

A Brief Survey of Agricultural Conditions in the Eastern Division

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General. The Eastern Division consists of the Revenue District of Batticaloa. It is bounded on the East by the sea, on the West by portions of Badulla and Polonnaruwa Districts, on the North by Perugul Aru, a branch of the Mahaweli Ganga, and on the South by Kumbukkan Oya. Five other rivers arising in the Badulla District run through this area eastwards into the sea. These rivers supply water to the numerous tanks which irrigate paddy, the main crop of the District. The total land area is 729,000 acres of which only 185,000 acres are under cultivation. The total population in 1953 was 270,722 mainly concentrated along the coastal belt. There is one main coastal road with branches going to Polonnaruwa, Badulla, Anginiyagala and Moneragala. There are few good roads in the mainland. Communications are made more difficult by a 10 miles long lagoon which separates the thickly inhabited coastal belt from the mainland where the paddy areas are situated. Transport across the lagoon is

by means of boats and ferries and is very unsatisfactory. There are only 40 miles of Railway covering less than 1/10 of the area. The District is divided into 9 Divisional Revenue Officers' Divisions. The Development area of the Gal Oya Scheme falls within the boundaries of the District.

Weather. The District falls within the Dry Lowland Zone of the Island. The major portion of the District is below 100 ft. in elevation with a small section going up to 300 ft. The average temperature for the year is about 81° F. December and January are fairly cold with average temperatures of 77° F. June and July are very warm with an average of 85° F. During these months a warm dry wind called "Kachchan" blows over the District. This is really the South-West Monsoon deprived of its moisture in its ascent over the Central Hills and heated by compression in its descent on the leeward side. The average monthly rainfall in inches in four stations are given in Table 1.

Table I—Average Monthly Rainfall

	<i>Kalkudah</i>	<i>Batticaloa</i>	<i>Amparai</i>	<i>Panama</i>
January	13.8 in.	13.9 in.	14.1 in.	12.1 in.
February	4.3 ..	4.2 ..	4.9 ..	4.6 ..
March	3.7 ..	3.5 ..	3.8 ..	4.2 ..
April	2.3 ..	2.3 ..	3.5 ..	3.1 ..
May	2.8 ..	1.8 ..	3.5 ..	2.0 ..
June	0.4 ..	0.9 ..	1.7 ..	0.0 ..
July	1.8 ..	1.0 ..	1.8 ..	0.8 ..
August	2.4 ..	2.0 ..	2.9 ..	1.6 ..
September	2.8 ..	2.4 ..	3.6 ..	1.9 ..
October	8.2 ..	7.2 ..	7.1 ..	5.0 ..
November	11.7 ..	13.9 ..	11.0 ..	9.7 ..
December	18.6 ..	17.0 ..	14.4 ..	10.3 ..
Total	72.8	69.1	72.3	55.3

The rainfall is fairly uniform throughout the District at about 70 inches except in the extreme south where it goes down to 55 inches. Small sections in the interior get a little over 75 inches. It will be seen from the above figures that the North-East Monsoon rains bring 70 per cent. of the rainfall during the months of October to January. The other 8 months get only 30 per cent. Very little or no rain falls during June and July. This dry period in combination with the dry wind "Kachchan" is harmful to all crops and stock. Annual crops cannot be grown during this season except under irrigation. The North-East Monsoon rains, however, are very favourable for paddy cultivation. There may have been occasional droughts during this season reducing paddy yields but very rarely have there been complete failures of crops as are common in other parts of the dry zone of the Island.

Soils. There are 3 main types of soils in the District :—

- (a) The Coastal belt contains the sandy soils derived from Pleistocene deposits.
- (b) A middle area of non-lateritic grey-brown sandy loams.
- (c) Lateritic or non-lateritic reddish brown or grey-brown loams in the interior.

The sandy soils along the coast constitute the coconut soils and the low lying sections and tracts with irrigation facilities are cultivated with paddy. The reddish brown or grey-brown loams are suitable for a variety of crops but the bad distribution of rainfall limits the choice of crops.

