KRISHAK SAMACHAR

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Produce More In The Field and Less In The Home

"Produce more in the field and less in the home" is the slogan of the project undertaken by the Bharat Krishak Samaj in collaboration and financial assistance of the Farmers & World Affairs, Inc., U.S.A., with which Organization, the Samaj is also having a farmer to farmer exchange project since 1959.

The project has been undertaken as a pilot project in Yawal and Rawar Talukas of the Jalgaon District of Maharashtra and in Uttiramerur Block in the Chingleput District of Madras State. In the former State it was inaugurated on April 3, 1967—which day the Samaj observes as the National Farmers Day—by the Chief Minister of Maharashtra, Shri V. P. Naik. In the latter it was inaugurated on April 13, the Tamil New Year's Day.

The main aim and object of the project is to find out the problems that are limiting acceptance of family planning and improved agricultural techniques in the villages of India and to work for improving the climate for acceptance of both to bring about a balance between agricultural production and the growing population of India. The project is essentially meant for supplementing government efforts in both the fields.

With our present scientific knowledge, which is fast growing, it is possible to increase agricultural production two to three folds. This has been amply proved by the cultivaton of dwarf Mexican wheats, Taichung and other paddy varieties, hybrid maize, jower and bajra. There are improved varieties in other crops also. All these arieties must be judiciously employed along with the necessary inputs such as fertilizers and manures, irrigation, plant protection measures, improved agricultural implements, etc. Equally important is to acquire the 'know how'. Suitability of the different varieties or hybrids for the different environmental con-

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Farm Leaders Exchange Programme : Report of U.S. Farm Leaders on their Visit to India

February 25—March 31, 1967

Summary

In summarising the impressions of our group, we are certainly in agreement that an Exchange Programme of this kind can give the people of both countries a better idea of the problems that farmers face. Farmers the world over talk in the same terms even though they speak different languages. We have observed the same crops, the same system of research for new varieties, new agricultural practices and find many of the same weeds that we have at home. Farmers worry about the weather and crop diseases and pests and also an intangible worry about excessive government red-tape that stifles private initiative. Our group is small in number but we will show our pictures and tell our story to many groups. Our written report will reach many more. First we would like to list some of the misconceptions we came over with and which are prevalent in our country.

1. Unowned cattle wander at will through the countryside destroying crops and eat at will from the open shops in the cities. People will not touch one to drive them out of the fields or out of the way of traffic because the soul of some ancestor may be in the cow.

2. Indian people will not swat a fly or kill a rat or use insecticides for the same reason.

3. Two-hundred and fifty million bushels of foodgrains are lost each year to rats and insects. This equals the average production of wheat in Kansas.

4. Crop yields are very low. In a television programme seen in our country this winter the harvest on most farms was stated to be only about four units for each unit of grain planted.

5. Indian people are so ignorant and indifferent that they have no desire to help themselves.

6. Countless thousands of people are homeless and live and die on the streets.

Consequently it was an agreeable surprise to us to see thousands of acres of irrigated wheat that would yield more than our wheat at home. Cattle are numerous and excess ones are a burden but in the countryside all are owned by someone. They are herded during the day and are confined or tied up at night. Only in the cities are they seen roaming unattended. Many of the local cattle are used as draft animals and are prodded along, hauling large loads. A good team of bullocks costs about 1500 rupees and are well fed.

From all reports we could get, the wheat that the USA is sending to India is fumigated and stored in good, rat-free warehouses before moving out for distribution. Except for the drought areas very little has to move to the country, so even though transportation is a major problem most of the imported food grains are used to feed the cities.

Most of our travels were in the better farming areas but yields of 25 to 50 bushels per acre were in prospect and some of the new Mexican wheat varieties have yielded over 100 bushels per acre under optimum conditions.

People resist change everywhere if it runs counter to their traditions and customs. However, in the production of crops the majority are interested in and have the desire to get improved varieties and make use of irrigation and fertiliser.

Housing is a problem and a large percent of the people exist in shacks and mud huts. We did not see Calcutta, where, we learn, many refugees are homeless, but the number sleeping on the streets is over—emphasised. In hot weather many find it convenient.

India has many problems and each individual would have different ideas of their seriousness. Here is a partial list:

1. *Cattle:* India has the most cattle of any country in the world, 2,26,000,000 or twice as many as in the U. S. The local cattle produces 0.7 litre of milk per day which is less than one quart. Except for the work bullocks, most are seriously underfed and must die of old age instead of being utilised as a good source of high protein food. Many estimates have been made that cattle numbers could be cut 40% and still provide the draft animals needed now. Mechanization of farms could drastically reduce this number. Progress is being made in getting better dairy production but it is very slow. Here we would like to encourage more use of the improved breeds now on hand in research centres. The use of artificial insemination should be increased. The so-called sacred cow is held in esteem by traditions, not because of religion. The killing of cows was banned a thousand or more years ago out of harsh economic necessity. The Hindus recognize that the cow is (1) a provider of power for the plow (2) fuel for his fire, (3) milk for food, and (4) when the animal dies it provides a hide for leather. If a family was to survive after a drought they must not destroy their cattle. Only the two million Jains hold the cow sacred in that the soul of an ancestor may be re-incarnated in the animal. Only the very upper caste Hindus (Brahmins) are vegetarians while a large percentage of other categories of Hindus are non-vegetarians.

2. *Illiteracy:* Not many put illiteracy this high on the list of problems. To, utilise modern techniques in agriculture people must be educated so that they will be able to understand basic uses and application of fertilizer and insecticides, as well as the operation, service and rapairs of tractors and modern machinery. Also if industry is to absorb more of the population these people also will have to have a basic education. The basis for a successful democracy is to have an enlightened electorate. The world's largest democracy could very well fail because of the 74% rate of illiteracy.

