UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
AND
AUBURN UNIVERSITY
ALABAMA AGRICULTURAL EXPERIMENT STATION

NOTICE OF RELEASE OF 'AU Ground COVER' Caley Pea

The United States Department of Agriculture, Soil Conservation Service, and the Auburn University Alabama Experiment Station announces the release of 'AU GROUND Cover' caley pea, (Lathyrus hirsutus L.).

Fanners have used legumes in crop rotation8 for many decades to improve soil fertility in the Southeastern United States. Availability of relatively inexpensive chemical fertilizers contributed to a decline in their use as a nitrogen (N) source. More recently, producers have recognized legumes as valuable crops in water and soil conservation programs. Hence, there has been a renewed interest in these plants because of the benefits observed in systems that use conservation tillage for grain production.

Caley pea (Lathyrus hirsutus L.) is an introduced cool-season legume from the Mediterranean region. The name Caley derives from early collections of this pea from land owned by Mr. Caley of Central Alabama. In the Southeastern United States, producers have utilized caley pea as a cattle forage as well as a cool-season cover crop in soil conservation systems. Caley pea is mostly grown on wet clays of the lower Mississippi Delta area and on calcareous clays of the Alabama and Mississippi Black Belt. Currently, there are no caley pea cultivars available and most commercial seed is a mixture of caley pea and hairy vetch.

In 1983, at the Soil Conservation Service's Plant Materials Center at Americus, Georgia, researchers planted caley pea seeds from 140 ecotypes collected from fields and roadsides in central and northern Alabama for conservation tillage evaluation, This collection was grown in Americus, Georgia, where it was screened for adaptation, growth, winterhardiness, reseeding ability, and seed production.

In 1992 and 1993, we conducted tests of 23 selected caley pea ecotypes in Georgia (Americus Plant Materials Center) and Alabama (Winfield, Belle Mina, Marion Junction, Tallassee, and Monroeville). The experimental design was a randomized complete block with four replications in each location, We applied fertilizers according to soil test recommendations

We harvested the plot8 individually when 75% of the plants were blooming. At that time, we measured flowering date, canopy height measured at three places in the plot, and biomass fresh and dry yields.

The five most promising lines from these tests formed the composite C_3 called 'AU Ground Cover'.

APPROVAL FOR RELEASE OF 'AU GROUND COVER' CALEY PEA

James B. Newman
Director, Ecological Science Division
United States Department of Agriculture
Soil conservation Service
Washington, D.C.

3-9-94
Date

Eddie V. Todd
State Conservationist
United States Department of Agriculture
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Auburn, Alabama

2-24-94
Date

Acting For Herbert R. Reed
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united States Department of Agriculture
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03-07-94
Date

Billy H. Thompkins
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3-2-94
Date

Lowell T. Frobish
Director
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Auburn, Alabama

January 19 1994
Date

RELEASE OF 'AU GROUND COVER' CALEY PEA

Introduction:

Scientific Name: *Lathyrus hirsutus* L.

Common Name: Caley Pea

Varietal Name: 'AU Ground Cover'

PI Number: PI-576132 a composite of 9052101, 9053012, 9054221, 9052102 and 9052088.

Origin:

9052101 seed collected 5/22/85 by Steven Rohrer in Lowndes Co., AL, Sec. 24, *Twn* 15N, R14E MLRA 133A, Savannah soil, 3% slope, N. exposure.

9053012 seed collected 6/7/85 by David Barrow in Montgomery Co., AL, Sac. 10, Twn 14N, R20E, MLRA 135, Sumter clay soil, 3% Slope, 'ME exposure.

9054221 seed collected 5/86 by Ken Rogers in Montgomery Co., AL, Sec. 23, Twn 14n, R20E, MLRA 135, Sumter clay soil on Co. Rd. 101, 1 Mi. S. of Mamie.

9052102 seed collected 5/24/85 by Ken Rogers in Montgomery Co., AL, Sec. 34, Twn 15N, R20E, MLRA 135, Sumter Clay soil, 1%slope, N exposure, 1/2 Mi. from west end of county 46.

9052088 seed collected 5/25/85 by Ken Rogers in Montgomery Co., At, Sec. 35, Twn 16N, R20E, MLRA 135, Sumter clay soil, along Marler Rd.

Composite from Americus PMC, Americus, Georgia.

Description: Detailed description coming from Dr. Mosjidis later. Seed yields at Americus, Georgia have been about 400 pound per acre when planted on rows 36" apart.

Method of Development: Direct seed increase of five lines that constitute the cultivar.

Superior Characteristics: It has a forage dry matter yield and maturity similar to commercial hairy vetch. No cultivars are commercially available for this species. Even commercial types are difficult to locate. When farmers are able to locate caley pea seed, they commonly find a mixture *of* vetch and caley pea.

Conservation Use: Primary use will be as a cool season cover crop in conservation tillage systems. Caley pea has also been utilized as a cattle forage.

Area of Adaptation: This cultivar is well adapted to Alabama and Georgia, Caley pea is mostly grown on wet clays of the lower Mississippi Delta area and on calcareous clays of the Alabama and Mississippi Black Belt, Further comparison testing will have to be done before the complete useful range *of* this cultivar is determined.

Disease and Insects: This cultivar does not have any particular resistance to disease or insects beyond those commonly found in the species,

Increase and Distribution: International Seeds Inc., and X-F Seeds are interested in securing rights on this cultivar.

Submitted by:

This recommendation for joint release *of* 'AU Ground cover' from USDA-SCS was prepared by Charles M. Owsley, Manager Americus Plant Materials Center, Malcome S. Kirkland, Assistant Manager Americus Plant Materials Center, and Donald Surrency, Plant Materials Specialist, Athens, Georgia.

Documentation was gathered by Dr. Jorge Mosjidis, Auburn University and Alabama Agriculture Experiment Stations, and the staff at Americus Plant Materials Center, USDA-SCS, Americus , Georgia.

Initial evaluation material was collected through efforts of Ken Rogers Agronomist, USDA-SCS, Auburn Alabama.

REGIONAL COMPARATIVE TESTING RESULTS

Conducted by Dr. Jorge Mosjidis, Auburn University Alabama Agricultural Experiment Stations and the staff of USDA-SCS, Americus Plant Material Center,

Introduction:

Selected lines 9052101, 9053012, 9054221, 9052102, and 9052088 were increased to produce seed from comparison testing. Also composite C1 (9052102, 9052088), composite C2 (9052101, 9053012) and composite C3 (9052101, 9053102, 9054221, 9052102 and 9052088) were formed as synthetic8 for comparison. Composite C_3 is called 'AU Ground Cover'.

This material was compared to commercial hairy vetch for forage yield and flowering date. Tests were conducted at Tallassee, Americus, Winfield, Belle Mina, Marion Junction and Monroeville in 1992 and 1993,

Materials and Methods:

The experimental design was a randomized complete block with four replications in each location. Plots were harvested individually when 75% *of* the plant8 were blooming.

Results and Discussion:

This cultivar has a forage dry matter yield and maturity similar to commercial hairy vetch. No cultivars are commercially available for this species.

PUBLICITY AND TECHNOLOGY TRANSFER ACTION PLAN

1. Brochure of 'AU Ground Cover' caley pea.
2. Article on 'AU Ground Cover' for popular publication.
3. Registration article for CSSA.

Reviewed by Diane Holcomb PAS 3/24/94
Diane Holcomb, Public Affairs Specialist, Athens, GA