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Dr. Punjab Rao Deshmukh,
Founder President

KRISHAK SAMACHAR



OLDEST AND WIDELY CIRCULATED FARM JOURNAL

- MASSIVE IRRIGATION PLAN
- BROWNING OF GREEN REVOLUTION—RANDHAWA
- NATION COMMITTED TO CHILD CARE —RAJ NARAIN
- 2810 crores WEST GERMAN AID SINCE 1957

Photo showing Inaugural session of International Pediatrics Congress inaugurated by Shri Raj Narain, Union Health & Family Welfare Minister (5th from the left) and Shri Brij Lal Verma Union Minister of Communication is seen next to Shri Raj Narain.



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CONTENTS

Editorial	3
GOVERNMENT POLICIES/Massive Irrigation Plan	4
Nation Committed to Child Care	5
Need for Asian self-reliance	5
No return to rice Zones	7
RESEARCH NEWS	
Browning of Agriculture	8
Crop Insurance—under Govt Study	11
Wheat output can rise to 50 million tonnes	12
Poultry disease diagnosis by post mortem	14
FARMERS—BANKING AID	
Bank of Broda's new Rural Scheme	15
Farmers and Agricultural Universities	16
INTER GOVERNMENTAL COLLABORATION	
2810 crore West German Aid since 1957	
Bharat Krishak Samaj News	19

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The views expressed in this issue are not necessarily of the editor and publisher.

Irrigation Plan

The Government's plan to step up the pace of irrigation programme by 50 per cent is very welcome. It will help to bring under assured irrigation 17 million hectares in five years' time. This will help in the increased production of agriculture. This will also reduce our dependency on monsoon.

Both major and minor irrigation projects are necessary. But considering the huge investments required it would be worthwhile to take up minor irrigation schemes on a larger scale. These schemes need small investments and will not be a big strain on the Government.

Proper utilization of the irrigation potential is also very important. Most States are not prompt in using the facilities. The Ministry of Agriculture and Irrigation should monitor the implementation of the programmes and their proper utilization. This is a must. The State Units of the Bharat Krishak Samaj should also assist the State Governments in proper utilisation of the irrigation potential created.

Browning of Green Revolution

Dr. M. S. Randhawa, former Vice-Chancellor of the Punjab Agricultural University has brought out very clearly the problems of the farmers, mainly the price of inputs. He has suggested certain measures and these require Governments very urgent attention. We are sure the Central Government and State Governments will take urgent steps to reduce the direct and indirect taxes on inputs.

Rural Child Welfare

The Union Minister for Health and Family Welfare Shri Raj Narain has stated that nation is committed to child care. Out of 228 million children under 14 in India (1971 census), 186 million live in villages. As such the Governments programme will help our farmers children more. Bharat Krishak Samaj and the Bhartiya Grameen Mahila Sangh should cooperate and involve fully in these programmes and help in building our new generation for a prosperous India.



Chief Editor

Massive Irrigation Plan Rs. 1,000 Cr. Outlay for Current Year

A massive outlay of Rs. 1,000 crore has been provided for major and medium irrigation schemes during the current year for creation of a potential of 1.4 million hectares.

The outlay for creation of a potential of eight million hectares in the next five years for being spent on major and medium projects, has been proposed at more than Rs. 7,000 crore, according to the Union secretary for irrigation, Mr. C. C. Patel.

Looking to the needs of the country, the entire water resources available will have to be developed for irrigation in the 20 years or so. For this purpose a national plan for providing irrigation facilities, keeping in view the needs of drought-prone areas and the tribal and backward areas needs to be prepared. This aspect is under active consideration of the Central Government and studies of drought-prone areas have already been taken on hand.

The programme presently launched by the Government is the largest ever undertaken or accomplished in any country. Such a massive programme is fully justified by the needs of our country regarding the development of rural areas and agricultural production.

Two-pronged strategy is being resorted to for creating additional potential of 17 million hectares in the next five years. First, the implementation of ongoing major and medium projects will be expedited and new projects taken up for adding additional irrigation potential.

Secondly, the efficiency of the irrigation system is proposed to be improved and for this purpose a massive modernisation programme has been undertaken. It is also proposed to prepare systematic programmes for operation of major irrigation system and to monitor them. The progress of implementation of on-going schemes is proposed to be reviewed from time to time and monitoring units have been set-up at the Centre. The state governments are also setting up similar units at project-level and state-level.

It is proposed to work out implementation strategy for each year so that the inputs needed such as finance, manpower resources, materials and equipment are made available and the project implementa-

tion does not suffer for want of advanced planning. Quality and cost control arrangements are also proposed to be introduced in a systematic manner.

State Governments have been advised to continuously update the estimates so that cost escalations do not create surprises. It has been decided that the command area development works which comprise engineering works beyond the given outlet and serve an area of about 25 to 40 hectares each are completed soon after the irrigation potential is created. This comprises field channels, land-levelling, field drains and other infrastructural works.

According to the plan, minor irrigation programme will also receive a big boost in the next five years. A large programme of modernisation of minor works, particularly in the Surface Water Scheme, has been proposed to be taken up and more efficient water management practice would be introduced for increasing the area under irrigation. Area plans for development of minor irrigation schemes is proposed to be prepared as part of the total plan for irrigation development of the region. Co-operative structure for increased financing of the ground water schemes is proposed to be improved, particularly in regions like UP and Bihar where the groundwater potential is very high. The multi-purpose benefits of water development in the long run would be irrigation, flood control, power generation and navigation.

Meanwhile, the Planning Commission has cleared the Pench irrigation project in Maharashtra. The estimated cost of this major irrigation project is Rs. 40.69 crore.

The project envisages construction of storage-cum-diversion dam at Kamtikheri across Pench river to utilise the tail-race waters of Pench hydro electric project.

On completion, the project will irrigate an area of 74.670 hectares per year. In addition, it will provide 125 cusecs of water for Nagpur city water supply and 75 cusecs for the Moradi thermal station.

Nation committed to child care

Shri Raj Narain

Union Minister for Health & Family Welfare

The 15th International Congress of Paediatrics, the biggest ever meeting of doctors held in the country was opened by Union Health Minister Shri Raj Narain on 23rd Oct.

The theme of the seven-day conference, being attended by nearly 4,000 paediatricians from India and abroad, has a Sanskrit saying as its theme: "Breast-feeding with love leads to better child health."

Opening the Congress at the Talkatora stadium, Shri Raj Narain spoke of India's commitment to promote the health of children as part of the family welfare programme. "We firmly believe that if the children born are healthy and suffer less from diseases, the people will be willing to limit their family size on a voluntary basis."

He wanted doctors to be better trained in child health to reduce child mortality in the country.

Quoting statistics, Shri Narain told his audience that infant and pre-school mortality was "very high" in India. About 8 to 10 per cent of the deaths could be prevented if children were immunised against communicable diseases. Thirty per cent of the deaths, according to the Health Minister were due to pneumonia. Another 20 per cent die of diarrhoeal diseases. Malnutrition takes a toll of about 30 to 40 per cent.

He felt the public health system alone would not be able to reduce the mortality rate. There was need for an overall economic development. The Government had, therefore decided to increase rural employment to help the population earn more.

Shri Narain said that the Government was investing "considerable resources" in child health and

welfare and would welcome international co-operation in this field. "Your deliberations and strategies for child welfare would be of special interest to us," he told the paediatricians.

Prof. I. Dogramani President, International Paediatrics Association referred to the controversy about holding large conferences and said. "They have their usefulness." In addition to their scientific value they bring paediatricians from different parts of the world together and help them to get a close look at the host country, he added.

He urged the delegates to learn the Ayurvedic system of medicine which according to him, could be of great importance to contemporary medicine, particularly for the treatment of chronic diseases.

Prof. N. S. Tibrewala, President of the Congress warned against the introduction of large-scale sophistication of paediatrics being tried out at each and every centre. "We must lay down our priorities. We must concentrate on the eradication of malnutrition, infectious diseases, respiratory and other infections which account for a significant percentage of child morbidity and mortality in the developing countries."

"For these countries our main stress should be on preventive measures: on improving nutrition, personal hygiene, environmental and public health so as to reduce the load on curative services," he suggested.

Mr T. H. Gunaratine, Regional Director, WHO, said that despite major advances in science and technology, it was sad that a majority of children had not benefited from them.

