



XA0201020



XA0201021

Induced marker gene mutations in soybean

Non-fluorescent root mutants in soybean are useful as markers in genetic studies. 13 such mutants were detected among more than 150 000 seedlings derived from soybean lines treated with 6 mutagens [1]. One of them, derived from variety "Williams" treated with 20 kR gamma rays, did not correspond to the already known spontaneous non-fluorescent mutants. It was assigned the identification no. T285 and the gene symbol fr5. The other mutants corresponded with known loci fr1, fr2 or fr4.

REFERENCE

[1] PALMER, R.G., SCHILLINGER, J.D. and HOWSON, T., Soybean Genetics Newsletter 12 (1985) 77-81.

From: SAWADA, S. and PALMER, R.G., (Dept. of Agronomy and Genetics, Iowa State University, Ames IA 50011, USA). Crop Science 27 (1987) 62-65.

Increased genetic variability for symbiotic nitrogen fixation in green gram (Vigna radiata L.)

When green gram is planted after rice in Andhra Pradesh, its nitrogen fixation relies upon local rhizobia that have been able to survive the stress of 5-6 months submergence. No rhizobia strain isolated elsewhere was found superior to native rhizobia. Thus improvement of the host may be the only practicable way to improve nitrogen fixation. 15 mutants obtained from gamma irradiated green gram variety "LGG 127" were tested along with the parent and the cultivar "Pant Mung 2". Nodule no. per plant was higher in the mutants. There was also considerable variation in dry weight of nodules per plant and in seed yield. However the number of nodules per plant showed no correlation with seed yield, nodule size may be more relevant. The N content of the shoots at anthesis was positively correlated with dry weight of nodules, seed protein % and seed yield per plant.

From: ROSAIAH, G., KUMARI, D.S., SATYANARAYANA, A. and SEENAIH, P., (Nagarjuna University, Nagarjunanagar, Guntur, Andhra Pradesh 522 510, India). Indian Journal of Agricultural Sciences 57 (1987) 271-273.

Dwarf mutant of rice variety "Seratus Malam"

Seeds of "Seratus Malam", a local tall upland variety with long panicles and high yield potential were irradiated with 10-50 krad gamma rays in 1983. From 50 000 M₂ plants, 130 semidwarf mutants and 1 dwarf mutant were selected. The dwarf mutant M-362 was obtained from the 10 krad treatment. The mutant shows about 50 % reduction in plant height, but also in number of productive tillers. Thus the yield per plant is also significantly less. However, the mutant gene is not allelic to DGWG and therefore may be useful in cross breeding.

From: MUGIONO, P.S. and SOEMANGGONO, A.M.R., (BATAN, Jakarta, Indonesia). International Rice Research Newsletter 13 No.1 (Feb. 1988) 5.

Seed protein and nitrogen fixation in chickpea mutant variety "Hyprosola"

"Hyprosola" is a high yielding, high protein mutant cultivar obtained after gamma irradiation from the variety "Faridpur-1" [1]. The mutant yields 45 % more protein per unit area. The essential amino acid index is