The soils being derived from acidic types of rocks are deficient in lime and magnesia and potash content should normally have been high. But intense rainfall experienced from October to January and the open texture of the soil are responsible for leaching out much potash and thus the soils are deficient in this constituent also. The organic matter content of these soils is very low and is the most important requirement not only for the supply of plant nutrients including trace elements but also for moisture conservation. The phosphoric acid supply is variable but is often low. Thus the fertility of the soil is generally far below the average for the Island. Regular applications of cattle manure, compost or green manure are necessary to obtain satisfactory yields. The application of nitrogen in the form of fertilisers has resulted in a marked increase in yields. Phosphoric acid is best applied as Superphosphate to obtain quick results and potash as Sulphate of Potash because sulphur is also necessary for these soils.

Paddy. This is the most important crop of the District covering 134,700 acres out of the 185,000 acres of cultivated area. Although the climate is favourable for paddy cultivation, yields are poor owing to the low fertility of the soil. Crop cutting experiments have given the following yields :—

<i>Maha</i>		<i>Yala</i>	
	<i>Bushels Per Acre</i>		<i>Bushels Per Acre</i>
1951-52	.. 20.48	1952	.. 36.2
1952-53	.. 24.85	1953	.. 35.3
1953-54	.. 28.10	1954	.. 29.6
1954-55	.. 29.52	1955	.. 31.2

Holdings. Compared to the rest of the Island the average size of paddy holding

the District is very large. There are 1,000 holdings covering 134,700 acres, 6.4 acres per holding whereas the average for the Island is only 1.2 acres. The high average is due to the large number of holdings over 10 acres in extent. Several landlords own more than 200 acres each. The 1946 census gave the following figures for the District :—

Size of Holding	Number	Acreage
Less than $\frac{1}{2}$ acre	.. 160	.. 39
$\frac{1}{2}$ acre ..	.. 230	.. 134
1-2 acres ..	.. 1,400	.. 1,741
3-5 acres ..	.. 6,417	.. 19,942
6-10 acres ..	.. 5,840	.. 35,800
More than 10 acres	.. 3,244	.. 61,512

The number of holdings of more than 10 acres represents 40 per cent. of the all-Island figures and exceeds that of any other District in the Island. The large size of holdings facilitates mechanisation but does not help adoption of intensive methods of cultivation.

Tenures. About 4,500 holdings are leased out for cultivation. There are 3 main types of tenure.

(a) *Cultivation on "Rent" Basis.* Here the cultivator pays a definite rent in the form of paddy and the landlord also termed *Podiar* does not take any part in the cultivation. The rent may be paid at the commencement of the season or an increased rent may be paid after harvest. In Batticaloa South where this system is most prevalent the usual rent is $7\frac{1}{2}$ bushels of paddy per acre per season. In addition the cultivator may give various types of presents to the landlord.

(b) *Cultivation on "Customary" Basis.* Here the landlord bears all the cultivation expenses and gives the cultivator 3 bushels of paddy per month

during the cultivation period of 5 months for his food. After harvest the cultivator gets 1/10 of the yield and the sweepings from the threshing floor.

(c) *Cultivation on "Loan" Basis.* Here the landlord advances to the cultivator the seed paddy and paddy for his consumption during the cultivation period. The landlord also supplies cattle for ploughing and the hire for the cattle is computed in paddy. These loans are first recovered from the harvest with 50 per cent. interest. Harvesting, stacking and threshing expenses are met by the landlord and not regarded as loans. A ground rent of $2\frac{1}{2}$ bushels per acre is also due to the landlord. After deducting all the above items, the balance harvest is divided between the landlord and the cultivator in the proportion of 2.1. If the crop is poor, there may be nothing left after all the deductions are made and the cultivator will have to go away having only fed himself for 5 months. There are also other types of tenures covering small acreages. Sometimes there may not be direct negotiations between the landlord and the tenant. A middleman will assume the position of the landlord having paid a fixed rent to the actual absentee landlord. Except in a few cases where notarial agreements had been signed, there had been no security of tenure at all and tenants were victimised in most cases. No tenant attempts to improve the fields for fear of increase of rent as a result the next year. There is constant quarrel between landlords and tenants. A cultivator may lease out one field for the *maha* season and another field for the *yala* season far away.