AGRI-EXPO DARSHAN

The farmers will be treated as V.I.P. in AGRI-EXPO exhibition taking place from November 13 to December 13, 1977 at Pragati Maidan, NEW DELHI. Railway concession of 50% is given for a batch of 20 farmers. Their board and lodging will also be arranged for a few days. Please contact the Director of agriculture or your nearest district agricultural officer for details.

P.M. : Need for Asian Self-Reliance

THE Prime Minister, Mr Morarji Desai, emphasised the need for Asian countries reducing their dependence on developed countries by coming together closely and helping themselves much more than was the case at present.

Opening the third Asian Conference on Agricultural Credit and Cooperation and the first general assembly of the Asian Regional Agricultural Credit Association, Mr Desai said, "It is in our common interest that we get together closely, exchange out experiences and evolve suitable remedial measures. We have more to learn from one another than from other countries who are already well developed."

The five-day conference attended by representatives from Asian countries was intended to exchange ideas on developments in the field of agricultural credit and to explore new ways of achieving closer collaboration between credit programmes and rural development.

The Agricultural and Irrigation Minister, Mr. Surjit Singh Barnala, and the Finance Minister, Mr H. M. Patel, spoke on agricultural scene in the Asian region and laid stress on adopting appropriate strategies to improve economic condition of the rural poor by checking growing inequalities between the rich and the poor peasants.

Mr Desai also gave an idea of socio-economic, inequalities faced by rural population and suggested that the development strategies of Asian countries should be focussed on the underprivileged sections of society and directed towards their welfare.

Such strategies, he said, were necessary because problems of low per capita income and poverty were common to many Asian countries.

In this connection, Mr Desai referred to Mahatma Gandhi's dream of rural civilisation and said that a large number of small and marginal farmers, improvised artisans and landless labourers should not be taken as a liability but should be considered as and converted into national economic assets. "With adequate purchasing power, they will, in fact, provide the stabilising economic base for supporting industrial growth. It is the lack of purchasing power which leads to the strange situation of poverty in the midst of plenty. This is also the root cause of the exploitation of the developing countries of the Asian region through adverse terms of trade in agricultural produce," he remarked.

It was in this context that the government of India had committed itself to the policy of comprehensive rural development with accent on the rural poor and the progressive realisation of their prosperity, Mr Desai said.

This approach of rural development encompassed production aspects in the fields of agriculture, animal husbandry, forestry, fisheries, dairy poultry and reorganisation of cottage and village industries.

Mr Desai said that apart from giving opportunities of employment to the rural population, India had also to tackle the broader question of providing public service and basic amenities in the villages. The problem of serving five lakhs and fifty thousand villages with a population of more than 400 millions no doubt posed a gigantic task of planning and administration but it had to be faced if the country was to realise gradual progress towards a welfare state.

MARKETABLE SURPLUS

The Prime Minister also referred to the problem of agricultural credit, basic need of the rural population. In this connection he drew the attention of the delegates to several problems like little marketable surplus, lack of holding capacity and the phenomenon of distress sales at harvest time faced by small farmers who were also unable to go for high-cost technology and capital intensive agricultural practices.

These and other problems were so complex that credit institutions by themselves would not be able to find solutions to them. Other institutional arrangements and administrative support would be required to enable the weaker sections to make effective use of credit.

The Asian countries would have to take all these factors into consideration while framing development strategies.

The Agriculture and Irrigation Minister, Mr S. S. Barnala, called for structural changes in the institutional framework. The most important pre-requisite was the establishment of integrated credit-cum-service system at the base level. Urgent measures were also necessary to enrol weaker sections of the community as members of co-operation credit institutions and to provide adequate representation to them in the board of management of such institutions.

It was also equally necessary to see that inputs, marketing facilities and extensive services were available to small farmers at places within easy reach, he added.

Mr Barnala told the delegates that core of India's next five-year plan would be agricultural and rural development and the government was proposing to double the question of agricultural credit availability within three years.

The Union Finance Minister, Mr H. M. Patel, referred to the important role of irrigation in agricultural development and said the government was stepping up efforts to bring about four million hectares of additional land under irrigation each year.

This, he said, would be virtually double than the present annual rate of two million hectares.

Similarly, supply of fertilisers, pesticides and other essential inputs would also be stepped up.

Mr Patel estimated the agricultural credit needs of India at around Rs. 30,000 million a year. Since the cooperatives were able to provide hardly one-third of the needs, major efforts would have to be made in the coming years to augment resources at the disposal of credit institutions.

He also spoke on the need for reorganisation of agricultural credit societies and said the Reserve Bank had advised state governments to undertake the reorganisation of large number of primary societies so as to convert them into a fewer viable societies.

NO RETURN TO RICE ZONES

Centre rejects states' demand

The Centre has rejected the demand of five state governments for re-imposition of zonal restrictions on movement of rice and paddy. It has been categorically stated "there is no reason for excessive controls" when the country has ample stocks of food grains.

While the internal consumption is around 36 lakh tonnes through the public distribution system, the government would have stocks to the tune of over 80 lakh tonne. The existing inventory of rice is 48 lakh tonnes. The government expects to procure this year 30 to 35 lakh tonnes through levy on millers.

Minister of State for Agriculture and Irrigation Bhanu Pratap Singh told the doubts expressed by the West Bengal, Assam, Bihar, Orissa and Tamil Nadu about the government's kharif policy were unfounded.

He denied that the government's policies were confusing and contradictory or that it was tilting towards a laissez faire philosophy on the food front.

The government, he explained, is not tied down to "laissez-faire" or any other policy or doctrine. Its main consideration is the well-being of the people—producers as well as consumers. Whatever serves their interest best, under a given situation, determine the decisions of the Union government, and not any attachment to any particular system. Too many

control and restrictions on movement of food grains had some justification in times of scarcity.

"But now, when we have ample stocks of both wheat and rice, and are expecting a record production of rice in the country, there is no reason why excessive controls should be exercised. But even while allowing free rice and paddy movement, we have not given up procurement and public distribution of rice."

He said even earlier, when the government had lifted curbs on movement of wheat, the public distribution of wheat continued. Similarly, we intend to continue public distribution of rice, wherever required, for which we have ample stocks. There is thus, no confusion and contradiction, he added.

Mr. Bhanu Pratap Singh told that he had written to all the chief ministers of states and Lt Governors of Union territories on October 4 this year emphasising the need for supply of adequate quantities of food grains through the public distribution system so that the open market prices could be kept in check : continued and concerted attention to the maximisation of procurement effort ; and adequate price support arrangements so that farmers could get fair price for their produce. Our insistence on these three points makes it perfectly clear that we have no intention to revert to "laissez faire" policy in regard to food grains trade.

Farmers' Co-operative Bank of India Ltd.

The auditors of Co-operative Societies of Union Territory of Delhi have recommended that the Farmers Co-operative Bank of India Ltd., be placed in category "A" in view of efficient and smooth running of the Bank.

Browning of Green Revolution

by Dr. M.S. Randhawa,

Ex-Vice Chancellor, Punjab Agricultural University

FROM 1972 onwards the Green Revolution has lost its tempo. The crunch in agriculture came in 1972-73 as a result of the oil problem, an offshoot of the West Asian war. The developing countries of Asia and Africa suffered more grievously by the hike in the price of oils as compared with industrialised countries of the West. Oil provides not only an essential input for industry, but is also a crucial input for agriculture. Most of the fertilizers produced in the world are naphtha based. Apart from this, oil is also used for tractors and diesel engines. All over the world the effect of the alarming increase in the price of fertilizers increased twice and even three times. Governments all over the world are under pressure for social reasons to keep the price of food down. This is not only to keep the people contented but also to provide a curb on inflation which has ravaged the economies of many countries. However, the farmers find that they cannot balance their budgets, and as a result they cut down their purchases of fertilizers. This means reduction in the production of food when soaring population growth requires more of it. Since 1972 there has been a phenomenal rise in price of agricultural inputs. Taking 1967 as the base year, the index of prices of agricultural input in Punjab was 146.61 in 1973 and 217.76 in 1975. Let us take the price of some popular brands of tractors. The price of Massey Ferguson 35 H. P. tractor was Rs. 21,563 in 1967 and Rs. 45,583 in 1975. The price of International 35 H. P. tractors was Rs. 21,610 in 1967 and Rs. 47,222 in 1975. H. M. T. Zetor Rs. 13,700 in 1967 and Rs. 32,730 in 1975. Electric motors and diesel engines have not fared better. A five horsepower electric motor cost Rs. 984 in 1967 and Rs. 1622 in 1975. The price of Kirloskar Diesel engine was Rs. 2,740 in 1967 and Rs. 3,580 in 1975. The increase in the price of fertilizers was still more alarming. One tonne of urea in 1967 costed Rs. 840 and in 1975 it was Rs. 2,000. Flat rates of electricity in Punjab also increased from Rs. 12.50 to Rs. 19 per H. P. The annual bill for a 5 H. P. electric motor in 1967 was Rs. 792 and in 1975 it was Rs. 1,140. The daily wages of agricultural labour rose from Rs. 4.93 in 1967 to Rs. 9.50 in 1975.

