

are accustomed to seek the fulfilment of their wants through a village economy. This pattern of life has appealed to Indian philosophy. In depressions or booms, these farmers have shown an extraordinary spirit of sturdy independence and self-reliance.

But we find the world changing. Farmers have felt the influence of the new commercial age, technological developments and specialisation. But we are concerned here whether this self-sufficient pattern with all its accompanying satisfactions and advantages should be changed just to increase efficiency or to consider whether efficiency is not compatible with the present structure. It will be readily accepted that the latter view appeals to all. Wholesale and ill-considered adoption of mere technological efficiency is not advisable if it interferes with the spiritual and artistic cravings of man and destroys abruptly the general pattern of farm life. To submit therefore, to forces of economic or technological efficiency is to forget moral values and social welfare. But the same time, to cling stubbornly to the extreme forms of subsistence farming may be to deny that the world has changed or is changing and may constitute a social conservatism in an exaggerated form. We have to make a compromise between these extremes.

Barring certain phases of mechanisation, it can be said that technology has not reached such a stage as to put the family or the subsistence farm at such a disadvantage as to lose efficiency. We know that the family-sized farm is capable of great efficiency, particularly in lifting water and also capable of benefiting from improved seeds and better manuring. One may still remember what Dr. May said about Northern Europe where 'it has been proved to the full that the highest degree of technical excellence is entirely compatible with family farming, but on condition that the land unit is the subject of special State guardianship and individual family effort is supplemented by group effort in purchase, processing and sale'. On the whole, therefore, there seems to be no present cause for assuming, as is done in some quarters, that family farms are inefficient and must be abandoned in favour of co-operative or collective farms to attain new goals either of social welfare or economic advantage.

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## Irrigation as a means for Maximisation of Crop Production

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The importance of irrigation to step up production of crops has been well recognised and of late numerous irrigation schemes have been started in various countries. In the Madras State, two major schemes viz., the Tungabhadra and the Lower Bhavani Projects are expected to be completed by 1952. Of these, the

former is intended to irrigate certain parts of the Ceded Districts, over an area of two-and-a-half lakhs of acres, where nearly eighty percent of the tract is composed of deep black soils. As the tracts are subject to very variable and uncertain rainfall, the average yield of crops is low. Chemical investigations conducted on the black soil of the tract and the water of the Tungabhadra river were in favour of irrigation, since the salt contents were low and no harmful effects like upward rise of salts or water-logging were noticed as a result of irrigation. Likewise, the performance of the crops under irrigation was satisfactory and very high yields were recorded in the several crops raised. It is thus clear that with the introduction of irrigation to this tract the production of crops could be considerably enhanced from the following considerations: (1) The cropping calendar could be started on the irrigated black soils in the month of June itself. Such a situation is not possible under the existing rainfed conditions, where the cropping calendar on the black soils of the ayacut area starts only from the month of July. Since the cropping calendar period is lengthened, it is possible to have a wider range of crops and this offers scope for greater choice of crop rotations. (2) By irrigation it is possible to fix definitely the time of sowing for each crop. (3) The irrigated black soils can stand heavy manuring and greater density of plants. (4) By irrigation, it is possible to introduce various crops new to this tract and (5) for maximising the production of crops under irrigation, consideration should also be given to pests and diseases to minimise their havoc either by breeding or by agronomic methods or with the aid of pesticides. Since the tract is subjected to both the South-West and North-East monsoons, consideration should also be given to the vagaries of rainfall which upsets the sowing and harvest operations of the crops and in addition the number of irrigations are also liable to be affected from year to year. In spite of such disadvantages, systematic light irrigation once a fortnight is found to be a feasible proposition on the whole. Finally, by irrigating two-and-a-half lakhs of acres of the ayacut, production of both food and commercial crops are maximised to a considerable degree in the area and this goes a long way in meeting the requirements of the deficit districts of the Province, in addition to making the area self-sufficient. In the case of commercial crops like cotton, irrigation offers tremendous potentiality for the introduction of long-stapled American cottons, so urgently needed to-day in the Indian Union.

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