Paddy Lands Bill. This bill was applied to the District in November, 1953, to cure the ills of the existing land

tenure system. The purposes of the bill were—

- (a) to give security of tenure for a period of 5 years.
- (b) to fix maximum rents payable to the landlord. 10 bushels or $\frac{1}{4}$ crop whichever is less per season per acre.
- (c) to allow Government to take over uncultivated lands and get them cultivated.

During 1954 and 1955, the number of leases registered under this Bill were 1890 representing only 40 per cent. of the total number of leased holdings. The other landlords claimed that they have changed their system of cultivation to hired labour. As the bill did not clearly distinguish between tenants and hired cultivators it was not possible to take action against landlords. As the Bill stipulates a fixed rent contrary to age old customs in some areas it is difficult to check on the correct rent paid to the landlord. Thus the working of the Bill has so far not been very satisfactory and legislation to remedy the shortcomings is contemplated.

Irrigation. The 134,700 acres of asweddumized paddy fields in the District are distributed as follows:—

Irrigated by Major Tanks	71,700 acres
Irrigated by Minor Tanks	10,200 acres
Rainfed	52,800 acres

There are 15 Major Schemes of which the important ones are—

Pattipola Aru	32,173 acres
Rugam	8,145 acres
Vakaney	7,282 acres
Manalpiddy Aru	6,987 acres
Unnichchai	5,883 acres
Siagamam	2,846 acres
Rufus Kulam	1,020 acres

The Pattipola Aru is a branch of the Gal Oya. The three Tanks Kondavattam, Amparai and Irakkamam and several anicuts in the Aru supply water to this Scheme. During the North-East Monsoon season the river overflows and silts up all the paddy fields and no cultivation is possible. Thus this is essentially a *yala* season scheme. After the construction of the Senanayake Samudra at Inginiyagala, flood waters have been reduced to some extent and *maha* cultivation is now possible in some areas. These 32,173 acres are in one large block and form the largest single mass of paddy fields in Ceylon. The major schemes supply water for both *maha* and *yala* cultivations, more for *maha* than for *yala*. Water is issued from the tanks only after they are full in December and therefore all preparatory tillage operations and sowing are dependent on rain. This creates difficulties for transplanting and harrowing of the standing crop of paddy. The *yala* cultivation is fully irrigated and mud sowing is normally adopted. Due to the sandy nature of the soil, absence of concrete channels and the numerous sand dams that control irrigation, water is not available to many fields at the proper time and there is a large amount of wastage of water. There is constant trouble between cultivators in water issues during the *yala* season.

Seasons. There are 2 main seasons for cultivation. The *Manawari* (rainfed) and *munmari* (irrigated) correspond to the *maha* season. *Kalapokam* (irrigated) corresponds to the *yala* season. This is in contrast to the nomenclature in the Northern Province where *kalapokam* refers to the *maha* season. There is extra water left in the tank after the *yala*, a late *yala* or *idaipokam*.

are also cultivated. The *manawari* fields are ploughed with the first rains in August or September and sown with 4 months paddy early in October. The *manmari* fields are also sown with 4 months paddy mainly during November and to a small extent in December. Sowing for the *kalapokam* season under the Pattipola Aru Scheme commences late in January and continues till March and for the other major schemes in April and May. 3 months paddy is only cultivated during *kalapokam*. Sowing for *idaipokam* is done with 3 months or 4 months paddy in June and July. Along the borders of the 30-mile long lagoon, 2 months flood and salt-resistant paddy is cultivated during the *maha* season. Thus sowing goes on at one place or another for 10 months of the year continuously. This provides ideal breeding ground for most of the paddy pests. During 1955 the acreage sown for the *maha* season was 86,466 acres and for the *yala* season 46,116 acres. Most of the *maha* fields are separate from the *yala* fields and double cropping is done only in some areas. A very small extent of fields under the Pattipola Aru Scheme are cropped thrice a year.

Improved Methods of Cultivation. Due to the poor nature of the soil, large size of holdings, insecurity of tenure and unsatisfactory irrigation facilities the adoption of improved methods has been slow but steady progress has been recorded in recent years especially after the Guaranteed Price Scheme was introduced and the price raised to Rs. 12 per bushel of paddy.

