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AGRICULTURAL EXPERIMENT STATION of The Alabama Polytechnic Institute, Auburn, Ala.

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CALEY PEA PRODUCTION AND USES IN ALABAMA

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The Caley pea (Lathyrus hirsutus) is an annual winter legume that germinates in the fall, makes most of its growth in the spring, and produces seed in May and June. The viny plant somewhat resembles vetch, and has reddish flowers. The hairy leaves and seed pods give the plant a silvery appearance.

The Caley pea produces seed abundantly and, if not grazed too closely, will produce seed for a volunteer crop each succeeding year. A high percentage of the seed are hard and for this reason a poor stand may be obtained the first year, unless the seed are scarified or unless sown at a heavy rate.

The name, Caley pea, is a local one given to this plant, because of the special interest of A. F. Caley whose farm adjoins the Black Belt Substation. The crop is known in some sections as wild winter pea and rough peavine, and in Louisiana as the Singletary pea. The scientific name is Lathyrus hirsutus.

Uses of Caley Peas

The Caley pea is used principally for supplementary grazing in late winter and early spring. It may also be used for hay and silage.

In a cropping system to support livestock production, the Caley pea is very desirable for several reasons: (1) it provides grazing at a critical period of the year -- late winter and early spring when feed supplies are usually short; (2) it stimulates growth of feed and forage crops grown in rotation or combination with it, such as Johnson grass, Dallis grass, and grain sorghum; (3) it reseeds itself from year to year; and (4) it does not require land breaking for planting.

As a green manure crop, the Caley pea is not as desirable as vetch or Austrian winter peas, because it produces vegetative growth too late for turning under previous to planting spring crops.

Adaptability of Crop

The Caley pea has been grown successfully on both lime and moderately acid soils of the Black Belt. It has been the experience of this Station that it will not grow on extremely acid land. The crop grows well on bottom lands that are not swampy but too wet for clovers and small grains.

The results from winter- and spring-grazed Caley peas in the Black Belt have been so encouraging that some farmers in other sections of the

State are giving the crop a trial. The Alabama Agricultural Experiment Station is testing Caley pea production on various other soils of the State.

Planting Caley Peas

Soil preparation. Caley peas prefer a very firm seedbed. Therefore, it is not necessary to break the soil, unless it is desired to level the land or to get rid of undesirable plants. In such a case, the breaking is done well in advance of planting time, in order to allow the soil to settle and form a firm seedbed.

Planting. The pea seed may be broadcast and disked in lightly or, if a disc drill is available, they may be drilled. In either method of planting, the seed should not be covered with more than an inch of soil.

Date of seeding. Seeding is done in September or October but preferably in September.

Rate of seeding. The lowest recommended rate of seeding is 40 pounds per acre.

Fertilizer. The fertilizer treatment consists of 200 to 400 pounds of superphosphate and 50 pounds of muriate of potash, or 400 to 800 pounds of basic slag and 50 pounds of muriate of potash per acre. If superphosphate is used, seed and fertilizers are broadcast separately and disked into the soil.

Lime. On extremely acid lands of the Black Belt, 1 to 3 tons of lime per acre are applied previous to planting Caley peas, the amount depending upon the degree of acidity of the soil.

Inoculation. Vetch inoculant should be used.

Management of the Crop

Caution about stands. It has been the experience of the Black Belt Substation that the stand usually is poor the first year, increasing to a satisfactory number of plants by the second year. For this reason, it is not advisable to grow Caley peas unless the crop is to be planted on areas where it can grow 2 or more years. If a good stand is needed the first year, a heavy rate of seeding (at least 80 pounds per acre of unscarified seed) may be used, but under favorable conditions satisfactory stands have been obtained from the minimum rate of 40 pounds of unscarified seed.

Grazing. Caley peas afford nutritious grazing in the winter and spring. Profitable returns from grazing have been made at the Black Belt Substation and on farms throughout the Black Belt.

On lime lands this crop is well suited to a rotation with Johnson grass, and it is suggested that it be planted in Johnson grass hay fields. Caley peas are not to be considered a substitute for permanent pastures, but rather a supplementary grazing crop.

On farms made up entirely of acid lands, early grazing may be obtained from one or more fenced fields planted to Caley peas and rotated with Dallis grass. However, such areas must be fenced, in order that the grazing may be controlled.

Caley peas should not be grazed too heavily the first year after planting. After the first year the peas may be grazed from fall until blooming begins in the spring. Caley peas are toxic to animals when the plants begin to bloom and make seed. Removing cattle about April 1 or when blooming begins, will eliminate the danger of poisoning, and permit the production of a seed crop, which is necessary to ensure a stand the following year. The seed should not be fed to animals as they are very toxic.

CAUTION. Caley peas under certain conditions may be poisonous to livestock. The toxic effect of the Caley pea has been associated very definitely with the stage of maturity of the plant. As the Caley pea reaches maturity and begins to bloom and form seed, a toxic effect on animals grazing the crop has been observed. At the Black Belt Substation, cattle have been grazed on Caley peas during this stage for three successive years. In 1 out of 3 years, the animals became stiff, but none died. All recovered within 30 days and appeared to be normal.

In the animal nutrition laboratories at the Main Station, Auburn, chickens and hogs have been found to be particularly sensitive to the toxic action. It is considered hazardous to feed a mixture of threshed oats and Caley pea seed to any kind of livestock.

Seed production. The farmer should set aside an area from which to harvest seed. Caley peas produce good yields of seed, often 600 pounds or more per acre. The seed may be harvested by (1) combining the mature plants or (2) mowing, curing in windrows, and threshing from the windrows. Since the seed shatter very easily, the crop is windrowed and is threshed as quickly as possible after cutting.

Additional Suggestions for Areas Outside the Black Belt

It is suggested that farmers who are interested in trying this crop, especially farmers in the carpet-grass areas, apply lime, phosphate, and potash, and then control the grazing of the crop.

