

IRRIGATION FROM A RYOT'S POINT OF VIEW*

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A conference of this nature is helpful in bringing together Agricultural experience and research for a free exchange of ideas. Irrigation from a ryot's point of view is given here and research should be able to offer solution to the problems set out. Irrigation has developed considerably the world over, natural resources are utilised to the full, water is held up in times of plenty and distributed when scarce, to get over unequal rainfall distributions. But irrigation is only a means to an end and growing crops with irrigation is not enough; it must also be remunerative, foremost.

There are about 10,000 acres of wetlands in the Kulitalai taluk irrigated by the Cauvery. Originally, the irrigation was managed by the people themselves, and was taken over by the Revenue Department by about 1882. Later in 1907, the control was transferred to the Public Works Department and continues to be so.

Prior to 1924, water was not entering the canals directly, except when the river was in floods. Water was diverted into the canals by putting up dams, known as *Korambus*, across the river with twigs, brushwood, sandbags etc. They were washed away every time by the rise of water in the river and had to be renewed.

Owing to the difficulty of constructing efficient *Korambus* and the silting up of the canals, the supply of water in the canals was inadequate and was supplemented by the drainage from the upper villages. This was done by taking water from the river to the fields through these drainage canals, which had to be maintained at a high level to command the fields. The fields were thus deprived of the valuable fertilising silt and were further encumbered with the injurious salts, passing down with the drainage. The evils of the drainage-irrigation were greatly offset by the inherent fertility of the soil and the seasonal rains, and commercial crops like sugarcane, plantains, etc. were grown largely in the taluk.

The old irrigation system was swept away by the 1924 floods and the Kattalai scheme has taken its place. There is a bed-regulator across the Cauvery at Kattalai with two high level irrigation canals, one on either side. The wet tract is now bounded by two high level irrigation canals, resulting in water-logging. Drainage is in defect and the area under commercial crops like sugarcane, plantains etc. has fallen down and even paddy does not thrive well. Expansion of irrigation without drainage has proved a big failure.

* Abstract of a paper read during the College Day and Conference in December 1934.

The annual irrigation conference of the Kulitalai taluk was held on the 9th of November 1934, under the presidency of the executive engineer. The revenue divisional officer and the ryots attended the conference. It was reiterated that the irrigation and drainage be separated wherever possible by removing the dams across the drainage canals; that the supply of water to the lands now irrigated by such canals be made from the newly excavated high level irrigation canals, and that the canals be closed for six weeks from 1st May every year, for allowing the Public Works Department to carry out repairs,—though experience would indicate the desirability of opening the canals by the middle of May itself. It may be mentioned in passing that the Agricultural Department was not invited to this conference.

Under the conditions prevailing now, single-cropped wetlands are more profitable than double-cropped wetlands, so much so that double cropped lands are sought to be converted into single-cropped lands. Two crops could not conveniently be raised owing to the closure of the canals during May and June from 1926 onwards. Landowners hold that the closure of the canals leads to the drying up of the clayey soil and lower yields, consequent probably, on the disturbances set up in the activities going on in the wet clayey soil.

The choice of crops suitable for the season is a factor that decides the profitableness of irrigation. In Kulitalai, *Kuruvai* a four months' rice crop suitable for clayey soils is sown in May-June and *Sarapalli* a three months' crop suitable for loamy soils is sown in July. Both are harvested before the onset of the N. E. Monsoon, escape submersion in the monsoon floods, and are suitable as first crops.

The incidence of Land revenue and water-tax determines chiefly the profitableness of wet cultivation. The recently revised water-rates in the Kulitalai taluk, Rs. 15 for the first crop, Rs. 7—8—0 for the second crop, and Rs. 3—12—0 for the third crop are very high. The third crop was not assessed till now. The valuation of the lands offered as security to the Kulitalai Land Mortgage Bank reveals that data given in the settlement table, based on the settlement of 1862, has no application today. The income from land is very much less than what is furnished in the table. Yet a flat rate of Rs. 15 is proposed for the first crop, irrespective of the soil, its yielding capacity and similar considerations.

The theory that the Government is entitled to half the net produce is responsible to a very large extent for the frozen credit in Agriculture. That the landowner is entitled to a share of the produce is denied in practice by this theory and the labourer and the Government more or less share the produce. The land-owner occupies a place in agriculture corresponding to that of the capitalist in industry, but is without the share that he takes as his right with the result that the land loses its value as a marketable security. The passing of the Land

Mortgage Bank Act, and the Government guaranteeing the debentures thereof, makes it imperative to invest the land with a face value, just like the guilt-edged security and that is not likely to happen till the land-owner gets a fair share of the produce as the interest on the capital invested by him on land. That emphasises the need for changing the Land Revenue Policy of the Government, and the Taxation Enquiry Committee has rightly said that "the rate of assessment should be standardised at a comparatively low figure not exceeding 25 per cent of the annual value." It is well to remember that the Sovereigns in the early days were entitled customarily to a sixth of the produce.

The dictum of law sanctified by the Privy Council, "The incidence of the ryotwari tenure is governed by custom and includes a right to receive from the owner of the soil (whether Government or a private individual) a supply of water sufficient for the irrigation of the mamool wetlands,—" does not justify the increased water-rates in Kulitalai. The Kattalai scheme, launched by Government at a heavy cost no doubt, must not be taken to be a commercial investment, as it is a restoration of the irrigation system that was destroyed by the 1924 floods, to fulfil the primary and customary obligations of the Government as the land-owner. The water-rate on lands newly brought under irrigation, though not governed by the above considerations, is nevertheless high, arbitrary and hence unjustifiable.

