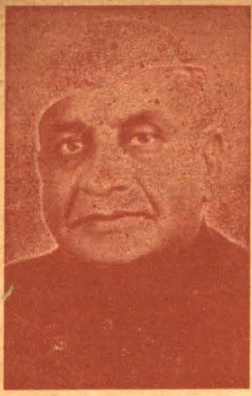

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A Fight Against Drought and Floods

Droughts and Floods are posing a problem before farmers every year. Even in the age of science we depend upon the weather bagaries and ill fate of farmer dooms all the speculations of rich harvest. Under these circumstance when Government help and assistance is sometimes late, in sufficient and difficult, we must gird up our loius to self help.

Self help means the farmers could jointly raise their voice, they could try to fight with the drought, against the flood. In many areas where drought is a regular phenomenon farmers should try to find out the under ground water resources, they should maintain old wells, they must conserve water in the small ponds. As regards seeds they should take the new drought resistant seeds for sowing. They must sow them little deeper so that it may sprout with little amount of moisture. They must procure grass and other vegetation for keeping the moisture reserve in the fields by way of pulvar.

They must use cow dung manure, instead of fertilizers, so that crop may be benefitted even without water. The fertilizers are often demanding high quantity of water to let the plants sprout and spread. In the same way they may have both the sides of furrows for sowing. This will give them enough irrigation at the time of even smaller rain.

Besides this recently P.A.U. Ludhiana has produced a best quality of date palms which are very responsive in dry and desert areas. The Farmers of such areas can procure seeds or seedlings from this university to sow a good amount of palms in the desert areas like Badmer and jaisalmer. This is though a smail remedy, cut it will give some sweet fruits and vegetation to the farmers suffering from scorching sun and thrist.

Recently, a survey has revealed that the deserts, particularly in Rajasthan holds high promise for water and oil resources in the heart of it. If the join exploration of water is made by state or union Government the areas of 20,000 acres could be very well irrigated in the Rajasthan and Gujarat deserts besides, Rajasthan canal resources of irrigation. This will give a return of 8 lakhs of ton food and fibre.

Similarly in the areas of flood the farmers are simply helpless and recently a floodshed has swept away over 15,000 villages in east Rajasthan. The flood is not only the problem of Rajasthan. It is a problem of east U.P., Bihar and many other states where rivers are in spate almost in every rainy season. On the one sides. The farmers are cursed with flood and on the other side with high amount of drought and scarcity.

In these circumstances, the Government is taking high level measures to silt out the rivers which is a very costly measure, while the repairing of dams also very troublesome and expensive. But this is being done by Government at every step to avoid floods. Still the farmers could also watch the situation round about their villages to plug such dams with small breaches, to infrom the irrigation authorites about the leakage chances and weak points of such dams which pose a threat sometimes.

The bags of sand may already be procured near about such villages where flood is always threatening. The farmers in a combined group and spirit should do such voluntary labour in this task. They should also try to silt out ponds every year so that it may accomodate the large amount of water in the flood situation. They should also help in repairing the dams in addition to Government's help., because ultimately is if will be their own security and will save their crops and lives.

There are many measures which could be taken long before such threats. Suppose a village is situated at the low lying areas, we may try to vacate it in advance as soon as the heavy down power starts. The cattle and villages can shift to high attitute to watch the situation with their food and fuel. They should also wait for crop sowing and let the monsoon come in its own course. Still the means of communications are enough developed and the farmers got the weather report three four prior through All India Radio and newspapers.

If the news are coming to them they must alert themselves and the authorities to avoid the situation. The recent damages calculated in crores in many areas from flood and drought could not be reperated but the farmers could think of their better tomorrow with the wise planning of Rabi season.

JAGDISH KODESIA

Labour Standardization, Remuneration and Income Distribution on Cooperative Farms

By Bocho Iliev

Remuneration can only be correctly fixed if the amount and quality of work done are precisely specified. The amount of work done are precisely specified. The amount of work done on cooperative farms, just as that done in all enterprises in Bulgaria. is specified on the vasis of labour standards. The length of work-time (number of workdays and hours) cannot specify directly and precisely the amount of work done and its social usefulness. Labour standards, as year sticks of work, are now being improved along with the improvement of labour standardization.

During the initial period of development of cooperative farms in Bulgaria, when they were still not consolidated, people had no habits of working in collectives, as a result of which labour standards were very low. The Second Conference of Cooperative Farms in Bulgaria was held in 1950 ; it discussed and approved labour standards—set forth in a special brochure for use by all cooperative farms.

Whereas in crop-raising, model labour standards are specified on the basis of work done, in animal husbandry these standards are specified on the basis of the quantity of production obtained (milk, wool, eggs, number of cattle bred, live animal weight growth). The work of cattle-breeders alone is specified on the basis of number of head of cattle.

Such model labour standards have been established for different types of work in the various sectors of cooperative farms ; they also include labour standards valid for affiliated secondary enterprises.

All labour standards established for cooperative farms are only model standards they are not explicity specified but vary within certain limits. On the basis of these standards—the leading bodies of cooperative farms specify their own (not model) specific labour standards, themselves subject to approval by the cooperative farmers at their annual meetings. Discussions on the nature of labour standards for cooperative farms are organised every year; depending on the achievement of better results, the acquisition of equipment for production work and the improvement of the skills of cooperative farmers, they are respectively corrected and adjusted.

Scientific and Technical Labour Standardization

The amount of work done can only be specified with precision by means of scientific and technical labour standardization. In order to establish scientifically-grounded labour standards, experiments on the scientific and technical standardization of labour processes have been made in this country during the past two years by persons entrusted with this task under the guidance of research institutes, on the basis of methods established by the latter.

Thus, labour standards reflect the amount of work done; its quality is also taken into consideration in its specification. The assessment of the quality of work done is made, taking into account the skills of cooperative farmers, the complexity difficulty of the work, its economic effect, social usefulness, the season in which a certain type work is performed, etc.

In animal husbandry, as mentioned above, labour standards and the assesment of work performed are different. They depend completely on the volume of production obtained by the cattle breeders from the herds they breed.

The 'work day' assessment of labour in crop-raising is made by means of taking as standard the volume of work performed; in cattlebreeding work standards are specified on the basis of the volume of production obtained (milk, wool, eggs, live animal weight growth, etc.).

The standardization and assessment of a labour on the basis of production obtained is more precise and more progressive method of labour standardization.

In order to improve the standardization and assessment of labour on cooperative farms, the Council of Ministers issued a Decree on the Organization of Labour and the Remuneration on Cooperative Farms in 1954. In this decree lt is recommended to the respective leading bodies of cooperative farms that they specify standards of work for cooperative farmers employed in crop-raising and animal husbandry and make assessments of the work done in conformity with the volume of production obtained, recording a specific number of work days of farmers per 100 kg. of production obtained by them.

(Contd. on cover 4th)

Irrigation Economics : A Critique of Jain Commission Report

By S.V.S. RAO

The first part of the report of Indian Irrigation Commission headed by Mr. Ajit Prasad Jain has been published. For a Commission whose terms of reference include the unenviable task of reviewing development of irrigation since the turn of the century when the first Indian Irrigation Commission submitted their Report, it makes an interesting re-ading, even if much of it is familiar.

Literally much water has flown down our rivers during the years and with it economic concepts concerning river valley planning and development. Investment in irrigation projects can no longer be considered within restricted financial norms or in terms of a criterion that does not reflect changing national needs. The present Report of the Commission (other volumes are yet to follow) bristles with many policy prescriptions. It is of interest, however, to consider only such suggestions of the Commission as are related to economic and financial aspects of future development in this crucial sector.

