

TABLE-VI.

*One year laying record of FIRST CROSS at the U.P.P.A. egg laying test*  
(From 1st November 1927 to 30th September 1928 i.e. 12 lunar months)

Register number of hen.	Number of eggs laid per month											Total	Grade of egg		Remarks
	Nov.	Dec.	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.		I	II	
Hen. 44	6	17	24	22	21	14	6	12	8	11	9	150	45	105	
" 45	9	24	25	22	25	12	3	13	17	3	9	162	47	115	
" 46	17	25	23	20	18	17	6	6	13	13	5	163	39	124	
" 47	14	25	23	21	22	16	10	12	18	8	14	183	64	119	
" 48	19	23	23	20	21	19	5	13	17	13	7	180	55	125	
" 49	6	17	17	15	17	9	6	5	16	6	5	119	35	64	
" 50	14	20	21	18	22	11	9	9	10	5	Nil	139	28	111	

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## THE PLACE OF PADDY IN THE WELFARE OF THE COUNTRY<sup>1</sup>

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I understand that you are interested not only in the dry parts of economics but also in the effect on the community at large, of maladjustments in the economic position. I have therefore chosen as the subject of my discourse what I consider to be a grave maladjustment in the agricultural economy of this Presidency. I refer to the large area under paddy, more particularly swamp paddy.

The total area actually under crop, in the Presidency, is approximately thirty-nine million acres. The total area under paddy is approximately, eleven million acres, of which area approximately eight millions are swamp paddy. This does not mean that every third or fourth crop is a paddy crop and that other crops are given in rotation with it. If that were so, much of what I have to say would not need to be said. As you are aware, there are wide stretches of country where paddy follows paddy monotonously every year and these stretches are getting wider and the area under swamp paddy is being added to yearly. This is the position. I propose to examine

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it from the swamp paddy aspect first and then view the paddy position as a whole. I am following this order because, whatever the paddy position generally, the aspect of the swamp paddy position which I propose to lay before you, will remain the same.

The salient feature of swamp paddy cultivation is that the land is by preference kept under a slowly moving stream of water three or four inches in depth. This procedure is attended by many disadvantages.

The first is that enormous quantities of water are used in growing the swamp paddy crop, much more than is necessary for growing any other crop which requires irrigation only occasionally. The main effect of this is that for a given supply of water under given conditions, the area which can be protected from failure of season is less when swamp paddy is given than otherwise would be the case. The cultivators who insist on growing swamp paddy determine the shape that an irrigation project shall take and the limits of the area which shall be benefited. In a country like this where failure of crop for climatic reasons is comparatively frequent, it is obviously better that as large an area as possible should be protected against drought.

The second disadvantage is worse than the first. While the paddy crop is on the ground, it prevents or inhibits the growing of crops other than paddy. The first result of this is that the majority of the cultivators have to depend on paddy and paddy alone. This is particularly the case when it is possible to grow more than one paddy crop in the year. The evil of a one-crop rotation is therefore established. The second result is that it places a very definite check on enterprise. Anybody can grow swamp paddy and the opportunities for exercise of skill are very limited. The third result is that it ends in a loss of all knowledge of how to grow other crops so that when that knowledge is needed, as at present, the cultivator does not know what to do and is unable to react to change of conditions as quickly as he should.

The third disadvantage is that while the crop is on the ground, there is no room for the cattle of the village. They have therefore usually to be sent away long distances to a forest to graze. As they go they collect and spread diseases of which many of them die. The forest is usually overstocked, with the result that the cattle lose such condition as they had and at the same time lose some of their resistance to disease. There is therefore an enormous wastage annually and the cattle are the poorest of their kind. This state of affairs leads to a practice which causes a further aggravation of the position. Cattle treated like this cannot produce milk in any quantity. It is hopeless to try. The buffalo is therefore introduced as a milk producer and that puts the final closure on any idea of improving the cattle so that they will produce a reasonable supply of milk and a good calf. On the need for a greater all-round consumption of pure cows' milk there is much to be said, but that is a subject in itself. Before leaving this item it has to be mentioned that this practice of grazing cattle in the forest in this way, besides being bad for the cattle, is bad for the forest.

The fourth disadvantage is that the swamp paddy crop demands the application to the land of large quantities of unrotted organic matter. If these cannot be obtained from waste land or by growing a green manure crop, then the forest has again to be drawn upon, to the detriment of the forest.

The fifth is that between planting and harvest, the paddy crop requires very little attention and as, there are no other crops to provide occupation

between times, there is an unequal demand for labour. Short spells of activity are followed by long spells of idleness. One result is that gangs of labourers wander round the country in the busy seasons following the work. They are at times a distinct menace to public health.

The sixth is that the paddy crop provides little in the way of subsidiary industry which will afford employment for the population in excess of that required for the cultivation of the land. This is not strictly a disadvantage peculiar to swamp paddy but this is the most convenient place at which to mention it. The point I wish to make is that when the population in an area is in excess of requirements for the cultivation of the land and the subsidiary industries dependent on cultivation, the surplus must migrate, emigrate or compete for a share of the labour requirements of the land and the subsidiary industries. Paddy affords little scope for the establishment of subsidiary industries.

