technical problems: and the Talcher plant which should have been ready in 1976 is still lacking its exchange burners and is delayed by 2 years. Hence the purchase of heavy water from the USSR for RAPP II which bring its under international control. CSIR announces that advisory councils are being formed to formulate research projects for the national laboratories. Also the Executive Councils of the Laboratories are being reconstituted and both will be directed to meet the new rural priorities of the country and forge better links between them and industry.

Health :

The Family Planning programme which has performed very badly in 1977-78

(see last issue pp 346-347) has been the subject of a communication from the Prime Minister to the Chief Ministers referring to the high priority of the programme to bring about a reduction in the birthrate of at least one per thousand per annum. In accordance with the population policy adopted in June 1977 (see Vol. VIII p. 393), finance is not a constraint (in the current year Rs. 120 crores are provided against last year's Rs. 90 crores) and the programme is to be linked to the rural health scheme. That scheme is being evaluated in order to expand and extend it. Seven agencies— (1) the Institute of Economic Growth, (2) the National Institute of Health and Family Welfare, (3) the All India Institute of Hygiene and Public Health, Calcutta, (4) the Indian Council of Medical Research, (5) IIM, Ahmedabad, (6) the Indian Institute of Population Studies and (7) the Gandhigram Institute of Rural Health — have been commissioned to evaluate the scheme. The first report of the Institute of Economic Growth points out certain deficiencies in the scheme, spread over 741 PHCs (for e.g. the quantum of honorarium Rs. 50 per worker and medicine Rs. 50 per month are inadequate, the non-availability of the manuals for the community health

workers) but that the misgivings of the medical profession about the scheme are not justified. An important development in the Family Planning Programme is the new child marriage Act which raises the marriageable age to 21 for males and 18 for females as from October 2. The State government has decided to sanction additional funds for providing medical facilities in rural areas for equipping hospitals with needed instruments, medicines and clinical laboratories. Also Malaria is now killing 3,000 children everyday in the state and so the state government has restarted the malaria eradication campaign, for which the union government has given a cash grant to the state of Rs. 22.38 lakhs and transport vehicles and equipment worth Rs. 77.50 lakhs for action in Madras, Salem, Erode, Tuticorin, Vellore, Cuddalore, Dindigul, Tiruchirapalli, Ramanathapuram and Rameswaram where the disease has become endemic. Insecticide spraying is being done in five districts of South and North Arcot, Dharmapuri, Salem and Ramanathapuram and anti-larvae measures in Ramanathapuram district and Rameswaram. A State Malaria Committee with the health minister as Chairman has been revived and supervises the campaign.

* * * * *

V Employment

The Draft Five Year Plan (1979-83) envisages the creation of 49 million man years of work by 1983 (which is the

present back log of 19 million man years plus 30 million who will enter the labour force). This would also make the

enforcement of the minimum wage easier. The Plan with regard to its employment projection has one positive element and that is the whole hearted acceptance by the people, the union and all state governments. It has one pre-condition and that is the restructuring of economic and financial institutions of the country. The Director of Employment reports that more women are offering themselves for employment, in 1977 they were 25.38 lakhs, which was a rise of 1.8 per cent. In the public sector, women employees rose by 0.9 per cent and in the private sector by 2.9 per cent, the highest increase being in the north east zone (12.5 per cent), followed by the central zone (8.5 per cent) and eastern zone (4.7 per cent),

while there was a fall in the southern zone (2 per cent), northern zone (0.8 per cent) and the western zone (0.8 per cent). The total number of jobs seekers registered with Employment Exchanges rose to 10.24 million in March 1977 and 10.41 million in June 1977—an increase of 1.6 per cent over the quarter and 8.3 per cent over the year. Andhra Pradesh government announces a scheme to provide work for educated unemployed among the weaker sections. The selected candidates with 10th standard to intermediate qualifications will be given a monthly stipend of Rs. 75, a B. A. Rs. 100 for a period of 3 years during which period they will be given training for self-employment.

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VI Other Items

Dr. C.T. Kurien, Director, MIDS :

From July, 6, 1978, Dr. C. T. Kurien took over as Director, Madras Institute of Development Studies. The Institute itself becomes a National Institute financed by the Indian Council of Social Science Research and the Government of Tamil Nadu. Dr. Kurien, was Professor and Head of the Department of Economics of the Madras Christian College, Tambaram till he took over the Directorship of the Institute. One of the Country's outstanding economists, Dr. Kurien has taken the leadership in restructuring the

Economics undergraduate curriculum for the University of Madras and the Autonomous Madras Christian College, Tambaram and is the author of several books including: Out Five Year Plans (1966), India Today (Ed.) (1967), Indian Economic Crisis (1969), A Theoretical Approach to the Indian Economy (1970), A Guide to Research on Economics (Ed.) (1973), Poverty and Development (1974), Economic Change in Tamil Nadu (1978) and Poverty, Planning and Social Transformation (1978). His approach to his task as Director is set forth in a note on Economic Research which appears as the second article.

College Visits :

Gobi Arts College, Gobichettipalayam, organised during May and June its NSS/CSS staff and students to build a link road in the village and constructed within 10 days a building to run the adult education programme for the village as part of its participation in the National Adult Education Programme. The building was inaugurated in early June. Also in early June, the tenth training course for the NSS/CSS teacher coordinators from the college in the districts of Salem, Dharmapuri and Ramanathapuram was held in Kandaswamy Kandar College, Velur over a ten day period and attended by 30 teachers. The course in addition to training the teachers on the methods and techniques of launching Adult Education (literacy) programmes through the staff and students of their colleges, identified the immediate problems to be solved in launching the programmes and the means of overcoming them.

Plus 2 and Seminar for US Educators :

A one day seminar for headmasters of city schools who are launching the plus 2—higher secondary school—programmes was held at Lady Willingdon Training College, Madras. The seminar worked on the handbook setting forth guidelines in launching the plus 2 sections that had been developed by the Coimbatore conference (see last issue p. 344). As a result, the Madras schools are ready with their general education and vocational courses to be operated during the coming school year, as noted earlier. Towards the end of June, a 3 week seminar for some 20 US social scientists was organised by the Tamil Nadu Agricultural University on the theme,

Regional Planning and National Priorities. One of the findings emerging from the seminar was that if the Plan strategy and objectives on ridding the economy of poverty and unemployment were to be operationalised, there will have to be multi level planning and execution for the economic, social and structural changes envisaged.

TNBCE and IAEA :

The Tamil Nadu Board of Continuing Education held meetings of its executive committee and council and reviewed the functioning of its non-formal education programme, and action research project and decided on procedures for participating in the National Adult Education Programme. It also held a meeting of the Governing Council of the Resource Centre and approved the work programmes and budget for the year. A selection Committee met at the end of June and selected the coordinator and assistant for the training centre for training the NAEP staff. The committee also selected 12 project officers, coordinators and supervisors for the 12 centres to be operated by the Board under NAEP. The Indian Adult Education Association selection committee met in mid June and selected the Director for the Association to head the Association's participation in NAEP.

Institute of Financial Management and Ford Foundation :

A meeting of the Board of Governors of the Institute of Financial Management was held in mid June and after, review of its programme decided to emphasise the research, survey and consultancy services and slow down a little its fast growing training programme. A team of

Ford Foundation specialists visited Madras at the end of June to meet the Government authorities concerned with planning and evaluation. They also met with the Director and staff of the Madras Institute of Development Studies and exchanged views on the role of social sciences in policy formulation and national development.

Family Planning Foundation and India International Centre :

The Family Planning Foundation called together a dozen social scientists to review the Draft Plan chapter on Health and Family welfare. The group met with the ministry of health and the union Planning Commission. Its main finding was that there should be high priority given to family planning in order to counter the catastrophic slide that occurred in 1977-78 (see last issue p. 347), that it should be woven into the minimum needs programme, the integrated rural development programme, the education, health, maternity and child welfare and mass communication programmes of the Plan and that its operational structure should be more clearly delineated in order that its targets might be attained and delivery effected. There was a meeting of the Board of Trustees of the India International Centre in mid June at which the work of the Centre, was reviewed and the launching of a journal on international relations decided upon.

Commonwealth Secretariat :

The Commonwealth Secretariat held a 2 day meeting in London to prepare for the commonwealth conference to be held in India in early 1979 on non-formal education and development. It was

decided to limit the conference to two areas of non-formal education—education of the unschooled and underschooled children in the age-group 10-14, and adult literacy for those in the age-group 15-45. The Conference will deal with problems of motivation and political commitment, the techniques and content of learning for the school dropouts and that for adult illiterates, and problems of financing, organisation and international cooperation.

Parliament :

A meeting of the consultative committee on education of the Parliament was held on June 20 and 21 on Education. The Committee reviewed the plans and operations of the 10+2 school system in the country and laid emphasis on universalising primary education. It gave absolute priority to adult education and called on all political parties to give the programme massive support. It was divided on the question of slowing down the opening of new colleges and universities during the Plan period which the majority supported. There was general agreement on the need for concentrating on the reform of the system of higher education.