Fruitful aspect

Perhaps the most fruitful aspect of the Commission's deliberations is the emergence of a national water policy, absence of which has bedevilled efforts at integrated development of the country's water resources. It is not that earlier Five-Year Plans and Committees of the Government both at the Centre and in the States have not gone into some aspect or other of such a policy and drawn attention to existing lacunae in the policy frame work. But these have at best been piecemeal solutions and lacked the needed long-term prospective of development. It is to the credit of the Commission that they have attempted to go into various aspects of the problem and spell out the institutional measures to secure the integrated use of water resources. Thus for instance, a principal recommendation made by the Commission is the creation of a supreme policy making body called the National Water Resources Council. This council headed by the Prime Minister would be concerned with taking policy decisions pertaining to conservation, utilisation and inter-basin transfers of water. At the regional level, the Commission has recommended the establishment of River Basin Commission for preparation of basin plans for major river systems in the country.

It would be the task of the Water Resources Council to ensure that plans formulated by the River Commission were in accordance with national priorities. The River Commissions have planning and advisory roles and seek to translate the principle of "one river, one plan."

In this context, the importance needs hardly to be stressed of clearly defining "regional" and "national" objectives which on past experience would suggest scarcely, If ever, meet and even the more difficult task of integrating water resources programmes with the specific needs of regional development. For instance, interests of regional development may indicate preference for high cost works to be taken up in an area if equivalent benefits at lower costs may be available elesewhere. Cl national benefit cost criteria would not be adequate for such planning unless special weightage is given for regional needs. That the Commission is aware of this need, is seen to some extent in their recommendation concerning drought-prone areas, where relaxation of existing benefit cost ratio rule has been recommended. Besides, it has also been recommended that in evaluation of such projects the effects on income disparities should be taken into account. While the need for special consideration of schemes located in drought prone areas is hardly disputed, it is a point for consideration if for all regions potentially to be developed with irrigation, emphasis should not be placed on a social cost benefit criterion designed to reflect adequately the Government's increased emphasis on removal of regional imbalances and promotion of greater employment.

Such procedures have been formulated in great detail by the United Nations for application to developing countries and they have been tried out with suitable adjustments in developing countries. It is of interest that even in an advanced country as the U.S. employment is treated as a benefit rather than cost. For instance, in areas where chronic and persistent unemployment or under-employment exists, employment during the life of the project to the extent that such employment in the absence of the project is unutilised or under-utilised requires

to be identified as 'redevelopment' benefits for purposes of cost allocation, cost sharing procedures and their significance in project justification indicated. It is not known to what extent such benefits, if any, are specifically provided for in the benefit cost criterion, which is being currently used. These aspects in the present context of emphasis on regional balance and social justice, do not appear to have figured prominantly in the Commission's thinking. The Commission again has preferred the continued use of cost benefit ratio recommended by the Planning Commission some years ago and has also upheld the prescribed minimum cost ratio of 1 : 5 : 1, Fresh validity for continuing this measure in the present form and for its general application needs however to be established. The ratio is subject to the same limitations as the estimates of costs and benefits and a higher ratio is not necessarily an insurance against errors of estimation. Such errors could however be minimised with standardisation of procedures of evaluation and uniformity in the matter of interest or discount rate, shadow prices of labour etc.

Modern management practices increasingly rely upon such techniques as Net Present Value of Investment and the Internal Rate of Return based on Cash Flows. The application of these techniques no doubt gives rise to problems as choice of discount rate (interest) and weights (shadows) to be attached to the various programme objectives. Discount rates importantly affects investment projects. For instance as experience elsewhere suggests that with a discount rate of 6-8 per cent applied to investments where lower rates were used, 64-80 per cent. of initial gross investment turned out as-productive with a B-C ratio of less than 1. Current evaluation procedures. Therefore, need a fresh look, and guidelines given for the advancement of the socio-economic viewpoint in river valley planning. Presumably this is the task of another Committee and optimising decisions on investment must wait.

Another important aspect-the financial, often conflicts with the national economic profitability criterion and it is the requirement of sound policy to keep these in balance. Various Committees in the past notably the Finance Commissions and the Nijalingappa Committee had drawn attention to the inadequate financial returns from irrigation schemes and the increasing subsidies that invesment in these projects involved. This has been a perennial source of worry to planners and those charged with the task of implementation alike. In this regard new directions in policy have hardly emerged from the labours of the Jain Commission. The Commission was content to suggest the/off repeated need to link water charges with the benefits conferred on the farming community.

It is true that no other single measure contributes to the efficiency objective in satisfying the demand for water as its price and the financial return importantly affects considerations as size and location of irrigation projects. It is also conceded that the cost of water per unit of output has not increased relative to other inputs as fertilizers, pesticides etc. Irrigation is an important pre-requisite to other inputs in many regions in the country and not competitive as is generally assumed. The shift in the basis of assessment of water rate from the cost of supply consideration to that of benefit conferred. a position that most earlier thinking has taken, is however, of limited validity in the present context of mounting construction and operation costs. This position can be reciatedapp with reference to the Commission's data.

Using the figures of average capital cost and applying uniformly a rate of Rs. 15/- as operation and maintenance expenses. It will be seen that the annual charges (interest plus maintenance) with few exceptions exceed the permissible limit of benefits suggested by the Commission.

Table No. I indicates the average Interest charges recoverable at different charges recoverable at different rates from completed and continuing schemes.

Table No. II suggests the comparison of (national) annual charges for the two categories of works with limits of levy recommended by the Commission.

Two important reservations have to be made. Firstly, the maintenance charges of Rs. 15/- per hectares assumed for convenience sake here, is unrealistic. The actual cost of maintenance varies widely between different regions and projects in the same region depending upon topography, soils, climatic variations, etc.

Secondly, and even more importantly qualifying than the first the average cost are of water charges assumed here annual while the benefit, presumably, is from one irrigated crop. With assured irrigation, two or more crops could be cultivated although no data is available to indicate the size of annual benefit. Besides, extent of irrigation varies widely and the benefits of perennial irrigation

(*Contd. on page 5*)

TABLE I : VALUE OF BENEFIT AND INTEREST CHARGES

State/Crop		Produce Value (Rs. per hectare)	Capital cost (Rs. per hectare)		Interest obligations				
			compl.	contg.	compl.		contg.	compl.	compg.	com. cog.
Rice										
Andhra Pradesh	...	1406	1016	2721	64	170	81	218	101	272
Bihar	...	533	516	1067	32	67	41	85	52	107
Gujarat	...	1377	1910	2483	119	151	153	199	191	248
Haryana	...	773	—	507	—	32	—	41	—	51
Kerala	...	1556	—	3951	91	247	116	316	145	395
Madhya Pradesh	...	1090	1448	3292	131	206	167	263	209	329
Mysore	...	1092	2088	3543	215	221	275	283	343	354
Punjab	...	716	3432	1228	78	77	100	98	126	123
Tamil Nadu	...	1120	1255	3889	97	243	124	311	154	389
West Bengal	...	1699	1544	1055	50	66	64	84	81	106
Wheat										
Punjab	...	1353	2365	3514	148	220	189	281	237	351
Rajasthan	...	1055	1320	2642	83	165	106	211	132	264
Utter Pradesh	...	1041	793	1189	50	74	63	95	79	119

Source : Tables 11.4 & 11.5

TABLE II. EXISTING WATER RATES, BENEFITS AND NATIONAL WATER CHARGES UNDER VARYING ASSUMPTIONS

State		Existing W. rate	Assessable benefit— Min (5%	Max (12%)	Annual charges— @6—1/4% Interest		8% interest		
					Compl.	Contg.	Compl.	Contg.	Compl. 10% tnterest	Comg.
Rice :										
Andhra Pradesh	...	37.5	70	169	79	185	96	233	115	287
Bihar	...	37.5	28	66	47	82	56	100	67	122
Gujarat	...	45 to 62.5	69	165	134	166	168	214	206	263
Haryana	...	24.4	39	93		57	—	56	—	66
Kerala	...	12.5 to 25.0	78	187	116	252	131	331	160	410
Madhya Pradesh	...	25	55	131	156	221	182	288	214	334
Mysore	...	40	55	131	220	236	290	298	358	369
Punjab	...	24.4	36	86	93	92	115	113	141	138
Tamil Nadu	...	40-59	56	134	112	258	139	326	169	404
West Bengal	...	13.4 to 31.25	85	204	65	81	79	99	96	121
Wheat :										
Punjab	...	14.6	68	162	163	235	204	296	252	366
Rajasthan	...	13.1 to 25	53	127	98	180	121	226	147	279
Uttar Pradesh	...	10-30	52	125	65	89	78	110	94	134

(*Contd from page 3*)

are not given to every project area. Even if benefits are assumed as double the figures indicated here by the Commission, only a few projects at the interest rate of 10 per cent, recommended by the Commission are within benefit limits suggested by the Commission. As compared to prevailing rates, the national water charges assumed here represent a sizeable increase, the implications of which need to be examined in the context of ceilings on holdings and taxation of agricultural incomes, and the need to improve rapidly the incomes of small farmers. To what extent, project-wise statistics of benefits and costs deviate from the average situation described here is of course a matter for further empirical investigation.