(a) *Use of Light Iron Mould Board Plough.* During the last 6 years about 1,000 iron ploughs made at the Government Factory were sold to cultivators.

Model C is the popular plough. 136 tractors of which 95 belonged to private individuals and 41 to Co-operative Agricultural Production and Sales Societies (C. A. P. & S. S.) are being used for ploughing. 47,500 acres representing 35 per cent. of the cultivated area are ploughed with light iron ploughs and tractors. Some fields cannot be ploughed and only mudding can be adopted. In the other areas the traditional old wooden plough is still being used.

(b) *Use of Pure-line Seed Paddy.* There are 23,500 acres representing 17 per cent. of the cultivated area under pure-line paddy. In addition to this, the 32,000 acres under the Pattipola Aru Scheme grow only Vellaiperunel and to a small extent Pachchaiperumal, the 2 pure-lines recommended by the Department for the *yala* season. As the purity of this paddy is not up to Departmental standards this area is not taken into account in the acreage under pure-line paddy. The variety Oddavalan is also grown in a small area for the *yala* season. The best variety for the *maha* season is Murungakayan. It is now replacing Vellai Ilankalayan which was formerly recommended. Perilanel is also grown in some areas during the *maha* season. The scheme of multiplication of pure-line paddy by private seed farmers has not met with much success because the seed farmers usually sell their produce for consumption owing to lack of storage space and want of immediate payment for their produce. Some of the C. A. P. & S. S. are helpful in purchasing and storing this paddy till sowing time.

(c) *Use of Manure.* Cattle manure, compost and green manures are applied in 11,400 acres and artificial fertilisers in 9,700 acres. Fertilisers subsidised by the State are only given through the

C. A. P. & S. S. and in those areas where these societies do not function satisfactorily the cultivators are not able to obtain the fertilisers. Yield increases up to 28 per cent. have been obtained by the use of fertilisers alone.

(d) *Weeding.* This is done by manual labour in 11,100 acres. As the paddy fields are situated far away from inhabited localities, it is necessary to transport labour for weeding. The cultivators have realised that the full benefits of fertilisers are not obtained without weeding. Weedicides have not yet become popular.

(e) *Harrowing the Standing Crop of Paddy.* An extent of 5,200 acres is harrowed when the crop is 3-4 weeks old. Lack of irrigation water during the *maha* season and the difficulty of access to the main masses of paddy fields after they are sown are the obstacles to the harrowing of greater acreages.

(f) *Transplanting.* Only 200 acres are transplanted. Although the benefits of transplanting have been effectively demonstrated in every village, following fundamental difficulties prevent the large-scale adoption of the practice:—

- (1) Large size of holdings
- (2) Insufficient labour
- (3) Lack of irrigation water for raising nurseries during the *maha* season.
- (4) Short-term paddy. During the *yala* season when irrigation water is available only 3 months paddy is cultivated and it has been found uneconomical to transplant such paddy.

(g) *Saline Paddy.* The local variety Uvarvellai, and the introduced variety SR 26, are grown in 90 acres.

TABLE 2—Progress in the Adoption of Improved Methods of Paddy Cultivation

		Use of Iron Ploughs and Tractors Acres		Use of Pure- line Paddy Acres		Use of Fertilisers Acres		Harrowing the Standing Crop Acres		Transplanting Acres
1949	..	5,000	..	2,200	..	800	..	270	..	60
1950	..	7,000	..	5,000	..	1,942	..	500	..	72
1951	..	14,000	..	7,100	..	1,357	..	840	..	115
1952	..	30,000	..	9,280	..	4,690	..	1,610	..	120
1953	..	40,000	..	11,900	..	8,560	..	3,650	..	70
1954	..	46,000	..	23,300	..	9,700	..	4,800	..	210
1955	..	47,500	..	23,500	..	5,560*	..	5,200	..	200

* This reduction in acreage is due to the non-availability of fertilisers at the C. A. P. & S. S. which controlled the State subsidised fertiliser scheme.