There is a further disadvantage of swamp paddy cultivation, dependent on the fact that such large quantities of water are used in its cultivation, to which reference must be made. In order to avoid the trouble of many to lift so much water, the level of the fields has been lowered so as to permit the water to flow on to the fields. This has resulted in the high ground of the village being passed away until there is very little left except that on which the houses and a few topes stand. The paddy fields come right up the doors of the houses in some cases. The few cattle that are kept in the village have only a restricted space to move in, and sanitary arrangements frequently leave much to be desired. Pools of water lie about the fence and mosquitoes and other insects are prominent. Altogether during the monsoon a paddy village is not the pleasantest of places to live in.

I have indicated the more direct and some of the consequential disadvantages of the swamp method of cultivating paddy. What about its advantages? It is supposed to have two. One is that by this means large quantities of food are produced on the spot and the other is that this crop can be grown where natural conditions would forbid any other crop being grown. The latter advantage remains and to my mind should be the only excuse for growing paddy under swamp conditions. The former advantage has lost most of its point now that food can be so easily moved by road and railway to whatever point where there is scarcity and it should not be forgotten that a grain of paddy is one-third husk which is not fit for human consumption, while with ragi the proportion of husk to grain is one-twentieth. The first advantage can now be ruled out. Times have changed and continue to change. The agricultural labourer in the future will expect more of the good things of life which he sees others enjoying, and will demand higher wages, which the paddy crop will not be able to provide. The farmer himself wants a better return on his money than he can get by growing paddy. Paddy will have to concede some area to other crops. It is already doing so, but slowly.

And now we will turn to the general paddy position. Last year I worked out the statistical position, and on a basis of a population of 46 millions, with 40 per cent of the population rice-eaters, an average consumption of rice per head of 4 cwts. per annum, a yield of rice per acre of 8 cwts; after allowing for wastage, dryage and reserve for seed and an acreage of 11.3 million acres, I came to the conclusion that the needs of the Presidency

were being met, and suspected that rice was being held up. Against this was the fact that on the average of three years there was a net import by sea of 345,000 tons of rice. Owing to the absence of information as to the movement of rice by road and rail, it is not possible to make an absolutely definite statement, but it is, I think, a fair assumption to make that the paddy and rice imported into the ports of Tuticorin and Cochin are for the use of Travancore. During the three years in question the average import into these two ports was equivalent to 250,000 tons of rice, thus accounting for a very large proportion of the net import.

The position for 1929-30 is more favourable still to the idea that we are able to meet our own needs as the net import for the year is equivalent to only 245,000 tons of rice most of which comes from Burma. The import into Tuticorin and Cochin is equivalent to 220,000 tons of rice, thus leaving a net import of 25,000 tons. It is known that paddy is being stored in the country in the hope of a return to better prices.

Now if we have reached a position like this, where we are as it were balanced on a knife edge, with one year a net import of 100,000 tons and, the next year, a small net export, we shall be wise to take stock of the position and see what the future has in store for us. 100,000 tons of rice spread over 8,000,000 acres is equivalent to an average increase of 50 lbs. of paddy, a mere flea-bite. If all the swamp paddy crops or a large proportion of them were got in early and the season was average, this increase would be easily surpassed. If to this possibility is added the efforts the Agricultural Department is making successfully to reduce the seed-rate, to encourage the spread of the practice of growing green-manure crops for use in conjunction with phosphatic manures and to increase the acreage under heavier yielding strains, it must be admitted that the time is in sight when the normal position will be that there is a considerable net export. Add to this that wheat is coming into favour as a substitute for rice among the educated classes thereby reducing the demand for rice and adding to that a substantial increase in acreage and very soon a good season will land us into the same plight as the jute-growers in Bengal. For the line we are following is the line that all the other paddy-growing countries in the world are following. They are all strong to increase the average yield per acre and the total acreage, especially those countries which do not at present produce enough paddy for their own needs. The outlook for the future does not look very promising for those who are hoping for a rise in prices.

Now look where we are drifting and look at the position we are in as regards other matters. With a properly regulated supply of water to be used to eke out rainfall or as a stand-by, we have ideal conditions for producing sugar, fruit, vegetable oils, fibres, cotton, milk and milk products, eggs and vegetables. Look at this list and look at the things we import and you will arrive at the conclusion that the cultivator of this Presidency would be wiser to try and capture his home market and to produce raw materials which other countries are less favourably placed for providing than to drift into—aim is too definite a word—becoming the importunate seller of rice to an unwilling buyer. If, further, it is remembered that some of the articles on this list form the raw materials of industries which already exist and could expand or of industries which could be established and which would provide more employment for the people of the country than is the case with paddy then this conclusion is the more inevitable.