NOTES ON THE WORKING OF A LAND DEVELOPMENT SCHEME IN THE NORTH-CENTRAL PROVINCE.

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IN 1918 there was a food shortage in Ceylon due to restrictions imposed on the exportation of rice and food grain from India. Measures were taken by the Government to control the supply of rice by rationing. The object was to prevent inflation in prices and the proper distribution of supplies to obviate the possibility of complete shortage in particular areas. A Food Production Department was organized to take measures to increase local food supplies and to bring fresh land under food cultivation. Regulations were made compelling employers of labour to set apart areas of land for food cultivation, or to open up new areas for this purpose. However, with the removal of export restrictions in India, the schemes proposed by Government were abandoned.

During this period, to enable local employers of labour and others to open up land for food production, Government offered to lease certain tracts of irrigable land to those who were prepared to develop them. Some of the land thus offered was taken up by specially organized limited companies, and other land by private individuals. Lands in the vicinity of Minneriva, Kalaveva, Karachi, and Tissa were taken up by companies, but after a few months the lands were abandoned. Among private individuals the writer of this paper obtained a lease of land in extent approximately 900 acres irrigable and 200 acres non-irrigable, about 4 miles from Anuradhapura, situated in Ratmale, Amana, Nelubeva, Divulveva, and Malvatu-oya. This land was taken up in 1919 and has been developed under the name of Sravasti Estate.

These notes will be confined to the methods and procedure adopted in developing the estate and the present condition of its cultivation, as such information may be of some use to those who contemplate opening land in the dry zone areas of the Island.

The area comprising Sravasti Estate consisted of irrigable land and high land covered with thick primeval forest from which the Forest Department had at various periods extracted the more valuable timber trees. It was not possible to extract timber from the remaining forest and, for all purposes, the forest was of no economic value.

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The clearing of the forest was done by contract labour. In accordance with the availability of such labour a portion of the forest was cleared each year. Owing to the nature of the country, the difficulties of obtaining supplies of labour and the unhealthy conditions of the district, the cost of clearing was high. Felling and burning worked out at from Rs. 50 to Rs. 60 per acre during the first few years till a normal rate of Rs. 40 was reached in subsequent years.

The forest was felled, burnt, and cleared and a first crop of *héna* paddy was sown in October. The paddy came up very well. The varieties of paddy used in this first sowing were *mada-el* and *tillenayagam*. A quantity of *indrasal* paddy obtained from Bengal through the Department of Agriculture showed a remarkably healthy growth with a higher yield than local paddies. These plants further showed a vigorous growth and tillering was very marked; some of the *indrasal* paddy plants threw out over twenty tillers and the average worked out very well.

The usual practice in cultivating new land in the North-Central Province is that, when the first *héna* paddy crop is reaped, the stubble is burnt and a crop of gingelly is sown. The gingelly came up fairly well, and a few showers of rain in April and May helped its growth and produced a fair crop averaging about 6 bushels per acre.

The land after the crop of gingelly had to be prepared for paddy fields with as little delay as possible. If by any chance the ridging and plotting is delayed no paddy crop can be sown during the following season (October-November). And if the land is left uncultivated the rapid growth of weeds and the sprouting of jungle plants make its subsequent reclamation a very costly and tedious process requiring much care and labour. For this reason it becomes necessary to overlook the importance of thorough work in clearing the land of little hillocks and the proper levelling of the plots; the most important and urgent work at this juncture is to have the ridges put up to enable the collection of water to make the land sufficiently swampy for preparing it for sowing. Necessarily a large number of stumps and little hillocks remain on the land. Ploughing is not possible during the second year of cultivation, and therefore only puddling the land with buffaloes can be carried out. The puddled land is levelled as well as possible and seed is sown before the season becomes too late. The third crop thus sown is reaped in February-March; and the land is again prepared by puddling with buffaloes and the removal of as many hillocks and small scrubby roots as possible. The crop is sown in April-May and reaped in August-September. The cycle of cultivation is thereafter continued. In normal seasons two crops are taken each year, one sown in October-

November and the other in April-May. Each year the levelling of hillocks and the removal of roots is continued. From the third year the land is ploughed with the country plough and puddling is carried out subsequent to ploughing. The average yield of paddy for the *héna* crop under normal weather conditions works out at 30 to 50 bushels per acre. The *yala* gingelly crop yields 5 to 6 bushels of gingelly per acre, and subsequent paddy crops on prepared land average 30 to 40 bushels per acre for each crop or 60 to 80 bushels for the year.