Wrong Policies

Agricultural development is a delicate operation and requires careful handling. It was the policy of incentive price for foodgrains which sustained the Green Revolution. This was accompanied by provision of agricultural inputs at a reasonable price and lowering of electricity rates for tube-wells in all the northern States. When things start working, we have the genius of putting spokes in the wheel.

Misguided by clever urban-based economists who cannot distinguish barley from wheat, the Government of India adopted wrong policies after 1971 which have crippled agriculture. Ceiling on land was fixed at the ridiculously low level of 12-18 acres of irrigated land. How would it affect mechanized agriculture could easily be imagined.

If the ceiling had been fixed at 25 acres of double-cropped land, then the ends of social justice would have been met and agriculture would also have been saved a crippling blow.

It should also be kept in mind that this ceiling was applied also to farmers, who were cultivating their land along with their family members and can by no stretch of imagination be called parasites. If it had been applied to absentees or more rent-suckers who make no investment in land improvement, one could see its justification. Coupled with a low ceiling was the imposition of vexatious taxes like wealth tax on agricultural land, gift tax, and estate duties. Due to inflation the value of land has risen fantastically having no relationship to its productive capacity. Farmers are simple people and are not familiar with the intricacies of these taxation laws. The imposition of sophisticated taxes on unsophisticated farmers played havoc. They lost their peace of mind, and instead of managing their agriculture, they became a prey to land valuers, and lawyers etc. a vast predatory horde let loose on a hard-working peasantry. Politicians often make promises for the abolition of land revenue to please the rural electorate. Land revenue is an insignificant percentage of farm expenditure. Even if it is abolished it will not provide any worth while relief to the farmers. Farmers know it, that is why they never ask for abolition of land revenue. The cause of farmers' distress lies in Government policies which have halted agricultural progress. These are imposition of sophisticated taxation and cleverly concealed taxation of agricultural inputs.

Mechanisation

Farm mechanization is a necessity for intensive cropping. After harvesting a crop there is a race against time to prepare the land and sow the next crop in time. A delay of 15 to 20 days can convert a possible bumper crop into an average, mediocre crop. For example to reap a bumper wheat crop the sowing of the Kalyan, Sona and PV 18 wheat varieties should commence from the first week of November. By early sowing, these varieties escape exposure to mid season rusts and high temperatures near maturity. Delaying beyond the optimum sowing period results in a progressive decline in the yield. Mechanization helps greatly in the utilization of

scarce resources. By properly levelling the land water is utilized effectively. Deep ploughing with discs and cultivators prepare the land better for sowing. Proper depth of the seeds and placement with respect to fertilizer with drills optimizes the use of scarce fertilizer. Multicropping is necessary to utilize the scarcest resource of all-land. This can be accomplished most efficiently only by increasing mechanization in Indian farming. Never was the necessity of mechanized threshing realized more than the time when the first bumper harvests of the high-yielding varieties of the Green Revolution started pouring in. The conventional method of bullock drawn *phase*, and winnowing could not cope with the harvests and so mechanical threshers, driven by diesel engines, electric motors and tractor power take-off points came to stay. Political leaders and urban-bred economists with no practical experience of farming have deeprooted, false ideas that mechanization will aggravate the rural unemployment problem, by displacing labour. Their attention needs to be drawn to Punjab which has some highly mechanized farms and no rural labour unemployment. In fact, it is the migrant labour from UP and Bihar which is now sustaining Punjab agriculture. Thus, the Green Revolution in Punjab has substantially helped other States too by providing employment to un-employed and partially-employed farm workers. Though the employment of a tractor on a farm does displace some workers in its immediate field of operation, on the whole mechanization helps by raising productivity and creation of more employment opportunities by multi-cropping and intensification of cropping. Now there is no slack season in intensively cultivated areas and farmers keep busy throughout the year.

Modern technology includes components such as use of tractors for cultivation, tubewells for irrigation, improved seed, fertilizers and plant protection chemicals. Its adoption in the period 1966-1971 was profitable to the farmers as the prices of inputs was reasonable. The rapid increase in the price of input and stagnation in the product prices has given rise to cost price squeeze. Farmers generally complain that they are unable to meet the high expenditure on farming. Small farmers are unable to adopt modern technology because the expenditure which it involves is beyond their reach.

Farm business analysis of the Sutlej Bed Seed Farm, Ropar, for the year 1974-1975 which is being run by the Punjab Agricultural University is revealing. This farm has a total area of 776 acres out of which 660 acres are under cultivation. It has six tractors with necessary implements and 22 tubewells. It is managed by an efficient and highly qualified staff who get professional support from the Departments of the Punjab Agricultural University. The crops which are raised, viz, wheat, maize, paddy, pulses, oilseeds and vegetables, are sold as seed. The gross income is Rs. 12,90,405/- while the total expenditure excluding the land rent is Rs. 11,54,784/-. The net profit per cultivated acre is Rs. 208/- exclud-

ing land rent. If the vegetable area is excluded the net income declines from Rs. 208/- to Rs. 142/-. Sale of farm produce as foodgrains would convert the net profit of Rs. 1,37,620 into a loss of Rs. 69,419. The break-up of expenditure for this farm gives an insight into the expenditures which our farmers are incurring. The cost of labour—permanent and casual, comes to Rs. 506/- per acre. The cost of fertilizers is Rs. 348/- per acre. The depreciation of machinery is Rs. 58/- per acre. The irrigation cost comes to Rs. 27/- per acre. It will be much more now as the rates of electricity have been raised since the analysis was made. In small farms of 15 acres equipped with a 6 H. P. motor tube-well the cost of irrigation comes to about Rs. 90/- per acre.

From this analysis it is clear that the economic picture of mechanized farms, 15-18 acres in area, would be worse than that of Sutlej Bed Seed Farm. Ropar (Rupnagar) as they do not enjoy the economy of scale.

Farmers are blissfully ignorant of mysteries of depreciation of farm machinery and farm structures and interest on capital invested. In many cases they are still carrying on with machinery purchased in 1966-67 and they would face real problem when they have to replace worn out machinery.

High Input Costs

Most of our present difficulties have arisen from phenomenal increase in the price of agricultural inputs. The increase in the price of mineral oils and consequently of fertilizers is due to circumstances beyond our control and this is the difficulty we share with the rest of the world. The increase in the prices of tractors, implements, oil engines and electric motor is due to Government policies adopted under the mistaken notion of taxing the farmer. This tax burden is in the form of excise and auxiliary duties and Central and State sales tax. While there may be justification for such policies when some farmers had large holdings, such justification is no longer there with the present ceilings on land holdings from 12 to 18 acres of double cropped land. The tax incidence on farmers who have adapted modern technology is very high. According to Dr. S. S. Kahlon who has examined the impact of indirect taxes on Punjab Agriculture in a book, "on an 18 acre electrically-equipped tubewell-irrigated farm, the annual indirect tax amounts to Rs. 209.62 per acre, and for the alternative oil-engine powered tubewells farms it amounts to Rs. 254.37 per acre. Calculated as proportion of the net income it works to 49.32 per cent and 59.85 per cent respectively." This is exorbitant, and unprecedented in the economic history of agriculture the world over.

Such a policy will not promote farm investment and the adoption of modern technology. Taxation of agricultural inputs is as new as the input technology itself for until 1965 almost all of these inputs were subsidised. Such taxation obstructs the acceptance of technology. The irony of our situation is

that indirect taxation has been imposed before technology was allowed to get firmly established particularly among small farmers with holdings below ten acres.

It is therefore suggested that the taxes imposed upon more widely diffused inputs which have direct influence on production should be withdrawn. Fertilizers, pesticides, and oil-engines fall under this category. Taxes on tractors should also be reduced substantially and the credit terms for their purchase should be made light and easy. It should not be forgotten that tractors are a great help to marginal farmers who do not own bullocks and get their land cultivated on custom by farmers who own tractors. With the imposition of ceilings at a low level, viz. 12-18 acres of double-cropped land, large farms have been severely trimmed. There are no landlords in India now, but only medium or small farmers.

