

# AGRICULTURE

## Increasing Paddy Production, Prices, Yields and Fertilizer Usage; while PMB paddy purchases drop 633-18

Recorded annual paddy production crossed the 100 million bushel mark for the first time last year. Paddy production, according to Department of Census and Statistics estimates, during 1979/80 reached the record level of 102.2 million bushels. This was about 11.2 per cent higher than the production of 91.9 million bushels recorded in the previous year. The Maha 1979/80 crop produced 69.7 million bushels, an increase of 4.3 per cent over the previous year's Maha production of 68.8 million bushels; while Yala 1980 production of 32.6 million bushels showed an increase of nearly 30 per cent over the Yala 1979 production which was 25.1 million bushels.

Also, significant was the fact that the highest recorded yield per acre so far was achieved during the two seasons of last year. The yield per acre during the Maha 79/80 was 57.2 bushels, an increase of 4.6 per cent over the 54.7 bushels per acre reached in the previous Maha season; while the Yala 1980 yield was 56.0 bushels per acre an increase of 12.7 per cent over the 19.9 bushels per acre recorded during Yala 1979.

During the year 1978/79 paddy production increased by only 1.4 percent, which was a decline in

the growth rate when compared to the increases of previous years. However, in 1979/80 the growth rate once again showed an upward trend (See Table below).

Despite the record production achieved last year actual production for 1979/80 fell short of the target, set by the Ministry of Agricultural Development and Research, by 3.8 million bushels. There were shortfalls of about 2.5 to 3 million bushels in both seasons. The increase in paddy production during last year is attributed mainly to the increase in the yield per acre and to a lesser extent to the increase of acreage under cultivation. The main factor that helped in the increase of yields appears to be more intensive use of fertiliser; other factors being that climatic conditions were not as unfavourable as in the previous years, the wider use of improved seed paddy, expansion of cultivated area irrigated by the Mahavel Development project, controlled irrigation and more methodical use of pesticides.

### Use of Fertilizer

As observed earlier, increased fertiliser usage was a big factor in helping to push up yields. Fertilizer issued for paddy cultivation in the year 1979/80 was as much

Table 1—EXTENTS CULTIVATED AND HARVESTED, AVERAGE YIELD PER ACRE AND TOTAL PRODUCTION 1972-1980

Year/Season	Net Extent Sown		Net Harvested Area		Average Yield Per Acre		Total Production
	'000 acres	Difference	'000 Acres	Difference	Bush. Mn.	Bush.	Difference
1972	...	1975	1975		46.87	62.9	
1973	...	1792	1660	+5.13	44.58	62.9	0.0
1974	...	2038	1969	+18.6	45.65	76.8	+22.1
1975	...	1719	1476	-25.0	44.04	55.3	-28.0
75/76	Maha	...	1147		47.17	42.3	
76	Yala	...	642		40.30	17.7	
1976	...	1789	1570	+ 6.4	44.91	60.0	+ 8.5
76/77	Maha	...	1329		51.56	54.8	
77	Yala	...	717		43.98	25.6	
1977	...	2045	1933	+23.1	48.92	80.4	+33.9
77/78	Maha	...	1421		53.02	61.6	
78	Yala	...	744		46.61	29.0	
1978	...	2164	2077	+ 7.5	50.70	90.6	+12.7
78/79	Maha	...	1444	+ 0.7	54.70	66.8	+ 8.8
79	Yala	...	646	-13.2	49.94	-25.1	-13.5
1979	...	2090	1951	- 6.1	53.36	91.9	+ 1.4
79/80	Maha	...	1429	+ 0.4	57.23	69.7	+ 4.3
80	Yala	...	673	+ 4.2	55.99	32.5	+29.7
1980	...	2102	2030	+ 4.0	56.76	102.2	+11.3

Source: Department of Census & Statistics

as 77 per cent more than that of the previous year. In 1978/79 fertilizer issues for paddy totalled 97,000 metric tons as against 171,000 metric tons in 1979/80. The use of fertilizer both in the Yala and Maha crop 1979/80 increased in equal proportions (See Table II).

Fertilizer was issued at comparatively high subsidised rates, ranging from 55 to 85 per cent, from about September 1979 upto February 1981. This factor contributed significantly to the increase in yields in the year 1979/80. On the contrary the high prices of fertilizer that prevailed upto September 1979 acted as a constraint on the use of fertilizer in paddy cultivation; and why production in 1979 had not shown any remarkable improvement is attributed to this factor.

From February 1981, the price of fertilizer increased by about 110 percent. For instance, Urea, which is heavily used in paddy cultivation, was earlier priced at Rs. 49 per cwt. It has now gone up in price to about Rs. 107 per cwt. an increase of about 118 percent. Gradual increases in the price of fertilizer and a reduction of the government subsidy on fertilizer from between 55 percent to 85 percent to about 30 to 75 percent in February 1981, has aggravated the increase in local prices of fertilizer.

