

IMPROVEMENT OF QUALITY CHARACTERS
IN RICE

1. SELECTION OF PARENTS FOR HYBRIDIZATION PROGRAMME

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Quality characters of eight varieties of rice selection from Central Rice Breeding Station (CRBS), Batalagoda were studied at the Rice Processing Research and Development Centre (RPRDC), Anuradhapura, with a view to selecting parental varieties for a hybridization programme proposed to improve such characters.

Analysis of variance indicated significant differences between varieties for all characters studied. Orthogonal contrasts were used to separate the means.

The varieties tested comprised of old improved varieties such as H4, new improved Bg Varieties and introduced foreign varieties (IR 8).

No single variety excelled in all the characters investigated. For moisture content and total milling yield, H4 performed best while Bg varieties gave best results in head rice yield, cooking time, volume expansion, gelatinization temperature and protein content. IR 8 gave average results.

Results indicate that genes are dispersed between varieties for all characters, as such, parental varieties can be selected among these and judiciously planned hybridization programmes can recover excellent recombinant lines.

From the results of this experiment, H4, Bg 400-1, Bg 350 and Bg 3-5 were selected as parents for future breeding programmes to improve quality characters of rice in Sri Lanka.

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