Wealth tax on agricultural land was imposed before the new Land Ceiling Acts came into force. Wealth tax on agricultural land is discriminatory for there is no such tax on factories. Fields are for agricultural production and not for building houses. Increase in the value of land is due to investment which the farmers have made in improvements. Hence are they to be punished for development of land?

Another cause of increase in value of land is inflation. Here also the Government is to be blamed for they continue to over-print currency notes. Besides, it is a vexatious type of taxation and is a source of harassment to the farmers. It would be better if they spend their time on agriculture rather than waste it in courts. Hence, it is in national interest that agricultural lands are freed from this type of taxation. Agriculture is dependent upon weather. Multi-purpose hydroelectric dams have only partially liberated us from such dependence. When there is failure of monsoons, reservoirs of dams in South India are severely depleted. Such droughts also affect reservoirs in the Himalayan zone, though less severely, as the rivers are snowfed. Prolonged drought over two years also affects snowfall and storage of water is seriously affected even in dams in the Himalayan zone. As the limited quantity of water is required both for irrigation and power generation there has to be careful management of discharge of water. Power generation is curtailed, and that in turn affects pumping of ground-water. While poor rainfall affects crop production even in irrigated areas, it is the rainfed areas in Gujarat, Rajasthan, Maharashtra, Mysore and Madhya

Pradesh which suffer severely. In drought years the production of jowar and bajra goes down alarmingly, thus creating grave food shortages. It is in such drought years that intensive agriculture with the use of modern inputs in irrigated areas which saves the country. Such agriculture is costly and as such has to be supported by the Government. Apart from drought, cyclones, floods, wind storms and hailstorms cause great damage to crops including fruits. When rain falls on fruit trees when they are flowering, or the temperature falls down, fruit-setting is gravely affected. Large areas in rice-growing areas of Andhra get damaged by cyclones. The damage to wheat in Punjab and Haryana in 1976 by hailstorms is still fresh in our minds. It should not be forgotten that to grow an acre of wheat a farmer invests more than a thousand rupees in cultivation, irrigation and fertilization with costly chemical fertilizers. As such, we must bear in mind that the farmer is at the mercy of forces of nature, and fields can never become factories. Hence agriculture, if it has to be successful has to be supported by the Government. We must not forget that the most important input in agriculture is the human element, the farmer. The modern farmer is not an illiterate man, a mere clod-hopper whose main task is walking behind a pair of bullocks and twisting their tails. A modern farmer is a technologist who understands the use of fertilizers, plant protection chemicals and the doses in which they are applied. He understands the use of agricultural machinery. Above all, he is a manager whose main work is to procure inputs in time and to organize family as well as hired labour so that they work productively. If the farmer is encouraged and enthused he will conquer the malaise which has affected Indian agriculture. If he is frustrated and discouraged, then to progress is possible. Hence it is necessary that he should be given stability so that he works with confidence. He should also be given respect and his advice should be taken before changes in policies are made which affect agricultural production. High cost of inputs, vexatious taxation, coupled with unremunerative price for wheat have put Indian agriculture under great strain. The peasantry who have been groaning under these burdens got their opportunity during the recent election to parliament. They have recorded their protest against the policies of the outgoing Central Government. Let us hope that the new helmsmen learn wisdom from this experience and produce conditions which are more favourable to agricultural development. We have vast resources in land and water, and we have experienced hard-working farmers. They gave us the Green Revolution and given facilities and freedom to work, they can meet the challenge of food production.

CROP INSURANCE—UNDER GOVT. STUDY

Schemes for crop insurance submitted by the General Insurance Corporation of India are under active examination by the Centre, reports Samachar.

Mr. G. V. Kapadia, chairman of the General Insurance Corporation of India, told that the Union ministry of finance, which was examining the schemes in consultation with the Union ministry of agriculture, would take a decision after receiving the reactions of the state governments to whom the schemes had been referred.

Explaining the salient features of the schemes, the crop insurance proposed by the corporation would not be for individual farmers but for a group of farmers operating in homogeneous agro-climatic area. Farmers who were eligible for bank loans under the Reserve Bank eligibility norms would be covered.

It was not yet decided whether the proposed crop insurance would be voluntary or compulsory.

He said the schemes envisaged deduction of the premium by the lending bank whether it was the state co-operative bank or some other bank, so as to save the administrative costs involved which otherwise would be very huge. Similarly, in the event of a claim, the amount would be paid to the bank which would be credited to the account of the farmer so that he would automatically be eligible for a fresh loan.

There was also a proposal that the state governments should share 25 per cent of the premium and the claims, so that there was involvement on their part as well.

The sum insured would be determined on the basis of the average of 10 years' crop cutting results of the area. There was also a proposal for insuring for higher amounts, there the payment of claims was based on the 'annavari system.'

Mr. Kapadia said that in all these schemes, the aim was to motivate the farmer to adopt modern methods of cultivation and to assure him that in the event of crop failure he would be compensated so that he was not deterred from putting in inputs like fertilisers or using insecticides or at times tractors on hire.

Since the schemes involved huge financial commitments, the same were now under the active examination of the Union finance ministry.

Crop insurance was undertaken on an experimental basis in certain pockets in Tamil Nadu, Andhra Pradesh, Gujarat, Maharashtra, West Bengal and Uttar Pradesh by the General Insurance Corporation in collaboration with fertiliser companies like the EID Parry and Gujarat State Fertiliser Com-

pany. By and large, the results were not favourable. In any case, insurance schemes would not be successful unless they were undertaken on a very large scale.

Proposals were, therefore, now under consideration to have pilot schemes covering very large areas in a good number of states in the country, so that the experience gained could be very useful, when the Central and state governments decide to undertake crop insurance on a regular basis.

There were suggestions that the present schemes be limited to food crops. But some states had indicated they would prefer these experiments to be confined to cash crops so far as their states were concerned.

He said methods would have to be worked out for the application of the crop insurance schemes to drought prone areas. The premium would not be high though the guaranteed yield would be less. The guaranteed yield would be based on 10 years crop cutting date in these areas.

He said he personally believed government should have a separate corporation to implement the crop insurance scheme and give it the proper attention it deserved.

About the cattle insurance scheme, Mr. Kapadia said the General Insurance Corporation had successfully persuaded government to subsidise the premium so far as small and marginal farmers covered by the Small Farmers Development Agency and marginal farmers and agricultural labour projects were concerned.

The General Insurance Corporation had finalised an agreement with the Kaira District Milk Producers Co-operative Union (AMUL) which had 880 primary cooperatives under which animals of every agriculturist attached to the societies would be covered by the corporation. The Mehsana dairy in Gujarat had also been similarly covered. The two unions between them had eight lakh animals.

This was an example worth emulating by dairies in Tamil Nadu also. The General Insurance Corporation gave concessional rates of premium. The corporation would set up veterinary facilities at strategic centres.

In conformity with the government's policy of creating employment in rural areas, the corporation had decided to appoint rural representatives who would be paid stipends of Rs. 75 to 125 in addition to the commission they would earn on their business.

Wheat output can rise to 50 million-tonnes

Rice Institute for Vietnam

India will help Vietnam to set up a rice research institute and a buffalo breeding centre. India will provide the equipment and technical co-operation in establishing both.

The two countries exchanged letters for the purpose at the end of a 15-day visit of an economic delegation from the Socialist Republic of Vietnam. The delegation was led by Mr. Nguyen Chanh, Vice-minister of foreign trade.

The Indian side responded positively to the Vietnamese request for supply of food grains to help them tide over a situation of temporary scarcity.

Metal bin drier

The Tamil Nadu Agricultural University has developed Hot air generator, Rectangular Metal bin drier, Seed cleaner cum grader and Fibre Extractor for Mesta. The designed hot air generator is capable of blowing hot air at the desired temperature for bulk drying of paddy, can be dried at a time within a duration of 8 hours. The cost of drying one ton of paddy from 22 to 12% moisture content is about Rs. 40/-. The cost of this unit is Rs. 19,000/-

The metal bin drier is another processing equipment which can be used for drying paddy, chillies, groundnut. The holding capacity is 100 kg. of paddy, or 550 kg. of groundnut or 125 kg. of chillies. The time taken for drying one tonne of paddy from 22 to 12% moisture content is 8 hours. It takes about 10 hours to reduce the moisture content of chillies from 66 to 10% and 9 hours in the case of groundnut from 27 to 8% moisture content. The cost of the unit is Rs. 5500/- with an axial flow flower and Rs. 8,100/- with centrifugal flow blower.