It is well known that the cost of capital is under-estimated in investments of this nature and Economists have urged the adoption of higher rates of interest as more appropriately representing the true opportunity cost of capital. Unlike the practice in other countries, the capital charges are not fully recoverable from the beneficiaries. More often, it is a charge on the general revenues. At present, such charges are to be recouped through Betterment Levy which however, has largely remained on paper.

The Commission now seeks to restrict the betterment levy to half the capital cost of projects payable over a maximum period of 30 years. It is not clear how the balance of cost is to be recouped except through surplus annual revenue receipts. It is of interest that with an annuity of Rs. 10 60 (for Rs. 100) the annual obligation on capital account would be a little over Rs. 100 in regard to project with capital cost of 1000/- per hectare. As the average costs are much higher, the capital charges, if any to be recovered would be much larger than water rate. Irrigation projects breaking even, in financial terms, is thus likely to take time and investments in all probability would continue to enjoy a fair measure of subsidy. The financial picture, however, could be improved through modification of present accounting methods so as to reflect the other, if sometimes more important, indirect revenues from the projects. Far from discarding the financial yard-stick, innovations need to be made in regard to capturing and reappropriating to the Project the element of surplus in tax and other receipts which would accrue to the State and Central Governments as a result of the project. Importance of financial analysis for the present, however, rests, mainly on its use as ranking or priority device rather than for selection of projects per sc.

Dairy Industry and Art of Selling

Y. G. GUPTA
Research Officer (Extension)

Perhaps all know the meaning of Salesmanship but a few really know the art of Selling further, you may wonder, what this art of Salesmanship has to do with Dairy Industry. What follows will clarify the great importance of this art not only in Dairy affairs but as a great aid towards personal success, and in all businesses and petty affairs of daily life. Effective selling will help you to realize maximum returns which you are entitled to enjoy. One may succeed even without knowing this art, but the other who knows and applies in his transaction will under similar circumstances, naturally derives greater benefits and thus even greater satisfaction.

Probably most of the Dairyman presuppose and take it for granted that once made, the dairy products sell themselves at the market to the best advantage, and so it is quite useless to bother about any new art or technique. But we shall subsequently see the really great value of effective selling.

Your Dependence on others

It is fundamental fact that whatever a man gets, comes to him through the agency of some other man. Man in all cases totally depends upon other men. An employee depends upon his master, a manufacturer depends upon his customers, so on and so forth.

And since all things must come to you through other men, your ability to influence other men must inevitably add to your normal returns from life.

In every transaction, whatsoever, you have to deal with a second man and praetically anywhere and everywhere salesmanship, that is the quality to sell in an effective manner, to some extent, enters the transaction.

You sell your employer the idea that you are worth more money to him. The more you think of it, will see it involved every where. Hence as has been said above in the form of a law, the more you are able to influcnce the other party, the more benefits you are likely to derive in your return.

Does then not this apply in the case of a dairyman too. No doubt, if the quality of his products is good, he makes a profit. By applying salesmenship a particular product will fetch its real worth. A little more added to the usual profits will mean considerable extra profits in the course of a year, and that is what every dairyman or business man will like to have.

Many dairymen, though they work hard and produce the best, are not yet able to earn much and for this they usually curse their luck. But as a matter of fact, it is only due to their not being good salesmen.

Buyers must be shown the advantages of that product. To the intrinsic value of the product must be added the merit of salesmanship and it is then that you will derive greater advantages. Tne argument will yet be more clear from the following example :

There are dairy products of the same quality and from the same producer on two different shops. One of the shopkeepers just lets the thing sell itself behaving with you in a dry manner. The other just applies a bit of salesmanship. He takes the trouble of showing them to you, tells you of some special qualities, and just flatters you a bit, you are sure to buy from the latter one even at a slightly higher price though the product is the same on the two shops. The net result is that the latter shopkeeper is able to sell the larger amount of dairy products at a comparatively larger profit. Next take the case of a shopkeeper who keeps his dairy products covered in a glass box, the second one keeps them shabbily in a dirty almirah, while the third keeps the same dairy products in a well cleaned and decorated almirah, well arranged in his shop. Decidedly the third one is most likely to impress a buyer. Herein lies the important relation of the art of selling by a Dairyman. It should be concluded from the above that salesmanship is the whole secret of making money. Its study not only profits a dairyman but also a businessman. Salesmanship consists of telling the buyer in an aggreeable and acceptable way the advantages which your products possess.

There are, say, two sellers of ghee in the market, The sale rate is Rs. 14/-a Kg. A grocer goes there to buy ghee. One of them says to the grocer "Do you want to buy my ghee ? I am charging Rs. 14/-a Kg." The other one says some what these words "I have only twenty tins of pure ghee. You can see for yourself the good aroma, colour and purity. And all twenty tins are just like the ones you are looking,

and I am asking only Rs. 14/- for a Kg. of pure ghee." Most undoubtedly the second one will be able to sell his ghee.

The first one simply thought that his ghee is good and he took it for guaranteed that the grocer knows the advantages his ghee possesses. He simply let his ghee sell itself. Moreover he had not the confidence to ask more than the market price, for he had not displayed the true worth of his ghee. But the second one actually sells his ghee. He makes the advantage of his ghee clear to the grocer. He makes the grocer think that it will be much advantageous to him to buy ghee, as it has good aroma, colour and purity. The price he demands was also just, for afterwards the grocer could easily get Rs. 15/- for a Kg. in retail sale. He was getting extra value and greater saleability in his stock. Thus the bargain was just for the seller as well as for the buyer. This is a fundamental importance to acquaint the buyer with the outstanding features of your product.

It is a simply to bring the advantages to light so that both the parties may be able to consider their mutual advantages. So make it a point never to take for guaranteed that the prospective buyer knows the merits of your product. He may not have inspected it carefully or he may make an idea that you yourself do not know the merits of your product so it always pays to remind him of the merits.

A dairyman can cheat his customer only once or twice by adopting unfair means but later on he will have to lose for he has lost the valuable confidence in him. This is a compliment to the qualities of a practical hard working dairyman. And as you begin to apply this, you will certainly be amazed to see its universal utility.

Let me give you an example of its application, from an American dairy, it will disclose to you the immense power of this in other affairs too, besides dairying.

Cox is a prosperous dairyman. His neighbour Allan for some reason had a grudge against Cox. There was a long barbed wire stock fence between their dairy which was a bit dilapidated at points but was still adequate for use. It was jointly built and jointly maintained by the two dairies. Now purposely at a time when Cox was busy, Allan with a mischievous head appeared to meet Cox and said that the fence was inadequate and therefore, it was worthwhile to put new wires and new posts all the way.