University Events :

During June there were meetings of the Syndicate Committee of Affiliation, Recognition and Inspection which reviewed and made decisions on the new requests for affiliation or changes; of the committee on affiliated colleges which dealt with appeals from teachers and managements; of the steering committee of the Advisory Committee on Industry and Trade; of the commission on medium of instruction; and an Advisory group on

launching a molecular biology programme in the university. The university participated in the 73rd birthday celebration of Mr. M. P. Sivagnanam who served on the Syndicate for 6 years and has rendered greater services to the cause of Tamil. There was a special meeting of the Senate in early June to nominate a member of the committee to choose the panel for the Vice-Chancellorship. The Syndicate met at the end of the month and nominated its member to the committee and reviewed and approved the programme for the coming academic year.

July Development Seminar :

The paper, Small and Village Industries, by Mr. T. V. Natarajan for the July

seminar, held on 27th, together with summary of the discussion at the seminar, chaired by Prof. S. Ramanathan appears as the first article.

Second Article :

A note, Research Orientation of the Institute, by the Director, Dr. C. T. Kurien appears as the second article.

Book Review :

A review by Prof. P. K. Aiyasamy, Tamil Nadu Agricultural University, of Madras Institute of Development Studies publication No. 16, Rotation of Crops in Thanjavur District by Dr. M. Srinivasan appears in the Book Review section.

Small and Village Industries

By

T. V. NATARAJAN

Madras

"The poor of world cannot be helped by mass production, only by production by the masses" —Gandhiji

Introduction

During the next few months the sixth plan document will be finalised. As the result of the elections held in 1977 there has been a change of government both at the Centre and Tamil Nadu. Both the ruling parties (Janata and AIADMK) have declared a similar approach in economic matters particularly in respect of—

- a) eradication of poverty and unemployment
- b) accent on rural development
- c) encouragement of small and village industries

It is better to clarify at this early stage certain terms. Village and small industries consists broadly of (i) traditional cottage and household industries viz., handloom, khadi and village industries, handicrafts, sericulture and coir industry, and (ii) modern small scale industries (defined as those having investment of up to Rs. 10 lakhs in plant and machinery and Rs. 15 lakhs in the case of ancillary industries). As distinguished from

modern small scale industries, the traditional cottage and household industries are located mostly in rural and semi-urban areas. A large number of these traditional industries do not use power operated appliances and equipment.¹

NATIONAL SCENE

Previous plans

The main objectives of the programme for the development of these industries during the preceding plans were to create large scale employment opportunities, promote decentralisation and dispersal of industries, develop agro-based and ancillary industries, improve the skills of artisans and quality of their products, reduce the role of subsidies and step up the production of consumer goods, essential articles for the masses and those having a large potential for exports. To achieve these objectives, the earlier plans envisaged formulation of common production programmes for the small and large sectors, promotion of entrepreneurship, provision of package of consultancy service etc.

1. Draft sixth plan

Lack of and upto date statistics particularly in the traditional rural industries is a handicap for assessing the physical progress of the development programmes undertaken so far in achieving the objectives and strategy envisaged in the preceding plans. Table I (given at the end of this article) gives the position in respect of production, exports and number of units for the last decade. It will be seen that although the value of export has increased there has been no significant increase in production. There is an interesting and illuminating comment in the draft plan.

"By and large, the objectives of the various programmes of improving the skills and production techniques, development of ancillary industries, growth of industries in rural and semi-urban areas and improvement in the levels of income, have not been achieved to an appreciable extent in a number of these industries. Common production programme were not formulated in detail. There was also an increase in the number of schemes, agencies and institutions, without adequate arrangements for coordination and monitoring of their activities. Most of the artisans, craftsmen and other small entrepreneurs failed to get a package of assistance and services, especially scarce raw materials. The Khadi and Handloom industries also experienced marketing problems from time to time".

New Industrial Policy :

On 23 Dec. 1977, a new industrial policy was announced by our Minister for

Industry. Main features of this policy are given below ²

- (a) Effective promotion of cottage and small industries widely dispersed in rural areas and small towns on the ground that whatever can be produced by small and cottage industries must also be so produced.
- (b) The list of industries which would be exclusively reserved for the small scale sector has been expanded and will now include more than 500 items. While this list will be continually reviewed in order to ensure that capacity creation does not lag behind the requirements of economy and annual review of reserved industries will also be undertaken so as to identify new products processes capable of being manufactured and adopted in the small scale sector.
- (c) A tiny sector has been identified within the small scale sector. Special attention will be given to units with investment in machinery and equipment up to Rs. 1 lakh and situated in small towns and villages. Cottage and household industries, as well as khadi and village industries, are also to receive greater attention.
- (d) Expansion of weaving capacity in the mill and powerloom sector will not be allowed, while the handloom sector will have priority in the allocation of yarn spun in the organised sector. Reservation

of textile items for production by handlooms will be enforced and the area extended as feasible.

- (e) Shift the focal point of development from the big cities and State capitals to the district headquarters, where the district Industries Centre will be located. This centre will provide under a single roof, all the services and support required by small and village entrepreneurs.

- (f) The apex term lending financial institution of the country, the IDBI, has taken steps to set up a separate wing to deal exclusively with the credit requirements of the small sector. It will coordinate, guide and monitor the entire range of credit facilities offered by other institutions for the small and cottage sector. Financial institutions and the nationalised banks will be required to earmark a specified proportion of their total advances for the promotion of small, village and cottage industries.

- (g) The public sector will be charged with the responsibility of encouraging the development of

ancillary industries and contributing to the growth of decentralised production by making available its technological and managerial expertise to small and cottage industries.

Keeping in mind the new industrial policy, the sixth plan follows the following strategy.

- i) To generate opportunities for fuller and full time employment by—

- a) revitalising and developing the existing traditional and other small scale industries, and

- b) promoting intensive development of new viable small industries;

- ii) To raise the level of earnings of rural artisans, handloom weavers, craftsmen and others employed in these industries;

- iii) To promote the growth of these industries in rural areas and small towns; and

- iv) To reduce progressively the roll of subsidies by providing these selectively for credit and development of skills, designs and marketing.

Plan outlay

TABLE II

OUTLAY ON VILLAGE AND SMALL INDUSTRIES.

Sl.No.	Industry	Fifth Plan		Plan Outlay
		1974-79 Outlay	1974-78 (estimated expenditure) Rs. crores	1978-83
1	Handloom Industry	99.92	80.63	280.00
2	Powerlooms	3.25	.53	6.00
3	Khadi & Rural Industries	142.98	126.38	390.00
4	Small Scale Industries	200.68*	121.89*	545.00**
5	Industrial Estates	21.06	17.64	45.00
6	Handicrafts	29.80	14.94	57.00
7	Sericulture	29.68	19.23	70.00
8	Coir Industry	7.66	5.55	17.00
Total		535.03@	386.79	1410.00

*Includes centrally sponsored schemes of the Rural Industries projects to be merged into the District Industries Centres set up and Collection of Statistics.

**Includes Rs. 60.0 crores for the schemes of Craftsmen and Apprenticeship Training.

@ Subsequently revised to Rs. 510 crores.

The outlay of Rs. 45 crores for industrial estates will be supplemented by the outlay made for the schemes of industrial areas under the programme for medium and large industries. In addition to the outlays made in the public sector about Rs. 2,000 crores are expected to be invested from private sources including banking and financial institutions. Thus,

under the Plan, a total outlay of about Rs. 3,400 crores would be available for the development of household, cottage and other small industries.

Table below gives the employment and production at the beginning and end of the sixth plan.

TABLE III

EMPLOYMENT AND PRODUCTION—VILLAGE AND SMALL INDUSTRIES

Sl. No. 1	Industry 2	Employment (lakh persons)		Production	
		1977-78 (estimated)	1982-83 (anticipated)	1977-78 (estimated)	1982-83 (anticipated)
		3	4	5	6
1	Handloom Industry	57.10	92.00	2,300	3,700 m.mtr.
2	Powerlooms	10.00	13.00	2,800*	3,900* „
3	Khadi & Rural Industries	25.60	74.48	270	2,561 Rs. crores
4	Small Scale Industries	27.68**	57.68	6,700**	26,700 „
5	Industrial Estates				
6	Handicrafts	18.20	24.00	550	800 „
7	Sericulture	36.00	44.00	35.4	62.5 lakhs
8	Coir Industry	5.00	5.00	n.a	n.a

* includes art silk fabrics

** relates to calendar year 1976

n.a. not available

In the context of the enlarged programmes to be taken up under the new plan, it will be necessary for All India organisations concerned with the development of different industries to take suitable steps for periodical review of the policies, programmes and problems of these industries. Besides a closer liaison with the concerned State departments and institutions for monitoring the programmes, quick studies will also be undertaken for assessing the impact of some of the major programmes especially on the level of employment, earnings and exports. A reference has already been made about the need for setting up a high level coordination committee at the centre to review from time to time

the progress of the programmes of all these boards and State governments also to ensure coordination in respect of important policies and programmes like for credit, training, marketing and exports. This costs a heavy responsibility on all organisations entrusted with the progress and development of various small and village industries.