3. *Fertilizer:* Fertilizer and water are usulally listed as critical for India's development. This is also tied to production of electricity so all must expand together. The canal water is allocated by the government. In many areas, because of the pressure for more water, more allocations have been made then there is water available. Farmers then apply for a permit to put down a tubewell. Sometime this is refused because they are in a canal district. Some have electric motors and than when there is a shortage of former it may be shut off long periods. The result is a waste of resources as crops suffer for lack of water at critical periods.

A great deal of progress has been made in improving wheat varieties. Other crops have been improved but not in such a spectacular manner excepting perhaps paddy (rice). The new, shorter strawed, earlier, higher yielding Mexican wheat varieties have the capacity of greatly increasing the food production in India. However, these varieties require more irrigation and more fertilizer or they will produce less than the local varieties.

Fertilizer production from the government owned plants has been inadequate and cannot keep up with tnis increased demand. So far the government has not seen fit to encourage production in the private sector. To our minds, private enterprize is the only solution to this complicated problem of fertilizer, water and power.

4. *Credit:* Adequate credit is essential to a developing economy. In our country commercial banks and loan agencies supply most of our credit needs. Here in India, the credit from commercial banks is only 1% and credit from cooperative banks about 25% of the total credit and the interest rate is high because the risk is great. In our country there are federal land banks and banks for cooperatives. These started out with government backing but are now owned by the members in most cases. The basis for any credit system, if it is to be successful, is a desire on the part of the borrower to establish a good credit rating by paying back his loans. We understand that in India the rate of defaulters runs 40 to 50%. In our country the rate is only a small fraction of a per cent and these are hardship cases. The cumulative effect of trying to default on loans whether through political manoeuvering or plain efforts to defraud will keep the interest rate high and the availability of credit low.

5. *Red-tape:* This is one of the prices which must be paid for a society depending on the public sector to perform services which private sector can and should provide. We can buy fertiliser, tractors, irrigation pumps, cars, and any goods that we want and have money or credit to pay for. If items are scarce they are higher in price and that limits their scale without rationing. When items are rationed and permits are needed for their purchase it leads to endless redtape, frustration political pressures, graft, inefficiency and an uneconomic use of resources. The latter is ironic because the idea of government rationing is to make better use of resources in line with what some planning commission decided was best. Costly blunders often result.

6. *Language:* India has hundreds of dialects with 14 major languages. English was the official language of the governing bodies before Indian independence. After 1947 Hindi was declared the official language. This is unfortunate because it will hinder India in communicating with the rest of the world and tend to isolate the country. India still suffers from the effects of partition and there is no solution in sight for this problem.

7. *Population:* Visitors from less populous areas are always amazed at the number of people moving about in the cities and along the country roads. India has lowered the death rate from 45 per thousand to about 20 per thousand per year. The birth rate per thousand has decreased somewhat but not enough to make up for the longevity increase brought about by better health resources. The increase of population is about 10 million per year. The production of agricultural products is increasing at a much slower pace causing a good gap This has been intensified by the severest drought in history.

In addition to clearing up many misconceptions, our group was pleasantly surprised to see many trees, beautiful flowers and impressive buildings in New Delhi. We have seen only one season and wheat has been the main crop. To those of us from heart of the wheat belt of the U.S.A., and depending on dry land farming, we were amazed at the thousands of acres of good wheat. We were really surprised at the price of land, especially when it is compared to the daily wage of a labourer. The price received by the farmer for his wheat is near three times the price in our wheat belt yet tractors and other machinery are relatively cheaper.

We saw the well planned city of Chandigarh and felt the pride that the people there have of their city. We saw a Gandhi Memorial Training Centre near Panipat (District Karnal) which showed how simple improvements can make the village life easier and more pleasant. We saw the Indo-German Project near Mandi with their spotted Highlander cattle and a demonstration of drainage to improve the water logged soils. They had many simple innovations which would raise the standard of living. We have visited with a number of the Peace Crops members and have been impressed with their dedication and the way they work with the Indian Extension Service.

We realize that many of the desired improvements in agriculture cannot be obtained overnight but must proceed step by step. The older members of our group have seen the primitive conditions of our area change with the use of electricity and labor-saving devices, so we know that it can be done here, especially when these tools are already developed. Even though labor is cheap here, it is only by increasing productivity of the individual that a higher standard of living can be achieved.

There is a need for a larger midlde class. We have poor and underprivileged people in our country but most of them live the way they do because they do not have enough individual initiative to improve their lot. India has many people who could move into a middle class range as technicians and artisans if they had the education and opportunity to expand their farm, or find skilled work in a factory. Education could be expanded by the use of radio and encouraged by eliminating the present licensing of receving sets.

At the top we find many highly educated people who like to draw up elaborate plans but seemingly are not interested in implementation or at least to an outsider they seem to lack a sense of making things practical. There is a terrific waste of time and resources to have motored traffic on the same highway with bullocks and the whole procession proceeding at the speed of

the slowest one. This problem could be corrected by providing separate tracks for slow and fast moving traffic.

On the farms there could be greater use of improved machinery or irrigation equipment if farmers would go together cooperatively to purchase some items from which all could benefit.

We have seen farm cooperatives that have been established to employ with the land reform laws. We have also heard of many other coope ratives for various purposes so we are aware of the cooperative movement in India. But there is a need for another type of cooperation that is apparently lacking. This is cooperation between two or more farmers in the Organization and sharing and the managing of farm machinery. There are several different methods of doing this cooperatively, but this we feel is the only practical answer for the majority of the farmers regardless of whether they farm two or two hundred acres.

