B-38 Inheritance of pericarp colour in rice

N Gordiyehewa[1], D S de Z Abeysiriwardena[2], V A Sumanasinghe[1]
[1]Faculty of Agriculture, University of Peradeniya [2]Rice Research and Development Institute, Bat

Pericarp colour in rice (*Oryza satlva* L.) is one of the quality characteristics that influcences c preference. Knowledge on the inheritance of pericarp colour is important to overcome the pr unexpected segregation of grain colour in some of the improved varieties and to maintain varietal

Inheritance of pericarp colour was studied using F_2 seed samples (seeds harvested from F_1) from crosses of red x white: Bg 1639 (White) / AT 353 (Red), AT 90-199 (Dark Red) / Bg 1219 (White 94-1 (White) / AT 357 (Dark red).

Colour development of a grain depends on its maturity stage. No colour variation was observe matured grains within the same panicle as well as between plants within the same inbred line.

2 genes R_e (Light red) and R_r (Red) are involved in the cross Bg 1639 / At 353 with a F_2 segregatio 9 Red : 3 Light red : 4 White. At 90 - 199 / Bg 1219 expresses 27 Dark red : 9 Light red with shade : 9 Red : 3 Light red : 16 White with 3 genes R_e (Light red), R_r (Red) and R_b (Blackish red). 1 / At 357 showed 36 Dark red : 12 Red : 9 Light red with blackish shade : 3 Blackish shade : 3 : 1 White with 3 genes R_l (Light Red), R_r (Red) and R_b (Blackish red).

Red pericarp is completely dominant over the white. With respect to the number of genes, perica inheritance is varietal specific. In the studied population of *Oryza sativa* L., 4 different genes are r for the pericarp colour. R_e for light red with a recessive epistatic effect on R_r and R_b, R_r for r blackish red and R_l for light red.