Khadi & Village Industries :

Khadi and Village Industries Commission (KVIC) was established in April 1957 under the Khadi and Village Industries Commission Act 1956 to plan, organise and implement programme of development for Khadi and Village Industries. The industries under the

purview of the commission are 1) Khadi (cotton wollen and silk) 2) Processing of cereals and pulses, 3) ghani oil, 4) manufacture of cane gur khandsari, 5) palm gur making and other palm products, 6) cottage match, 7) non-edible oils and soap, 8) handmade paper, 9) Bee keeping, 10) village pottery, 11) flaying curing and tanning of hides and skins and ancillary industries connected with the same and cottage leather industry, 12) fibre other than coir, 13) manufacture of gums and resins, 14) lime manufacturing, 15) collection of forest plants and fruits for medicinal purposes, 16) blacksmithy, 17) carpentry, 18) manufacture and use of manure and methane (gobar) gas from cowdung and other waste products (such as flesh of dead animals, night soils etc.) 19) manufacture of shellac, 20) bamboo and cane work, 21) manufacture of katha, 22) fruit processing and fruit preservation, and 23) manufacture of household utensils in aluminium.³

During last two decades KVIC has done excellent work. Unfortunately, this has not received adequate publicity, Mr. Vadilal Dagli, Editor Commerce in his introduction to the book 'Khadi and Village Industries in the Indian Economy' says: "Despite the negligence and measly support, the Khadi and Village Industries Commission, which was set up with the specific purpose of promoting the development of khadi and village industries, has indeed, done commendable work in organising the village artisans and building up a channel of providing technical and financial assistance to them. As on 31st March, 1975, the programmes of khadi and village industries were implemented through 20

State Khadi and Village Industries Boards, 700 registered institutions, and 23,175 industrial cooperatives. In 1955-56 there were only 2 State boards, 242 registered institutions and 60 industrial cooperatives. In other words, over the 20 year period the number of organisations went up as much as by 80 times from 304 to 24,435. The production of khadi went up from about Rs. 6 crores to nearly Rs 43 crores and that of other village industries rose from Rs. 11 crores to Rs. 137 crores. In other words, the combined value of production of khadi and village industries shot up from Rs. 17 crores in 1955-56 to Rs. 180 crores in 1974-75 or by more than 10 times. The value of sales of khadi and village industries rose from only Rs. 5 crores in 1955-56 to Rs. 175 crores in 1974-75 of by more than 35 times. Employment provided by khadi and village industries rose from 9.5 lakhs in 1955-56 to 19.6 lakhs in 1974-75. Earnings of the artisans engaged in khadi and village industries in 1974-75 amounted to Rs. 51 crores compared with Rs. 7 crores in 1955-56. Hopefully enough, production in village industries other than khadi has risen faster.

The Khadi and Village Industries Commission has played a creditable part in promoting improved technology in khadi and village industries. This task was more complicated since it required a psychological orientation of traditional khadi workers and of the artisan community. During the past two decades of its existence, the Commission introduced a wide range of modern tools and equipment and machinery in the field of rural industries. Power was introduced in many processes. The Commission's

pioneering role in the development of gobargas units using cowdung and other organic waste, manufacture of non-edible oils from oilseeds such as neem, mohua and scientific bee-keeping, has received wide acclaim. The improvement in technology introduced by the Commission has enabled the artisans in various industries to derive higher incomes.

Khadi economics :

It is absolutely necessary to understand Gandhiji's views on the importance of Khadi in his scheme of constructive programme and village development. "I have often said the khadi is the central sun round which the other village industries revolve like so many planets. They have no independent existence. Nor will khadi exist without the other industries. They are absolutely interdependent. The fact is that we have to make a choice between India of the village that are as ancient as herself and India of the cities which are a creation of foreign domination. Today the cities dominate and drain the villages so that they are crumbling to ruin. My khadi mentality tells me that cities must subserve villages when that domination goes. Exploiting of villages is itself organised violence. If we want Swaraj to be built on non-violence, we shall have to give the villages their proper place. This we will never do unless we revive village industries by using the products thereof in place of things produced in city factories, foreign or indigenous. Perhaps it is now clear why I identify khadi with non-violence. Khadi is the chief village handicraft. Kill khadi and you must kill the villages and with them non-violence. I cannot prove this by statistics. The proof is before our eyes."⁴

The modern economists write off khadi industry as not capable of becoming a viable industry. Several years ago Shri Gulzarilal Nanda pleading the economic soundness of khadi in his book "Some Aspects of Khadi" said: "Indian mills produce cloth worth about Rs. 50 crores. Of this, a sum of about Rs. 10 crores constitutes the wage bill of the industry. Khadi, of the same value would provide Rs. 35 crores in the shape of wages. Khadi manufactured from the same quantity of raw cotton would if the existing circumstances continue, be sold at Rs. 100 crores of which the wage bill would amount to Rs. 70 crores. As against a raise of Rs. 50 crores in the price of cloth, the increase in the amount distributed as wages is Rs. 60 crores'.

Selected indicators progress are given in Table IV (given at the end of this article). Production per rupee of net disbursement is extremely encouraging in most of the village industries. Mr Dagli has emphasised, "while the commission has performed a signal service to village industries in their unequal struggle for survival, it does not cover more than 10 per cent of village industries in terms of production and about 15 per cent in terms of employment. What has so far been done for these industries by the Commission could be done for the remaining village industries if their credit, raw materials and marketing needs could be satisfied. We should go a step further. Unless we declare village industries as the priority sector for bank finance, our unemployment problem will continue to remain hopelessly intractable. A shift of bank credit from capital intensive to labour intensive projects is the heart of banking revolution in India."

Employment and Credit Need

ICICI in its report some years back mentioned that an ICICI backed industry (mainly large industry) requires Rs. 40,000 (probably Rs. 1 lakh now) to create one job whereas the village industry (taking to consideration a modest shed imple-ments, raw material, machinery, and working expenses) needs only about Rs. 4,000-5,000. It is also necessary to find out the pattern of credit given by banks. It is Rs. 4,500 crores for large industry, Rs. 1,500 crores for small industry and only Rs. 25 crores for village industry. There is a need for massive aid to village industries. The credit need of various artisans is about Rs. 2,000 to 3,000 crores per year. A detailed credit plan for village industries should be worked out by the Planning Commission and the banks and there should be a village industries division in all the banks so that they have the necessary experience and expertise. In addition the lead banks should take the responsibility for starting material banks. There is a widespread complaint that the public sector banks give VIP treatment to large industry and neglect the small and village industries. This is not always true. The bankers have their own problems and their point of view is given below.⁵

(a) Information flow from the units to the banks is not sufficient. Before parting with credit, banks do make it a point to tell the entrepreneur what books have to be maintained and what data is to be fed back. Small scale units are usually one man shows with the entrepreneur either not having the ability or the time to maintain financial records up to date. It is very rare to find an entre-

preneur who can produce on demand a fairly correct balance sheet of his company for the previous year.

(b) Information in quite a number of instances, is also deliberately withheld from the bankers. For example, commitments to other creditors and diversion of funds for personal use and other projects are not mentioned. To some extent this is due to the fear, (misplaced, say the bankers) that if too many liabilities are shown, the bank may refuse to enhance credit.

(c) Faced with this lack of adequate and upto date data from the borrowing units, banks have perforce to take their own time about deciding cases of fresh loans. True, the banks have their censors, such as field officers, managers and the credit departments. But unless the entrepreneurs are more diligent and forthcoming in their accounts these front line censors of the banks will be of limited use.

(d) Because of the lack of frankness from the entrepreneurs side and a certain indifference among the field staff of the banks, the distress of sick units catches the attention of their banks about a year after the setting in of illness by which time it is too late for quite a number of the units.

Sick units

Though exact percentage is not available, most well informed people agree that most 50% of small units are sick. The reasons are both internal and external.

a) Internal:

Lack of managerial ability in various areas like finance, production marketing and knowledge of various regulations pertaining to export, factories act, ESI, PF, etc.

b) External:

Problems connected with raw material, power supply, market fluctuations, delay in receiving payments etc.

A few examples about how some small units failed and became sick are given below:⁶

- i) Over-ambitious expansion of the present activity resulting in complete loss of control.
- ii) Lack of alternative plans to meet unforeseen eventualities or stiff competition or rapid obsolescence.
- iii) Scarcity and below standard indigenous raw materials, resulting in substandard quality of the finished product.
- iv) Single customer who lifts entire production of the units, leaving no standby both as regards alternative customers and the choice of the products.
- v) Location not proper; the unit should not have been set up at all.

It should be possible to obtain the necessary expertise and take timely precautions. There are many instances of sick units coming back to normal health. This involves close cooperation between the banker and the entrepreneur. Consultants can play a big role but unfortunately they confine themselves to new projects or expansion or provision of knowhow.

Mr. N.M. Sachidanand⁷ after discussing the problem with small scale industrialists and bankers recommends the following remedial actions:

- a) preventive steps
- b) rehabilitative steps

Preventive steps:

1. Set up in every state a single official agency which can take care of all the preliminary requirements for setting up a small scale unit.
2. Besides a generous moratorium on the repayment of principal, the financial institutions should phase out even the interest payments in such a manner that for the first two or three years, until the unit establishes itself, the interest burden is low or even zero.
3. Interest rates on working capital should be lowered to the bank rate plus one percent.
4. Priority should not only be given but statutorily enforced in all store purchase programmes of the governmental and public sector undertakings to products of the small scale sector.

