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CIL-57

# Current Information Letter

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AGRICULTURAL EXTENSION DIVISION—PAUL E. MILLER, DIRECTOR

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April 14, 1943

UNIVERSITY FARM  
ST. PAUL, MINNESOTA

No. 00057

FILE UNDER: FARM CROPS - Field Pea

THE FIELD PEA

UNIVERSITY OF MINNESOTA  
DOCUMENTS

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Why has an increased acreage for the production of dry field peas been requested by the United States Department of Agriculture in 1943?

The Secretary of Agriculture has established a goal of 725,000 acres for dry field pea production in the United States in 1943. This is an increase of 60,000 acres over the goal set for 1942.

More high protein, easily digested food in concentrated form is needed to partially replace meat in human rations. Field pea seed provides that kind of food.

In what forms are peas marketed for human consumption?

Most of the field peas are marketed in the form of split peas.

In preparing field peas for the retail trade, the less easily digested seed coats are removed from the seeds and discarded. In this operation the cotyledons are separated.

Are there any other uses besides human food production for which field peas may be grown to advantage?

Field peas mixed with oats make a good emergency hay crop, and mixed with oats and rape provide an excellent crop for hogging off.

Will it pay farmers to grow field peas for seed production in 1943?

A guaranteed price of \$5.50 per hundred weight for U. S. No. 1 and \$5.25 for U. S. No. 2 Grade seed in new sacks f.o.b. car lots at country shipping points has been established for the 1943 crop. As a further incentive, \$15 per acre has been offered for all acres above 90 to and including 110 per cent of the individual farm goal. These prices and incentive payments have been offered on seed of the following varieties: White Canada, Marrowfat, Alaska, Scotch Green and First and Best.

What is an average yield per acre of field pea seed and how does the cost of production per acre compare with that of barley or oats?

On good corn land, adapted pea varieties will average 20 to 25 bushels per acre or more weighing 60 pounds per bushel. Where seed for planting must be purchased, the cost per acre this spring will be around \$8. This is about double the purchase price of oat seed per acre. Other costs of producing oats and peas up to harvest time will be similar. Harvesting costs per acre for field peas should be no higher than for oats if combined. If peas are cut and threshed in unfavorable weather, the cost per acre will exceed that for oats.

From what sources can field pea seed be obtained by farmers who plan to grow this crop in 1943?

Only a small acreage of field peas has been grown each year in Minnesota. The seed has been sold largely to dealers and the peas have been processed and distributed as split peas to the grocery trade. For an expanded acreage in 1943 it will be necessary to obtain to a large extent seed produced in Wisconsin, Michigan, Washington, Idaho or the Canadian provinces. In these areas, most of the available seed is usually handled through Crop Improvement Associations or seed houses.

What varieties of field peas are suitable for growing in Minnesota?

The recommended varieties for Minnesota are Chancellor and Chang. Chancellor has small yellow pure cream yellow seeds. The seeds of Chang are medium in size, yellow with black hilums. These two varieties are high yielding selections from what is generally known as the Canadian yellow or Canadian white field pea. They will qualify as Canadian white peas. Both are early maturing. Canadian white or yellow varies in seed size from small to medium and in maturity from early to medium. In Wisconsin selections from Canadian white go under the name of "Multipliers." Scotch Green, a late maturing variety with medium size green seeds, is grown fairly extensively in Wisconsin. The bright green cotyledons of the seed of this variety make a particularly attractive split pea product. Alaska is an early maturity variety with bluish green seeds of medium size. It is grown extensively in Minnesota and Wisconsin as an early canning pea. Canadian Beauty and Marrowfat have large yellow seeds. These varieties are tall growing and late maturing. Austrian winter is a medium maturing variety with small seeds having purple flowers, gray seed coats speckled purple and yellow cotyledons.

What is the rate of seeding per acre of field peas?

For peas drilled solid like grain, the following rates of seeding per acre have been found satisfactory: Small seeded varieties, 100 lbs.; medium size seed, 120 lbs.; large seeded varieties 160 to 180 lbs. For peas drilled in rows 24 to 36 inches apart, one-half the above rates. For mixed pea and oat crops grown for hay silage, or hogging off, 60 pounds peas and 32 to 48 pounds of oats are the amounts recommended. The peas and oats are mixed before drilling. Broadcasting a pound or two of rape seed per acre after the peas and oats have been drilled provides a greater variety of feed for the pigs.