Pests and Diseases. Owing to continuous cropping of paddy, pests are of regular occurrence. The Paddy Swarming Caterpillar occurs every year during the months of February and March under the Pattipola Aru Scheme. If there is sufficient irrigation water, not

much damage is done as the caterpillars cannot damage the plants below water level and as they float in the water they can easily be collected and buried. But if no water is available, very serious damage is done. Spraying with DDT has become a popular control measure if

recent years. The Paddy Bug is the other serious pest. It is controlled by dusting with BHC or spraying with DDT. The Paddy Stem Borer is controlled by routine spraying with Endrin or Folidol and Paddy Leaf Roller by dusting with BHC. Among diseases, Blast and Brown Spot have been rapidly increasing in recent years. Disinfection of seed by Perenox or Ceresan Wet is an effective control measure.

Mechanisation. Owing to the large size of paddy holdings this District offers great scope for mechanisation of paddy cultivation. There is also shortage of labour due to the large-scale recruitment by the Gal Oya Development Board. The number of tractors used for paddy cultivation increased from about 10 in 1950 to 136 in 1955. Medium-sized rubber wheeled tractors are popular. They are used for ploughing, harrowing, tyne tilling and threshing. Combine harvesters cannot be successfully used owing to the numerous paddy field ridges and the uneven nature of the fields. Earth-moving machinery is in great demand for levelling work. But the attachments to the small tractors to do this work have not produced satisfactory results. There is no organization to purchase and work heavy tractors which alone can perform this job. Aerial spraying against paddy pests is possible in the 32,000-acre block of Patipola Aru paddy fields. The Eastern Province Co-operative Agricultural Societies Union is the local agent for one make of medium sized tractors and has done very useful work in furthering agricultural mechanisation in the District.

Co-operative Agricultural Production and Sales Societies. These Societies have increased from 16 in 1950 to 55 in

1956. Originally they were interested only in the marketing of paddy. But gradually some of them were made to take an increasing interest in production activities. They did useful work in selling Light Iron Ploughs, Artificial Fertilisers, Pure-line Paddy and Insecticides. They maintain 41 tractors for hire to cultivators.

Highland Crops—Coconuts. Next to paddy, coconuts cover the largest cultivated acreage. There are 18,900 acres of which 60 per cent. is in the narrow 20 miles long belt between Kalkudah and Batticaloa. Most of the estates are in a very neglected state. The soil is very sandy and due to the long dry period of the year, the useful life of the plant is reduced to a great extent. As very little replanting has been done, there are several vacancies and the average pluck will not exceed 400 nuts per year per acre. There are a few estates that give 1,000 nuts per year per acre. The estates in Akkaranipattu area which accounts for 20 per cent. of the total extent are in a better state. Most of them are ploughed by tractor before the monsoon rains and kept in good condition. Even these estates compare unfavourably in yields with estates on the South-West coast of the island owing to the sandy soil and the long drought experienced here. 60,000 seedlings raised in the Batticaloa nursery from nuts supplied by the Coconut Research Scheme were sold to estate owners and colonists for planting during the last 7 years. Outbreaks of the leaf-eating caterpillar occur every year and are controlled by the liberation of the *Eulophid* parasites.

Cashew. This is now grown in about 450 acres along the coast from Kalkudah to Kaluwanchikudy. The nuts produced

are mainly consumed locally with very little sent to Colombo and Jaffna. This crop can be extended to about 5,000 acres along the coastal belt on poor soils that are unsuitable for any other crop and an export market developed for this commodity. Peasants have been encouraged to plant more cashew in their home gardens. Capitalists are reluctant to put money into this crop because of the long waiting period to get returns which are small.

Mango. There are about 200 acres of mangoes mainly grown as a home garden crop. Most of the varieties are sour. There is good scope for the extension of this crop and the introduction of good varieties. The crop does well throughout the District both along the coast as well as the interior. 12,600 mango grafts of selected varieties obtained from Jaffna were sold during the last 7 years.

Citrus. There are about 800 acres of limes and oranges mainly grown in the Maha Oya area which adjoins the citrus-growing areas of Uva. These gardens are in a poor state because no irrigation is available during periods of drought and the villagers are more interested in their *chenas* during the rainy season. 5,300 orange grafts and 4,600 lime seedlings were sold for planting during the last 7 years.