Seed cleaner cum grader

The seed cleaner cum grader is intended for cleaning and grading the seeds and upgrading their quality by removing the chaff, broken ones and immature seeds. The out put is 200 kg. of paddy and bajra, 400 kg. of maize and 250 kg. of jowar per hour. The cost of cleaning and grading per quintal of paddy of bajra, jowar and maize, groundnut is Rs. 5/-, Rs. 4/- and Rs. 2.50. The cost of the Unit is Rs. 19,000/-

India can raise its annual wheat production to 50 million tonnes from the current level of 28 million tonnes, "if all the known production technologies are made use of," according to Dr. R. G. Anderson, associate-director of the Mexico-based International Maize and Wheat Improvement Centre. Dr. Anderson attended the recent 16th all-India wheat researchers workshop at New Delhi to evaluate the latest-bred high-yielding wheat varieties.

Though India's wheat output had more than doubled in the last twelve years, the full potential is yet to be exploited, he felt. He pointed out that the fourth five year plan target of 30 million tonnes wheat is not yet achieved.

Dr. Anderson commended India's achievement of building a 22 million-tonne food buffer stock in a couple of years. Wheat accounts for more than half of it.

He said the governments should see to it that the bumper harvest and the market surplus did not result in a major fall in prices, thus creating a production disincentive. In India, he said, there is a danger of considerable wheat area going to pulses as the latter offered the promise of higher returns.

To arrest such a large scale shift in wheat area, researches should be intensified to evolve high yielding pulse varieties to produce enough pulses from their traditional lands, he said.

"It also surprises me to see how Indian farmers even in remote areas have successfully adapted to the high yielding wheat varieties," he added.

He said building resistance should get priority in wheat research. India should also try to evolve large number of wheat varieties, supported by matching policies in the matter of inputs like fertilisers and pesticides.

Fibre Extractor for Mesta

In the conventional method, the fibre from mesta is extracted by immersing the plants for 18 days in water. But the new method by a machine requires only 8 days of retting for removing the fibre. The plants are to be harvested at 50% flowing stage and allowed to ret for 8 days and fed to the machine. The machine developed will remove 25 kg. wet ribbons (fibre) per hour. To get 25 kg. of fibre 100 kg. of plants are to be fed. The cost of removing one quintal of wet ribbons is Rs. 9.50. The cost of the machine is Rs. 2,500/-

New Wheat Varieties

SIX new high yielding and disease resistant wheat varieties have been selected by the 16th All India Wheat Researcher's Workshop, which concluded and formally released for cultivation during the next rabi season in different wheat growing zones of the country, reports Samachar.

The pride of place goes to HD (hybrid Delhi)-2204 evolved by Mr. V. S. Mathur, Chief Wheat Breeder of IARI. According to IARI director, Dr. H. K. Jain, it is the first significant achievement in combining high yield and good grain quality with disease resistance. It is the only variety recommended for large scale cultivation under high fertility irrigated conditions in the north-western plane zone, comprising of the country's wheat bowl areas of Punjab, Haryana, Rajasthan, Uttar Pradesh, Delhi and Jammu Kashmir.

Another IARI variety, IWP-72, has been recommended for rainfed cultivation in the same zone. For peninsular zone states of Maharashtra, Karnataka and Andhra Pradesh, the newly recommended variety is HW-657. It is for rainfed conditions and has a high degree of resistance to diseases.

Two varieties, K-7410 and HUW-12, are recommended for irrigated areas in the north-Eastern plane. Both have good grain quality and fair degree of disease resistance.

For the northern hill zone, the recommended variety is VL-421, evolved by the Vivekanand Laboratory at Almora. The workshop did not recommend any new variety for the central zone, as the varieties came up for consideration were found highly susceptible for diseases.

Another decision of the workshop is delinking of varietal release from minikit trials, as the minikit data availability was found to be very slow. From this year, the recommended varieties will be sent for extensive cultivation without minikit trials.

Speedy Steps on Land Ceiling Cases Urged

Barely one-third of the area declared surplus on enforcement of land ceiling laws has been distributed among the landless. Another pointer to the poor pace of land reforms is that about 216,000 cases of ceiling disputes are pending.

Because of the pendency of these cases, considerable area which ought to have been distributed among farm labour is still in the possession of land-owners.

The attention of the Chief Ministers to this poor performance has been drawn by the Agriculture Minister, Mr Surjit Singh Barnala, who has sought to impress on them the urgency for disposing of these cases.

He has suggested to them to fix month-wise targets so that the entire pending cases are disposed of within a year.

Further, he has asked the state governments to ensure that all surplus land in their possession be distributed to the landless within a month, i.e. before Gandhi Jayanti.

According to the latest figures 38.42 lakh acres have been declared surplus. Of this, only 20.35 acres have been taken possession of. Even so, only about 12.05 lakh acres have been distributed.

The minister has told the states that the Centre is keen on expeditious implementation of land reforms and commended to them a six-point strategy that provides for expeditious disposal of ceiling cases: immediate distribution of land taken possession of by the government, acceleration of takeover of surplus land, mutating the names of the allottees in the land records as soon as they are given possession of land ensuring that they are not dispossessed; maximisation of financial assistance to the allottees of surplus land and help to the allottees to take to subsidiary occupations.

Promoting Fertiliser Consumption

A task force has been set up in the Union Ministry of Agriculture and Irrigation to study in depth the problems of credit and distribution which continue to inhibit growth in fertiliser consumption.

The task force will also examine the question of avoiding wastage of fertilisers because of poor storage conditions and bad transportation. Officials put the value of wasted fertilisers at more than Rs. 30 crores a year, while unofficial estimates are as high as Rs. 100 crores.

To the extent the wastage can be minimised, the gap between production and consumption will be narrowed, thus involving a saving in the fertiliser import bill.

Though both domestic production and consumption have recorded a substantial increase in 1976-77, the overall consumption continues to be low for a country of India's size.

The spurt in consumption during the last financial year reversed the trend in the past few years.

From 1972 to 1975, the increase in consumption was extremely slow while in 1975-76 it was negative.

Even though the take-off during 1976-77 in the southern states was low, it was more than made up by the high demand in other parts of the country.

The main reasons for this increased demand were the reduced fertiliser prices, normal rainfall in most of the states, overall increase in the irrigated area and promotional efforts by the government and industry.

However, two major constraints—inadequacy of credit and uneven distribution—still inhibit the growth in consumption.

Credit for both production and distribution is not only insufficient, but its cost is high. Similarly the distribution network needs to be strengthened so that fertilisers are available to farmers at a convenient distance.

The task force in the ministry will examine the warehousing facilities and recommend steps to cover the entire country through a suitable distribution network.

Poultry Disease Diagnosis by Post-Mortem

The importance of post-mortem as a method of diagnosing many diseases is revealed by the statement "A necropsy is a message of wisdom from the dead to the living". Accurate diagnosis is a necessary fore-runner to the effective control of devastating diseases and it is much more so in the case of rapidly growing poultry industry to prevent economic loss. Post-Mortem examination is best done by the Veterinary Surgeon. However where this is not possible the poultry breeder himself can attempt this and this may furnish some useful information.

External examination consists of observing the colour of the head particularly the comb and wattles for anaemia and cyanosis. Colour of the shanks and shrinkage of the skin give an indication of degree of dehydration. Eyes are observed for any evidence of leucosis and discharge from eyes and nostrils is indicative of respiratory infection or Vitamin A deficiency. Skin examination is done for any evidence of tumour, pox, lice and mites in the feathers and cloacal examination for evidence of diarrhoea.

Dipping the bird in water or moistening the feathers keeps down the dust and prevents feathers from flying around during necropsy.

Examination of internal organs is done by opening the body cavities. Initially the skin over the breast is cut and the legs are pulled apart to loosen the hip joints. The carcass is placed on its back. Musculature on the breast is observed for loss of flesh and emaciation or haemorrhage or letered colour. Abdomen is opened by an incision on the abdominal wall across the posterior abdominal region. The lateral extension of the incision through ribs and collar bone removes the sternum exposing the abdominal and pleural cavities, which are then observed for any presence of fluid, exudate or blood.