The need for increased production of milk here is very apparent. We have seen the improved breeding programmes carried out by the government research stations, and understand there are bulls available to the farmer in some areas. It would seem that a program could be developed to make use of frozen semen for artificial insemination.

We hope we have offered these suggestions in a constructive way. India has already progressed further than we had been led to believe in the States. We have covered many subjects and as people in our country do, we have stated our opinions as frankly and honestly as we know how. We hope this will be accepted as constructive criticism.

We owe a debt of gratitude to many officials of the Indian government, officials of the various States we visited, and the Indian Embassy in Washington. Our own officials in the State Department and the Department of Agriculture have been most courteous and helpful.

As representatives of various farm organizations we have been inpressed with the activities and good work being done by the Farmers Forum (Bharat Krishak Samaj). From the President, Mr. Thomas, who hosted our group and our new found friends in India at a farewell tea, to the able and conscientious Secretary, Mr. Deshpande and his wonderful wife, Usha, down to the many State and local officers of the Farmers Forum, we are extremely grateful. All have gone out of their way to arrange programmes and tours and host our group. This enabled us to understand and appreciate India as few Americans have had the privilege of doing.

We should like to emphasise that a true farmer exchange programme should have the selection and tour planning arranged by farm organizations, not some government agency of the USA or India. The present arrangement has been very satisfactory because it is different from other government to government programmes. This trip as well as others preceding ours should aid in improving the mutual understanding between our countries. Farmers & World Affairs stands for 'Peace Through Mutual Understanding". We believe the programme is much broader than that. There are so many problems in the world that are extremely complex. Better understanding of any of them will lead to the improvement of mankind as well as his relationship with his fellowmen. We feel inspired to go home and take this message to as many of our farm and city friends as possible.

Felicitations

Mrs. Vimlabai Deshmukh, Vice-President, Bharat Krishak Samaj has been elected to the Rajya Sabha. Bharat Krishak Samaj takes this opportunity to felicitate her on this election and hopes she will continue championing the cause of farmers on the floor of the House.

U. S. Farm Leaders Leave

The U. S. Farm Leaders on the completion of their five week's tour of India left on the 31st March, 1967. They were given a farewell on March 29 at which function a large gathering of farmers and distinguished persons was present. They toured through parts of Rajasthan, Haryana, Punjab, Himachal Pradesh, Uttar Pradesh and Delhi. At Jaipur, they met the Governor, Dr. Sampurnanand and at Chandigarh, Governor, Shri Dharam Vira and had tea with them. They also visited Madras and Bombay although these places were not in the schedule. Due to bad weather they could not visit Jammu & Kashmir. Actually their plane returned after flying nearly 3/4 of the way. Before their departure, the group had evaluation both by the Bharat Krishak Samaj and U.S. Embassy and AID and also met the Prime Minister Smt. Indira Gandhi. The group was very pleased with the programme and was greatly impressed with most of what they saw during their tour.

The group was treated as State guests by the Punjab and Himachal Pradesh Governments and at Pilani by the Birla Institute of Technology and Science. The Samaj is grateful to them and also to the various host families, as also to the officials of the State Governments, U.S. Embassy, U.S. AID, West German Embassy, Research Institutes, Organizations, Commercial firms, progressive farmers, office bearers and members of the State Samajs concerned and scores of individuals who helped to make the programme a great success.

A summary report of the U. S. Farm Leaders on their visit to India is published in this issue.

Mr. Basu Leaves

Mr. Basu, Secretary Young Farmers Association has joined the Afro-Asian Rural Reconstruction Organisation as Consultant. While his departure is a loss to the Y.F.A., we felicitate Mr. Basu and wish him even greater success in his new assignment.

Death Anniversary of Dr. P.S. Deshmukh

The second death anniversary of our late President, Dr. Panajbrao S. Deshmukh, was solemnly observed in different parts of the country.

In the Central Office of the Bharat Krishak Samaj, a meeting was held to pay tribute to his loving memory. Mr. Thomas, President of the Samaj, placed a wreath on the photograph of Dr. Deshmukh and two minutes silence was observed while standing. Among those present on the occasion, besides the staff of the Central Office and the National Agriculture Fair, were, Messrs. M.S. Anvikar, V.V. Patil, President and Vice-President of the Maharashtra State Krishak Samaj respectively; R. Srinivasan, Secretary, Farmers' Forum, Madras, Smt. R. Rangachari, Member of the Govering Body of BKS; B. J. Trivedi, Secretary, YFA and Sri Anil Jhaveri, Secretary, Y.F.A. Gujarat.

To observe the Second Death Anniversary of the revered Founder President of Bharat Krishak Samaj Dr. P. S. Deshmukh a meeting of the local farmers was held at Narangarh in Puri District, on 10-4-67. Shri Prananath Bidhar, Life Member of the Samaj presided over the meeting.

Shri M. C. Rautarey, Assistant State Organiser, Orissa Krishak Samaj addressed the meeting and earnestly requested all the participants to strengthen the Samaj by enlisting themselves as members of the Orissa Krishak Samaj.

The President in his speech requested all present to complete the unfinised work of the late President with devotion, determination and missionary spirit.

With a vote of thanks to the chair, the meeting came to an end.

Sendhwa Krishak Samaj

Bharat Krishak Samaj, Sendhwa, Madhya Pradesh sent a parcel of 25 new saries to the Incharge, Sadaqat Ashram, Patna for distribution to the famine affected people. The Sendhwa branch of the Samaj also sent a sum of Rs. 100/ for the same purpose. Earlier the said Samaj had sent a parcel of 30 saries and has assured the authorities in Bihar of further help.

