similar to Century and has an intermediate iron chlorosis score on high pH soils at Iowa locations. It has moderate
tolerance to metribuzin injury. Logan is susceptible to races
1 and 4 of Phytophthora megasperma (Drechs.) f. sp. glyciniae
Kaun and Erwin, but was rated intermediate in field toler-
ance in Ohio tests. It has moderate resistance to the pod and
stem blight organism, Diaporthe phaseolorum (Cke. & E11.)
var. sojae Wehm.

The Nebraska Agricultural Research Division has designated
the seed classes of Logan as breeder, foundation, reg-
istered, and certified, and will maintain and distribute breeder
seed. Other information is published in Nebraska Soybean
Performance Tests, 1983 EC83-104 and 1984 EC84-104,
University of Nebraska Cooperative Extension Service and
Agricultural Research Division, Lincoln, NE 68583.

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and R. S. MOOMAW

References and Notes

1. Professor, associate professor, and professor, Dep. of Agri-
   culture, Univ. of Arizona, Tucson, AZ, 85721.

2. Approved for publication as Arizona Agric. Exp. Sta. Bul-

Registration of Germplasms

REGISTRATION OF ARIZONA 8501 BARLEY
GERMPLASM FOR DISTURBED LAND
RECLAMATION

ARIZONA 8501 barley (Hordeum vulgare L.) germplasm for
disturbed land reclamation, PI 499692, (Reg. no. GP-76) was
released by the Arizona Agricultural Experiment Station,

A disturbed land reclamation barley breeding program,
using barley genotypes adapted to harsh environments
throughout the world, has been conducted at the Safford
Agricultural Center, Safford, AZ, since 1960. The original
parents were chosen for their apparent tolerance to high tem-
perature, low temperature, drought, salinity, and infertile
soil. Fifty selected genotypes were crossed onto male-sterile
‘California Mariout’ barley. Equal quantities of seed from
each cross were mixed to form the basis of the population.
A representative sample of the germplasm was planted in a
saline soil, irrigated with saline water, and harvested each
year for 20 yrs. Since the population maintained a few male-
sterile plants, a small amount of cross-pollination occurred
each year.

Arizona 8501 produced 68% more tillers per unit area, 54%
more ground cover, and 47% more seed per unit area
in copper mine reclamation soil in southern Arizona for a
4-yr period than did the best commercial barley cultivar (1).
When grown in coal mine reclamation soil in northern
Arizona for a 3-yr period, it produced 52% more tillers per
unit area, 45% more ground cover, and 34% more seed per unit
area than did the best commercial barley cultivar. This germ-
plasm produced 54% more tillers per unit area, 42% more
ground cover, and 3% more seed per unit area than did the

Arizona 8501 is moderately resistant to low-temperature,
mildew, and resistance modifying factors from each
region. Arizona 8501 is resistant to Rhynchosporium secalis
and is resistant to scald, [caused by

Pyrenophora secalis var. secalis (Drechs.) f. sp. secalis (Yoshino)]
and net blotch (caused by

Pyrenophora teres (Oud.) J.J. Davis] and net blotch (caused by

Pyrenophora teres (Oud.) J.J. Davis]. CC XXXIII-A and -B are
resistant to BYDV disease. Plants tolerant to infection by
BYDV express little or no visual symptoms, e.g., leaf
chlorosis and necrosis. Plants resistant to the disease (BYD)
and resistance to BYD disease. Plants tolerant to infection
BYDV expressing little or no visual symptoms, e.g., leaf
chlorosis and necrosis. Plants resistant to the disease (BYD)
and resistance to BYD disease. Plants tolerant to infection
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and resistance to BYD disease.