Cox at once recognized the ill motive of his wicked neighbour. As a matter of fact Allan in suggesting this was cutting off his own nose to spite his face. Any other would have been much annoyed to be disturbed at such a busy time and would have called a spade. Actually a feud might have ensued. But Cox did not like to flow up the hidden feud into an open fight. But he also did not want to spend his money and time at the moment. It was with a clever sense that not only he saved his time and money but he also disposed off his opponent peacefully and well satisfied. Well can you guess what he said. Let me tell you then. He said, "Well Mr. Allan, you have well spoken about the fence. I have been thinking of putting hogs in there for years. And now as you have a mind to rebuild that old fence, I would like to put in a hog tight fence and make it really tight." And it made Allan to jump for a hog tight fence would have cost much and Allan had no mind to spend so much. Cox also cleared that if they are going to rebuild, it must be hog tight, and if he wanted to postpone, he would be too glad to make his hogs stay where they are. And the two men parted with a friendly feeling.

It is due to its intelligent application that out of a number of dairymen who work under all other identical circumstance, only few are really successful who get what they really deserve. A successful dairyman does better everywhere in selling his produce, in his buyings, in his relations with his community in which he lives and leadership seek him automatically. He has the biggest bank balance, and the most satisfied workers at his disposal. And the most surprising aspect is that all this proceeds in quite a natural way. He simply analyses the facts at the time of a particular situation and then puts in a suitable words and actions.

When a buyer purchases a thing, he actually purchases the advantages that he seeks in that particular object. For example while buying a pure ghee tin you will specifically look to its purity, aroma and colour. A salesman who keeps in view all these points, will be most successful one. Same is the principle applying to the sale of dairy products. So it is of fundamental importance to keep in mind the sales possibilities while offering a product for sale. The buyer may analyse the merits himself but if they are pointed out to him, he will accept them more readily. A good salesman can always point out a large number of merits of his product. In the beginning, such advantages can be outlined beforehand. These points as they are called, should be communicated to the buyer in a most natural way you

have got some fine cattle to sell. In the case of a particular cow you can say :—

1. This is a pure pedigree cow.
2. The bull belonged to the finest Austrialian quality, or it was the finest in the locality.
3. The milking record of the motor was such and such.
4. The milking record of the cow is such and such which is exceptionally good.
5. It has no particular traits of character, can be milked by any one, can relish any sort of fodder.
6. It is very noble.
7. The height is exceptionally great.
8. That the buyer will be proud to have such a fine cow, one of the best in the locality. Thus a lot of points can be indicated.

While talking to the buyer about the merits of the product, it should be borne in mind that the points which make the strongest appeal to the buyer must be emphasised most. For example in the above case of a cow the milk yield, and the eye appeal i.e. the beauty and size, colour etc. of the cow must be stressed. It is not a difficult job to find out the points which are most advantageous to the prospect.

It is a well know fact that when village folk go to sell their buffaloes or bullocks they at least first get it washed, rub a little oil on its body and horns and this really means something to the buyer.

Even if a dairy product is decent to look at and speaks of merits of itself, salesmanship has to be applied : And then there is the question of competition. I have already told you that even when two products are identical in all respects, that one whose qualities are pointed out ingeniously has a greater chance of selling. Special advantages of the product must still be shown to the purchaser.

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A few essentail selling steps are enunciated below :

1. The product must be graded and well developed so that it may be appealing to the eye. In this case a large number of talking points can be prepared.
2. The chief talking points must be demonstrated and emphasized the most. In some cases a direct comparision between a superior and an inferior article may impress and prospect.
3. In some cases a general sample may still further nemodstrate the qualities of the product.
4. The price policy must be so designed as to provide a fair yield to the producer and yet be really generous to buyers.
5. The personality of the sales man must be straight forward, earnest, sincere and pleasing. Any sort of artificiality may create an undue suspicion in the mind of the buyer.
6. An intelligent and proper use of sense must always be made.

Cane Prtce to be Raised

The Cabinet sub committee on sugar industry is believed to have decided to increase the statutory sugar-cane price from Rs. 7.37 to Rs. 8.50 per quintal at 9 per cent recovery. In the past, the price of Rs. 7.37 was linked to a recovery of 9.4 per cenf.

The committee has also thought it proper to raise the price for every 0.1 per cent rise in recovery from the present 6.6 paise to 7.5 or 8 paisa so as to neutralise the profit by 100 per cent.

It is further gathered that the Tariff Commission has recommended to the Centre that sugarcane growers should have a share in the extra profits earned by the industry by the sale of free market sugar.

In calculating their earnings, the millowners are likely to be allowed rehabilitation allowance, an allowance on losses on export and an allowance for a rise in manufacturing costs and taxes, etc.

The profit is likely to be shared in the ratio of 60:40. The share of the cane grower would be 60 per cent., while that of the mills 40 per cent.

It is further understood that the Centre is also thinking of announcing this policy for a minimum period of three years and also considering if this can be extended to five years with a view to providing stability to the production of sugar-cane and at the same time let the industry work out its economics in regard to production and profitability.

The committee's decision will go to the Cabinet for a final decision and announcement.

we have not done badly but MUST DO BETTER

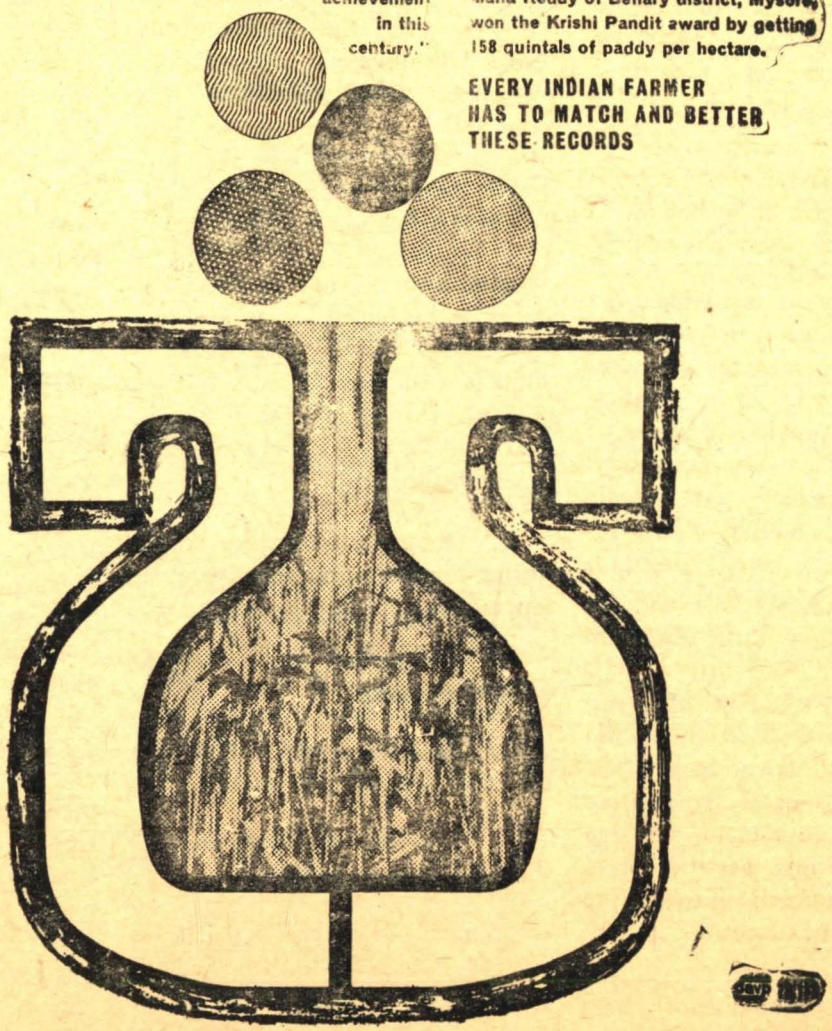
In the epoch when we were not free, famines were frequent and as recently as in 1943, four years before independence, took a toll of three million lives in Bengal. There were prophets of pessimism all over the world when the rains failed for two years in 1966-68. But the world Press later referred to the Bihar drought as "the famine that wasn't."