The conditions under which irrigation facilities are obtained are peculiar to most of the dry zone areas. The heaviest rainfall is experienced during the north-east monsoon from about October 15 to the end of January. The irrigation reservoirs in normal years are able to supply water only for short periods, to end of February and from April or May to the middle of August. The ability to supply water depends on the condition of the tanks and the capacity of such tanks. However high the rainfall may be during a particular year, the quantity that can be stored is circumscribed by the capacity of each tank. Abnormal high rainfall sometimes reduces the capacity of the tanks by breaching the bunds, which have to be hurriedly repaired. Often the breaches are so marked, the reservoir itself has to be emptied to enable the repairs to be carried out and instead of the heavy rainfall helping the cultivators, it results in their supply of water being reduced or altogether stopped. Even under normal conditions no cultivator can depend on getting water except during prescribed periods, and each year the irrigation authorities have to fix the periods just before the season for cultivation. As a result of this regulation without which it will be impossible to continue to supply water with any regularity, the opportunities of the cultivators for any departure from their established practice are very remote. They get an average period of about four to six weeks to prepare their fields and sow their crops, and the length of time for which they can expect water for their growing crops averages about three months. Under such circumstances no radical improvement in tillage or the preparation of the soil can be effected, as during the period of four to six weeks the most the cultivators can do is to hurriedly prepare the seed beds. As the period during which water is available is limited only varieties of paddy that take from three to four months have a chance of success.

Any improvement in cultural methods in accordance with the practice elsewhere in the Island or in other rice-growing countries is therefore a difficult one in the dry zone areas. Improvements have to be developed to suit the conditions existing in the district. It has to be borne in mind that weather conditions and the seasons cannot be changed. The system of irrigation under storage

tanks is not open to alteration. It will not be possible for the tanks to supply water except under the regulations which are adopted now. So the preliminary conditions have to be kept in view as unalterable. The supply of labour cannot be unduly increased to enable more hands to be employed during the four to six weeks period, as during the rest of the year such an extra labour even if available cannot remain idle. Transplanting is not effective or profitable where short-period paddy has to be grown. Selection of seed, greater attention to weeding during the period of growth of the crop, the supply of a sufficient number of buffaloes for agricultural operations, and the use of fertilizers that are likely to be readily available are the lines on which improvements have to be sought.

The question of the improvement of seed is beset with many difficulties when it concerns short-period paddies. Mere pure-line selection under conditions prevailing in the dry zone cannot go very far. Pure-line no doubt has two advantages; one is an even growth of healthy plants and the other the securing of a crop with seeds that are easily shelled with as few breakages as possible. In the case of short-time paddy that has to be cropped within three and four months uniformity of selected seed does not help in increasing the yield; for in the selection of seed the usual procedure is to select the largest and the best formed ones, such seeds produce plants that take a little longer time to flower and mature than the avarage smaller seed and the outturn of the crop suffers in consequence. In selecting pure-line for short-time paddy, it may be advantageous to ignore the best seed, and to make the selection from the average small-sized and early-ripening seed, as such seed will grow and produce a more abundant crop than the larger ones. As regards the advantage in the milling it has to be remembered that rice is seldom grown in Ceylon for a milling industry as the quantity produced in the Island does not indicate that even in the near future we are likely to have a surplus for purposes of export.

Apart from pure-line, there are other directions in which the quality of seed-paddy can be improved with a view to getting a better yield. They lie in the selection of seed from plants that show an early ripening and a greater tendency to develop tillers. Short-time paddies throw out only a comparatively small number of tillers in each plant; there are indications that a few plants throw out an abundance of tillers which flower and mature their seeds well within the season. In any scheme for seed selection, these points are well worth consideration for it appeared from the *indrasal* paddy from Bengal that tillering and even maturing of the seed have been points that have been taken into consideration in the breeding of the particular variety.