6. Financial Express 5th June, 1978

7. Special Report: The Hindu 5th June, 1978

5. Large units should be pressed to pay the bills of small suppliers within 30 days of passing of material. Public sector units should be strictly made to toe the line. On site inspection in the manufacturing units themselves will make the procedure quicker.

6. Banks should not arbitrarily reduce initial working capital limits demanded by the entrepreneur in his project report.

7. The red tape involved in the granting of concessions should be cut. It should be the direct responsibility of the Directorate of Industries and Commerce in the State Government to ensure that *these concessions reach the entrepreneurs* without delay.

Rehabilitative steps:

1. A special fund should be set up in the banking sector with lower interest rates, for deployment in case of rehabilitation.

2. Bank branch managers who primarily deal with small scale entrepreneurs should be specially selected and trained so that they break away from the traditional security consciousness.

3. Once the genuineness of sickness of a unit and the feasibility of its revival has been established by the State level committee, the outstanding liability amount should be converted into term loan and fresh working capital on realistic basis made available.

4. A moratorium on interest payments for atleast one year should be given.

5. Based on merits of individual cases, concessional rates of interest should be charged on capital borrowed during period of closure. Instead of insisting on further margin money from the entrepreneur, seed money should be provided by one of the Government agencies so that the unit gets the working capital needed for revival.

6. Seizures due to unpaid rent of shed (in case of Government industrial estates) and disconnections due to unpaid power bills should be rescinded and collection of such outstandings put off till the units is on its feet again.

2 years back as part of managers' social commitment, I organised a group of senior managers from various functional areas. This group used to meet entrepreneurs periodically, discuss their problems and suggest solutions. The results were amazing. Here is an ideal role for management associations and chambers of commerce. Eminent economist Mr. C.N.Vakil says—

“Large industrial houses have been asked to help in rural development by adopting villages and spending their resources in men and money for which encouragement is given by Government, by exempting such expenditure from Income Tax. Would it not be better if the industrial houses are asked to help the development of small industries for which they are better qualified? With the prevailing estrangement between Industry and Government due to the public speeches of some Ministers on the one hand, and comparative ignorance of rural conditions by those in industry

on the other, it would be wiser to utilise their talent in an area in which they can do so with success".⁸

Tiny Sector :

It has now been recognised by the planners that the bulk of assistance meant for the small sector is being appointed by the relatively better organised small units. Therefore, a fresh definition of 'tiny' units along with a new preferential treatment. Now units with an investment in plant and machinery up to Rs. 1 lakh are termed 'tiny units.'

The tiny and village sector industries are as far as possible being exempted from regulatory measures, except where absolutely essential. The tiny units will be encouraged to promote self-regulation and self assessment by the voluntary organisations of industries. By this, rigours of the enforcing agencies are also expected to be minimised.

In addition to this tiny units in towns and village with population below 50,000 will be offered an investment-cum-employment subsidy of 15 per cent. The National Small Industries Corporation is expected to assist the tiny units in marketing their products. Income tax, excise duty and sales taxes, it is being suggested, should be waived for atleast five years.

With a fixed investment of Rs. 2,000 crores and working capital of 5,300 crores the tiny sector is expected to produce a gross output of 27,000 crores in the last year of the 6th plan. 3 million jobs will be created. 20% of the

fixed investment is expected to be provided by the entrepreneurs. Success depends on effective and efficient implementation by all the parties concerned.⁹

Technology

The urban elite who are the rulers are obsessed with high technology. This is not only costly but unsuitable for Indian environment. Mr. E. F. Schumacher in his book 'Small is Beautiful' says: "As Gandhi said, the poor of the world cannot be helped by mass production, only by production by the masses. The system of mass production, based on sophisticated, highly capital intensive, high energy input dependent, and human labour-saving technology, presupposes that you are already rich, for a great deal of capital investment is needed to establish one single workplace. The system of production by the masses mobilises the priceless resources which are possessed by all human beings, their clever brains and skilful hands, and supports them with first class tools. The technology of mass production is inherently violent, ecologically damaging, self-defeating in terms of non-renewable resources, and stultifying for the human person. The technology of production by the masses, making use of the best of modern knowledge and experience, is conducive to decentralisation, compatible with the laws of ecology, gentle in its use of scarce resources, and designed to serve the human person instead of making him the servant of machines. I have named it intermediate technology to signify that it is vastly superior to the primitive technology of bygone ages but at the same time much simpler, cheaper, and freer than the super

8 The Mail 11th June 1978

9 Tiny sector and some big questions—Indian Express 12th Dec. 1977.

technology of the rich. One can also call it self help technology, or democratic or people's technology—a technology to which everybody can gain admittance and which is not reserved to those already rich and powerful.”

Regarding technology and development the plan document says :

“Special measures are envisaged under the new industrial policy statement for ensuring an effective and coordinated approach for the development machines and devices for improving the productivity and earning capacity of those engaged in different small industries. It will further be the endeavour of the Government to fully integrate such appropriate techniques of production with the broader programme of all round rural development. Efforts will be made by the staff of the District Industries Centres to identify technological and other problems of small industries and to arrange for research and investigation on them through local and other concerned education and technical institutions. For this purpose, the facilities for research and common services will be expanded.”

This is a typical government pronouncement combining hope and sentiment. A great deal of work remains to be done in the area of appropriated technology. The green revolution was possible because of a multipronged strategy and the establishment of hundreds of demonstration farms. Similarly we need atleast one ATDC (Appropriate Technology Development Centre) attached to each district industry centre.

District Industry Centre (DIC)

There will be one agency in each district called the District Industry Centre, mainly to provide and arrange a package of assistance and facilities for credit guidance, raw materials, training marketing, etc. including the necessary help to unemployed educated young entrepreneurs in general and custom services. These centres will establish close linkage with the development blocks on the one hand and with specialised institutions concerned with the development of small industries on the other.

Our Industries Minister is concentrating on the creation of District Industry Centres. Thanks to his dynamism and the cooperation of the states, all the 460 DICs will be operational by 1st April, 1979.

Certain other features are given below :

- a) There will be 8 Managers including one General Manager. There will be a staff of 180.
- b) Lead bank in each district will make available to the DIC a credit manager for two years.
- c) Each Joint Secretary in the Ministry of Industries (I believe there is a total of 16) will look after one major state.
- d) Utility of the DIC will be judged in the first instance by the ability to nurse back existing sick units.
- e) Professional bodies like management associations and Chambers of Commerce have been invited to associated themselves with the DIC.

The concept of DICs is not new. During the discussions of the State Task Force on Small Industries (of which I was a member) in the early seventies one of our major suggestions was that an entrepreneur should deal with only one agency for all his requirements. DIC idea is similar.

POSITION IN TAMIL NADU

Like the Central Government, the Government of Tamil Nadu is also deeply interested in the growth of village and small industries. The budget allotment during recent years is as follows :

Rs.
1975-76—88.04 lakhs
1976-77—108.85 lakhs
1977-78—194.68 lakhs

In 1976 the total number of registered units crossed the 50,000 mark. Whilst checking the functioning of these units it was discovered that only 50% were operational.¹⁰

Backward Area

To promote industrial activities in backward regions, the State Government has identified 9 districts as backward and units situated in them are given special concessions of finance at low rates of interest, extended initial grace period for the commencement of repayment, reduction in service charges, reduced power tariff etc. Similarly the Central Government have located 28 taluks in 5 most backward districts for sanctioning an outright grant or subsidy of 15 per cent on total fixed capital investment of new and expanding units.

A national census of small industries was conducted in 1973 with 1972 as reference period. Small industries in Tamil Nadu by major industrial group is given in Table V at the end of this article.

A study of this table indicates the following :

- Capacity utilisation is 59.2%
- Leather and leather products have higher capacity utilisation whereas in metal products it is only 48.5 per cent
- Regarding percentage of employment, out of 2.15 lakh persons the Chemical industries account for 21.5% followed by metal products 14.6% and mineral products 9.8%

Capital needed to absorb one worker is as follows :

Chemical Industry—Rs. 3,800

Electrical machinery—Rs. 16,200
(the sectoral average is Rs. 8,400)

Districtwise distribution of small industries is given in Table VI at the end of this article. Analysis of the table reveals the following :

- 2/3 of total investment is in three districts (Madras, Chingleput and Coimbatore)
- Chingleput has the maximum investment per unit (Rs. 4.36 lakhs)
- Capacity utilisation is poor in Coimbatore and Madras.