Chief Ministers' Conference at New Delhi

The Chief Ministers of all States held a Conference at New Delhi on April 8 and 9. The decisions of their deliberations were announced by the Union Food & Agriculture Minister, Shri Jagjivan Ram in the Parliament. We reproduce below the text of his statement:

The Chief Ministers of all States met in a conference at New Delhi on April 8 & 9. The conference considered the following subjects:

(1) General food position in the country, particulary, measures needed to meet the very difficult period till the harvest of the khariif crops by the end of the year.

(2) Tentative national food budget prepared by the food department; and

(3) The procurement policy and prices for rabi foodgrains including wheat and gram.

National Problem

The discussions in the conference were marked by a sense of realism and also the determination to treat food as a national problem. The Chief Ministers were informed that as a result of the discussions in the consortium meeting held in Paris it had been indicated that efforts were being made to enable India to import about 10 million tons during the year. The quantum of availability, however would become clearer only by the end of the month. The Chief Ministers were also informed that even if the promised supply of 10 million tons of imports materialise, it would not be possible to increase the allocations of central stocks to the States beyond the level at which they were at present.

The following are broadly the conclusions reached at the conference:—

(I) It was realised that in the present context of shortage and scarcity, it would not be wise to depend upon the free market mechanism to meet the situation. It was, therefore, felt that the existing zonal restrictions under which the inter-State movement of foodgrains on private trade is banned, should continue. The movement of pulses other than gram would, however, continue to be free.

(II) The present wheat zone consisting of Punjab, Haryana, UP and the Union territories of Himachal Pradesh and Chandigarh and the non-rationed areas of Delhi, would be split into single-State zones. Under the revised system, UP, Punjab, Haryana and Himachal Pradesh would form separate zones.

Budget

(III) It was recognized that the tentative national food budget placed before the conference had some limitations on account of the imperfect data available relating to production, consumption etc. It was, therefore, felt that in order to meet the difficult situation during the year it would be necessary to proceed on ad-hoc basis and that efforts should be made to perfect the system of collection of data so that a proper and more accurate food budget could be prepared later on.

(IV) It was recognised that the position with regard to rice was extremely difficult. It was agreed, therefore, that every effort should be made to intensify the procurement of rice within the country both in surplus and deficit States so that sufficient quantities may become available for public distribution in the deficit States. It was agreed that Andhra Pradesh would supply to the Centre in all 6 lakh tons against the supply of 2 lakh tons of imported wheat and milo by the Centre to the State. The Punjab Government agreed to make available to the Centre about 6 lakh tons of all foodgrains. Orissa agreed to supply 75,000 tons of rice to the Centre and also agreed to consider whether some more quantities could be made available in exchange for wheat supplied to the State by the Government of India.

(V) With regard to procurement, it was agreed that the method of procurement in each State should be left to the State concerned but that every State should make all efforts to maximise procurement.

(VI) It was felt that procurement prices for wheat recommended by the Agricultural Prices Commission were somewhat low. It was decided that the question would be discussed further with the main rabi-growing States and that the level of prices for the rabi food-grains would be announced within a few days.

(VII) It was agreed that the role of the Food Corporation in the procurement of Foograins should be examined and that the States should make every effort to assist the Food Corporation in fulfilling the objects with which it was set up. It was emphasised that in doing so every effort should be made to see that the Food Corporation functions efficiently and that it did not function as an additional intermediary. It was also agreed that examination of the costs margins of the Food Corporation would be looked into to nsure that the bringing in of the Food Corporation did not result in any increase of prices.

(VIII) It was agreed that a standing commitee of Chief Ministers consisting of some Chief Ministers of deficit as well as surplus States will be formed to deal with the various problems on food as and when they arise.

(IX) It was realised that in the very difficult situation in which we are this year, it was very necessary to intensify production in the country and for this purpose every effort should be made to grow short term crops over as large areas as possible in the period between the hervest of the rabi and sowing of the kharif crops.

Food Minister's Appeal to Farmers

Shri Jagjivan Ram, Union Food & Agriculture Minister made an appeal to the farmers through the AIR on 11th April 1967 to increase agricultural production in the country to meet the food crisis. We reproduce below the text of that statement:

I appeal to Indian farmers to raise short-duration crops during the period inter-vening between the current rabi harvest and the next kharif sowings to overcome the present difficulties on the food front.

Every inch of irrigated land which can be put under a short duration crop should be utilised, so that several thousand tonnes of additional food grains are available before July and August.

If any state found it difficult to get the required seed, the centre would make efforts to arrange its supply from other States.

The deteriorating food situation in the country consequent to the two continuous drought years warrants radical change in the cultivation practices by the millions of farmers throughout the country, so that agricultural production can be rapidly increased in all such areas where the facilities exist. There is pressing need to raise several thousand tonnes of foodgrains before July and August for partly overcoming difficulties on the food front.

Food production can be stepped up not only by intensive methods of cultivation but also by increasing the number of crops that can be raised in every arable acre. The advent of the short duration high yielding varieties had made it possible to increase the outturn of crops in all the cultivated areas. These varieties are generally period bound and do not suffer from the limitation of the season.

For example, after the harvest of the rabi crops in March-April the land is allowed to remain fallow till the kharif season starts in the month of June-July. A period of 90-100 days is available between the two traditional seasons and there is no reason why this time cannot be utilized for growing a short duration food crop provided the necessary irrigation facilities exist.