It has already been mentioned that one of the most important matters concerning the opening up of forest land in the dry zone for the cultivation of paddy is that the land once cleared should be rigidly kept under cultivation. The forcing climate of these districts with long spells of dry weather and short spells of heavy rain has a tendency to make weeds and shrubs grow up rapidly and luxuriantly within a short time, and consequently once a piece of land is left without cultivation the growth of jungle and weeds makes it very expensive to bring the land under proper cultivation at a later period. This difficulty is much in evidence in the villages where through sickness, failure of water, or other circumstances the cultivators fail to keep lands under regular cultivation. The difficulties involved in bringing such land into cultivation at a later period have increased the areas of waste land covered with weeds and scrubby jungle.

Irrigable land can be roughly divided into two categories, one where the land is lowlying and swampy during rainy weather, and the second where the land does not turn into swamps until irrigation water is turned into it. It is the second description of land that requires immediate and prompt attention if it is to be converted into suitable paddy fields. If, after the *héna* crops, this land is left unridged or not laid out for the second year's sowing it reverts to jungle and weeds. The difficulty has been partly met after some experience by adopting a new system of cultivation. Instead of sowing the *héna* crop after the first clearing, the land can be put under a crop of vegetables such as pumpkins and planted out with plantains. Pumpkins grow well and command a ready market and bring in a larger profit than a *héna* crop of paddy. The plantains come into bearing during the second year and continue to yield crops at least for three years. During these four years the land becomes remunerative, the weeds and jungle are kept down, and in the meantime there is ample time available for building the ridges and channels to make the land a rice field by the time the plantains cease to bear remunerative crops. This system was evolved after a few years' experience and is now carried out each year with great advantage. One welcome feature of this successful experiment is that it is now being adopted fairly extensively in the neighbouring villages.

Paddy cultivation is very important from several points of view, particularly as a source of a nourishing and a desirable food for the people; but this importance should not blind us to the economic fact that under present conditions it is a precarious cultivation and it does not supply by any means all the food on which people can live. The cultivation itself is one that will occupy the cultivators only for short periods during the year. Whatever land is available the cultivator should have no direct or indirect

compulsion to force him to keep it merely as paddy land; nor should he be discouraged from or deprived of having access to high land with the mistaken notion of compelling him to cultivate paddy in preference to other food crops.

The development of unirrigable high land is of great importance in a proper system of rural welfare. The early history of the Island clearly indicates that the rural wealth or welfare of the people who inhabited the present dry zone area depended on the successful cultivation of unirrigable high land. The best and most valuable crops are mentioned as those grown on high land. The best rice and rice that was in high repute was *elvi* or rice grown on high land. Rice from swamp paddy is always mentioned as common or inferior; fine grain, peas, beans, root and yam crops and fruits were all grown in abundance on the high land. Milk was an essential article of diet in its various forms as ghee, curd, whey, etc., and was produced with the aid of pasture grounds on high land. Therefore it is essential that the possibility of developing such land should receive attention. Sravasti Estate has 200 acres of high land and of these 50 acres were cleared and have been put under cultivation for over six years. Annual crops, such as green gram, maize, tomatoes and tobacco have been grown repeatedly year after year. Root crops such as manioc and sweet potatoes thrive extremely well, yielding heavy crops. Cotton was grown but it cannot be a commercial success on account of climatic conditions which are not favourable due to rain that came during the cropping season. Of permanent crops kapok grows very well and comes into bearing within four years. Varieties of citrus grow well, particularly lime and grape fruit. Mangoes thrive and can be extensively grown; of other fruits papaw, pomegranate, pineapple, etc. produce good crops. In regard to other economic plants, those yielding essential oils, such as citronella grass, have been established successfully. Andropogon (vetiver) for its scented root is easily grown. Patchouli thrives almost like a weed; mimosa, jasmine and other flowering plants grow well and flower in abundance. Napier grass grows well. Particulars are given below of the growth of some of the above-named crops on the high land attached to the estate.

Green Gram.—Green gram is a good catch crop where fruit trees are grown. Records were kept of one plot measuring about half an acre. The land was unirrigable high land with a red claying loam, the usual type of soil in the district. It had been cleared six years before and was planted with oranges and mangoes. Green gram seed was sown early in November and this catch crop gathered in February yielded 6 bushels for the half acre.

Maize.—A piece of high land of average soil was selected that had been cleared six years before. No special treatment

was given to the land except that of loosening the soil. A measured acre of land was taken and maize (Indian corn) seeds were put down in rows in November. The crop was gathered in February and yielded 20 bushels of good well-formed seed.

