field conditions for ease of establishment, drought tolerance, plant
vigor, forage production, cold tolerance, and persistence. The pri-
mary area of adaptation of Cochise is southern Arizona, New
Mexico, and far west Texas, at elevations of 500 to 1,800 m (1,500 to
6,000 ft). Cochise has become established and performed well in 25-
to 50-cm (10- to 20-inches) precipitation zones. However, it may re-
quire an average minimum of 9 cm (3.5 inches) of winter moisture to
maintain an adequate stand. Cochise is well adapted to sandy
through silt loam (coarse- to medium-textured) soils. 4

Breeder and foundation seed will be maintained by the SCS Tus-
con Plant Materials Center. Foundation seed is available to growers
through the Arizona Crop Improvement Association and Arizona
natural resource conservation districts.

REGISTRATION OF TIFBLUE-78 BLUE
LUPINE1
(Reg. No. 5)
Homer D. Wells, Ian Forbes, Jr., Robert Burns, and
John D. Miller*

'TIFBLUE-78' is the first winterhardy, disease resistant, sweet
(low alkaloid content), soft-seeded blue lupine (Lupinus angus-
tifolius L.) cultivar with seed-shatter resistance. It was selected
from the cross ‘65G-251’ × ‘Uniharvest,’ an Australian cultivar.
The strain 65G-251 was developed from the cross ‘WH-1’ (a
winterhardy selection of P.I. 168535 from Portugal) × ‘Rancher,’
a sweet cultivar with resistance to anthracnose (caused by Glomerella
cingulata Stolz) and gray leaf spot (caused by Stem-
phylium solani Weber). Uniharvest has non-shattering seed pods.
Strain 65G-251 has winterhardiness and gray leaf spot and
anthracnose resistance. Both 65G-251 and Uniharvest are sweet,
soft-seeded, and have white flowers and seeds. Inoculations and
screening for disease reactions were conducted on the F_2 through
the F_4 generations in the greenhouse at Tifton, Georgia. Screen-
ing for winter-hardiness was carried out in field test nurseries
at Tifton and Experiment, Georgia. The F_2 and F_4 generations
were screened for seed shatter resistance in Western Australia
by the Western Australia Dep. of Agriculture. Tifblue-78 was
constituted by compositing equal amounts of seed by weight of
F_2 seed from 124 F_2 lines with similar winterhardiness and reac-
tions to gray leaf spot and anthracnose.

The genotype of the cultivar is tardus plus lentus (seed-shat-
ter resistance), gl_1 and/or gl_2 (gray leaf spot resistance), An
(anthracnose resistance), iucundus (sweetness), mollus (soft seed-
edness), and leucosepermus (white flowers and seeds and absence
of purplish pigments in vegetative parts). The inheritance of
winterhardiness is unknown; but appears to be conditioned by
one major dominant gene and one or more modifiers. Winter-
hardiness of the cultivar is possibly related to its slower growth
at low temperatures. Seed are white with a light brown mottle
and do not shatter. Flowers are also white. Since the cultivar is
sweet, it is of value for grazing and for use as a high protein
grain. Tifblue-78 is not significantly different from ‘Frost’ blue
lupine in herbage production, protein content, freedom from al-
kaloid (sweetness) for herbage and seed, softness of seed, cold
tolerance and resistance to gray leaf spot and anthracnose. How-
ever, the non-shattering of seed permits seed of Tifblue-78 to be
harvested several weeks after maturity whereas ‘Frost’ and other
blue lupines in cultivation in the U.S. shatter seed at maturity.
Forage yields averaged 7,169 kg/ha and seed yields ranged from

on written request. Address requests to H. D. Wells or J. D. Miller, at the Georgia Coastal
Plain Station, Tifton, Ga. 31793.

REGISTRATION OF TIFWHITE-78 WHITE
LUPINE
(Reg. No. 6)
Homer D. Wells, Ian Forbes, Robert Burns, and
Jim Dobson*

'TIFWHITE-78' is the only white lupine (Lupinus angus-
tifolius) cultivar winterhardy in Piedmont of Georgia with
26.3% of plant and seed (sweetness), soft seed shattering resis-
tance. It was selected from the crossing of a winterhardy man
man cultivar, × 'Experiment 1'. Experiment 1 was selected
from a seed increase of P.I. 177456, a wild lupine from Tur-
key, which was winterhardy at Experiment Station and
expressed seed-shatter resistance, soft seeded, high protein
and low alkaloid content to the cultivar, while Experiment 1
was also winterhardy. Tifwhite-78 was constituted by compositing
amounts of seed by weight from 56 similar F_2 lines in 1975.

The cultivar's flowers are white, sweet, and intermediate in size compared to commercial
cultivars. Plants remain in the rosette stage through one summer months. In Georgia with the onset of
late March or early April the plants elongate above 1 m or more in height depending on soil type.
Gene, pauper, conditions the sweetness of the cultivar. Polonisation to the nitrogen-fixing trait and high
protein feed grain. Nitrogen yields of forage ranged from 1,080 to 2,448 kg/ha. Crude protein of forage ranged from 14.5
to 16.7%. Nitrogen production of herbage averaged 140.4 kg/
ha and seed yields ranged from 100 g to 770 g.

Breeder seed will be maintained by the Southern Regional Plant Materials Center. Foundation seed is available to growers
through the Arizona Crop Improvement Association and Arizona natural resource conservation districts.

REGISTRATION OF SEVILLA ST.
AUGUSTINEGRASS
(Reg. No. 66)
T. P. Riordan, V. D. Meier, J. A. Long

'SEVI~LTA-78' (Stenotaphrum secundatum
(Walt.) Reg. No. 6) is a turfgrass cultivar
released by the AR-SEA-USDA, Coastal Plain Exp. Stn., Tifton, Ga. This grass is a very winterhardy, disease
resistant, and leaf color. It was selected from a cross of 'Seville,' an Australian cultivar, × 'Gela,' a West Ger-
man cultivar, × 'Experiment 1'. Experiment 1 was selected
from a seed increase of P.I. 177456, a wild lupine from Tur-
key, which was winterhardy at Experiment Station and
expressed seed-shatter resistance, soft seeded, high protein
and low alkaloid content to the cultivar, while Experiment 1
was also winterhardy. Tifwhite-78 was constituted by compositing
amounts of seed by weight from 56 similar F_2 lines in 1975.