The alternatives before the cultivators towards this effort are very many and varied. Ragi, a staple food crop in Mysore and other South Indian States offers itself as a likely choice. A number of high yielding strains of this crop have been developed in many States with a duration varying from 85 to 105 days. The crop requires only light irrigation, when there are no rains.

The climate of the North Indian States also during the period April to June suits this crop, and its cultivation may not interfere with the normal cultivation in the kharif season.

Short duration varieties of maize including hybrid maize lend themselves to this type of cultivation and this crop the irrigation demands are not high.

In areas where plentiful irrigation is available the short duration varieties of rice come up well and can be followed by normal kharif crop, even if it be paddy.

The summer irrigated tracts of jowar, particularly in Madras and Andhra Pradesh are also suited for increasing production. In these areas, the land is kept follow after the harvest of the summer jowar crops during the months of April to June, till the next rabi season.

Vegetables

Cultivation of vegetables during the summer period (April to June) will go a long way in meeting with the nutritional requirements of the people. Most of the indigenous vegetables are suited for this purpose and have the additional advantage of fetching better price in the market at a period when there is scarcity of vegetables.

The situation demands that in the areas with good facilities, maximum advantage should be taken between the two main seasons to raise a short duration food crop.

The methods and practices suggested are technically feasible and the Government of India has advised all the State Governments to take up such a programme.

It may be, that in some states the required seed is not available readily. To this end, the Central Government will make efforts to arrange for supply from other States.

I. therefore, appeal to the farmers all over the country to meet this challenge of food shortage by growing short duration crops after the harvest of the present rabi crop.

It should be the endeavour of the farmers to ensure that every inch of land which canbe put under a short duration crop is not left fallow.

I am sure that with our joint efforts we will be able to do the utmost to tide over to a large extent the acute shortage that is facing us today.

Curbs on Link with Krishak Samaj to go

Mr. Charan Singh, Chief Minister, U.P., addressing a meeting of the executive committee of U. P. Krishak Samaj in Lucknow on April 4, said that the order forbidding officers of the Government to associate with the activities of the Krishak Samaj would be withdrawn. He added that the recommendations of the Krishak Samaj would receive earnest consideration of the Government.

The Krishak Samaj. assured the Chief Minister of its fullest cooperation to the food procurement drive. It also pleadged to do everything possible to step up agricultural production,

Mr. Charan Singh said that the Krishak Samaj was a non-political all-India organisation devoted solely to the service of the peasantry. At the Central and State levels, Ministers of Governments were associated with the Samaj.

Quality of Milk

The experts took part in the fourth meeting of the FAO—World Health Organization Expert Panel on Milk Quality. They pointed out that protein being the most important nutritive factor in milk, every effort should be made to preserve and use milk especially in the developing nations.

The Panel agreed that education, and demonstration, rather than regulation, will help in slowly improving the over-all quality of milk in developing countries.

Higher Fertilizer output

World Production of commercial fertilizers has risen to nearly 50 million metric tons.

A report by the Food and Agriculture organization says output in 1965/66 hit 48.1 million tons, a rise of 113% above the previous year.

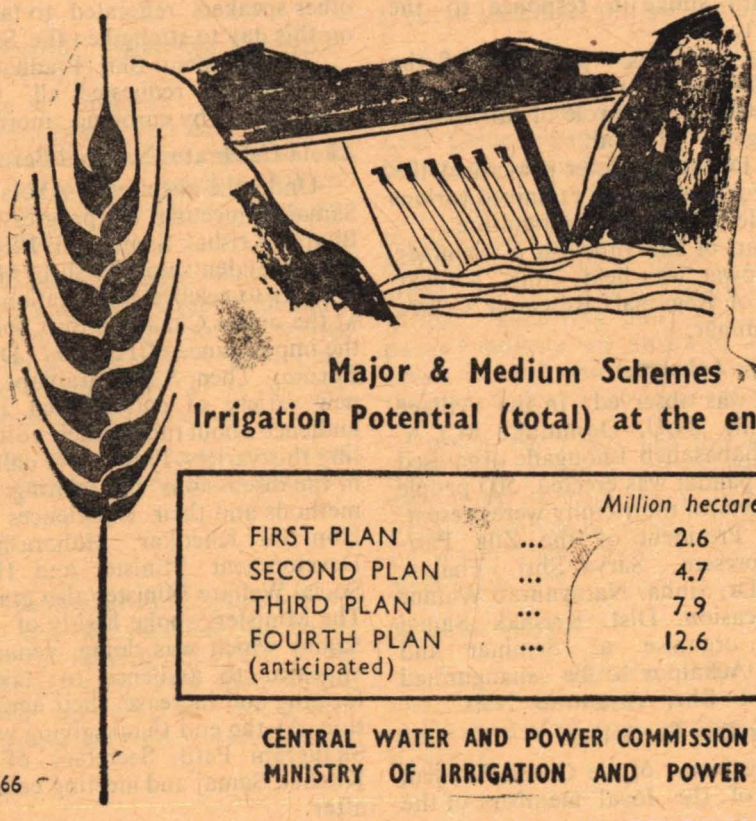
Consumption of 1965/66 increased to 45.8 million tons, or a rise of 11.5% over the previous year.

The combined world production of fertilizer nitrogen is set at 19.5 million tons, up 13.4%, potash, 13 5 million up 12%. and processed phosphate, 15.1 million tons, up 9% The FAO statistics include an unofficial estimate of 950,000 tons of commercial fertilizer produced in China (Mainland) against an estimated consumption of 1.5 million tons.