However, in an attempt to cushion the effects of this increase the government increased the guaranteed price of a bushel of paddy by Rs. 2/50. In keeping with the increasing prices of oil, an enhanced price would have to be paid in future for fertilizer which is imported as well as locally manufactured. A further increase in the price of fertilizer or the lessening of the subsidy would lead to a fall in the use of fertilizer which could eventually result in lower yields. This consideration becomes all the more significant since nearly 80 percent of the present area under paddy cultivation is sown with improved seed paddy, which is highly responsive to fertilizer. Just as fertilizer helped to increase yields, it is evident that a drop in the use of fertilizer could result in a marked drop in yields.

In the year 1979/80, as much as 1,743,000 acres or 82 percent of the acreage under paddy was cultivated with new and old improved seed paddy which gives high yields. In the previous year the area cul-

Table II—USE OF FERTILISER AND IMPROVED SEED PADDY VARIETIES FOR PADDY CULTIVATION 1979 AND 1980

	1978/79 Maha	1979 Yala	1978/79 Total	1979/80 Maha	1980 Yala	1979/80 Total
Use of fertiliser in '000 metric tons ...	55,686	41,336	97,022	98,676	72,989	171,665
Acreage cultivated with (old & new) improved seed paddy in '000 acres	1,154	495	1,649			
Average yield per acre (bushels)	54.70	49.94	53.36	57.23	53.99	56.76

Source: Ceylon Fertilizer Corporation, Fertilizer Secretariat, Department of Agriculture and Department of Census & Statistics.

tivated with these varieties was 1,648,000 acres or about 79 percent of the area under paddy. In both seasons of the year 1979/80, acreage under improved seed paddy increased and this no doubt contributed to increases in yield.

In the year 1979/80, crop failures due to drought in the dry zone and floods in the wet zone, were comparatively fewer than those in recent times. It was also in this year that both during the Yala as well as Maha season, the minimum number of crop failures were recorded. During the 1979/80 recorded crop failures covered only 72,000 acres — 48,000 acres of the 1979/80 Maha crop and 24,000 acres of the 1980 Yala crop. When compared with the previous year's figure of 138,000 acres we observe a marked drop in crop failure. Generally, drought and floods are the causes of 80 percent of the crop failures, which was not much in evidence last year. However, had there been a better water supply to the dry zone in the Yala season of 1980, the yield for that crop would certainly have been higher. It is evident that the yield per acre could be further increased only by means of proper water control and extensive use of improved seed paddy, a regular use of fertilizer in necessary quantities and with favourable weather conditions.

#### Extent and Areas

In the year 1979/80 the total area under paddy cultivation was 2,102,000 acres, exceeding the previous year's extent by only 0.6 percent. However, crop failures in both seasons of that year were less and the crop left for harvesting exceeded the previous year's figure by about 4 percent.

Of the total area cultivated in the year 1979/80, 68 percent came within the 15 districts of the dry zone and the balance 32 percent in the wet zone districts. Cultivated area in the dry zone districts

in the Maha season amounted to about 1,045,000 acres while in the Yala season it dropped by about 63 percent. In the wet zone districts, the cultivated area in the Maha season was about 378,000 acres while in the Yala season it fell by about 25 percent. In the year 1978/79, a similar trend was apparent with regard to the area cultivated in the dry and wet zones in both seasons. Of the total paddy production in the Maha season of 1979/80, 78 percent or 54.7 million bushels were produced in the dry zone districts; and of the total production in the Yala season of 1980, 68 percent or 22.1 million bushels were collected from the same region.

#### Cultivation Loans

The release of institutional loans for paddy cultivation was heavily boosted with the 75 percent credit guarantee operated by the Central Bank on behalf of the Government and in 1978 the level of bank credit went up immensely to exceed Rs. 450 million. The year 1979, however, saw a severe contraction in the disbursement of credit to the rural sector. The major factor that led to this situation was the sudden and complete withdrawal of the 75 percent credit guarantee which compelled commercial banks to adopt stringent lending criteria. Recourse to the stipulation of normal conditions of lending in case of the rural sector made it difficult for farmers to have easy access to credit. Whether this tight credit policy has resulted in increasing the operations of the private money lending is worth examining.

In 1978/79 therefore, there was a heavy drop in institutional loans and only Rs. 66 million was released. This was the lowest amount granted since 1973/74. In 1980 too there was no notable change

in the level of agricultural loans released by institutions. For instance, the People's Bank, which releases the bulk of agricultural loans, had disbursed only Rs. 28.3 million.

The Central Bank has struck the following warning note about this situation:

"The role of rural credit in Sri Lanka needs to be reviewed urgently in view of the very rapid decline of institutional credit to the rural sector. Because of the excessive amount of credit given under the unusually liberalized credit conditions of 1978, the impact of the institutional credit squeeze in 1979 would not have been felt on the production seriously. However, in the coming years, if new measures are not taken probably the production may decline due to reduced use of inputs such as fertilizer and agro-chemicals. To prevent the development of this unhealthy situation, a system of supervised credit with effective participating of the state sector commercial banks needs to be evolved."