Tomatoes.—Half an acre of land consisting of average soil which had been cleared six years before was selected. It was well cultivated and manured and tomato plants were put down in November, 1927. Crop began to come in from February and continued for two months. The quantity of saleable fruits gathered was 1,150 lb. They were sold in the Colombo market at an average price of 25 cents per pound. The total amount realized by the sale was Rs. 250. In 1928 one acre was put down in November; it yielded 1,756 lb. of good saleable friut which realized Rs. 430.

Tobacco.—Tobacco cultivated under ordinary conditions on well prepared and manured soil grows very well. In 1926 a small plot of Dumbara tobacco showed good results; in 1927 an acre of tobacco from seed supplied by the Department of Agriculture was grown on the high land and the plants showed an exceptionally good growth. However the market for this tobacco was disappointing. In 1928 one acre of tobacco of the variety grown in Hiriyala, North-Western Province, was cultivated; the crop has come up exceptionally well and is being cured now. This tobacco is a chewing variety and should fetch fair prices in the local market.

Manioc.—Manioc thrives on the high land, with very little attention as to cultivation and produces good crops. A few plots were planted in 1925; the produce was disposed of in the nearest bazaar. In 1926 several acres of manioc were grown which gave a good yield, but the demand for the root was limited to those living in the neighbourhood and only a part of the crop could be disposed of. Manioc does not keep long after the roots are dug up and facilities for transport to Colombo or other centres are not satisfactory. A similar condition prevails in regard to sweet potatoes which thrive extremely well and yield abundant crops. The only prospect of disposing of large crops of these roots lies in arrangements for ready and prompt distribution in populous centres. Railway transport under present conditions is costly and unsatisfactory. The payment of parcel rates for such heavy crops which sell at low prices is prohibitive and no suitable provision is available for transport in bulk which will reduce cost of freight and packing charges. There is, however, a prospect of growing these crops in a remunerative manner by arranging for their preparation and drying on the spot. Where manioc is grown on a large scale in other countries, it is made into flour for disposal in distant markets. Similarly sweet potato can be chipped and dried for distant markets. Both these crops can be

developed in small holdings if arrangements can be made to purchase the crops from the cultivators and if their preparation for the market can be undertaken in a small central factory.

Kapok.—With regard to permanent crops that do not require special attention or are likely to take up much of the time of the cultivator, kapok gives great promise in the district. Over ten thousand kapok plants were put down on the boundaries of the estate and the trees have grown very well. They flower in four to five years and practically all the trees are in flower and fruit now.

Mango.—Mangoes grow well on dry land and thrive without special attention. Mango grafts from Jaffna which were planted in 1921 started bearing fruit in 1925. There are about three hundred grafted mangoes from India growing on the land now. Their ages vary from two to four years, and those over four years have begun to yield fruits. Mango is a fruit which is largely cultivated in a regular manner in many parts of India. In Ceylon the fruit has seldom been cultivated regularly. Mango trees stand the drought well and the trees planted on the estate are in very good condition. In India great attention has been paid to the cultivation of the mango. There are in India numerous varieties each distinguished for its own quality and flavour, and the best varieties fetch good prices in the market. Canned mangoes and dried mango pulp are also largely consumed in India. Recently there have been experiments made in drying the unripe fruit as a possible source of an important cattle food.

Limes.—Practically all varieties of citrus trees can be grown in this district and limes particularly seem to thrive well. Limes planted in 1922 started bearing in 1926. There are about 250 lime trees which are now about six years old. They show very good growth, are hardy and fairly free from disease. They bear well practically throughout the year. There is a fair demand for the fruit which sells from Rs. 2-50 to Rs. 7-50 per 1,000. If there is a surplus that cannot be disposed of in the market profitably the fruit can be salted and dried, and there is a limited demand for salted limes both in Ceylon and India. If large plantations are grown, lime juice can be extracted and exported to Europe. Bulletin No. 49 of 1921 issued by the Department of Agriculture gives particulars regarding the extraction of lime juice and its preparation for the market.