The largest increase in output during the year under review occured in North and Central America and in Europe. The heaviest use of fertilizer still occurs in Europe where the application runs an average of 118 kilograms per hectare of arable land. In North and Central America the comparabl figures are 48 kilograms per hectare; in the Soviet Union they are 24 kilograms in South America and Asia; and five kilograms in Africa.

Development of Irrigation

Assured Irrigation for Increased Food Production



Major & Medium Schemes
Irrigation Potential (total) at the end of :–

		Million hectares
FIRST PLAN	...	2.6
SECOND PLAN	...	4.7
THIRD PLAN	...	7.9
FOURTH PLAN (anticipated)	...	12.6

CENTRAL WATER AND POWER COMMISSION
MINISTRY OF IRRIGATION AND POWER

davp 66/566

National Farmers Day

The National Farmers Day was observed on the 5th April, 1967 at 4 p.m. 3 miles away from Amravati city in Anantwadi by the Dist. Krishak Samaj, Amravati and the Nagar Krishak Samaj, with great fanfare and activity.

A huge pandal was erected and rostrum installed with front gate well decorated.

Shri Bhaurao Jadhao, hairman of the Dist. Central Cooperative Bank and M.L.A. presided. It was inaugurated by Sirmati Pratibhatai Patil, Deputy Minister of Prohibition and Health.

Shri Narayanrao Watane President of the Dist. Krishak Samaj explained the significance of the Day and emphasized the role of the Krishak Samaj.

Srimati Madhumati Kulkarni representative of the State Congress Committee spoke on the role of women in agriculture and introduced the guest of the day to the audience.

Shri B.S. Patil spoke in responce to the reception given to him.

Shri Bhaurao Jadhao, president of the meeting who arranged the numerous schemes for the farmers emphasised the role of farmers in the present emergency of food.

Srimati Patil, Deputy Minister prescribed the code of conduct for farmers and explained various schemes for the development of agriculture.

Before the start of the function a Seminar on Cotton and Jowar was held. Shri Katiyar and Dr. Sidiqui of Regional Research Centre guided the Seminar.

At Deurwada (Tq. Achalpur)

Krishak Day was observed in the village of Deurwada. Shri N.U. Deshmukh M.L.A. presided. Shree Babasaheb Bhongade organised the meeting. A pandal was erected. 500 people attended. Villagers of the vicinity were present. Shri Naygaokar, President of the Zila Parished also was present. Sarva Shri Thakre, Bobde, Metkar, Dr, Sinha, Narayanrao Watane spoke on the occasion. Dist. Krishak Samaj now intends to organise a Seminar and Farmers rally at Achalpur to be inaugurated at the hands of Shri Vasantrao Naik.

National Farmers Day in Orissa

Under the auspices of the Orissa Krishak Samaj, a meeting of the local members of the Samaj met on 3-4-1967 at the Meeting Hall of the Orissa University of Agriculture & Technology. Shri P.M. Pradhan, Deputy Chief Minister, Orissa and Chairman of the Orissa Krishak Samaj presided over the meeting.

Shri Raj Ballabh Mishra, Minister for Agriculture, Orissa, Shri Himansu Sekhar Padhi, Deputy Minister for Irrigation, Shri D. Behura, Director of Agriculture and Food Production, Orissa and Ex-officio Secretary of the Orissa Krishak Samaj, Bhubaneswar, Dr. K. Ramiah, Vice-Chancellor, Orissa University of Agriculture and Technology, Shri J.C. Singh Deo, Dr. A.R. Panda, Joint Director of Agriculture, Orissa Shri M.C. Rautarey and others attended the meeting.

At first Shri M.C. Rautarey, Assistant State Origaniser read out the message of the President of the Bharat Krishak Samaj, New Delhi. All other speakers reiterated to take a solemn view on this day to strengthen the Samaj.

The President Shri Pradhan in the course of his speech requested all to strengthen the organisation by enrolling more Life Members.

Akola Celebrates National Farmers' Day

Under the auspices of Akola District Krishak Samaj a meeting of progressive farmers of Bharat Krishak Samaj was held at Akola under the presidentship of Shri Maniklal Somani. in other to celebrate the National Farmers' Day. At the outset Chairman Shri Somani emphasized the impor tance of Farmers' Day and Farmers' Forum. Then Shri Paranjape who evolved the new variety of cotton seed 1007 revolved the audience about raising their cotton yield by adop ting this variety. Progressive cultivators took part in the discussions by relating to the improved methods and their experiences and difficulties. Hon. Shri Khedkar, Maharashtra State Rural Development Minister and Hon. Shri Vairale Social Welfare Minister also graced the occasion The Ministers spoke highly of Bharat Krishak Samaj which was doing yeoman service and appealed to audience to take to improved farming and increase their agricultural production. At the end thanksgiving was done by Shri Shaligram Patil, Secretary of Akola District Krishak Samaj and meeting came to close thereafter.

Roundworms of Poultry

Tests conducted at the Indian Veterinary Research Institute. Izatnagar, showed that the largest intestinal roundworm, ascandia galli—of poultry could be controlled almost fully with piperazine citrate.

A dose of 0. 5 gram of the chemical per bird resulted in completely throwing out the roundworms. A lower does was not so effective. For worms, which are not fully grown, the does could be reduced to C.25 gram per bird.

The drug given through the feed or in drinking water was found to be about 85 to 100 per cent effeetive.

Termite Damage to Cane

Timely and sufficient irrigation or appli cation of chemicals can effectively protect sugarcane against damage by termites (white ants).