The new Mettur Dam is not only not beneficial to the Kulitalai taluk, but definitely injurious. Even in an year of poor monsoons as during 1934, the rainfall in Mercara between June and September was not in defect and would provide supply of water for irrigating Kulitalai, and the dam is not therefore any additional benefit, even protectively. The dam has prevented the inflow of fertilising silt into the fields and to that extent is injurious.

The Trichinopoly irrigation is liable to be sacrificed for the sake and benefit of Tanjore as the Cauvery irrigation is for a lakh of acres only in Trichinopoly and 9 lakhs of acres under the old system and 3 lakhs of acres under the new Mettur scheme in the Tanjore Delta. The supply of water in Kulitalai was reduced this year in September, to provide irrigation water for Tanjore and this has reduced the yields substantially, in Kulitalai.

At the present low level of prices, irrigation does not appear to pay and yield a profit. Drastic economics have to be effected all round to make irrigation and farming remunerative. Individual efforts would go a little distance only towards the solution of the problem. That is not enough; state and intervention only can relieve the present tension and save the landowners.

The fragmentation of holdings into uneconomic sizes has gone apace and consolidation of holdings by legislation is necessary. A pair

of bullocks could be maintained economically only if the cultivated area is 3 to 4 acres in double cropped wet lands and one acre in the case of baling wet lands.

Banks of irrigation canals must be made to serve as road for carting manure and seeds to the field and the produce to the thrashing floor and granary.

In Kulitalai, paddy seeds are sown at 30 to 40 madras measures (75—100 lbs.) per acre. The reduced seed-rate advocated by the Agricultural Department is not adopted for want of seed-bed areas. The Agricultural Department can select suitable areas and reserve them for nurseries.

Grant of facilities for growing green manure crops on *porombokes* and for grazing animals in the forests free of charge, would go a long way to reduce farming costs.

Revision of the Land Revenue Policy is equally necessary. There is a very great disparity between the land assessment and the income-tax. Both are ultimately taxes on income and yet there is such a difference in the rates levied on the two classes of income.

There is need for co-ordinating the activities of the Agricultural, Revenue and Public Works Departments for solving the irrigation and drainage problems. The time and period of closure of canals is an instance in point. The agricultural department is in a position to decide it best.

The pronouncement of Prof. P. J. Thomas of the Madras University would aptly close the subject. "A hundred years ago, there was a similar depression in the Madras Presidency; and it was lifted as a result of irrigation works and road-making carried out by Government.....a vast stimulus was given to industry and production by the employment of labour and circulation of capital. Thus of old, Madras, showed an example to the rest of India; may we hope that history will repeat itself. Financially Madras is the best equipped for initiating a forward policy just now, but the will is needed."

(Mr. Ramamoorthy, I. C. S., the Director of Agriculture, partook in the discussion that followed this paper and spoke as follows.—*Ed.*)

Several of the speakers referred to the necessity for the co-ordination of the Irrigation and the Agricultural Departments. Such a co-ordination has been going on for the past few years. If the Agricultural Department was not consulted in the earlier years, it was because the Agricultural Department was not in a position to give correct ideas about the water requirements of crops. Agriculture must precede irrigation and not vice-versa. But before that, experiments must be done to find out the duty of water for the various crops which would guide the Irrigation Department in the regulation

of the supply of water in the channels. It is only recently that scientific knowledge on this aspect of the question has advanced. However with the advances of knowledge on soil physics and water-relationship between the soil and the plant now, the Agricultural Department is in a position to advise the Irrigation Department, when such advice is required. As regards the other question of revenue, there have always been two views held respectively by the people who give and who take it, the former wishing to give as little as possible and the latter trying to take as much as possible. And this has led to differences between the two. As regards the water-rate, it was fixed at a time when times were prosperous. Everyone has been hit hard by the present depression and there is no use crying against each other.

THE HOUSEFLY NUISANCE AND ITS CONTROL WITH MAGGOT TRAPS.

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Man and the Housefly: It is well known that the common housefly is one of the worst pests of our dwellings and that, during certain seasons in the year, this creature becomes a terrible nuisance. Though for all appearance this dark grey flying insect looks an innocent and harmless creature and is unable to cause pain like the mosquito its potentialities for mischief are formidable; for, it is not only a mechanical nuisance flying about the nooks and corners of our dwellings, visiting both filthy and wholesome materials and contaminating the latter, but it has also gained great notoriety as a terrible disease carrying agent. Infectious and dangerous diseases like Cholera, Tuberculosis, Typhoid and Dysentery are easily carried by the fly from those suffering from these diseases to healthy persons. The general features of the body of the fly are specially suitable for performing its functions very effectively; for it has its legs, body, wings and the mouth parts well supplied with hairs and bristles which serve as excellent media for carrying infective particles. Infection is mainly caused by the direct contact of the different parts of the body which carry germs of disease with wholesome food, drinks, etc., when the fly perches on the latter; the fly has also the habit of depositing its excretory particles, *foeces* 'specks' which may contain highly infectious germs in great numbers. In its habits, therefore, this fly is disgustingly filthy, feeding indiscriminately on excrement of all kinds such as vomit, sputum, nasal and eye discharges, pus and blood from boils and wounds; in the same manner, it is equally attracted by all the best and tasteful of human food stuffs and will, when not disturbed, pass to and back between the two extremes. It is, therefore, incumbent on every householder and citizen and on every person responsible for the general sanitation and health of our villages and inhabitants that sufficient attention is paid to this terrible pest.