



REFERENCES

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AGRONOMIC PERFORMANCE OF OLD SOYBEAN VARIETY 'ALTONA' DERIVED MUTANTS

An induced mutation program has been initiated at the Department of Genetics and Plant Breeding to develop early maturing cultivars with good yielding capacity. Some new mutants have been produced by irradiation of variety Altona with ⁶⁰Co gamma rays. Ten years of breeding resulted in two new mutant varieties named 'Noventa' and 'Gate 511'. The present study deals with agronomic performance of these mutants. Registered soybean varieties Altona and 'McCall' as well as Altona derived mutants (Gate 511 and Noventa) have been compared (Table 1).

Table 1. Some agronomic characters of early maturing mutants in comparison with the original and check cultivars (1988-1990)

Character	Altona	Gate 511 (mutant)	Noventa (mutant)	McCall (check)
Vegetation period	120-141	115-122	90-105	120-125
Date of maturity	3 September	25 August	30 July	29 August
Plant height (cm)	46-50	50-55	40-46	40-55
Hylum color	black	black	black	yellow
Seed weight (g)	5-16	5-17	8-19	4-19
1000 seed weight (g)	170	171	177	147
Seed yield (t/ha)	1,5-2,3	2,3-2,8	1,8-2,4	1,9-2,7

The vegetation period of mutant lines has been reduced considerably, Gate-511 was about one week earlier, while Noventa was about one month earlier than the parent variety Altona. The plant height of mutant Noventa was shorter while the mutant Gate-511 was higher than the parent. The seed yield of mutants showed a slight difference in comparison with the parent and check varieties. The mutant Noventa has been released as new variety in Hungary in 1993, License No. 207 922. Gate 511 is being tested in official field trials in Hungary.

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