hybrids short enough to suggest that they may be four-dwarf.
None of the lines carries known resistance genes to biotype
E greenbug [Schizaphis graminum (Rondani)], although the
breeding histories suggest several may have genes for
biotype-C resistance. Pathological examinations of the
hybrids were made from the seedling stages to several weeks past
frost. Stalk rot pathogens were found at all stages of develop-
ment, but no significant stalk rot pathogen differences were
detected. Test hybrids ranged from 6 d earlier to 4 d later
than the hybrid RS626. Some agronomic data are provided
in Table 1.

The lines have been numbered serially from N49 to N67.
Germplasm amounts of seed are available from P.T. Nord-
quist, West Central Research and Extension Center, Rt 4,
Box 46A, North Platte, NE 69101.

P. T. NORDQUIST* AND J. E. PARTRIDGE (1)

References and Notes
1. P.T. Nordquist, West Cent. Res. and Ext. Ctr., North Platte,
NE 69101; and J.E. Partridge, Dep. of Plant Pathology, Univ. of Nebraska,
Lincoln, NE 68583. The development of this germplasm has been partially
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REGISTRATION OF GERMLASM LINES
OF SOYBEAN, A11, A12, A13, A14, AND A15

THE SOYBEAN [Glycine max (L.) Merr.] (Reg. no. GP-100
through GP-104) germplasm lines A11 through A15 (PI
510679 through PI 510683) were developed cooperatively by
the Iowa Agriculture and Home Economics Experiment
Station and the Puerto Rico Agricultural Experiment Station.
Their resistance to Fe-deficiency chlorosis on calcareous soil
is superior to any other genotype of soybean that has been
evaluated for the character. The lines were released for use
as parent stocks in soybean breeding and genetics programs
in 1987. A11 through A15 were selected to represent different
maturities from Maturity Group 0 to III.

A11 through A15 were derived from S1 plants in the breeding
population AP9 (1). The lines were identified after seven
cycles of recurrent selection for improved resistance to Fe-
deficiency chlorosis on calcareous soil in the field. The S1
progeny of 100 S1 plants were evaluated each cycle for chlor-
osis resistance when grown in replicated plots on Harps soil
(fine-loamy, mesic Typic Calciaquoll) in Iowa with a pH of
7.4 to 7.9. The 10 lines with the least chlorosis were mated
in a diallel during the same season. The S1 plants from the
crosses were grown during the winter at the Isabela Substa-
tion of the Puerto Rico Agricultural Experiment Station
to obtain S2-derived lines for the next cycle of selection.

The S2 seed was harvested in Iowa during 1985 from the

level of resistance to Fe-deficiency chlorosis available (2). The lines designate
chlorosis ratings in the field, compared with a nutrient solution of 2.3, 2.
mean score of 3.9 for A11, and a range from 1 = no yellowing, A13, A14, and A15 were
A7 in seed yield, and all were
A11 to A7 in field resistance to
A11 is of Maturity Group
' Hodgen 78', and has purple
pods at maturity, and dull yellow
maturity, and dull yellow seeds.
Maturity Group II, average
purple flowers, purple pod
maturity, and dull yellow seeds
Maturity Group III, average
purple flowers, gray pod
maturity, and dull yellow seeds.

Seed of the lines is distributed by
Agricultural Development, P.O.
50011.

H. J. JESSEN, W. R. FEHR, AND S. R. DE CIANZIO

Reference
and S.R. Cianzio. (1986) Reg. no. PI 510679. Mayaguez:
Iowa Agric. Home Economics Experiment Station, Provi-
ental Paper no. J-12659; and the Wisconsin Agric. Exp.
Mechanized Prom. Board. Registration no. 790070. The research was sup-
ported by the Iowa Agricultural Exp. Station. Accepted 30 July 1987.

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REGISTRATION OF SOYBEAN LINES WITH ADAPTATION TO
OR PREFERENCES FOR SPECIFIC ENVIRONMENTS

Six soybean [Glycine max (L.) Merr.] (Reg. nos. GP-105, GP-110) adapt-

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