We have not done badly in the twenty-five years of freedom. We drove towards self-sufficiency through our Green Revolution, which has been hailed by the world Press as "an accomplishment that may be as important for the human race as any other achievement in this century."

We decided we would stop concessional food imports by the end of 1971 and did, though we had to look after ten million unexpected guests from Bangla Desh for the best part of an year.

Krishi Pandit Ramesh Rajabhau Bondre of Buldana district, Maharashtra, achieved this high score in wheat production—161 quintals per hectare. Malla Reddy of Bellary district, Mysore, won the Krishi Pandit award by getting 158 quintals of paddy per hectare.

EVERY INDIAN FARMER HAS TO MATCH AND BETTER THESE RECORDS



Virus Disease Problem in Vegetable Crops

By D.K. Gupta, M.Sc. (Agri.)
Publicity Assistant, Krishak Samachrr

Vegetable in general suffer from numerous Virus diseases. Some of these are very destructive and their production as also adversely effect the quality of the fruit and seeds with increased intensity of the Vegetable cultivations in recent years and introduction of wide array of new varieties of these crops, the disease situation has rather aggrovated. These disease are systematic in nature and are very difficult to control. In majority of the cases, the control lies in preventive measures i.e., starting with a healthy crop and checking the spread of the disease through various means, such as seed, seed material, insect vactors and by suitable sanitary measures, would lie in the use of resistant variety, if available. An intimate knowledge of the disease is essential before a control measures is recommended. This article endeavours to provide information on some of the very destructive virus disease which are widely prevalent in the country.

Brinjal :—Two most important disease are commonly met with in Brinjal in India are 'little leaf' and mosaic disease. The little leaf is characterised by smalling of leaves, shortening of internode, stimulation of auxillary and latent buds. The disease is transmitted by grafting and by two jassed vactors. A large numbers of brinjal varieties have been tested and all of them have been found to be suceptible to the disease.

Eradication of the disease plants and insecticidal control of vectors are recommended control measure.

A number of viruses are known to be responsible to the cause mosaic diseased in brinjal. Clean cultivation, destroying the old infeeted plants, spraying the nursery beds with insecticides and observance of other phytosanitary measure are recommended for control.

Bhindi :—Yellow yield mosaic is the most serious disease of Bhindi. It causes severe losses in yield and seriously effect the quality of the fruit. This diseases is characterised by severe venial chlorasis. The vein and veinlets of leaves also become thickened. The fruit are dwarfed, malformed and chlorotic. The seed formation is also affected.

The virus is not mechanically transmissible but it is transmitted by grafting and by the agency of white flies (Bemisia tabaci). Besides growing resistant varieties of Bhindi, other control measures are generally recommended are :

1. Observation of close reason during summer in place where over lapping crops bhindi grown.

2. Eradicating the collateral hosts of the virus.

3. Rouging diseased plants in the early stage of crop growth.

4. Spraying the parathion or diazinon after every ten days.

Tomato :—Leaf curl is the most serious diseases in tomato. The affected plants are characterised by severe curling, puckering, smalling of leaves and stunting of the plants. The disease may also result in partial to complete sterlity of the affected plants. The views is not sap-transmissible but in nature it is transmitted by white Fly. Vactor. The Vector and the virus have a very wide host range among the cultivated as well as Weed plants which make the disease difficult to control. No tomato variety has so far been know to shown significant resistant the virus.

Root dip treatment of tomato seedlings with gibberelic acid or 2-thiarracil at 50 ppm for six hours before transplanting has been found to delay the appearance of disease symptions and result in higher yields. The other recommended control measures are weekly spray of exatox or folidol before fruit set to limit the vactor population.

Acuba mosaic strain of tobacco mosaic Virus causes another important disease of tomato and is of common occurence in India. The virus is also carried through seed of freshly extracted tomato fruits. Strict observance of phytosanitary measures during the field operations and avoiding the use of freshly extracted seeds reduces the chances of the spread of the disease.

Cucurbits :—The mosaic diseases of bottle gourd, snake gourd, pumpikm squash, melon water, and ribbed gourd etc. are of very common occurence. The diseased plants develop well marked light or dark green mottle together with blistering and distortion of the leaves and stunting of the plants. The fruits are often mottled and malformed.

(*Contd. on cover 4th*)

FARM NEWS

AGRICULTURAL EDUCATION

Food Craft Training Institute for Hyderabad

HYDERABAD : A Food Craft Training Institute, sponsored by the Government of India, will be set up at Hyderabad in August this year.

This is one of the chain institutes started by the Government of India in collaboration with the State Governments.

At present, five Food Craft Institutes had already been established in Bangalore, Goa, Kalamassery in Kerala, Lucknow and Nagpur, in addition to the four Institutes of Catering Technology and Applied Nutrition located at Bombay, Calcutta, Delhi and Madras.

Similar Institutes are also proposed to be established at Ahmedabad and Chandigarh this year, it is learnt.

This Institute offers both full-time and part-time craftsman courses in bakery and confectionery crokery, restaurant and counter service, hotel reception and book keeping, house-keeping, canning and food preservation.

It is also proposed to start part-time courses of 13-weeks duration for housewives in bakery, cookery and food preservation.

ANIMAL HUSBANDRY

Duck Breeding in Kashmir

SRINAGAR : The Animal Husbandry Department of Jammu and Kashmir has started duck breeding from "khaki Campbell," an imported breed from Britain.

The Union Government had imported last year 500 'Khaki Campbell' ducklings and they were distributed to all States. But the ducklings became prone to a disease in all the States except Kashmir where 13 males and 15 females survived.

For further propagation, 600 duck eggs of the 'Khaki Campbell' breed were loaded last month and about 300 ducklings hatched out. As water ponds and good ration for ducklings are freely available here, Kashmir Valley has good chances for duck breeding on a vast scale.

The 'Khaki Campbell' breed has a laying capacity of 280 to 340 eggs a year and body weight is comparatively larger than the native variety.

The department intends to start cross-breeding of ducks at the duck breeding farm in Hajan where 'Khaki Campbell' female will be crossed with the native male and vice versa to evolve a suitable cross breed progeny.

The department is presently engaged in selecting good and suitable sites for duck farm in the Valley. The 'Khaki Campbell' has the same nutritional values as that of hen's eggs and its meat is better.

IRRIGATION

India's Development Plans

SRINAGAR : An area of 28.5 million hactares will be irrigated and 22.5 million kwt more electricity will be generated all over India by the end of 1979 at an estimated cost of Rs.9,500 crores. This will double the axisting rate of power and irrigation development in the next Five Year Plan.

Disclosing this at a press conference here after the conclusion of the three-day meeting of all-India State Power and Irrigation Ministers, Dr. K.L. Rao, Union Minister for Irrigation and Power, said that both these irrigation and power projects would be taken in hand during the Fourth Plan period and completed in the next Five Year Plan.

Dr. Rao said that for irrigation purposes "we have decided to implement the American technique by having national water grids to have navigational-cum-irrigation facilities from north to south by harnessing waters of some of the rivers in the north and their tributaries. He said a team of U.N. experts had three surveys for having this national water grid and "We are now awaiting their final report for further investigations."

He also disclosed that all State Irrigation and Power Ministers had agreed to evolve "a national water policy" to have the maximum benifit all States in the country. This would considerably help in ending the present inter-State water disputes, he added.

Fifty Ministers from various States and the Centre attended the conference.

The conference said in a resolution that though the national average of utilisation of potential from major and medium irrigation projects was as high as 88 per cent, there were areas and regions where utilisation was much below the national average.

A report from Thanjavur says that the Union Government is examining a feasibility report, submitted by the UN survey team, which recently visited India to work out the details of linking the rivers of the north with the south, according to the Centra Planning Commission Adviser, Mr. C.S. Ramachandran.

He told newsmen, the UN team felt that there was enough hydro-electric power in Bihar to bring the river waters to the south by means of pumping wherever necessary.

