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### **Output instability of rice production: a Sri Lankan experience**

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Since independence, Sri Lankan paddy production has achieved a significant average growth of 4.4 % per year. Despite the substantial improvement, instability of the paddy output has attracted the attention of successive governments in the post independence era. Therefore, this study was designed to reveal the actual nature of paddy output fluctuations, characterize the sources and to identify the factors that have led to output fluctuations. The investigation was conducted using macro level paddy related data from 1952 to 2009. Yield per unit area and the area under cultivation were considered to be major sources of paddy output fluctuations and national average paddy yield accounted for 1.9% of the annual growth while the area cultivated showed 2.2 % average annual growth. On a seasonal basis the Maha season provided 67 % of the national paddy output, whereas 33% come from Yala season. Variability in the Yala season (Coefficient of Variation - 51%) was higher than that of Maha (CV- 47%). Higher variation seen in the Yala season is due to variation in the area cultivated during the season. However, no significant difference in average yield levels of the two seasons was observed. Further, 60 % major irrigation, 21% rain fed and 19% minor irrigation schemes contributed to the total national paddy output, respectively. According to the availability of water, variation was higher in rain fed areas due to changes in the area under cultivation. The average yield changes are comparatively marginal in major irrigation schemes. Though paddy production occurs in all the districts of the country, about 50% of total national production comes from the four major paddy producing districts: Ampara (16 %), Polonnaruwa (14 %), Kurunegala (11%) and Anuradhapura (9 %). Among these districts the paddy output variation was low in the Ampara and Polonnaruwa districts (CV-13%). However, the two other districts were also in a highly vulnerable position as Kurunegala (CV-30%) and Anuradhapura (CV-40%). This was mainly because rain fed and minor regimes are dominant in these two districts than major regimes. The study suggests that the areas under cultivation during the Yala season should expand, and stabilize via assured water supply through new technology and suitable varieties. Immediate attention is needed to stabilize paddy production in the Kurunegala and Anuradhapura districts. Conventional yield and area expansion are not adequate to tackle the problem of output instability, and further sustainable long term policies focusing on output instability needs to be formulated and implemented.

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