AGRICULTURE

CHANGES IN PADDY PRODUCTION STATISTICS COMPUTATION

Paddy is regarded as the most important field crop influencing the overall performance of Sri Lanka's economy and in estimating the value of the National Product an accurate computation of paddy production is essential. This was a major consideration when a more realistic assessment of total paddy production of the island was introduced from the Yala season of 1978. This change in the methodology employed in assessing paddy production is significant; where a basic change was made in the correction factors used in computing the net area harvested in respect of the various districts.

In the method employed earlier the Department of Census and Statistics arrived at the net area harvested by using an all island correction factor of 15 per cent. Here the Department worked out (by sample crop cutting surveys) the gross area harvested in each district, the average yield per net acre in each district, and the average yield per net acre for the whole island. The total area of land harvested in the entire island was then estimated by deducting 15 per cent of this figure; the balance 85 per cent being considered the net area of total land harvested. Total paddy production was then arrived at by multiplying this figure of total net area harvested by the all island average yield per acre. According to this method an overall 15 per cent of total land harvested was used as the correction factor. No individual calculations or correction factors were used for each district.

At the Yala 1978 season, however, the net area harvested was worked out at a district level for 19 districts, using correction factors estimated from more recentArea Surveys. These correction factors (percentages) vary from district to district; for example, it was a high as as 43.64% in Nuwara Eliya going down to 2% in Moneragala and 0% in Kurunegala. (See Table 1) The all island correction factor of 15 per cent continued to be used in respect of the districts of Colombo, Gampaha, Badulla, Puttalam, and Ratnapura and the Uda Walawe region as separate correction factors for these areas were not available.

The new basis of computation has at least two clear advantages: the availability of a more realistic assessment of total paddy production in the island, as a result of employing a more scientific methodology; and the computation of paddy production data on an individual district-wise basis. (Previously the Census Department did not have data of production for each district). Annual paddy production estimates, computed under the old method, showed a lower figure than under the new method which uses different correction factors. Thus annual paddy production over the last ten years, for instance, when the old basis of calculation was used, shows a 2 to 6 per cent under-estimation of production when compared with the computations on the new basis (See Table 2). The main reason for this difference can be attributed to the fact that when production is calculated under the new method for districts such as Kurunegala, Amparai, Anuradhapura and Polonnaruwa, where acreage is very large, the correction factors are comparatively much lower.

Paddy production statistics compiled by the Department of Census and Statistics were worked out using the old method of computation upto Yala 1978 and the new method thereafter. There can be definite disadvantages when statistics derived

through two different methods are employed for comparison without data adjustments. For instance, comparing paddy production before and after 1978 Yala could be misleading since the data computed in the earlier period is comparatively underestimated. A glaring example is the comparison of paddy production statistics for the years 1977 and 1982. According to the officially published figures, which are now in use, paddy production went up from 80.4 million bushels in 1977 to 103.3 million bushels in 1982, which is an increase of 28.5 per cent. But when figures are adjusted, on the basis of the new method, for the pre–1978 period, the increase in paddy production amounts to only 23.2 per cent that is, from 83.9 million bushels in 1977 to 103.3 million bushels in 1982. It is apparent that by not duly adjusting the data for comparison there has been an over estimation by 5.3 per cent in the recorded paddy production increase during the period of the last 5 years. It shows that in comparing data of different periods, computed on the basis of differing methodologies, can be misleading.

Looking at paddy production trends over the five years from 1977 to 1981 it appears that there has been an increase in production from 1.7 million metric tons in 1977 to 2.2 million metric tons in 1981; and that in between production kept moving up from 1.9 million tons in 1978 to 2.0 million in 1979 and 2.1 million in 1980, according to figures maintained by the Department of Census and Statistics. To look at the trend more scientifically, however, the comparison would have to be made between the years prior to 1978, while those after 1978 have to be adjusted accordingly.

Table 1

The correction factors and the gross area harvested, during the year 1980/81, in respect of all districts

District	New correction factor	The gross area harvested in the year 1980/81 (acres
)		
1. Colombo*	15.00	32,208
2. Gampaha*	15.00	67,051
3. Kalutara	7,75	91,435
4. Galle	21.74	95,358
5. Matara	21.05	95,320
6. Ratnapura*	15.00	74,949
7. Kegalle	6.32	53,375
8. Kurunegala	0.00	261,078
9. Puttalam*	15.00	36,240
10. Kandy	20.92	89,596
11. Matale	10.07	45,760
12. Nuwara Eliya	43.64	20,499
13. Badulla*	15.00	51,598
14. Moneragala	2.00	30,341
15. Jaffna	11.26	66,321
16. Vavuniya	5.65	29,128
17. Mullativu	5.65	20,080
18. Mannar	4.52	26,664
19. Anuradhapura	19.59	167,892
20. Polonnaruwa	11.54	139,812
21. Trincomalee	7.10	93,882
22. Batticaloa	11.74	125,911
23. Amparai	4.43	178,685
24. Hambantota*	12.63	77,459
25. Udawalawa*	15.00	42,830
26. Mahaweli 'H'		53,985
27. Paddy cultivation on high land		14,379
Sri Lanka Total		2,081,796

Table 11

The paddy production of Sri Lanka –1971/1972, calculated as using the old correction factors and the new correction factors.

Season	The production calculated using the old C/factor ('000)	The production calculated using the new C/Factor ('000)	The percentage increase under the new system
71/72 Maha	42,327	43,606	2.9
72 Yala	20,574	21,012	2.1
72	62,901	64,617	2.7
72/73 Maha	42,004	43,568	3.9
73 Yala	20,896	21,442	2.6
73	62,900	65,000	3.3
73/74 Maha	52,629	54,102	2.7
74 Yala	24,165	24,859	2.8
74	76,794	78,961	2.7
74/75 Maha	34,458	35,572	3.1
75 Yala	20,875	21,662	3.6
75	55,333	57,234	3.3
75/76 Maha	42,278	43,886	3.7
76 Yala	17,766	18,198	2.4
76	60,034	62,074	3.3
76/77 Maha	54,833	57,653	4.9
77 Yala	25,554	26,244	2.6
77	80,387	83,887	4.2
77/78 Maha	61,626	65,361	5.7
78 Yala	28,185	29,979	2.7
78	89,811	94,340	4.8
78/79 Maha	64,113	66,764	4.0
79 Yala	24,420	25,122	2.8
79	88,533	91,886	3.7
79/80 Maha	67,306	69,653	3.4
80 Yala	30,897	32,584	5.2
80	98,202	102,237	4.0
80/81 Maha	70,009	72,961	4.1
81 Yala	32,470	33,884	4.2
81	102,479	106,854	4.1
81/82 Maha	61,445	66,313	5.9
82 Yala	36,285	37,999	4.5
82	97,730	103,312	5.4

* *Since the correction factors for the Colombo, Gampaha, Ratnapura, Puttalam, Badulla, Uda Walawe districts are still being worked out the 15 per cent all island correction factor that was used earlier is still used for these districts.*