LAND REFORMS

Agreement by Chief Ministers

NEW DELHI : The Chief Ministers agreed to implement the recommendations of the Congress Working Committee on land reforms by the end of the year at a meeting held here on July 23, 1972.

The agreement was that the ceiling on land with assured irrigation for two crops a year should be between 10 to I8 acres, with weightage of 25 per cent for land irrigated by private sources.

For dry land, the ceiling will be 54 acres.

The ceiling will apply to a family defined as a husband, wife and three minor children. For larger families additional land may be allowed but in no case will the total holding be more than twice the ceiling for a standardsized family.

The Congress Working Committee and suggested that thc quesiion of exemptions for plantations, stud farms, goshalas and other such categories should be further studied by a committee, but the Chief Ministers decided that exemptions could straight away be given for plantation of tea, coffee, rubber and cardomam. As for animal farms, State Governments can go ahead with their own legislation after consulting the Union Agriculture Ministry.

On the question of orchards, the CWC had given the Chief Ministers two alternatives to treat such holdings as dry land or to allow an extra five acres for orchards. The Chief Ministers decided to adopt the first alternative.

The CWC had suggested that educational and religious trusts should be exempt from the ceiling law. Tne Chief Ministers decided that charitable trusts should also be exempt provided it was established that they served a public purpose.

The ceiling laws will be given retrospective effect from January 24, 1971. States wishing to fix an earlier date will be free to do so.

Compensation for land in excess of the ceiling will not be paid at the market rate. A slab system may be evolved. whereby small surpluses will be compensated at a proportionately higher rate than large surpluses. The criterion for fixing compensation has been left to the States.

Speaking to newsmen at the end of the conference, the Union Agriculture Minister, Mr. Fakhruddin Ali Ahmed, said that all the Chief Ministers had promised to take speedy action to amend their ceiling law.

As regards the distribution of surplus land, preference would be given to landless labourers, Harijans and Adivasis.

Mr. Ahmed said lands having private irrigation sources would get preference and one to 1.5 acres of additional land would be allowed but it should not cross the upper limit of 18 acres.

He clarified that dugwells and tanks would not be regarded as tubewells. Where these lands could grow only one crop, the upper limit of ceiling would be 27 acres. In case of dry lands the ceiling limit would be 54 acres, only with the exception of Tamil Nadu which had been allowed 60 acres.

The meeting presided over by Mr. Fakhruddin Ali Ahmed, was attended by almost all the Chief Ministers.

Explaining the level of ceilings, Mr. Ahmed said that there would be three categories :

"One is first class land, where irrigation is available and, which is capable of yielding two crops in a year whether the irrigation is from public sources or private sources. The ceiling with regard to that land will be between 10 and 18 acres depending on the nature of the soil and the classification of the land from place to place. So far as land under private irrigation is concerned, they will get a preferential ratio of 1.25 to one, provided the upper ceiling of 18 acres is not exceeded."

The State would decide whether dugwell and tank irrigation should be treated in the same way as tube irrigation in this respect.

For the third category of land, the ceiling would be 54 acres.

Mr. Ahmed said in reply to a question that the States were expected to indicate by the end of this year how much of surplus land would be available on the imposition of the new ceilings.

Vereinigung Der Gegenseitigen Bauernhilfe

Zentralvorstand

104 Berlin, ReinhardtstraBe 14, Fernruf 42 09 33 17

The Governing Body of
Farmers' Forum, India
A-1, Nizamuddin West,
New Delhi-13.

Berlin, 28th July, 1972

Dear Sirs,

On behalf of the Presidium of the VdgB Central Executive we convey to you our most cordial congratulations on the occasion of the 25th anniversary of achieving the independence of your country.

The proclamation of the independence of India was a milestone in the eventful history of your country. It was the result of the struggle the progressive forces of your country waged for social progress and national independence, for peace and international friendship.

Together with the whole population of the GDR we have at all times devoted great attention to the development of your country. We pay great attention to the development of your country. We pay great respect to the achievements attained by your people in the political and economic fields over the past 25 years. In particular, we highly appreciate the foreign policy of your country, founded by Pandit Jawaharlal Nehru and based on the principles of peaceful co-existence and non-alignment.

Today your country plays an important role in the World-wide struggle against imperialism, colonialism and racism. This found its visible expression in the consistent support for the liberation struggle of the people of Bangla Desh. By rebuffing the imperialist attempts to blackmail India, your people demonstrated their firm determination to continue the path of the progressive foreign policy and to contribute to the safeguarding of a lasting peace on the Indian sub-continent and in the world.

With pleasure we state that the relations between your country and the Socialist Community of states are steadily growing closer. This is above all based on our joint aims and interests in the anti-imperialist struggle as well as on similar or equal views on the basic issues of international policy.

We are convinced that like in the past this concurrence will hold good also in the future. At the same time we couple with it the hope for a further useful co-operation between our two organizations.

We wish the Indian farmers further success in the development of agriculture and you, highly esteemed members of the Governing Body, personal happiness and good health.

Sincerely yours,
Sd/-
F. Zeuner
First Secretary

Pests of Wheat Crop and their Control

M.N. BORLE and S.N. BODHADE

Wheat is an important cereal crop of Maharashtra State and occupies an area of about 2 million acres. About a decade earlier, there were a few insects causing damage to wheat crop of which stem borers and termites were considered to be important ones in the State of Maharashtra. However, in the recent years, several insects which otherwise were minor, have become important, particularly on high yielding hybrid varieties of wheat. The detailed account of these various pests along with their measures of control is given below to provide information to the wheat growers for adopting timely control measures.

1. **White grub** :—The bettle of this grub is yellowish brown in colour and measures about 18 mm. in length and 7 mm. in width. The full-grown grub is *fleshy*, white in colour, curved in appearance with 35 mm. body length and *possesses* dark brown head, strong *mandibles* and three pairs of prominent *thoracic* legs.

The grubs feed on the underground parts particularly on roots as a result wheat plants dry up. In cases of severe infestation, the patches of dead plants are seen in the infested fields. These grubs are *polyphagous* in habit and feed on several crops such as groundnut, sugarcane and vegetables.

The famale bettle deposits pearly white eggs singly in the soil in the beginning of rainy season. On hatching, the grubs live underground and feed either on the roots of grasses or other alternate hosts and attack wheat crop later on during winter season. The larval stage continues for about 5 to 6 months and pupotion occurs inside the soil. The pupal stage lasts for 10-15 days and beetles lay eggs either in the soil or migrate to pits of farm yard manures.

Control measures :—(1) Clean cultivation such as removal of weeds which serve as an alternate hosts for the pest.

(2) Use of sieved and well decayed farm yard manure to remove larval stages of the pest for their destruction.

(3) Soil application of insecticides like BHC 10%, aldrin 5%, or chlordane 5% at the rate of 20 kg. per acre before sowing has been reported to give satisfactory control of the pest.

2. **Grass hoppers** : About three species of grass hoppers have been seen to damage wheat crop in seedling stage of which *Aitractomorpha* and *Melanoplus* species are important. These grass hoppers lay their eggs in soil in batches during late winter. The eggs remain dormane in the soil till next monsoon and batch after good showers of rain. The nymphs feed initially on bund-grasses and migrate later on to Kharif crops and develop into adults in about 70 to 80 days. The adults survive for several days and attack wheat crop in seedling stage.

Control measures : Dusting of 10% BHC at the rate of 8 Kg. per acre on crop and bund grasses gives satisfactory control of the pest.

3. **Wheat stem borer** :—The incidence of stem borer of wheat has been increased in last 2-3 years particularly in varieties like Kalyan-sona, Sonalika etc. The months of these borers are small, straw coloured with marginal line on forewings and whitish dark hind wings. The larva measure about an inch in length and is pinkish in colour.