Handloom Industry

There are 5.56 lakhs looms employing nearly 10 lakh weavers which in turn provides sustenance to 30 lakhs persons. Weavers form 6% of the working population. The cooperative movement is

making steady progress. Presently it includes 30% of all weavers. This is expected to be doubled in the next five year period. For performance of the handloom industry (cooperative sector). Please see Table VII given below

TABLE VII
THE PERFORMANCE OF HANDLOOM INDUSTRY
(COOPERATIVE SECTOR)

Year	Number of societies	Member ship (000)	Production Quantity Million metres	Value (Rs. lakhs)	Sales Quantity Million metres	Value (Rs. lakhs)	Exports (Rs. lakhs)
1	2	3	4	5	6	7	8
1973-74	747	158.5	9.61	3,281.0	9.84	2,540.0	1,570.8
1974-75	764	167.02	7.62	3,408.0	6.83	3,834.0	2,000.0
1975-76	790	173.88	7.76	3,161.0	7.04	4,090.0	2,300.0

Tamilnadu has drawn up an ambitious Rs. 14 crore plan to set up a string of industrial cooperatives for handlooms throughout the state in the next five years. The idea is to establish about 150 industrial co-operatives including a few handloom complexes to cover more than 40,000 weavers, who are not owning any looms now.

Under the new scheme production will take place under one roof whereas under conventional cooperatives, weavers normally take raw materials home for weaving purposes.

In another major move, the State Government has asked for Centre's clearance to increase substantially its production of janata cloth in a bid to

provide more jobs. At present, janata cloth production in the State is about 17 million metres a year. This will be stepped up to 42 million metres.

As the Union Government offers a subsidy, production of janata cloth is financially feasible. Yet another plan is to diversify handloom production in a big way to avoid periodic gluts the decentralised industry often witnesses and to take advantage of the Centre's move not to sanction any more capacity in the mill sector. Out of the 5.6 lakhs handlooms in the State, about 20,000 may be asked to produce polyester fabrics. Experimental production has been successful and the response from the consumer has been very encouraging.

Additional emphasis would also be laid on manufacture of two by two and cambric varieties to meet the changing tastes of the customers. Meanwhile weavers using art silk yarn have bitterly complained against the irregular functioning of the voluntary mechanism for supply of the manmade yarn by spinning mills to weavers at regulated prices. Though allotments in favour of weavers bodies have been made under the voluntary scheme, spinners have not supplied art silk forcing the weavers to purchase their requirements in the open market.

Sericulture

This is located in the north western districts. During the last 20 years cultivation has increased from 120 acres to 10,464 acres. Employment is generated for 40,000 persons. Attempt is made to spread this cultivation in Coimbatore,

Dharmapuri, Salem and North Arcot districts. Presently the government supplies 8 lakhs layings, purchases 1 lakh kg. of cocoons valued at Rs. 20 lakhs and produces 12,000 kg of silk per annum. However the silk requirements of the State is about 6 lakh kg indicating a vast scope for development of this industry in the State.

Khadi and Village Industries

Khadi & Village Industries have performed well in 1975-76 crossing the Rs. 3.5 crores. Employment increased from 40,472 to 45,054 with wages increasing from Rs. 94 to Rs. 153 lakhs. Thus the average wage per worker was Rs. 341 compared to earlier Rs. 260.

Performance of the Village Industries is given in Table VIII (bellow)

TABLE VIII
PERFORMANCE OF VILLAGE INDUSTRIES

Year	Number of units Units Societies		Production Rs. lakhs	Sales Rs. lakhs	Employment '000 persons	Wages paid Rs. lakhs
1974-75	308	2,366	1,064.23	1,135.25	220	409.05
1975-76	818	3,047	1,343.03	1,518.45	256	554.56

Source—Khadi and Village Industries Board, Madras

There was significant growth in palm gur, bee keeping, leather and non edible oil. There was a set back in oil cakes. Employment increased by 16.25% but the total wage per employee is still low at Rs. 217 (1975-76).

Coir industry

There are 16 coir industrial cooperatives and a coir school and pilot plant for mattresses. Annual turn over is Rs. 20 lakhs. Eight development schemes with an outlay of Rs. 44 lakhs are under

consideration by Central Government. State government is also thinking of setting up coir complexes, expand marketing organisations and mechanise defibering. This involves a total investment of 53.85 lakhs.

Another view

So far a great deal has been mentioned in favour of small and village industries and appropriate technology. This paper will be incomplete without mentioning something about the other side of the picture. Speaking at the national management convention held recently in Madras, Mr. BL Tandon, Director National Council of Applied Economic Research who is known for his pragmatic approach said :

“Concentrating only on small industry at the expense of the large, will put a skull-cap on our technology—a technological freeze. We have to have a coexistence in a controlled multilevel technological mix—khadi and polyester, bullock cart and Boeing, microwave communications system and the village postman. Side by side with small technology, we need advanced technology into which our small industry will graduate progressively. To make and cheapen products for a billion people soon, we will need mass production at all technological levels. We must therefore maintain our options over a spread of technology which is, in fact, what we try to do, but in fits and starts. We freeze all mill capacities in favour of Amber Charka till we lose our traditional pre-eminence in world markets, and then we permit the installation of automatic looms. Thirty years later, we start the process of restrictions all over again.”

As an encouragement to small industry the number of items reserved for production in this sector has been increased to 500 items. The present trend is “What can be produced by village industries should not be attempted by small industries. What small industries can produce should not face competition from large industries.”

In other words exclusive areas are being earmarked productwise. Commenting on this Shri B.B. Poddar, past President, FICCI made the following comments in December 77. “However I have grave doubts whether high quality goods with economy in costs can be produced in the present condition of the Khadi and Village and cottage Industries which would be widely acceptable in the markets. While the general principle which has been enunciated for the demarcation and reservation of specific lines of industrial groups for cottage, small scale and large sectors is unexceptionable, I personally feel there should not be any statutory reservation, as suggested. No particular sector whether large, medium or small, should be completely barred by statute from producing consumer or any other products if economic considerations would make it suitable for that sector to produce the goods more economically.”

Electronics :

Tamilnadu has no natural or mineral resources but has skilled and intelligent people which is the main requirement for the development of electronics. Since there is 100% electrification in Tamilnadu it is necessary to emphasise that electronics can become a cottage industry as in Japan.

The present global production in electronics is about 100,000 crores. Out of this COMECON Share is 20% and Japan's 14%. Our country's share is a meagre 0.4% (410 crores). As per our perspective plan production in electronics by 1984 is expected to reach 2,000 crores. 50% of this will be in the public sector. The balance Rs. 1,000 crores should be made up by the private sector including the state electronics corporations. The progress in this sector except in a few states like Kerala is not very satisfactory. Kerala has production target of 100 crores (5% of our national target in 1984). This will provide employment to 2 lakhs persons—40,000 directly. Keeping in mind the various advantages, Tamilnadu must aim for a much higher target.

In my paper 'Industrial Perspectives' presented in 1977, I have indicated several steps for the development of electronics in Tamil Nadu. Unfortunately the pace of progress is slow. This causes frustrations and brain drain.

A technological university is expected to come up in Madras this year. Electronics should receive major attention from this university. Simultaneously the state should take practical steps to encourage the growth of more electronic units in the private, public and joint sector.

Outlook

The problems of small and village industries are complex. They have received a great deal of publicity and lip sympathy but there has not been much purposive action and progress. A great deal of hope has been raised by the

Government's plan to organise district industrial centres. Since government servants will be playing a major role in the DIC, the chances are that will become another bureaucratic maze. During the recent seminar on 'Small industries' held at Madras Mr. S Narayanaswamy who has several decades of experience in business and industry made an appeal to government to leave the entrepreneur alone.

Mrs. Barbara Ward, a sympathetic friend of India after analysing our economic problems was forced to say "what irritates me about the situation in India is that the so called experts do not know the national priorities."

What is needed is a balanced approach and this has been very well summed up by the Hindu.

"A modern economy needs a whole range of products as raw materials and feedstock, as consumption goods and for investment. Industries like steel, cement, power equipment and petro-chemicals have vital linkages throughout the economy. To give them secondary attention merely because the plans necessarily have to be large in size and do not provide as many jobs for a unit of investment as small industry, would surely lead to slowing down of economic growth, and then the employment situation would only worsen. If job creation is to be sustained over a period and the jobs are to be anything more than temporary, there ought to be a widening and a deepening of the industrial base. This can be achieved only through an integrated, overall approach."