Research at several Sugarcane Research Stations in Madras State have shown that where irrigation is a problem, 25 kilos of 50 per cent Heptachlor can be used for preventing termite damage. The chemical is to be applied in furrows or trenches before planting. It costs Rs. 15 to 18 to treat an acre with Heptachlor.

Termites attack the sugarcane crop in its early stages. They may attack the buds and the young tillers. Such canes do not grow well and come out of the ground with a little pull. During hot weather as much as 30 to 60 per cent of the cane shoots may be damaged.

Aldrin, dieldrin and chlordane are other chemicals which have been found to be effective against termites.

Paddy Stem borer

Experts have found that the application of gamma-BHC, also known as lindane, to irrigation water is effective in killing the pests living inside the paddy plants, such as the stem borers. Ordinary pesticides are effective in killing only the pests feeding on the surface of the paddy plants.

If applied through the irrigation water, gamma-BHC is absorbed by the roots and the other parts of the plant which are under water. It reaches the stems killing the pests living there.

Lindane is applied at 2 kilos of active ingredient per hectare at the maximum tillering stage. This may be followed by another 3 kilos of active ingredient at the booting stage.

The vapours from lindane were found to kill moths and other insects.

Insects on Paddy

By looking at the nature of damage done by it, the farmer can instantly make out which insect has attacked his crop. He can then take prompt measures and prevent heavy insect damage to the crop.

In the nursery and in the newly-planted crop, the curling of leaves is due to thrips. Burning of leaf tops or scraping of leaf tissue in parallel lines is due to hispa. An attack by stem borers, moths, leaf hoppers, swarming caterpillars or hoppers is easily recognized by their presence on leaves. Long hollow silvery tubes in seedlings spell gall midge.

At the tillering stage too, silver shoots mean a gall midge attack. Dry central shoots which when pulled come off easily mean stem borers. Leaf tissue scraped in white parallel lines or blisters on leaves indicate hispa.

Leaves folded along margins and webbed together show the leaf attack. Leaves eaten up entirely to mid-ribs or partly eaten up mean an attack by grasshoppers, cutworms, or army-worms. Yellowing and stunting of plants in patches indicate an attack of mealy bugs. Cut leaves formed into tubular cases attached to the stem or leaves point to cutworms.

When the heads are forming, an offensive smell and partly or completely chaffy heads with bugs on them mean an attack by gundhi bugs. Completely chaffy heads which come off easily when pulled indicate an attack of stem borer larva.

Mexican Wheats

The dwarf Mexican wheats, Lerma Rojo and Sonora-64, give better returns with the application of nitrogenous fertilizers than Indian varieties.

At the U.P. Agricultural University in Pantnagar, for every kilo of nitrogen applied they returned 32 kilos of grain as against 20 kilos by Indian varieties like NP 876 and NP 877.

With 20 kilos of nitrogen per hectare, Lerma Rojo gave a yield of 4,774 kilos of grain as compared with 1,900 kilos from NP 876.

Another finding from these trials was that beyond 45 kilos of nitrogen per hectare, there was no proprtionate increase in yield of Indian varieties. But Mexican wheats continued to give increased yields even with doses of up to 90 kilos.

So with Mexican wheats, nitrogen application even to 90 kilos is profitable.

Unirrigated Wheat

Like the irrigated wheat crop, rainfed wheat also responds well to fertilizer application,

In tests conducted at Gurdaspur in Punjab the application of 34 kilos of nitrogen and 17 kilos of P205 per hectare at the time of sowing gave yields of 13.15 quintals of wheat per hectare, against 7.25 quintals of wheat obtained from unfertilized plots.

Increasing the dose of nitrogen to 45 and 67 kilos per hectare increased the yield further by 105 and 345 kilos per hectare respectively.

It was also found that drilling of fertilizers at the time of sowing of wheat under unirrigated conditions enables the crop to withstand rought conditions better than when unfertilized.

To Get Better Milk

Proposals to improve the quality of milk, especially in developing countries, have been submitted to the Food and Agriculture Organization from an FAO-sponsored meeting of seven dairy experts.

The experts made these proposals among others:

The preparation of a monograph on milk quality to be distributed to producers and others

The preparation of a guide for uitlization of milk in developing areas.

Price incentives to producers according to basic quality of the milk.

Extension servise, from the plant to the producer, to advise, on basic hygienic requirements of milk production.

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ditions obtaining in the different areas must be first determined. The breeders and agronomists are engaged in these investigations. They must be consulted before growing any of them or else there will be frustration and waste of money and time, besides bringing disrepute to a really outstanding variety. This has actually happened in so many cases. Haste and indiscretion are detrimental and must be avoided.

Our food problem is serious, made more so by two consecutive drought years and rising population. Our famers are conscious of their duty and responsibility to feed the nation adequately. With the latest scientific knowledge available, much larger populations could be fed and clothed than ever before, but our efforts to produce more are offset by the population which is increasing at a terrific pace. The only solution, therefore, appears to be birth control. Our difficulties in population control are social and emotional. Education of the masses and making them realize that larger families meant more children to feed, clothe, house and educate resulting in lower standards of living accompanied by ill health, disease and poverty, is necessary and urgent.

We believe that as our successful progressive farmers have shown the way to better agricultural practices to their less fortunate fellow farmers, they can also set an example in family planning and persuade the rural community to emulate it to their benefit.

If the project in these two States proves successful, it may be extended to other areas. We have no doubt that our farmers will come out victorious both on the food front and the population control front, resulting in peace, happiness and prosperity of the Nation.