The female moth lays creamy white eggs on the leaves in clusters which hatch in about 6 days. The tiny larvae on hatching from the eggs feed on the tender leaves for a day or two and then bore into the shoots where they feed on the internal contents as a result central shoots gradually dry up causing dead hearts. The larvae become fullgrown in about three weaks and pupate inside the stem. The pupal period lasts for 8-10 days and total life cycle is completed in about 5 to 6 weeks.

Control measures :—(1) Remove the dead hearts along with the larvae twice or trice at an interval of one week and destroy the internal larvae. (2) Treat the crop with 0.04% endrin spray, 15 days prior to ear-head emergence and apply spray again after 15 days. (3) Remove the stubbles after harvest and burn them to kill hibernating larvae.

4. **Termites** :—These are social insects and live in a colony which consists of reproductive and sterile castes. The reproductive castes

include queen and king. Besides, there are some supplementary reproductive individuals which in emergencies arising out of the death of the queen, take up the function of reproduction. The sterile castes are represented by the workers and soldiers which are wingless. The workers have short mandibles and constitute 80-90 per cent of the population of the colony. Theyshun light and feed on the under ground parts particularly roots of wheat crop. The soldiers possess strong mandibles and perform the function of defence. They are only 2 and 3 percent in the colony.

Immediately after the commencement of monsoon, several winged individuals leave the colony in swarms. After a short flight, they shed their wings and settle on the ground where they copulate and establish new colony in the soil. The female which is called queen starts laying eggs in a small burrow and first brood is nourished by the royal parents. Further generation are looked after by the workers. The queen is the mother of the whole colony and can lay as many as 48000 eggs per life time.

The termites are commonly known as white ants. They are polyphagous in habit and feed on several crops like sugarcane, fruit, trees, cotton, groundnut etc. besides wheat.

Control measures :—(1) Locate the termite area and destroy the queen by digging it or fumigate it. with cyanogas, eithlene dibromide. (2) Soil application of BHC 10%, aldrin 5% or chlordane 5% at the rate of 20 Kg. per acre before sowing, has also been reported to give satisfactory protection to wheat crop from termites.

5. **Wheat jassids** :—There are polyphagous species and attack cereals and several grasses. It is a minor pest of wheat in Maharastra State but occasionally assumes serious form particularly in irrigated wheat crop. The adults are pale green in colour, wedge shaped and measure about 3.0 mm. in langth. The nymphs are also pale greenish in colour like the adults but are wingless and found on the lower surface of the leaves. The insect is characterised by its habit of walking diagonally in relation to the body.

Both nymphs and adults suck the sap from the leaves as a result the crop appears to be pale with numerous small white patches on the leaves. The growth of the plants remain stunted which adversely affects the yield.

The female deposits eggs in a leaf tissues which hatch in about 4 to 6 days. The rymphal stage lasts for 10-15 days depending upon the climatic conditions. The entire life cycle occupies about 2-3 weeks and there are several overlapping generations in them. It is also observed that the pest incidence is more pronounced under irrigated conditions.

Control measures :—The pest can be controlled by dusting 5% DDT at the rate of 8 Kg. per acre or by spraying 0.25% wettable DDT or 0.02 endrin.

6. **Brown mite (Petrobia latens)** :—This pest broke-out in epidemic form in Akola district of Vidarbha during 1970-71 and caused serious damage to wheat crop. At several places where infestation was heavy, the plants showed nearly wilting appearance although sufficient moisture was present in the soil The general symptoms, however, seen at several places were bronzening of leaves which could be marked from a distance.

This mite does not spin webs as other mites do. They are seen crawling on leaves and easily fall down when the plant is slightly shaken. The full developed mite is rounded, metallic dark brown or blackish in colour with a size of comma in newspaper. They possess very short hair on the upper side of the body, and four pairs of legs which are pale yellow in colour. The forepair of legs is typically longer than the remaining pairs.

The males are unknown in these mites and hence famale breeds parthenogenetically and lays extremely small shiny white eggs under the debris or clods in the soil arouud the bases of wheat plant which hatch without fertilization. The average number of eggs laid per female are about 80 over a range of 2-3 weeks. Under favourable conditions, their population increases very fast and attains the number responsible to cause severe damage to wheat crop.

Besides wheat, these mites feed on sorghum, alfalfa, ovious and several grasses. This mite practically cause no harm to wheat crop cultivated under irrigated conditions.

Control measures :—These mites are very difficult to control with common acaricides like dusting sulphur or wettable sulphur. However the use of parathion spray at 0.02 to 0.03% concentration has been recommended in U.S.A.

7. **Field rats (Rattus Rattus)** :—Rat is a serious menace to wheat crop. They cut the plants and feed on the grains and often carry them to their burrow. The destroy crop nearly 10 times as much as they actually consume.

Rats are prolific breeders. It has been estimated that a pair of rats

(*Contd. on cover 4th*)

New Members of Bharat Krishak Samaj

From June 1972 to July, 1972.

12121—Sh. Madadu Dhaondu Patil,
At : Modhale, Post : Mundane, Tak : Paroda,
Distt : Jalgaon, (Maharashtra)

12122—Sh. Arvind Kumar Sadashivrao Deshmukh,
V : Ridhora, Post : Ridhora,
Tal : Balapur, Distt : Akola, (MAR)

12123—Sh. Ram Kisanji Pardhan,
Post : Arnetha, Via : Keshav Ray Patten
Distt : Bundi, (Raj.)

12124—Sh. Ram Niwas ji Sharma, Pardhan,
Post : Barughan, Via : Talada,
Distt : Bundi, (Raj.)

12125—Sh. Sohan Lal Jain,
V : Baldevpura Farm, Post ; Ajras,
Distt : Bundi, (Raj.)

12126—Sh, Om Parkash Choudhary,
V : Baldevpura Farm, Post : Rjvas,
Distt : Bundi, (Raj.)

12127—Sh. Kesari Lal ji Mali,
Post : Barughan, Via: Talada,
Distt Bundi, (Raj.)

12128—Sh. Hanuman Dutt Dagich, S/o.
Madan Lal ji, Post : Barughan, Via : Talada,
Distt : Bundi, (Raj.)

12129—Sh. Kalish Goswami, S/o. Lachhman Puri,
Balchand Pada,
Distt : Bundi (Raj.)

12130—Sh. Prithvi Singh, S/o. Amar Singh ji,
Post : Bada Naya, Via : Hidoli,
Distt : Bundi, (Raj.)

12131—Sh. Jasvir Singh,
Adrash Farm Gudda,
Nathavatan, Distt : Bundi, (Raj.)

12132—Dr. Arjun Singh ji, Ex.M.L.A.,
Post : Chavnr, Shivganj,
Distt : Sirohi. (Raj.)

12133—Sh. Laksmi Narain Choudhary,
Bada Kuan Ka Pass,
Distt : Tonk, (Raj.)

12134—Sh. Sukhdev Jat,
Chhan Ka Kheda,
Post : Chhan, Distt : Tonk, (Raj.)

12135—Sh. Kesar Lal Jat,
Kushal Pura, Post : Raj Mahal,
Distt : Tokn, (Raj.)

12136—Sh. Bhavani Singh,
Chhan Ka Kheda, Post : Chhan,
Distt : Tonk, (Raj.)

12137—Sh. Choga Lal Choudhary,
Post : Davli, Via : Kharchi,
Distt : Palli, (Raj.)

12138—Sh. Chatan Kumar Choudhary,
Chairman, Marketing Co-op. Society Ltd.,
Sojat Road, Distt : Palli, (Raj.)

12139—Sh. Shiv Lal Bohra,
V : Kabra, Post : Kotdi, Tal : Railmagra,
Distt : Udaipur, (Raj.)

12140—Sh. Hemraj Choudhary.
Post : Kotdi, Tal : Railmegra,
Distt : Udaipur, (Raj.)

12141—Sh. Shiv Singh Chouhan,
Post : Kotdi, Tal : Railmagra,
Distt : Udaipur, (Raj.)

12142—Sh. Nathu Lal Choudhary,
V : Jvasaya, Post : Gilund, Via : Railmegra,
Distt : Udaipur, (Raj.)

