

Agri. Res. J. Kerala, 1978, 16 (1) 91—92

A NEW HIGH YIELDING, BROWN PLANT HOPPER TOLERANT VARIETY OF RICE

The coverage under high yielding varieties of rice is cent per cent in Kuttanad, the low lying areas of Alleppey and Kottayam districts of Kerala. Since the devastating out break of Brown Plant Hopper (*Nilaparvata lugens*) in 1973, damage caused by this insect to rice crop is a recurring phenomenon in this area. The commonly cultivated varieties with the exception of *Jyothi* are highly susceptible to this pest. Varieties with a high level of tolerance to the Brown Plant Hopper are therefore necessary in order to sustain the production potential of this area which is considered to be an important region of rice production in the state.

Culture 57 - 5 - 1 from the cross IR 8 x Ptb. 20 was found to be consistently a good yielder at this station compared to *Jaya* and *Jyothi*, the two most popular varieties. The performance of this culture in the trials laid out in the 2 seed farms of the Agriculture Department as well as in 2 locations in the cultivator's field was also found to be quite satisfactory. In all the 4 trials, culture 57 - 5 - 1 out yielded *Jaya* while it recorded an increased yield over *Bharathi* in 3 locations. The mean yields over the location of this culture, *Jaya* and *Bharathi* were 5951, 5269 and 5160 Kg/ha respectively. This is weakly photo-sensitive maturing in 125—130 days during September - February season. The analysis made at the Central Rice Research Institute, Cuttack shows that its protein content is 10.16 per cent which is higher than most of the cultivated varieties.

Since Brown Plant Hopper is a menace in this area, this culture was screened for its resistance to this pest at this Research Station, Agricultural College, Vellayani and All India Co-ordinated Rice Improvement Project, Hyderabad. The mean score of this culture on 0-9 scale was 4.4 and 3.4 when the score of the susceptible check was 9 and 8.2 respectively at this station and at Agricultural College, Vellayani. At Hyderabad when the damage was scored on 0-5 scale, the score of the culture was 2.2 against 5 in the case of the susceptible check variety TN 1. Incidentally it may be mentioned that seeing the good performance of this culture some progressive cultivators took small quantities of seed, multiplied it and grew in large area (0.5 - 2.5 ha) during the last season. In a padasekharam (a block of field surrounded by canals on all sides) of 350 ha, this culture was cultivated in an area of 2.5 ha. Hopper burn was noticed in all the surrounding fields while this culture survived in spite of heavy pressure of the insect.

Obviously this culture has combined in itself the potential for high yield as well as a high tolerance to the pernicious Brown Plant Hopper which is causing heavy loss annually in this area. The Seed Evaluation Committee of the Kerala Agricultural University has recommended this to the State Seed Committee for its release considering these qualities.

Acknowledgement

The authors are thankful to Dr. R. Gopalakrishnan, former Director of Research, Kerala Agricultural University for guidance and valuable suggestions and also to the scientists for screening for Brown Plant Hopper resistance and for quality analysis.

സംഗ്രഹം

മങ്കൊമ്പു fflcngj ഗവേഷണ ffiagjgoro/lcsJ ഉല്പാദിപ്പിച്ച 57-5-1 എന്ന സങ്കര ഇനം വിത്തു് ജയ, ജ്യോതി എന്നീ നെൽ വിത്തിനങ്ങളേക്കാൾ അധികോല്പാദന ശേഷിയുള്ളതും കട്ടനാട്ടിൽ തീരാശാപമായി roilrmlroTg^nd തവിട്ടുതുള്ളൻ എന്ന പ്രാണിയെ ചെറുത്തുനില്പാൻ കഴിവുള്ളതുമാണെന്നു് തെളിഞ്ഞിരിയ്ക്കുന്നു. മറ്റു നെൽ ജിനുസ്സുകളെ അപേക്ഷിച്ചു് ഇതിനു് കൂടുതൽ മാംസ്യം, ശർക്കരം ഉണ്ടു്. ഇതിന്റെ അധികോല്പാദനശേഷിയും തവിട്ടുതുള്ളനെ ചെറുത്തു നില്ക്കുന്നതിനുള്ള കഴിവും സർക്കാർ നെല്ലുല്പാദന കേന്ദ്രങ്ങളിലും കൃഷിക്കാരുടെ പാടങ്ങളിലും മാറ്റു ഗവേഷണ കേന്ദ്രങ്ങളിലും പരീക്ഷണങ്ങൾ നടത്തി തെളിയിക്കപ്പെട്ടിട്ടുണ്ടു്.

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