Inspection of Internal Organs

The proventriculus, gizzard, pancreas with the duodenal loop and large intestine inclusive of caeca are removed and the mesentery is cut as close to the intestine as possible. Examination of alimentary tract consists of opening the proventriculus for seeing the mucosa, and the contents are noted. Lesions for specific diseases like Ranikhet, Coccidiosis and worm infestation (Ranikhet-Grevish white membrane like deposits; coccidiosis—severe bleeding) are observed. In the large intestine cloaca is observed for any prolapse. Liver and spleen are removed separately and examined for any specific lesions of diseases like Leucosis.

The kidneys in position and ureters are observed for any evidence of leucosis or gout. In mature females the ovary is seen on the left side and is

usually examined for any discolouration or alteration in shape since discoloured or misshapen ova are characteristic of infection (Pullorum disease). The oviduct is removed by cutting dorsal and ventral mesenteric attachment and examined for abnormalities like misshapen or illformed egg.

Heart is inspected after the slitting the pericardial sac for any petechiae or frosted appearance as in gout or shaggy appearance indicating E. Coli infection. Lungs are removed from the thoracic wall. The airsacs are usually thin and membrane like. But if filled with exudate they appear prominent.

The bird is next turned towards the examiner and the mouth is opened by cutting through one corner (preferably on the right side). The incision extends through the throat, oesophagus and crop. The fullness of the crop gives an indication of the appetite. Another cut is made through the larynx, trachea, upto the level of bronchi and examined for any lesions suggestive of respiratory disease.

Examination of nerve bunch (Brachial plexus) between the scapula and vertebral column is done. The muscles on the legs are separated for exposing the sciatic nerve. Enlargement of brachial plexus or the sciatic nerve is an indication of fowi paralysis.

PRODUCTION TRAITS OF MANDYA SHEEP

Data on climatic factors in the Tamil Nadu State Livestock farms at Hosur and Pudukkottai for a period of six years from 1970-1975 and an reproductive traits and growth rates in the Mandya sheep maintained in the above two farms for 5 years were analysed.

It is concluded that the performance of Mandya breed of sheep is more or less uniform irrespective of the breeding seasons adopted and the environment prevailed in the two farms, and is ideally suited to the agroclimatic conditions of Tamil Nadu for more mutton production. The performance can be improved by making available better grazing facilities and by providing additional concentrates during breeding season and lean months.

CORRESPONDENCE COURSES

It is proposed to conduct Correspondence Courses on "Fish Culture" and "Sugarcane Cultivation", from October 1977. The details of the courses can be had from the Director of Extension Education, Tamil Nadu Agricultural University, Coimbatore-3.

Bank of Baroda's New Rural Scheme

Bank of Baroda has formulated a novel ambitious plan for total integrated rural development.

The scheme known as Grameen Vikas Kendra, claimed to be the first of its kind attempted by any institution in the country, is a sequel to the unique success of the Bank of Baroda achieved in retail banking through its multi service agency cell initiated in 1972.

Grameen Vikas Kendra envisages optimum of manpower and resources in villages through better management and organisation. As the scheme is multi faced it also covers a wider spectrum in the area of assistance for such adverse purposes like digging new wells, buying motors and pumpsets for agriculture as well as village arts and crafts like carpentry, pottery and weaving, bee-keeping, poultry and dairy farming, sheep and pig rearing and improving orchards and plantations. The bank has selected Pollachi for implementing the scheme in Tamil Nadu where it will be formally inaugurated by the Tamil Nadu Governor Mr. Prabhudas Patwari.

An intensive survey of 15 villages in and around Pollachi had been completed. The main plantations in the region were coconut trees and 4,000 coir makers of 1,500 families had been taken up for assistance. Some of the unique features of the scheme were assistance for all bankable schemes in villages and agriculture to cottage industries. The general manager of the bank made it clear that they were not trying to replace any existing scheme but only co-operating with the forces of progress.

He said in the new scheme where the recovery of loans was different from normal loaning operations the interest portion would be integrated with loan. For loans above Rs. 10,000 the rate of interest would be 11 per cent while for loans below this amount people qualified for DIR rates would be charged only 4 per cent.

The scheme would be introduced in Kerala and Andhra and depending on its success it would be extended to other areas, he said.

Urea price cut by Rs. 100 per tonne

The Union government has announced a reduction of Rs. 100 per tonne in the price of urea. The reduced price will be Rs. 1,550 per tonne.

The announcement was made separately by Mr Surjit Singh Barnala, Minister of Agriculture and Irrigation, and Mr H.N. Bahuguna, Minister of Petroleum Chemicals and Fertilisers.

Mr Barnala said that the decision had been taken to reduce the cost of agricultural inputs to farmers and to give a boost to fertiliser consumption. He hoped that it would help farmers in maximising the 'rabi' production.

Mr Bahuguna told a press conference that the reduction would cost the exchequer about Rs. 17 crores this year and Rs. 51 crores next year. Prices of other fertilisers would remain unchanged.

Orders were being issued under the Essential Commodities Act to enable state governments to enforce the cut effectively. The current stocks with dealers would also be issued at the reduced price.

Mr Bahuguna explained that the government's decision followed the recommendations of the Fertiliser Prices Committee under the chairmanship of Mr S. S. Marathe.

The government accepted the committee's recommendation to allow a return of 12 per cent. post-tax on the net worth of the units subject to capacity utilisation of 80 per cent and satisfaction of established consumption norms.

Agri. Universities Can Help Raising Pulses Production — Barnala

THE Union Agriculture Minister, Mr Surjit Singh Barnala, has urged agricultural universities to help step up the production of pulses, oilseeds and cotton as speedily as possible.

Inaugurating the conference of vice-chancellors of agricultural universities Mr Barnala said pulses had been neglected in the past and their per capita availability had been steadily declining. The Indian Council of Agricultural Research (ICAR) and the department of agriculture were currently developing strategy for improving pulse production in rainfed and inadequately irrigated areas as well as in irrigated areas.

During the ensuing rabi season, effort should be made to step up the output of gram, lentil and peas, the minister said. Since sowings were to start next month, the campaign should be started immediately. Agricultural universities could help in the campaign through organising mobile teams to train farmers and field extension workers in methods of sowing, application of bacterial cultures and use of phosphatic fertilisers. Students and staff of the universities could help in controlling pests, the said.

Stressing the need of stimulating the production of oilseeds, the minister said a study by the Indian Council of Medical Research had shown that the average consumption of fats and oils currently was only 10 gms per head per day against the desired intake of 30 gms. The need for fats and oils was particularly great for those who did manual works and for landless labour.

Mr Barnala said although the country had developed some capacity to grow more food, it had yet to develop for the entire population the capacity to purchase and eat food. The problems of marketing,

pricing and storage were partly due to this lacuna. Even a 5 per cent increase or drop in production tended to create all the difference between an uncomfortable glut and acute scarcity.

The global cost-competitiveness of Indian agricultural products was poor because of the relative high cost of production on poorly-managed small holdings, he felt.

He said it was essential to withdraw some of the landless labour from routine farming operations. He suggested development of agro-industrial complexes in every district where the landless labourers could be engaged.

He also suggested involvement of rural communities in the planning, management and supervision of educational programmes in order to make education relevant to the rural environment and responsive to the needs and aspirations of the rural people.

Mr G.V.K. Rao, Secretary in the department of agriculture, said the government wanted to speed up the irrigation programme. An attempt would be made to increase the area under irrigation this year by about four million hectares. In the past irrigation facilities were created at an average rate of about 1.2 million hectares per year.

He also disclosed that the ministry was reconsidering the priorities for agricultural scheme for next year. Although the current year's budget had already been announced, the finance ministry was willing to provide outlay of new worthwhile schemes this year itself, he said.

Priority Areas

Mr Rao outlined the broad priority area as water management, fertiliser use, dry farming and agricultural management at the district, taluka and village level.

S U B S C R I B E

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INTER GOVERNMENTAL COLLABORATION

Rupees Two Thousand Eight Hundred and Ten Crores aid from West Germany since 1957

Rs. 135 crores aid in 1977-78 :

IN an exclusive interview, Dr. Gerhard Pfeiffer, Charge d' Affairs of the Federal Republic of Germany and Dr. Pleuger, First Secretary, Information and Press stated to Dr. S. R. Barooah, Chief Editor of Krishak Samachar that Federal Republic of Germany has given an aid of 7.7 billion marks (Rs. 2810 Crores) in the form of Capital Aid and Technical Aid to India since 1957. Dr. Pfeiffer who is an economist by profession and is a charming personality mentioned to Dr. Barooah that their Government is fully satisfied with the proper utilization of the aid and they are very happy to help India and also to extend assistance in future. They believe in full cooperation and collaboration between the two Governments and the people of two countries for the further developments.