12143—Sh. Jagdish Chander Aameta,
Post : Etali, Via : Mavli.
Distt : Udaipur, (Raj.)

12144—Sh. Manohar Shanker Joshi,
Advocate, Post : Kpasan,
Distt : Chittorgarh, (Raj.)

12145—Sh. Badri Lal ji Pradhan,
V : Pachmitia, Via : Railmegra,
Distt : Udaipur, (Raj.)

12146—Sh. Mool Chand Ji Jain
Jain Krishi Farm, Near Circit House,
Distt : Bundi, (Raj.)

12147—Sh. Narinder Singh Ji,
V : Ngla Ram Singh, Post : Dhra,
Via : Kumhra, Distt : Bharat pur, (Raj.)

12148—Sh. Dalchand S/o Kungi Singh,
Post : Paprarra, Tal : Kumhar,
Distt : Udaipur, (Raj.)

12149—Sh. Bhagwat Singh, S/o Kungi Singh,
Post : Paprarra, Tal : Kumhar,
Distt : Bharat pur, (Raj.)

12150—Sh. Ku. Rahgu Raj Singh,
Raghu Nath Niwas,
Bharat Pur, (Raj.)

12151—Sh, Rajeshwar Singh Ji,
V : Purspura, Post : Sawar,
Distt : Bharat Pur, (Raj)

12152—Sh. Ghasiram Ji,
Nadiya Farm,
Bharat Pur, (Raj.)

12153—Sh. Bachan Singh, S/o Pratap Singh,
Mohulla Kumhar Gate,
Bharat Pur, (Raj.)

12154—Sh. Jaidev Singh ji,
V : Rani Hos. Post : Aggan,
Distt : Bharat Pur, (Raj.)

12155—Sh. Balwant Singh Ji,
V : Tiketa, Post : Athapur, D :
Bharatpur, (Raj.)

12156—Sh. Prem Pal Singh,
V : Chakfattiyar, Post : Athapur,
Distt : Bharat Pur, (Raj.)

12157—Sh. Mangal Singh,
V : Chaktiketa, Post : Adhapur,
Distt : Bharatpur, (Raj.)

12158—Sh. Dalbir Singh,
V : Surajpur, Via : Rupwas,
Distt : Bharatpur, (Raj.)

12159—Sh. Mahant Krishan Chand Giri,
Shivalya Mandir,
Simla, (H.P.)

12160—Sh. Yashwant Khosla,
V. &. Post : Badaspur,
Distt : Patiala, (Punjab)

12161—Sh. Kishori Lal Sud,
At & Post : Sarahan,
Distt : Mahsu, (H. P.)

12162—Sh. G. Srinivas Rao,
At & Post : Ellanki, Tal : Ramannapet,
Distt Nalgonda, (A. P.)

12163—Sh. Kanuthala Narshima Reddy,
V. &. Post : Ellanki, Tal : Ramannapet,
Distt : Nalgonda, (A. P.)

12164—Sh. G. Annantha Reddy,
V. &. Post : Sunkanapalli, Via : Gundrampalli,
Distt : Nalgonda, Tal : Ramannapet, (A. P.)

12165—Sh. V. Madhusudhan Reddy,
V. &. Post : Kuntla Guda, Via : Choutupal,
Tal : Ramanapet, Distt : Nalgonda, (A. P.)

12166—Sh. N. Shankar Rao,
V. &. Post : Lingoji Guda, Via : Chityal,
Tal : Ramanapet, Distt : Nalgonda, (A. P.)

12167—Sh. B. Ratnaih,
V. &. Post : Nagaram, Via : Valigonda,
Tal : Ramanapet, Distt : Nalgonda, (A. P.)

12168—Sh. Patil Praksh Bhowa,
V : Ghodasgaon, Post : Holnantha, Tal :
Shirpur, Distt : Dhulia, (MHR)

12169—Sh. Patil Bhika Bhoma
In Front of Madhyamik, Vidhyalaya,
Devpur : Dhulia, (MHR)

12170—Sh. Chaina Ji,
V : Sajwani, Post & Teh : Badwani,
Distt : West Nimar, (M. P.)

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(*Contd. from page 15*)

within a period of one year may give rise to as many as 1250 individuals. They are very shrewed and suspicious animals and are usually noctural in habit.

Control measures :—Poison baiting is one of the most effective and economic methods of rat control. The important constituents of bait are a poisonous chemical, a suitable attractant like wheat bran, wheat flour or crushed millets and water just a sufficient to moisten the bait. Often a little quantity of vegetable oil is also added to the bait which besides faciltitaing easy preparation of pills, helps to enhance the rate of absorption of poison in the system of rat.

Before undertaking the baiting operations, it is necessary to ascertain the live burrows inhabited by rats to economise the use of bait. For this purpose, the area to be treated requires to be surveyed to locate burrows. The burrows are then closed with the moist soil and kept under observation for a day or two. Only those burrows found opened during this period, indicates the presence of rats inside and are therefore selected for treatment.

Zinc phosphide is a very effective chemical for rat control. It is blackish powder with a strong pungent odour and is practically insoluble in water. It is usually used as 3 percent bait with carrier attractants already mentioned above. Zinc phosphide is highly posionous to human being and domestic animals, should be handled with great care.

While using, pills are prepared from the bait and two pills are usually kept at the opening, of burrow. On the next morning, both uneaten and half eaten pills are collected and destroyed. Similarly the dead rats are disposed of promptly either by burrying them deep into the soil or by burning as these dead rats if eaten by dogs or birds may prove to be fatal. In recent years, the use of phostoxin tabletes has also been advocated.

(*Contd. from page 1*)

During the year, the work-days of cooperative farmers are put down in records so to say, in advance; on the basis of estimates made at the beginning of the year (in work days) a specific number of work-days are recorded for every cooperative farmer. member of a given work-brigade of work-team, per 100 kg. production obtained.

In 1957 to 1958 many cooperative farms passed over to working without state financing. This meant passing over to the achievement of results from every activity, strict income-recording, saving on funds and material, and recording the net production obtained in every branch and sector.

The work of cooperative farmers throughout the year is assessed on the basis of labour standards in work-days. Remuneration in general and Remuneration per work-day are not a constant. They depend completely on the fulfilment of the annual production and financial plans of cooperative farms. These plans specify gross annual incomes, the amount of expenses, the sums set aside for fund-accumulation, the number of work-days, the money payment and payment in kind per workday etc.

Owing to the fact that cooperative farmers work in the open air and that no guarantee exists that plans for incomes and production will be fulfilled 100 per cent in a given year, the cooperative farmers receive sums in advance according to the number of their work-days on record. Usually these sums amount to 60-80 per cent of the planned sums per work-day. At the end of every year, the operative farms, cash incomes and incomes in kind—accruling from work in animal husbandry, crop-raising, the activity of subsidiary enterprises and other cooperative farm activities—are distributed among the members of cooperative farms by decision of the annual meetings.

Part of the incomes in kind are set aside to meet the requirements under contracts, as well as for sowing, for fodder for the drought animals on cooperative farms; some 3 per cent of them are allocated to the Assistance to Aged, Sick and Disabled Cooperative farmers Funds, if there are such. The remainder of the income in kind is distributed among cooperative farmers on the basis of the number of their work-days.

(*Contd. from page 10*)

These are easily transmitted by juice through seed of certain plant species and by their insect vactor many weeds cultivated plants are also hosts of these viruses.

Since some of these viruses are known to be seed transmitted, seed from the healthy plants should be used for sowing.

During the field operation, the hands of the worker, as well as the implements should be washed throughly and care should be taken not injure the vines.

Onion :—Onion yellow dwarf has been reported to cause damage. The Virus is transmitted through infected bulbs, but juice inoculation and by the aphid vectors. The diseases is not carried through seeds when the crop is raised from bulbs, the healthy bulbs, should only be used for planting.

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