Vegetables. About 1,000 acres of vegetables are grown mainly in *chenas* and to a small extent as a home garden crop under irrigation. Better varieties of seeds and seedlings are regularly issued to cultivators to improve the quality. A peculiar feature about irrigated brinjal cultivation in some areas is the injection of very small quantities of mercury into the barks of seedlings. By means of this

very old practice, large-sized fruits are produced.

Tobacco. About 100 acres of cigarette tobacco are grown on the banks of the rivers by lift irrigation. But Muslim cultivators from Eravur go in large numbers every year to Tamankaduwa to cultivate tobacco on the banks of the Mahaveli ganga and bring the cured product home for sale to Jaffna traders through their Co-operative Society. Cigarette tobacco is now being grown with success in the Gal Oya Valley with restricted irrigation.

Chena Crops. About 10,000 acres of *chenas* are cultivated every year in which the important crops are:—Manioc 3,000 acres, Maize 2,700 acres, Kurakkan 1,100 acres, Chillies 1,000 acres and Plantains 700 acres.

Animal Husbandry. The following livestock are found at present:—

Cattle	..	75,000
Buffaloes	..	64,000
Goats	..	14,000
Poultry	..	73,000

There is good scope for the development of animal husbandry in the District. Even now at least 100 fowls are sent by train to the Colombo Hotel every day. Waggon loads of cattle and buffaloes are also sent for slaughter. But systematic breeding or management has been adopted only in a few cases. Cattle and buffaloes are allowed to graze in paddy fields after harvest and during the paddy season they are sent to uncultivated areas away from paddy fields. Very little stall feeding is done. Cultivation of fodder and pasture is negligible. Few cows and buffaloes

are milked, the latter for the preparation of curd. Many landlords own large herds. Some of them are kept on coconut estates for manuring. Others roam all over the place doing considerable damage to cultivation. In order to undertake systematic improvement of the cattle and buffaloes, it is felt that the present numbers are far too many in view of the limited pasture lands available. This does not apply to goats whose numbers have been falling in recent years. Most of the natural pasture lands of ancient times have now been converted into paddy fields and the Gal Oya Development Board has taken over large areas. As a result of representations made to the Board, 26,575 acres have been set apart in 4 large blocks on the Left Bank of the Gal Oya for pasture. Even with this provision it is necessary to reduce the cattle and buffaloes to half their present number to undertake scientific breeding and management. The reduced numbers are quite sufficient for agricultural purposes in view of the large number of tractors working at present. Some improvement to the livestock has been made by the adoption of the following measures:—

(a) **Cattle.** Seventy-two Stud Bulls of the Sindhi and Khillari Breeds have been issued in the villages for crossing local cattle. Some of these have been given on loan and others in exchange for local scrub bulls. 900 cross-bred calves have been born during the last 7 years. Castrations of local bulls have been done, but owing to the very large number of bulls roaming about, these have not produced useful results.

(b) **Buffaloes.** Seventeen stud buffaloes of the Murrah breed have been issued on loan and in exchange in the

villages for crossing local buffaloes. 500 cross-bred calves have been born during the last 7 years.

(c) **Goats.** Ten Jamnapari stud goats have been issued for crossing local goats. Three Co-operative Goat Farming Societies were started but these did not fare well. There is scope for the development of more goat breeding in the district.

Poultry. Few districts in Ceylon offer more opportunities for poultry-keeping than this Division. 52,000 pure-bred eggs of the R I R and Australorp breeds were sold to villagers for hatching during the last 7 years and 800 cockerels of the same breeds were issued in exchange for village cockerels. Large-scale inoculations against Pseudo Fowl Pest have been done in the coastal area. But numerous deaths due to this disease still occur in the interior areas where it has not been possible to inoculate all the birds due to poor transport facilities.

Stud Centres. There are 3 Stud Centres at Batticaloa, Mavadiipalli and Akkaraipattu where free service is given by stud bulls and goats of improved breeds to villagers' animals. Although the stud goats were well patronised, the services given by the bulls were few. This is due to the fact that very few cattle are kept in the homes and stall-fed.