TABLE I
VILLAGE AND SMALL INDUSTRIES

Sl. No.	1965-66	1970-71	1974-75	1977-78 (likely)
A. PRODUCTION				
1. Cotton Cloth				
i) Handloom (metres)	3,056*	2,280*	2,290*	2,300
ii) Powerlooms (metres)		1,412*	1,678*	1,800
2. Khadi				
i) Quantity (m.sq. metres)	85	57	59	72
ii) Value (Rs. in crores)	26.81	22.85	43.28	64.10
3. Village Industries (Rs. crores)	55.87	85.60	136.31	206.24
4. Raw silk (lakh kgs.)	21.50*	28.40*	29.92	35.40
5. Small Scale Industries value (Rs. crores)	N.A.	N.A.	4,392*	6,700†
B. EXPORTS :				
1. Cotton handloom fabrics and manufactures (Rs. crores)	12.57*	12.40*	107.20*	210.00
2. Silk fabrics & waste (Rs. crores)	2.82*	14.23*	12.66	27.00
3. Handicrafts (Rs. crores)	27.58	80.30	194.38	440.00
4. Coir Products				
(i) Quantity (000 tonnes)	74.23	52.21	42.00	45.00
5. Small Scale Industries	N.A.	171.00	537.90	1,000.00
C. GROWTH OF SMALL SCALE INDUSTRIES				
1. No. of registered units (cumulative lakhs)	1.05**	2.38**	2.20*	2.60†

* relates to calendar year

† relates to calendar year 1976

** includes units also outside the purview of DC (SSI)

N.A. Not Available

TABLE IV
KHADI AND VILLAGE INDUSTRIES
SELECTED INDICATORS OF PROGRESS

Item	Unit	1973-74	1974-75
I Organisation			
i) State Boards	No.	20	20
ii) Registered institutions	No.	681	700
iii) Co-operatives	No.	23,715	23,715
Total		24,416	24,435
II Productive capita (a)	Rs. crores	97.67	104.50
III Production			
a) Khadi (quantity)	lakh sq. mts.	557	592
(value)	Rs. crores	32.72	43.28
b) Village Industries (value)	Rs. crores	122.40	136.31
Total (value)	Rs. crores	155.12	179.59
IV Sales (Rs. crores)			
i) Khadi		45.95	42.01
ii) Village industries		115.64	133.17
Total		161.59	175.18
V Employment (lakhs)			
a) Khadi		8.84	9.78
b) Village industries		9.28	9.82
Total		18.12	19.60
VI Earnings (Rs. crores)			
a) Khadi		17.08	23.32
b) Village Industries		22.16	28.05
Total		39.24	51.37

TABLE V
CENSUS OF SMALL SCALE INDUSTRIES
MAJOR GROUPS OF INDUSTRIES IN TAMIL NADU—1972

Serial Number & Industry	Number of units						Employment Nos.
	1	2	3	4	5	6	
			Fixed assets (Rs. 000)	Working assets (Rs. 000)	Productive assets (Rs. 000)	Installed capacity* (Rs. 000)	Production (Rs. 000)
1. Metal Products and parts (except machinery and transport equipment)		3,610	1,85,544	98,882	2,84,426	7,77,884	3,76,992
2. Basic Metal and Alloys		448	79,041	49,402	1,28,443	5,01,918	2,45,521
3. Machinery, Machine Tools and Parts (except Electrical machinery)		1,186	1,09,388	45,756	1,55,064	2,14,152	1,48,548
4. Transport equipment and parts		698	59,125	34,090	92,215	1,59,105	1,08,642
5. Leather and leather based industries		331	35,589	77,565	1,13,154	7,11,336	5,52,641
6. Chemical industries		1,608	99,794	76,729	1,76,523	6,22,423	4,23,700
7. Hosiery and garments		1,478	79,268	52,854	1,32,122	6,98,327	3,63,210
8. Food products		740	47,360	22,051	69,411	3,85,071	2,12,323
9. Beverages		67	3,144	589	3,733	5,920	3,322
10. Electrical machinery apparatus and parts		456	63,655	58,347	1,22,002	2,57,052	1,87,723
11. Rubber & plastics		903	76,839	31,633	1,08,472	2,72,461	1,45,134
12. Mineral products		945	79,041	25,137	1,04,178	1,67,235	99,056
13. Wood products		1,263	24,958	16,456	41,414	93,933	52,224
14. Other manufacturing industries		561	37,524	19,439	56,963	2,55,530	99,580
*Total (manufacturing industries)							
		14,294	9,80,270	6,08,930	15,89,120	51,22,347	30,18,616
15. Job work (I and II types) repairing, servicing etc. units.		1,708	1,31,273	43,230	1,74,503	3,17,661	1,99,165
Grand Total		16,002	11,11,543	6,52,160	17,63,623	54,40,008	32,17,781

*excludes job work other than I and II types
(Source—The Director, Small Industries Service Institute, Madras-32.)

TABLE VI

DISTRICTWISE DISTRIBUTION OF SMALL SCALE UNITS IN TAMILNADU—1972

Sl. No. and name of the district	Number of units	Fixed assets	Investments (Rs. 000) Working assets	Productive assets	Installed capacity (Rs. 000)	Production Value (Rs. 000)	Employment numbers
1	2	3	4	5	6	7	8
1. Coimbatore	2,767	208,731	136,442	345,173	12,57,378	652,174	32,761
2. Madras	3,009	256,090	118,773	374,863	11,72,693	536,671	32,567
3. Chingleput	960	251,935	166,919	418,854	758,481	477,780	28,432
4. North Arcot	875	51,339	59,453	110,792	558,731	449,663	14,502
5. Ramanathapuram	1,472	86,676	51,313	138,009	395,994	233,595	32,341
6. Madurai	1,581	69,299	35,330	104,629	340,883	212,335	13,408
7. Salem	1,139	47,050	19,326	66,376	246,120	113,479	10,340
8. Tirunelveli	1,004	34,805	18,469	53,474	191,316	109,902	18,335
9. Tiruchirappalli	1,045	42,680	19,265	61,945	172,577	86,484	10,295
10. South Arcot	462	18,832	11,535	30,767	129,111	83,939	3,452
11. Kanyakumari	328	9,997	3,092	13,089	130,769	69,484	9,867
12. Thanjavur	1,012	25,830	8,837	34,667	86,119	46,899	7,153
13. Dharmapuri	335	6,995	2,318	9,313	21,215	11,078	1,598
14. Nilgiris	13	1,204	668	1,872	3,144	1,851	138
Total in the State	16,002	11,11,463	651,740	17,63,623	54,62,131	30,85,334	215,182

*Exclusive job work second type (Source : The Director SISI Guindy)

Summary of Discussion

In the discussion of the paper at the Seminar held in the Seminar room of the Institute on Thursday, 27th July, 1978 under the Chairmanship of S. Ramanathan, the Chairman referred to the rapid growth of poverty and unemployment. In this connection he wanted to find out the feasibility of producing mass goods by masses. Any programme meant for the solution of these problems must understand the realities of life and people's reactions to the new methods of production. The neglect of human factor was the main cause for the failure of community development projects of the fifties and this fact should be borne in mind in promoting small scale industry in the country.

The author presenting the paper stated that there was much talk about poor people but very little was done for them. He stressed that the primary concern should be an improvement in the quality of life rather than a mere increases in the G. N. P. and per-capita incomes. For instance, although the promotion of small scale and rural industries is meant to benefit the poor, there are now powerful lobbies associated with these industries who stand to benefit by the state sponsored promotion programmes. Similarly, although banks are being asked to show special concessions to small industries, in effect they are helping only large industries because of their capacity to repay the amount without any difficulty. Small scale industries are unable to repay the amounts borrowed and there is no proper maintenance of accounts by them, either. Because of this even sick units are also not getting any help from the banks for their revival.

In Tamil Nadu, there is tremendous potential for the development of electronics but the state is lagging behind in this respect. The Government cannot change the face of poverty by just setting up an industry in a backward area. The author expressed the hope that the Janata Government committed to the speedy development of small scale industry in the country would bring about some change for better in near future.

During the discussion of the paper one of the questions that came up was whether it is necessary to have the goods for mass consumption produced by the masses themselves or whether production should be based on cost conditions and the optimisation of scarce resources irrespective of whether the production process is contributing directly to increased employment. In response to this question it was pointed out that the production and distribution aspects are intrinsically interrelated and hence it is not possible to claim that a cost reducing production pattern would also have the desired distribution effect. Hence to think of production solely in technical terms and of distribution in social terms is misleading. It is necessary to decide from whose perspective process of production and distribution are being viewed. In our economy, the earnings and employment of the people depend on the product mix and technological mix used in the production process. Economy has already a slant towards the production of certain commodities which have higher demand in the market. Those who have surpluses invest their money in the production of these goods because returns are high. People who

demand these goods are also the people who are having higher incomes. The increase in incomes will take place in a very small sector and there is no short supply of goods demanded by this sector. And it is these people who determine the kind and type of goods that will be produced in an economy. In this process, only capital intensive industry gets encouragement at the expense of labour-intensive small scale industry. Even the production of goods through small scale industry is also geared to benefit a few large industries. And consequently,

it is those large industrial houses which reserve certain commodities to the small scale industry rather than the politicians and the government. While promoting small scale industry, marketing aspects should also be taken into account. Government should also give more emphasis to those village industries apart from Kadhi which generate more employment opportunities and provide earnings to the poorer sections. Finally, to solve our problems, by encouraging small scale industry planners should understand the rural realities of life.

Research Orientation of the Institute :

A Personal Perspective*

C. T. KURIEN

This Note is essentially a personal reflection on some of the general issues of research into social problems and an attempt to see the future role of the Institute in that context.

Research usually is considered to be part of the professional activity of the academics, especially those functioning in institutions of higher learning. In recent times the world over, and in our own country also, there has been a tremendous expansion of higher education and of institutions related to it. It is well known also that when there is large scale expansion there will also be a tendency for certain kinds of division of functions to develop. Research as a specialised activity concentrated in, although not confined to, separate institutions set up to pursue it can be considered to be part of that process of expansion and diversification of knowledge. This is true to some extent and a corollary of it is that Institutes like ours must maintain and reinforce links with other institutions of higher learning, universities and colleges in particular.