What kind of soil is suitable for growing field peas?

Any well drained soil that will produce good yields per acre of grains and corn will prove satisfactory for growing field peas. Peas do not produce good yields on light sandy soil.

What is the place of field peas in rotations followed on Minnesota farms?

In the rotation (1) grain, (2) clover, (3) corn, (4) grain, part or all of the field usually sown to grain following corn might well be seeded to peas.

What fertilizers are needed for field peas in this state?

Barnyard manure should be applied to the corn preceding the peas in the rotation. This holds for phosphate also where it is needed. It is not necessary to apply lime in preparing the land for peas. Use of commercial inoculation on the seed although not absolutely necessary assures the presence or abundance of the desired bacteria.

Is fall or spring plowing best in preparing the seedbed for peas?

Fall plowing provides a firm seedbed for sowing the peas very early in spring. Prior to seeding, the soil should be stirred deep enough so that the seed can be drilled at the proper depth. The surface should be left very smooth so crop can be cut very close to the ground.

At what time in spring should peas be sown?

Pea seed germinates at relatively low temperatures and the young plants stand frosts as well as the seedlings of wheat and oats. Sowing as early in spring as the ground can be worked to advantage is very important.

How deep should field pea seed be planted?

Two inches in heavy soils and three inches in lighter soils are the desirable depths at which to plant. The grain drill is used for planting the seed whether it is drilled solid or sown in 24-36 inch rows.

How is the field pea crop handled for seed production?

As soon as the pods have turned yellow, the crop has usually been cut with the mower equipped with special guards and a windrow attachment. A good job of cutting can be done without the extra attachment provided the swath is forked over by hand out of the way of the mowing machine.

The peas are dried in the swath and threshed with the ordinary threshing machine. The concaves should be removed and the speed of the cylinder slowed down to about 400 revolutions per minute. The other parts of the thresher should be run at the usual speed.

In recent years, the Austrian field pea crop grown in eastern North Dakota has been harvested with the combine.

What value has the field pea-oat rape mixture for hogging off?

Field peas mixed with oats and rape provide high protein feed for pigs during a period of the year when other feed is usually scarce. On good corn land in Minnesota, an acre of the mixed crop will ordinarily provide feed during August and part of September for 7-9 pigs weighing around 80 pounds each at turning in time. Pigs usually gain from a pound to a pound and a half daily grazing on the mixed crop. The pigs should be removed from the field as soon as they cease to make good gains. Other hogs should be turned in to utilize the remainder of the crop. When seed is not too expensive, hogging off this mixture provides relatively cheap feed since there is no harvesting cost for the crop.

Is the field pea a satisfactory green manure crop?

In Minnesota sweet clover and rye are more economical green manure crops than field peas, largely due to lower cost of seed. In the Red River Valley mainly on the Dakota side, a considerable acreage of Austrian Winter peas is grown each year for seed to ship to the southern states. In the southern states the pea crop is sown in the fall and is plowed down in the spring in preparing the land for corn or cotton.

Are there any diseases or insect pests that make the growing of the pea crop difficult?

Powdery mildew, a disease causing a white coating on the plants, occasionally may cause some damage mainly to late planted peas.

Aphids or pea lice are usually present every year to some extent. The aphids overwinter in the egg stage in alfalfa and clover fields. In late spring winged forms develop, fly to pea fields and lay their eggs. They can multiply very rapidly and may cause considerable damage in dry, hot seasons. They may be controlled by thorough dusting before damage occurs with a rotenone dust bearing 0.75% rotenone. A dust containing 0.375% rotenone and 1.7% nicotine alkaloid has been used successfully. The dust should be applied at the rate of 40 lbs. per acre. Damage to the seed by the pea weevil may be avoided by planting seed known to be free from this pest. If seed grown on the farm is infested with weevil, fumigation with a standard liquid grain fumigant following directions on the package will kill the insects. The fumigant usually may be obtained from the local elevator or druggist.

Additional Sources of Information

1. "Culture and Pests of Field Peas" by Roland McKee and N. A. Schoth. Farmers' Bulletin 1803. 1938. Supt. of Documents, Washington, D. C. Price 5 cents.
2. "Growing Field Peas" by E. J. Delwiche and J. H. Lilly. Bulletin 457. 1942. Wisconsin Agricultural Experiment Station, Madison, Wisconsin.