Grape Fruit.—The cultivation of grape fruit is now extensively carried on in America, Australia and South Africa and is being taken up in the West Indies. The soil and climate of the dry zone appear to be suitable for the cultivation of the plant. In 1924 six grape fruit plants from grafts obtained from Australia were planted. These trees started bearing fruit in 1928 and

there is a good crop of fruit this year. The trees have come up well and are free from disease; the fruits are well formed and in flavour are equal to any fruits that are locally imported. In August 1928 twenty acres were planted with grafts obtained from Australia. They belong to the variety known as *Marsh's Seedless* and are planted 30 ft. by 30 ft. A thousand plants were obtained and all the plants have been successfully established. Their growth is very satisfacotry. It is proposed to plant an additional 20 acres during the current year. The demand for the fruit is a growing one and its cultivation at the present time in the United States, Australia and South Africa is a flourishing industry. There are a few important points that require attention in the successful growing of the plant. The soil should be well-drained, for swampy land or land with a moist sub-soil is quite unsuitable for citrus plants. No attempt should be made to put down seedlings, as though the raising of the plant from seedlings saves expense, the trees from such plants do not come true to type. The aim of the grape fruit cultivator should be to produce the best type of fruit of a uniform size, colour and flavour. The use of budded and grafted plants is the only means of attaining this object. Growers have now found that the variety known as *Marsh's Seedless* is the most useful commercial type. The best grafts are those for which the sour orange has been used as stock. In planting out care has to be taken to see that the roots are not crumpled up in the holes. The lateral roots should as far as possible be close to the surface. The best spacing for a grape fruit plantation is now considered to be 30 ft. by 30 ft. Deep cultivation is not necessary but the land has to be kept free from weeds and careful attention has to be paid to keeping the trees free from disease by treating them promptly on any appeareance of fungi or insect pests.

There are other fruits that grow freely and bear well in the zone, and their profitable growth on any extensive scale depends on satisfactory solving of the problem of packing, transport and marketing.

Papaw.—Eight acres of high land has been put under papaw fruits. The trees have grown very well and are now showing an abundance of fruits. Originally it was intended that the plantation should be used for the production of papain, the dried latex of the fruits. The market for papain is very unfavourable at the present time, prices having fallen to a considerable extent in recent months. The ripe papaw is in fair demand in towns but the problem of packing and transport is a difficult one considering the weight and the nature of the fruit and the absence of proper transport facilities for perishable goods of this nature. The provision of these facilities and the introduction of a canning factory can become the means of encouraging the growth of this and other fruits of a similar nature.

Pomegranate.—Another fruit that thrives well in the district is the pomegranate. Six acres of pomegranate plants have been put down and they are now in the bearing stage.

Pineapple.—A few acres of pineapple were grown on the estate from the time it was opened in 1920. Pineapple has to be grown on selected soil; it will not thrive on land which becomes swampy during the rains. The soil that suits this plant is not very abundant, but, on high land in the vicinity of irrigation channels, the plant could become an economic crop of value. An acre or two of pineapples can be successfully grown where the land is available and the fruit sold for local consumption at fancy prices, that is, prices ranging from 20 to 50 cents. As a commercial crop, the extent of cultivation would have to be fairly large and for the marketing of the crop canning becomes a necessary and essential process. Where canning facilities are available, it can also establish itself as a small holder's crop as then there will be a regular and ready demand for such fruits as may be grown by the small holder.

A series of experiments in the growth of plants yielding essential oils was started in 1922 and the results have been satisfactory. A brief account of these will be given here as the cultivation of such plants in the dry zone area can prove to be of much industrial and economic value and may open up avenues for a new and important industry both for small holders and small capitalists. The plants grown consist of citronella, vetiver (Andropogon), patchouli, mimosa and jasmine.

Citronella.—About 5 acres of high land were planted with citronella grass in 1924. The land was not specially prepared; it was clean weeded with the mamotty and tree stumps were not removed. The shoots were planted during the October-November rainy season. The plants came up very well and have stood well the long droughts of succeeding years. The growth is equal to any seen in the districts where the grass is regularly grown, and to-day in the fifth year they show no decline. Leaf was cropped from time to time and distilled in an improvised apparatus. The resulting oil was of fairly good quality. This grass is well suited to the soil and climate, requires very little special care and can be grown as a commercial crop.

