



# Determination of Yield and Yield Components of Traditional Rice Cultivars of Sri Lanka in *Yala* and *Maha* Seasons

U.G.S. Amarasinghe and A.L. Ranawake\*

*Department of Agricultural Biology, Faculty of Agriculture, University of Ruhuna*

## Abstract

One hundred Sri Lankan traditional rice cultivars were evaluated at 2011/2012 *Maha* and 2012 *Yala* seasons to understand the seasonal changes on yield and yield components of individual rice cultivars. Experiment was conducted at the Faculty of Agriculture, Kamburupitiya. Two week old seedlings were transplanted in the paddy field according to a randomized complete block design with four replications. Twenty plants were planted in a plot with spacing of 15 cm X 20 cm. Plant height (cm), number of tillers per plant, number of fertile tillers per plant, filled grain percentage and yield/plant (g) were measured at reproductive stage. Data were analyzed by ANOVA and mean separation was done by SAS statistical software. Among evaluated cultivars 73, 38, 29, 35 and 44 cultivars increased plant height, number of tillers/plant, number of fertile tillers/plant, filled grain percentage and yield/plant respectively in *Maha* season compared to those of in *Yala* season. Thirty four cultivars remained unchanged in total tiller number. Thirty six cultivars didn't show significant changes in number of fertile tillers/plant in *Yala* and *Maha* seasons. Filled grain percentage of 60 cultivars didn't change significantly with the season. Forty four cultivars increased their yield/plant in *Yala* season while 32 cultivars remained constant in both seasons. All the parameters of cultivar *Hondarawala*, *Karayal*, *Dewaredderi*, *Kotathavalu*, *Kokuvellai*, *Karayal*, *Karabewa*, *Muthumanikam*, *Induru Karayal*, *Dik wee 328*, *Maha Murunga Badulla*, *Kaharamana* and *Jamis wee* changed significantly at two seasons. Among them cultivar *Hondarawala*, *Kotathavalu*, *Kokuvellai*, *Karayal*, *Karabewa*, *Muthumanikam*, *Dik wee 328* and *Jamis wee* increased all the parameters in *Maha* compared to those of in *Yala* season. Cultivar *Podi sudu wee* didn't show significant difference in any parameter in *Yala* and *Maha* seasons. The best cultivating season for the individual rice cultivar can be selected according to the performances of them in the both seasons.

**Keywords:** *Maha*, *Traditional rice cultivars*, *Yala*, *Yield*, *Yield components*

\* [lankaranawake@agbio.ruh.ac.lk](mailto:lankaranawake@agbio.ruh.ac.lk)