#### Paddy Purchases

In 1980 the Paddy Marketing Board purchased 10 million bushels or 10 percent of the total paddy production. When compared with its purchases in 1979 of 25 million bushels or 28 percent of the total paddy production in that year it is evident that there has been a sharp drop in purchases during 1980. Compared with its purchases in the 1980 Maha season there has been a drop of 55 percent while the purchases made in Yala season during this year dropped by 90 percent. From 1976 to 1978 paddy purchases have gradually increased with the upsurge in paddy production; but later while production was on the increase, it is ironical that the paddy purchases of the PMB dropped by 23 percent in 1979 and by 60 percent in 1980. Thus, of the local production purchases by private dealers greatly increased in 1979 and particularly in 1980. In 1980, 80 percent of the PMB's purchases were from the 15 districts in the dry zone while the 10 wet zone districts provided only 12 percent. Here too 51 percent of the purchases were from the dry zone districts of Polonnaruwa, Anuradhapura and Amparal. Paddy purchases in 1979 too indicate a similar trend. Since the area under paddy cultivation is greater in the dry zone and so is the extent possessed by each individual farmer; these factors contributed to a greater production in these districts and

more selling of paddy.

#### Prices

One of the major anomalies in Sri Lanka's paddy sector was that while the average price of a bushel equivalent of paddy of imported rice had increased from Rs. 54/- in 1978 to Rs. 61/- in 1979, the guaranteed price of paddy remained unchanged (since November 1977) at Rs. 40/- per bushel. Moreover, a buffer stock scheme had been operated by the Paddy Marketing Board and the Food Controller, to prevent large price increases during the lean season. In the meantime, costs of production for the farmer increased dramatically, leading to a significant reduction in producer margins. In addition the conditions for obtaining credit for paddy cultivation was tightened. The farmer was also faced with an increased cost of living, rising with the general inflationary trends in the economy, and so the resources available for him to re-invest and improve his standard of living were considerably reduced. It was inevitable, therefore, that the guaranteed price which had remained static for over four years, at Rs. 40/- per bushel, had to be increased in December 1981 to Rs. 50/- per bushel. Again, with the increase in fertilizer prices in February 1981 the guaranteed price was raised in the same month to Rs. 52/50 as a relief measure to the farmer.

When the guaranteed price was Rs. 40/- per bushel, private dealers used to purchase paddy in the open market at varying rates ranging from Rs. 55/- to Rs. 75/- per bushel. Even after the guaranteed price was raised to Rs. 52/50 there exists a considerable gap between the new guaranteed price and the price prevalent in the open market. Hence the private dealers do not have much competition from the government's guaranteed price for paddy. Thus, when the government increased its guaranteed price a proportionate increase of prices by the private dealers in the open market did not follow. But if competition between private dealers develops, there may be a tendency for paddy prices to move up accordingly in the open market. On the other hand, since the PMB's purchase form only a fraction of the country's total production the increased guaranteed price would benefit only a small group.

When the government raised the price of rice, which it retails

through co-operative outlets, by Rs. 1 per kilogram, the private dealers and the PMB too raised their prices proportionately of rice sold in the open market and through the PMB sales centres. The increase of prices suddenly, by as much as 25 percent, had an adverse effect on the cost of living of consumers (particularly of those in the lower income group who spend a major part of their incomes on rice). However, it is still premature to analyse the price variations in the open market as a result of the increase in the guaranteed price. At least till paddy production from the current Maha season flows into the market this would not be possible.

As a consequence of the increase in the price of rice, incomes of those who purchase paddy to be sold as rice could go up by Rs. 10/- to Rs. 15/-. Since their profit margin becomes bigger, they might vie with each other to purchase paddy and this could result in the increase of prices in the open market, for paddy. However, if such an increase does not come about, the private dealer will make all the extra profit at the expense of the consumer. At the same time, if there is no increase in farmer's income by way of higher prices for his paddy, he would be averse to applying fertilizer at an enhanced price and also to using improved seed paddy.

Low purchases of paddy by the PMB in 1980 could be attributed mainly to the payment, under the guaranteed price scheme, of a lower price than what was offered by the private dealer, and also possibly difficulties the farmer had to encounter in selling his paddy to the PMB, as well as other malpractices. Even after the increase of the guaranteed price to Rs. 52/50, the prices offered in the open market are found to be much higher. Thus, even the PMB's future prospects of increasing its purchases seem weak. For instance, even after the raising of the guaranteed price, the PMB could purchase, in December 1980 and in January 1981, far smaller quantities than it purchased in the same months of the preceding years as seen from the following table:

#### PMB PADDY PURCHASES (tons)

	1978	1979	1980	1981
Jan.	49,743	6,219	1,332	130
Dec.	16,459	1,403	180	

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