But it is important to examine whether the rationale of specialised research agencies and institutions, especially those concerned with research on society, should be sought solely in the expansion, diversification and sophistication of knowledge. In other words, should research institutes attempt a mere extension of knowledge accompanied by the sophistications that may go with it, or should they have a qualitatively different orientation to research? This is the most important question in defining the nature of activities of Institutes like ours. In attempting an answer to this question it may be recalled that the social philosophy of the past century accompanied by the traditions of an even earlier period had led to those pursuing knowledge to become somewhat isolated from the rest of society. Detachment from the pressing problems of the day was considered to be one of the hallmarks of the scholar. The community of scholars was to be protected by themselves or by others from the mundane issues and mounting pressures around them so that they could concentrate on the pursuit of knowledge. In this process knowledge itself came to be

*Comments are welcome.

confined to the halls of learning and books and libraries came to be the chief sources of knowledge. Protection provided to the scholars was certainly a source of encouragement to the best among them to get on with their job, but it also led to an unhealthy, and in the final analysis untenable, isolation of scholars and scholarship from the rest of society. The isolationism that developed was true about practically all aspects of learning, but it became more pronounced in the case of research which became still more specialised and hence still more exclusive activity even within the general area of learning. The background we are dealing with, therefore, is one whereby research was twice removed from the normal life of society.

The isolation of learning and research from society has had a very pernicious impact on disciplines purporting to study society and social issues. In the case of the physical and natural sciences the environment of social detachment could have enabled the scholars in these areas to turn more intensively into their own fields of study, and thus become more creative. But in the case of the social sciences detachment from society cut them away from their areas of enquiry also. Thus a great deal of the "development" of the social sciences in the past couple of centuries or so, particularly since the middle of the nineteenth century was almost completely unrelated to their true subject matter, viz., the issues of the actual society.

One may argue that a science detached from its subject matter cannot really progress, and this is true. And so it is something of a paradox that the social sciences (particularly economics) have

witnessed a prolific growth in the past century. How does one explain this puzzle?

The answer to the puzzle is to be seen in the recognition of the fact that intellectual activity has an amazing capacity to create and recreate its own worlds. In our age of many spectacular scientific inventions it is all too easy to forget that the greatest inventive power of man is the power of the mind to create worlds and even universes. This creativity of the mind is both the greatest asset and the subtlest danger of all intellectual enterprises. It is an asset in so far as it enables the mind to make sense of the world around, to understand it and interpret it. In the realm of research the creative fecundity of the mind is seen in the power to abstract, to distinguish between what is important and unimportant, to inter-relate, and thus to arrive at what is the essence. It is through this process that concepts are formed, constructs are designed and theories are developed. Without such creativity there is no research at all in any meaningful sense. However, this creativity is potentially dangerous as well because there is little to prevent the process from becoming self-contained and self-perpetuating. It can then become the source of the proliferation of knowledge, but a knowledge divorced from reality.

The world of the scholars' making has many distinguishing characteristics. Because it is built on abstractions and on created concepts it is essentially a logical world. And it is in the essence of logic to crave for completeness, for the concepts derive their meanings only in their interrelationships with other concepts and hence there is a natural propensity for the world of the scholar to

become complete in itself in terms of its internal-inter relationships. The primary concern in the intellectual world thus becomes that of the internal consistency. In a logical world there are many rigorous procedures to ensure internal consistency and hence scholarship soon comes to be identified with the rigorous search for consistent procedures. In the course of such a quest more and more powerful tools of analysis are developed which open up another area for further scholarly endeavours. The perfecting of tools and the designing of new tools to deal with old problems engage the attention of another group of savants. Even the real world is not altogether ignored. Ways are designed, including "empirical studies" to accommodate in a Procrustean manner the real world into the world of intellectual imagination.

When this is what learning and research is all about, it will be meticulously, rigorous, increasingly precise and quantitatively oriented (for quantity is more conducive to rigour than anything else) highly sophisticated and substantially multiplicative. The knowledge explosion of our times is to a large extent the natural result of these tendencies and bears their stamp quite clearly. There is one more aspect to the phenomenon that must be noted. Like many other areas of life in the contemporary world, scholarly work is also becoming increasingly internationalised. Professionals in one part of the world communicate, in fact can *only* communicate, with the other professionals, and between professionals national boundaries and cultural peculiarities do not become major barriers. The only barriers that stand between professionals are the ones that they themselves set up—the arbitrary but extremely thick and strong disciplinary

boundaries which also proliferate as knowledge proliferates.

Where the purpose of research is seen to be primarily that of the personal and professional advancement of the scholar or even that of making a contribution to the ongoing process of the expansion, diversification and sophistication of knowledge, all these, including the rigidly narrow specialisation, may turn out to be of great advantage. But if the subject matter of the social sciences is indeed the real social world and not the simulated world of the 'scientists' and if the primary task of research is to bring knowledge to bear upon real and complex social problems, the present ethos of the academic world may be a high hurdle indeed. The choice of research problems may be decided more in terms of their international acceptance than in terms of social needs. Worse still, the analysis of chosen problems may be circumscribed by the available tools of analysis whether or not they are the kinds needed for a proper understanding of the areas of concern. This sort of situation is not peculiar to our country or merely to the poorer parts of the world where admittedly there are many social problems that remain glaringly beyond professional concern and competence. It is a world wide phenomenon recognised and lamented by scholars who are gradually becoming aware of the futility of much of what goes on in the name of science and scholarship. Leontief's words are worth reproducing. After admitting that many who play the game of 'scientific' economics have serious doubts about its rules, he comments on the manner in which new social problems are being dealt with: "In an almost Pavlovian reflex, whenever a new com-

plaint is raised the President appoints a commission and the universities announce a new course . . . The trouble is caused, however, not by an inadequate solution of targets, but rather by an inability to hit squarely any one of them. The uneasiness of which I spoke of before is caused not by the *irrelevance* of the practical problems to which present day economists address their efforts, but rather by the palpable *inadequacy* of the scientific means with which they try to solve them". This admission by one who spent an entire lifetime producing and perfecting scientific tools of analysis is of special significance. But he goes further: "I submit that the consistently indifferent performance in practical applications is in fact a symptom of a fundamental imbalance in the present state of our discipline. The weak and all too slowly growing empirical foundation clearly cannot support the proliferating superstructure of pure, or should I say, speculative economic theory."

Theories become purely speculative and tools of analysis become palpably inadequate when logic, instead of reality, becomes the basis of the science. This is precisely the situation of many of the social sciences, particularly of the more "advance" among them such as economics.

It is in this context that one must look for a new orientation to learning and to research. The main thrust of that new orientation is to break the isolation of the science—and of the scientists—from the social reality that surrounds them, and to change the course of the development of the science which is moving very rapidly, but on the wrong track.

I believe that the role of Institutes like ours is to make a decisive, though possibly modest, contribution in this creative but difficult area. Our work, therefore, will have to have a qualitative difference, some aspects of which I would like to touch upon.

In the first instance it must be noted that the difference consists of not merely in moving into applied research from what is frequently referred to as pure research. If it can be shown, as I have tried to do, that what is usually called 'pure' research in our disciplines at least, is terribly impure and corrupted that sort of dichotomy ceases to have much meaning.

The difference is not between 'policy-oriented' research and 'fundamental' research either, for although policy issues will certainly come within the purview of the kind of research postulated, what is required is *more* and not less fundamental research.

Wherein, then, does the difference lie? The following aspects may be listed:

I. The choice of areas for study :

Traditionally, research problems come up from within and in relation to the professional discourses and debates. It is to the bibliographies and footnotes in books and professional journals that one usually turns in search of topics for research. This must certainly continue, but the choice of areas of study must also be related to discussions in a wider social frame work. Social scientists must listen to a much wider cross section of society—administrators, ordinary workers, policy makers, other

commentators on social problems,—to decide what are the social issues on which factual evidence, clarity of thought and precision in analysis are required.

2. The purpose of research :

When the academic community is generally detached from the rest of society, the purpose of research is to come to have greater understanding of the problems studied either to satisfy intellectual curiosity or at best with the hope that somebody else will pick up the research finding and put them to use. But the understanding of a problem can only be one step in the social process. Where concrete social problems are taken up for study the purpose must also be to see that a socially satisfactory solution is found through bringing about necessary changes. Hence if the aim of social science research so far was to understand society, it must now become to change society.

3. The procedures of research :

In the context of a problem-oriented approach whose purpose is to solve problems and thus change society, the rationale of research, especially fundamental research is to be seen in the need to move from the recognition of a particular problem to an understanding of it within a wider context or in terms of its essence. If the concern for particular problems is not to lead to isolation and to consequent misrepresentation, there must always be search for wider frames of social analysis. The particular and the general will then become mutually replenishing leading to a better understanding of both. In the area of social sciences the dialogue between the particular and general is not common.

One reason for this is that the tools of analysis are such that they are geared to a study of either the particular and proximate or the general and epochal. Hence in a new orientation to research it is necessary to be engaged in the quest for broader frames and more amenable tools of analysis. In this process it will also become necessary to transcend the conventional disciplinary boundaries.

Against this background of the tasks of the Institute one may also outline the nature of its functioning.