Fourth Plan : Agriculture Sector

(*Contd. from octobor 66 issue*)

Credit

The mounting of a massive agricultural production programme calls for a considerable step up in the supply of agricultural credit which can only be reached if policies are clearly defined and implemented. To achieve the high credit target, the crop loan system, in terms of full supply of crepit to meet the production requirements, is being introduced in the cooperative credit stucture. Under this system, the loans given to cultivators are qased on the production needs of each type of crop and not on the landed assets of the borrowers. This system will have far-reaching effect on agricultural production, particularly in the case of tenants and the small owner-cultivators. Special cial efforts are being made to introdbce his system in the area covered by High-Yielding Varieties Programme. It provides that loans for supply of material inputs, such as seed, fertilisers, implements and pesticides should be advanced only in kind and that attempt should be made to link credit with marketing. Procedures for the grant of loans will also be simpliffed in order to avoid unnecessary delays.

Our policy has been and continues to be te arrange for the supply of agricultural credit through cooperatives. However, in areas where the cooperative mochinery is too weak to undertake the work invoived in this production programme, it may be necessary to provide a supplementary line of credit through the establishment of agricultural credit corporations in some of the States. The details of the proposal regarding agricultural credit corporations are under the consideration of the Government The co-operative structures is also in need of assistance both for the extension of coverage and improvement in its functioning in respect of services rendered to its members.

Land Reforms

Land reform is another important instrument, by which the Planning Commission has always set much store, for creating the necessary motivational background for increasing agricultural production. "Land to the tiller" has been the basis of this programme. But the experience of the last 15 years has shown that, though, intermediaries have been abolished and a certain measure of extension has taken place in peasant proprietorship, there are still a large number of farmers who function as tenants. It must be stressed that, in terms of motivation of the farmer, this programme is of significant importance to rapid increase in agricultural production. It is also important to emphasise the need for adeuba te and appropriate follow-up action in the agricultural sector if full benefits are to be derived from the implementation of land reforms.

Small Peasant Farmers

An understandable criticism levelled at agricultura planning as been that it does not do enough for small peasant farmers. Lands belonging to small owners may be divided into two categories, namely, those under direct cultivation and hose leased out to tenants at will. The prob lem which the former presents is of finance, technical assistance and organisation of cooperative activity. Regarding the latter, measures taken to protect tenants of small owners should be simple to administer and, as far as possible, the probe lems which they raise should be solved at the villaglevel by the people themselves.

The Fourth Plan includes programmes which are intended to help small peasants and persuade them to organise their activities on a community basis, preferably on cooperative lines. The pro vision of agricultural credit on the basis of production needs, instead of material assets. is one of these measures. Similarly, intensification of the programme of consolidation of holdings will alleviate the burden of fragmentation which affects the small

peasant. Pro grammers of bunding, levelling of land and well-sin king will be taken up on a community basis.

Crop Insurance

Severe distress is caused to the farmers by crop failure resulting from drought, floods and other natural calamities. This risk is likely to get accentuated under conditions of large investments on fertilisers, pesticides, improved seeds and other inputs which are proposed to be used on a large scale during the Fourth Five-Year Plan, especially under the high yielding varieties programme. One of the important means ofalleviating distress arising from natural calamities could be the organisation of crop insurance. In return for stipulated annual payments (viz. premia) the farmers could be assured of certain minimum compensation to cover the risk of loss from such calamities Under the Third-Five-Year Plan it was proposed to undertake this pilot scheme to study the feasibility of introducing crop insurance in the country. The Government of Punjab, which agreed to undertake this pilot scheme in a few areas, have already taken preliminary action in this direction, by way of collection of requisite data. Enabling legislation for the introduction of crop insurance on a compulsory asis by the States is under prepration. A scheme for crop insurance has been included in the Fourth Five Year Plan and will be in plemented in Punjab initially. It will be extended to other States which shwo their readi ness to implement it.

Minor Irrigation

The long term potential for the development of minor irrigation has been estimated at 75 million acres (gross), made up of 30 million acres from surface water and 45 million acres from groundwater resources.

The actual level of development expected to be reached at the end of the Third Plan period is about 50 million acres. The target for minor irrigation in the Fourth Plan has been fixed at 17 million acres including one million acres to supplement irrigation from major and medium projects for provid ing more intensive irrigation. This would include 12 million acres of new irrigation, about 2 million acres benefited by water conservation-cum-ground water recharging schemes and one million acre of area benefited from drainage, flood protection and anti-sea water intrusion works.

Area Plans for minor irrigation will be prep ared to reach the optimum level. These plans will be closely linked with rural electrification programme designed to provide electricity to clusters of wells or tube-wells. The programme will also insist on consolidation of holding wherever feasible. The small holders will be helped through community masonry wells constructed and maintained on behalf ot the panchayats or cooperatives and hired or sold out on instalment to farmers. The areas brought under minor irrigation will be properly serviced with extension, credit and supply facilities. In fact, each cluster of pump-sets will be treated as a project and special area treatemnt will be given to the areas served by these pump sets.

In order to ensure speedy and full agricultural benefits from irrigation projects, a programme of ayacut development is proposed as Centrally sponsored programme. This programme envisages an integrated approach, use of improved agricultural paractices in relation to irrigatedf arming, coopera- tion and develodment of rural industries. It is hntended to cover about 2 million acres of unutilis- de irrigation potential. The programme will, as far as possible, be implemented in compact blocks, each covering about 5000 acres. Although the programme vary in detail from region to region and project to project, its essential ingredients would be crop planning, regulation of irrigation supplies, proper distribution and application of irrgatiou water' land shading and consolidation of holding, soil survey, arrangements for supply of inputs, extension and demonstration, cooperatives, storages and marketing, communications and agro-industrial development.

(To be continued)

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