Gal Oya Scheme. This is the largest multi-purpose project ever undertaken by the Ceylon Government. It will bring in 72,500 acres of new irrigable land and give an assured supply of irrigation water to 51,640 acres of privately owned old fields including the famous Pattipola Aru fields. The Scheme is in charge of the Gal Oya Development Board set up

by Act of Parliament in 1949. At the end of 1954-55, 4,780 families consisting of 33,000 persons had been settled by the Board in 34 new villages. Of these 2,884 families come from outside the Batticaloa District. Up to 1953, each family was given 4 acres of irrigable land and 3 acres of highland but these were later reduced to 3 acres and 2 acres respectively. During 1953-54, an extent of 2,600 acres was set apart for middle class colonists at the rate of 25 acres per holding with 12 acres irrigable and the balance under light irrigation. In order to ease the congestion along the old coastal villages, 4,160 acres were alienated to selected peasants, each holding being 3 acres irrigable and 1/3 acre highland. Throughout the development of the scheme so far, mechanised equipment has been used in clearing jungle and 65,000 acres have been cleared in this manner. After the construction of Senanayaka Samudra which is the main tank in the Gal Oya Scheme, several irrigation and drainage problems which existed in the Pattipola Aru Scheme have been solved to some extent. A greater area is now being cultivated and it is possible to grow a 4-months paddy during the *maha* season in a substantial acreage which formerly grew only a 3-months paddy during the *yala* season. It is even possible to get 2 crops a year where only one was cultivated before. But the policy of the Board is to have only one crop of 5-6 months paddy a year during the *maha* season and to grow subsidiary crops like tobacco, chillies and onions with restricted irrigation during the *yala* season. Considerable success has been achieved in growing cigarette tobacco in this manner and incomes of Rs. 1,000 per acre have been obtained by several colonists.

Government Farms. There is only one farm at Karadian Aru, 400 acres in extent. 150 acres of paddy, 5 acres of mangoes and 10 acres of other highland crops are cultivated. There are also Nursery, Dairy and Poultry sections. There is a Practical Farm School for Boys in this farm where 35 students follow a one-year course. A new 200-acre farm is being opened on the Samanturai-Amparai Road to serve the needs of Batticaloa South. It is proposed to shift the Boys' Farm School there and convert the school at Karadian Aru into a Girls' Farm School.

Future Prospects. As the Gal Oya Scheme progresses, it is bound to have its effects on the agricultural development of the District. It has already had some effects. It has made the cultivators tractor minded. It has helped in the growing of a 4-months paddy in a traditionally 3-months area. It has shown that cigarette tobacco can be grown with success.

Increasing of paddy yields will continue to be the main task for the future. In spite of the poor soil, the Karadian Aru farm gave 48.7 bushels per acre in 150 acres during the 1954-55 *maha* season when the District average was only 29.5 bushels per acre. The methods adopted at Karadian Aru have been demonstrated in villagers' fields in every paddy tract in the District. If problems like tennure, irrigation, levelling of fields, etc., are solved it should be possible to bring up the District average to the Karadian Aru figure. Sales of subsidised fertilisers by CAP & SS should be looked into and every Society compelled to have sufficient stocks for all cultivators. The growing of 4-months paddy under the Pattipola Aru Scheme opens the way for the large-scale

adoption of transplanting during the maha season. In this thickly populated area with a fairly fertile soil and ample water from the Senanayake Samudra, transplanting can be made a success. 2.4 million bushels of paddy were purchased under the G. P. S. in the District during 1955. It is possible to increase the figure to 4 million bushels in a few years.

Increased cultivation of cashew and improved varieties of mango are two other important projects. Some form of State assistance for cashew cultivation and the production of large numbers of mango grafts in the Karadian Aru Farm for sale to growers are necessary.

The coconut estates need replanting and rehabilitation urgently. It is hoped

that many proprietors will make use of Government assistance in this respect.

Among the animal husbandry projects very quick progress can be made in poultry. It is possible to eliminate the local birds entirely in a few years and replace them with either pure birds or crossbreds. Inoculations against Pseudo Fowl Pest should be done on a very much larger scale than at present. With regard to cattle, buffaloes and goats, a well planned programme of development is necessary. The reservation of 26,575 acres of pasture land by the Gal Oya Development Board gives a good opportunity to develop grazing lands on scientific lines and organise stock breeding and maintenance. The newly-formed Stock Breeders Association will also be of help in this venture.