The tasks described above are in fact so vast and deep that our Institute by itself or even a chain of similar centres cannot aim to achieve them all in any foreseeable future. But the function of the Institute is not to become a sole agency attempting a new and difficult task. Its function is primarily two fold : first, to be conscious of the new objectives and to concretise them in its own work; and second, to serve as a catalyst or service station to other agencies in and sections of society engaged in similar pursuits. In this sense the functioning of the Institute can be thought of as essentially 'relational'. In its functioning the Institute must try to relate itself to and interact with the following :

- i. Academic institutions, especially Universities, Colleges and other research institutes with similar interests.
- ii. Institutions and agencies directly concerned with social problems although not explicitly involved in the study of society, as for example, medical and engineering institutions.

- iii. Institutions and agencies directly engaged in social activities, as for instance, trade unions, voluntary agencies, chambers of industry and commerce.
- iv. Policy formulating and decision making agencies in society such as government and its many administrative departments and agencies, banks, newspapers and political parties.

Interacting with such institutions and agencies the Institute will be able to enter into a variety of social problems to

understand the dynamics of social change and to make its contribution in directing change along desired lines.

The internal set up and working of the Institute also must be geared to achieving this objective. Administrative functions must be reduced to the minimum and the hierarchical pattern of functioning must be avoided. And while individual members of the Institute will, out of necessity, continue to be specialists in different aspects, within the Institute also there must be frequent interactions so that the new ethos becomes a reality.

Book - Review

“Rotation of Crops in Thanjavur District”

by Dr. M. SRINIVASAN

The transformation in the crop pattern of Thanjavur district has been recognised for long as one among the dominant components not only to diversify the agro-economic base but also to restructure the socio-cultural attitudes, values and norms of this time-honoured district. However, the uniqueness of the district, its peculiar agro-climatic complex and the institutional orientation did not lend itself for dynamic and positive changes in the crop systems and patterns. The efforts made since Independence to diversify the crop system seemed to yield to certain perceptible changes with the introduction of ADT-27 kuruvaï paddy at the instance of the ‘Package Programme’ ably supported by research and organisational efforts, including credit and marketing services. The pervasive awareness generated in the minds of farming community of the potential possibilities for increased coverage under kuruvaï, combined with higher productivity was considered the real ‘peace-setter’ and ‘path-finder’ for introducing of many such innovative changes in Thanjavur agriculture. The response of the farmers of all categories to modernise agriculture became much more pronounced and positive and Thanjavur district was often referred to as a model for agricultural progress.

Viewed in the light of developmental philosophy, what has happened so far can possibly be stated as the *first* and most *important phase* in the history of agriculture in Thanjavur district. What is in the process for the ‘next phase’ will determine the capacity of this district to emerge as a leading partner in agricultural/rural development. The key for initiating such a major change in a predominantly agrarian economy revolves around *firstly* on the technical possibilities for ‘crop rotations’ in the narrow sphere of crop husbandry. What is to be set in motion in the ultimate analysis is transformation in the ‘farming system’ involving animal husbandry dairying, poultry sericulture, pisciculture and the like enterprises with forward and backward linkages with rural industries and responding to economic stimuli of market forces. Considered in this perspective, the publication on ‘Rotation of Crops in Thanjavur District’ ably fulfills the first dimension and is a welcome addition. There are very many study reports research bulletins and publications about Thanjavur district and the one that indicates the path of what is to be done is more relevant at the current stage of development and this publication is the one in the series on agricultural development.

The book has seven chapters and the objectives are clearly spelt out in the Introductory Chapter followed by an outline of agro-economic profile in Chapter 2. In Thanjavur macro and micro-level planning for efficient water use is one of the critical areas and hence a subject matter area of intense and heated discussions between farmers, irrigation managers and policy makers. There is a Water Technology Research Centre and Water cum Social Conservation and Management demonstration pilot project areas, whose main objectives are to perform research and demonstrate the research results for large scale adoption and to introduce changes in crop patterns to maximise output and incomes. Inclusion of this information along with the crop rotations followed in the State Seed Farms, which are also model demonstration centres, could give the reader a better comprehension of the profile of the district.

In page 9, para (1) it is stated that "It is felt that area under kuruvai would not be affected in view of the likely late release of Mettur water for irrigation" But this is not the actual situation. As shown in table (p 15) the area under kuruvai in 1974-75 was lower by 43,000 acres and more due to late receipt of water, viz., by the third week of July 1974, and volume of release was also much less (p 8). The one another reason may be in incidence of Statewide drought conditions in 1974-75. In the same page ADT-3, ADT-20, ADT-8,

CO-25, GEB-24 and the like paddy varieties are observed as non-descript varieties, but they are not so. Each of these varieties have all their characters and potentials specified and then approved by the variety Release Committee prior to their use. In p 17, it is stated that a "study of yield of paddy per hectare belies the hypothesis that yields ought to go down due to monocropping year after year". But in the table (p 16) only area in *acres* and *production* in tonnes are furnished and not per hectare yields. Though the statement may be plausibly correct, the supporting data lack validity in the absence of use of adequate tools of analysis.

In p 26 under "Changes in Cropping Pattern" the results of analysis of all the crops grown in the district with their locational concentration have been summarised but the data needed to go with the argument is wanting. Probably the author has attempted to specify different cropping regions in the district as had evolved over years of experience to develop an understanding of the possibilities for introducing changes. In p 28 para (3) it is made out that "it will be too much to expect Thanjavur cultivators to switchover to rotation of groundnut, maize-gingelly or sugarcane-green gram, blackgram displacing paddy in entirety". A change in crop system or pattern does not mean total rejection of one or more crops for another set of crops, but growing location-specific crops consistent with efficient use of resources to give high

outputs and incomes. A glance through crop statistics, particularly in New Delta area, will show the emerging changes and the spontaneous response of the farming community to innovations. One would observe that it is the dimension and characteristics of the various constraints that are impeding change-introductions and they are relatively less rigid in the New Delta thus favouring a faster change.

Chapter 3 summarises the major findings of the Farm Management Studies in terms of costs and returns in respect of paddy alone, but is silent on other crops and their economics. Using the data, Cobb Douglas production has been fitted for ADT-27 kuruvai CO-25 samba and CO-25 thaladi in pp. 48-52.

In Chapter 4, the author has attempted to bring to focus the findings of three studies done in 1969-72 and 1974 using linear programming techniques. The areas of the study are confined to four development blocks viz., Pattukottai, Madukkur, Manargudi and Mayuram. The results have clearly established the scope for introducing major crop changes in the district, though under certain assumptions. Income increases and employment creations and better use of available resources had been invariably shown in all the optimum plans. The chapter is the longest one and this is due to repetition of certain basic theories and assumptions underlying the linear programming model. Restricting to the

appropriate segment of investigations and summarising the overall practical utility of such tools of analysis could have enhanced the value of the Chapter.

The heading for the Chapter 5 is Cost Benefit Ratios of Various (not varying) Crops and Crop Rotations. But this is essentially confined to kuruvai paddy (p. 127) and sugarcane (pp. 129-130). With respect to other crops suggested for rotation, no mention has been made except some broad indication in the last para of the Chapter. In Chapters 6, and 7 the author summarises the findings of the research studies and focusses the attention on provision of infrastructural facilities complemented by production incentives and extension services to motivate the farmers towards adopting the recommended changes. The one problem in Thanjavur is the paradox of relatively high level land use with poor overall employment extreme scarcity of off farm labour in one season and total idleness in another season characterise the employment situation in Thanjavur. This is due to the rigidity in the specificity of cropping seasons. To even out the peaks and troughs in resource use, there is need to obliterate the crop seasons by introducing new crops and farming systems. This could come about by intense research accompanied by structural changes in land development, soil-cum-water management coordinated with appropriate policy instruments to motivate such changes. It is hoped that this publication will be a pioneering effort in this direction.

Certain other improvements would relate to editing. Appendix II as stated in p 6 and Appendix I as stated in p 10 are not found. Tables have not been numbered. Spelling mistakes are fairly high. Uniformity has not been maintained in specification of units, eg., acres, and hectares, cm and mm, and the like which frequently appear in the body. Similarly for the same word or groups of words capital letters in some places and lower cases in some other places have been used. Sources for information and date have not been mentioned,

and even where it is shown particulars of year and the volume in which it was published are missing. The source mentioned in p 19 is probably not correct. The fertiliser consumption in Thanjavur district in 1973-74 shown in p 19 is at variance with p 10 for the same year. In p 24 sowing and harvesting periods have not been properly aligned. Tables in pp 33 to 46 have to be reorganised to be consistent with the matter presented in the body.

P. K. AIYASAMY,

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III. Future Publications

25. M. Srinivasan: Economics of Sugarcane Cultivation in Tamil Nadu.
26. V. J. Ravishankar and K. A. Zachariah:
Educational Profile of Jobs in Tamil Nadu.

* MIDS-ITES publication printed by the Government Press, Madras.

MADRAS INSTITUTE
OF
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The Institute was founded by Dr. Malcolm S. Adiseshiah in 1971 and was reconstituted in 1977 as a National Research Institute within the framework of the Indian Council of Social Science Research, New Delhi.

The aim of the Institute is to contribute to the economic and social development in Tamil Nadu and India.

The activities of the Institute are :

- Research leading to M. Phil and Ph.D. Degrees;
- Studies and action-oriented research in micro-development problems;
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