B-02: Performance of some elite lines of the 4 - 4.5 month rice breeding programme in a favourable irrigated ecosystem

Ranjani Peiris[1], [2]
([1]*Rice Research and Development Institute, Batalagoda, Ibbagamuwa,*[2]*Horticultural Research & Development Institute, Gannoruwa, Peradeniya*)

Seven elite lines which were bred with the objective of developing rice

varieties with high yield potential and pest and disease resistance, were evaluated in the fields at Rice Research and Development Institute, Batalagoda. The 7 lines were tested during Yala 93 and Maha 93/94 against 2 recommended varieties: Bg 379-2 and Bg 400-1. Bg 379-2 was used as the check variety. The experimental design was Randomized Complete Block design with 3 replications. The plot size was 3 m x 6 m and 3 seedlings of 21 day-old, were transplanted per hill with a spacing of 15 x 20 cm. The application of fertilizers (100 N : 25 P : 20 K) and cultural practices were done according to Departmental recommendations at the appropriate time.

The line, 93-355 (Bg 2205) which was derived from a two-way cross designated as ob 2552/Bg 1112//ob 2552/ 89-410 was found to be the most promising among the tested entries. The yield increment of 93-355 over Bg 379-2 and Bg 400-1 was 18% and 91% respectively. The laboratory screening results revealed that it is a line having resistance to Blast, Gall midge (new biotype) and is moderately resistant to Brown planthopper whereas the check variety Bg 379-2 is moderately resistant to Blast, Brown planthopper and highly susceptible to Gall midge (new biotype). Bg 400-1 is susceptible to all pests and diseases.

Bg 2205 will be a promising nominee for National Coordinated Rice Varietal testing programme, where varietal performance in different agro-ecological environments is being tested.