Vetiver.—Andropogon (*Vetiveria zizanioides*) grass (kuskus, savendra) was grown on a quarter of an acre of land. After planting no attention was paid to it; the bushes came up well and covered the ground, smothering all weeds. When dug up after six months a good crop of roots was obtained amounting to about four hundredweights. It was distilled in an improvised apparatus and yielded a fair quantity of essential oil. This oil has a good market and can be disposed of at remunerative prices. An

acre of land is estimated to produce an average of 20 cwt. of roots and the percentage of essential oil is estimated at from ·8 to ·9 per cent.

Patchouli (*Pogostemon Patchouly*).—A single plant of patchouli was obtained through the Department of Agriculture. This was carefully tended and cuttings were taken and in a year's time there were sufficient plants to get cuttings for about a quarter of an acre of land. The plants grew very well and later in the year the shoots were cropped and dried and a bale of about one hundredweight of dried patchouli leaf was sent to London. Also a quantity of dried leaves was given to the Ceylon Court at Wembley Exhibition. The leaves at the Wembley Exhibition where they were given to visitors at a nominal price were taken away by visitors within a day or two. The rest of the consignment sent to London was given to an essential oil distiller, who distilled it and reported that, owing to the leaves being old, the quality of the oil was only medium. With regular planting and cropping the patchouli plant can become a good addition to the crops in the dry zone. The soil and climate is well suited to the plant; it soon spreads and has almost become a weed on some parts of the estate. If a small perfume distilling plant can be set up in the district and the work of distillation and rectification carried out regularly large supplies of materials mentioned above can be easily grown.

Mimosa.—Mimosa or Acacia can be grown in abundance in average soil in the dry zone. The tree comes up rapidly and grows fast, forming into shrubs and flowering in two or three years. The sweet scented golden yellow balls of flowers appear in abundance. The plant is now grown in Grasse and Cannes in France for the extraction of its perfume. Its essential oil is very delicate and is considered to be a somewhat rare product. The flower of the plant has been put to a new use during recent times in the preparation of a crystallized sweet. Tuberose, another flower from which a delicate scent is extracted, and jasmin grow very well in the dry zone and flower profusely practically throughout the year. In Europe where the perfumery industry is carried on these flowers are obtainable only during a part of the year.

Napier Grass.—An experiment was carried out last year to ascertain the suitability of the dry land in the district for the growth of Napier grass. The grass was planted in a plot of land which had been cleared over six years before and on which various crops had been grown year after year without manuring or cultivation. The grass was put down in November last. The rainfall was below the normal average this season, but the Napier

grass came up rapidly and in February showed a growth of practically five to six feet in height with clumps thickly covering the surface of the land. The grass was cropped in February-March; both cattle and buffaloes consumed it with eagerness. The cropped grass grew up rapidly and has again become a fine field. The question of the supply of fodder, particularly during the dry season, is a problem that awaits a solution in the dry zone for an adequate supply of buffaloes and cattle is required for the ultimate success of paddy cultivation.

The work on Sravasti Estate was commenced ten years ago and some of the problems connected with the development of land have been discussed in this paper in the light of practical experience.

The development of cultivation in a hitherto neglected area is beset with unforeseen difficulties and these have to be met and surmounted with patience and perseverance. Agricultural development to be successful cannot be carried out in accordance with hard and fast rules, for conditions vary every day and new problems arise at every stage. These have to be solved on their own merits. There are certain fundamental principles which have to be borne in mind.

No tract of land is uniform in its soil or its aspect, and in planning the crops that are to be grown attention should be directed to utilize the land to its best advantage. Paddy requires irrigation water and when a soil has an excess of water or where the water is generally deficient, any attempt to make use of such land for paddy will result in failure or loss. One soil will be rich, another poor; some tracts will be dry, others will be in exposed situations; some are easily tilled, in others tillage will be an expensive process. Under these circumstances a variety of crops should receive consideration. Some crops will grow under proper irrigation; others will grow on rich soil. There are trees and plants that can be grown on boundaries and in odd corners; there are crops that grow on poor soil and there is other soil which can only be utilized in a restricted manner. Provision has to be made to meet these varying conditions. Any attempt to alter the soil and natural conditions to suit a given uniform crop is bound to end in failure. Theoretically it may not be impossible; but in practical working it will be a waste of time, energy, and effort without commensurate results. Hence it is important that a variety of crops of varying requirements which give a maximum of results should receive attention and consideration. The popular heresy that when land is sold or allotted to a cultivator he should be bound down to a particular crop or method of cultivation is untenable and is fraught with danger if believed in and given effect to.