The main aid programme on the rural development side are :

Mandi Project

One of the first and most successful cooperation between India and the Federal Republic of Germany was the Indo-German Agricultural Project of Mandi. The Agricultural Project, that covered the entire District of Mandi in the Indian Federal State of Himachal Pradesh registering an area of more than 37,000 sq. km. with some 500,000 inhabitants, was one of the first bilateral cooperation projects of the Federal Republic of Germany in which attempts were made to solve the problem of agricultural development by approaching it under the widely different aspects of the need of the farmers and the rural areas. This included not only agricultural extension service in the conventional sense. Besides advising on cultivation methods it was imperative to make necessary supplies readily available. A credit programme on favourable terms had to be initiated to finance the supplies. Better yields have to be marketed at prices which covered costs of production. This necessitated promotion of the cooperative sector and the improvement of animal husbandry to insure optimal utilisation of farm produced products. The collaboration between Indian and German experts and the generous technical assistance of the Federal Republic of Germany has led to remarkable successes in the Mandi District achieved through an integrated

promotion programme for the individual farm and development level.

Increased Fertilizer Consumption

To mention just a few of the results of the co-operation projects : The Fertiliser application in Mandi District was increased from 250 t in 1962 to 68 to over 7000 t in 1972/73. By 1970 additional grain yields in the value of over Rs. 10 crores had been achieved in the project area. After deducting all recordable costs a cost benefit ratio of more than 1:5 relative to the project funds employed was achieved as early as within the first 7 years. Supply of high yielding seeds varieties and the demonstrations of improved practises led to an increase in yields between 30 to 50%. The irrigation and drainage of suitable land made it possible for the farmers to harvest 3 to 4 times the original crop.

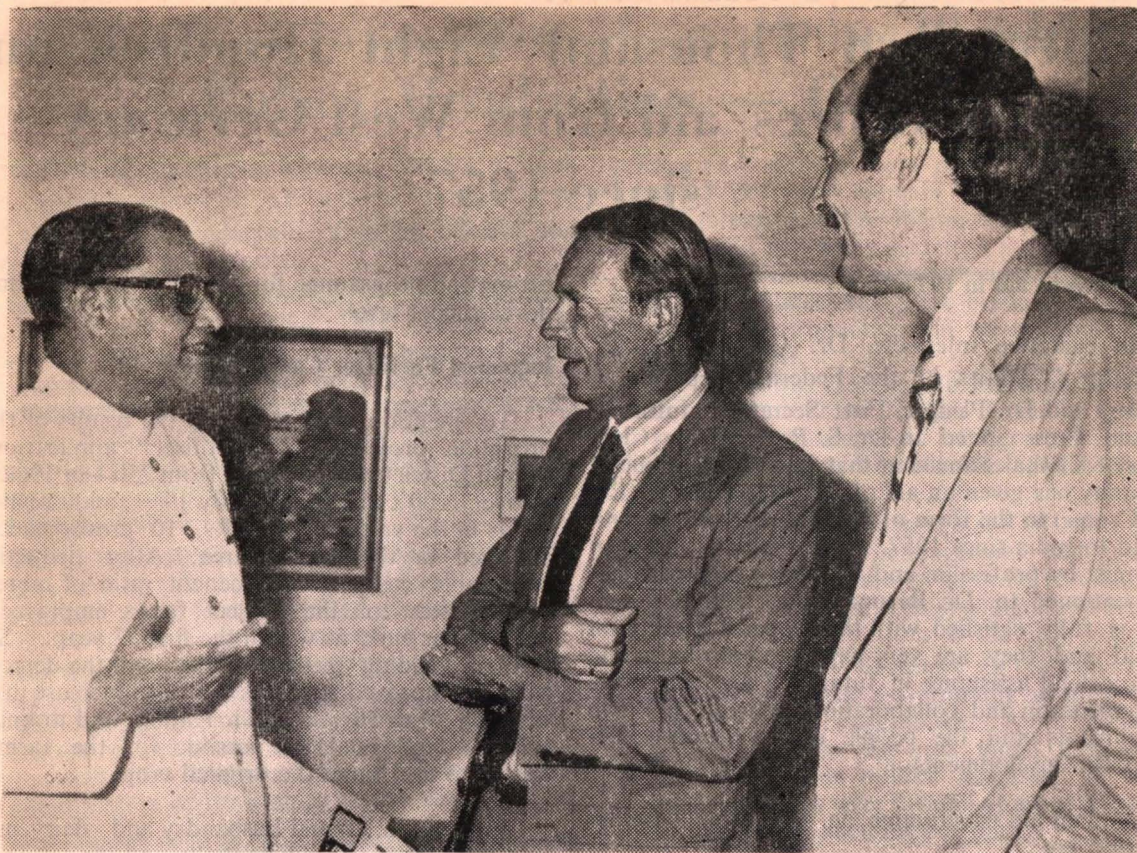
In addition, animal husbandry and dairy production were improved substantially and the set-up of a central project workshop, agricultural engineering, steel construction, civil engineering, irrigation and drainages and soil-conservation made the area self-sufficient to a large extent secured the continuing development of the rural district of Mandi.

Nilgiri Project

Another most successful feature of Indo-German collaboration is the Indo-German Nilgiris Development Project that was commissioned in 1967, and will be handed over to exclusively Indian administration in early 1978. From the outset this project has mobilized all its resources from both technical and engineering wings to solve the problems of the farmers in the Nilgiris District. The Projects of agricultural development cover a wide range of agricultural activities. Through the tireless efforts in the experimental farms and laboratories high-yielding varieties of seeds were selected. Simultaneously, multiplication of seeds was done and supplied to the farmers. Consequently the farmers of the Nilgiris were able to do well with the timely supply of seed materials, fertilizers and pesticides etc.

Fertiliser Education Project in West Beanal

Farmers in 12 Districts of West Bengal have been benefitting by the Indo-German Fertiliser Education-



Dr. S. R. Barooah, Chief Editor Krishak Samachar discussing with Dr. Pfeiffer, Minister and Dr. Pleuger, First Secretary Information of West Germany their aid Programme

al Project since February 1974. The aim of the Project is to make the farming community self-reliant. It covers the entire field of agricultural operation ranging from preparation of soil to harvesting and marketing. The Project which was supplied with "APF" Fertilizer as a grant of the Federal Republic of Germany has made considerable stress on educating the farmers on the use of balanced fertilizer in keeping with soil pest recommendations to insure optimum output. Though the Project aims primarily at popularising the use of complex ANF-Fertilizers amongst the farmers of West Bengal, an integrated approach to the overall rural development has been adopted. In 144 key-villages spread over 12 districts farmers have been helped to procure fertilizers and other agricultural inputs including finance by coordinating relevant agencies like nationalised banks, the State Department of Agriculture, National Seeds Corporation, the Pesticides Association and others.

TAWA Project in Madhya Pradesh

These are only a few examples of the fruitful and successful cooperation in rural development between India and the Federal Republic of

Germany. This cooperation will continue in the future. In the recent negotiations between India and the Federal Republic of Germany on financial assistance in the amount of 135 crores of the current financial year both sides agree to go ahead with the TAWA-Project. The gigantic TAWA Irrigation Project in Madhya Pradesh will turn Hoshangabad District into a granary in the State. The multi-purpose Project will irrigate about 8 lakh acres of land and help produce 23 lakhs tons of food grains worth more than Rs. 100 crores per annum. The area under irrigation in Hoshangabad District will be raised from a meagre 3% to a massive 60% of the net-sown area after completion of the Project. The most outstanding feature of the TAWA-Project will be that it seeks to bring about an integrated development of the entire area. It includes landshaping, construction of roads, market-centres and similar other features. Thus contributing substantially to the overall development of the area.

Indo-German collaboration in rural development has yielded proud results in the past. There are

(Contd. on page 19)

Bharat Krishak Samaj News

Meeting of Implementation Panel

The first meeting of the Implementation Panel constituted the B.K.S. met on the 18th October under the Chairmanship of Shri R. Srinivasan, and attended by Mr. S.M. Wahi, Mr. Parampal Singh, Dr. S.R. Barooah and Dr. D.A. Bholay all members.

The following decisions were taken :

1. The Panel will meet once a quarter, and the next meeting will be held during the National Council meeting on 27th December '77.
2. The Panel decided to take up the implementation of the resolutions passed at the convention held at Hyderabad.
3. It was decided to request the Union Minister for Agriculture and Irrigation to constitute a High Level Advisory Committee constituting of Union Ministers of Chemicals and Fertilizers, Commerce, Energy and Finance and representatives of Farmers Organisations like Bharat Krishak Samaj under the Chairmanship of the Union Minister for Agriculture & Irrigation who is also the President

of B.K.S.

The Committee will lay down and review policies connected with agriculture and agricultural inputs including agricultural machinery and credit keeping in view of the small and marginal farmers.

4. Shri S.M. Wahi and Dr. S.R. Barooah were requested to contact Shri Ram Niwas Mirdha, Dy. Chairman Rajya Sabha and Shri Nathu Ram Mirdha M.P. for creating a strong lobby in the Parliament for farmers.
5. It was decided to write to the Vice-Chancellors of the Agricultural Universities to give preference to sons and daughters of farmers in admission. Some Universities such as Maharashtra, Tamil Nadu and Himachal Pradesh have already agreed. Some members were asked to follow up personally, and Universities were allotted as follows : Dr. S.R. Barooah—Orissa, West Bengal, Assam and Bihar ; Shri S.M. Wahi—U.P. ; Shri Param Pal Singh—Punjab and Haryana ; Shri R. Srinivasan—Kerala ; Shri Prabhakar Reddy—Andhra Pradesh ; Shri S.N. Murshan—Madhya Pradesh.

(Contd. from page 18)

bright prospects for a further successful cooperation in this field in the future.

The assistance provided in the current year amounting to Rs. 135 crores will be used for the following purposes :

1. Project assistance of Rs. 88.595 crores (DM 235 million) for financing the foreign exchange costs of mutually selected projects.
2. Loans to Indian Development Banks to the extent of Rs. 9.425 crores (DM 25 million). These will be extended to the Industrial Finance Corporation of India (Rs. 5.655 crores/DM 15 million) and the Industrial Credit and Investment Corporation of India (Rs. 3.770 crores (DM 10 million) to enable the imports of capital goods for the small and medium enterprises assisted by these financial institutions.
3. Capital goods assistance of Rs. 5.238 crores (DM 13.894 million).
4. Community aid of Rs. 28.275 crores (DM 75 million) to be utilised for financing India's current import requirements of industrial equipments, spare parts and accessories as also semi-manufacturers.

The Federal Republic of Germany will, in addition, provide scientific equipment required for the

Oceanographic Research Ship as a grant, amounting to another Rs. 5.65 crores (DM 15 million), under their technical assistance programme.

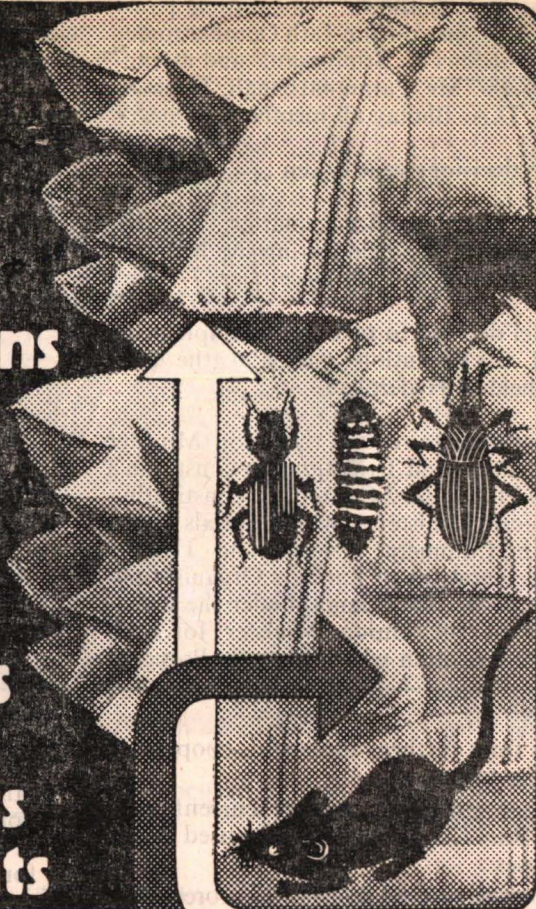
In the field of technical assistance the two delegations reviewed various on-going projects and noted with satisfaction that an agreement was signed recently for the establishment of a Tool Room at Ludhiana for providing common service facilities to small industries, involving assistance of Rs. 3.77 crores (DM 10 million). They also had preliminary discussions on several project proposals made by the Indian side in the fields of agriculture, education and technology. Furthermore, the German side agreed to assist the National Remote Sensing Agency (NRSA) in remote sensing surveys and to provide training facilities for Indian thermal power engineers in the Federal Republic and visits by German experts to thermal power stations in India.

The private investments of the various companies from West Germany in India is in the order of Rs. 65 crores (DM 179 million).

Dr. Barooah asked Dr. Pfeiffer as to how Bharat Krishak Samaj can help in these projects and other projects implemented under the West German Aid Programme, he mentioned that State branches of Bharat Krishak Samaj should involve themselves in these projects and assist the State Governments in its implementation (The State Units may kindly contact the State Governments).

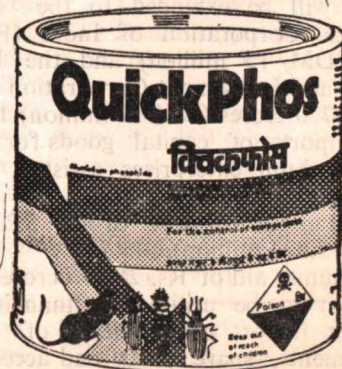
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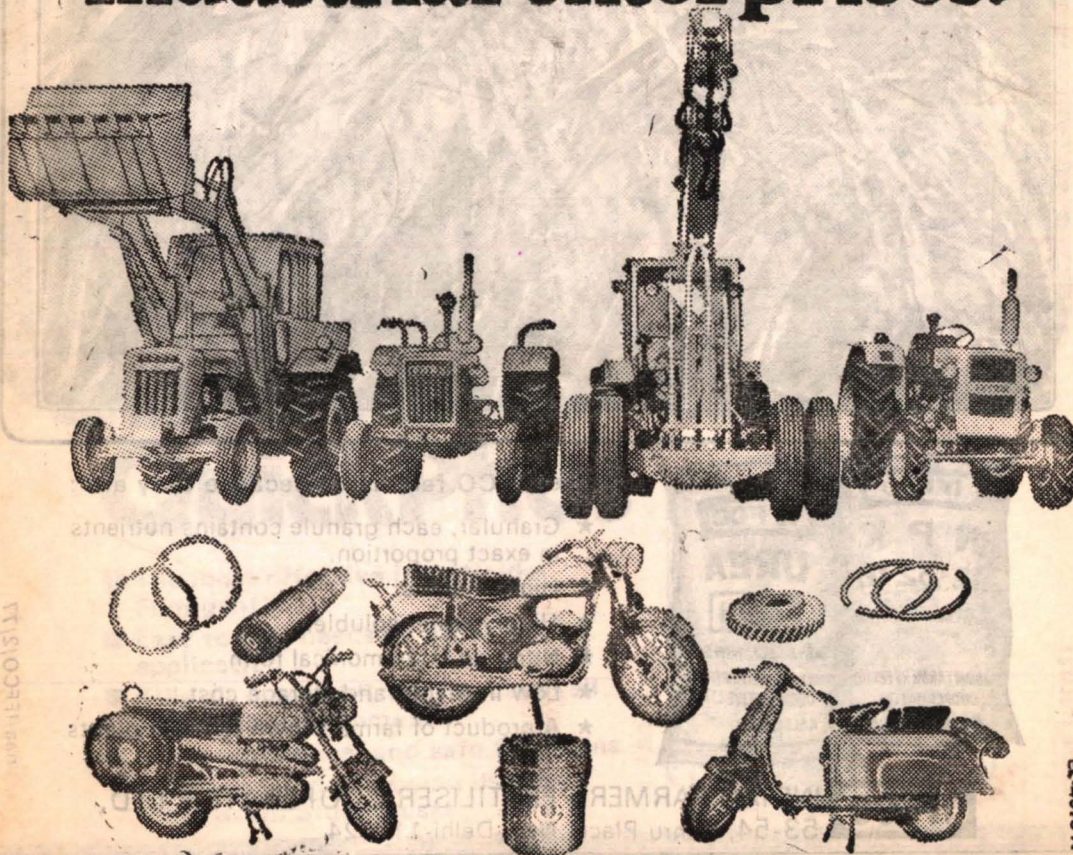
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