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H.C. Rather, Farm Crops
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GROWING ALFALFA SEED IN MICHIGAN

H. C. Rather,

Extension Specialist in Farm Crops

Can Michigan Farmers Grow Alfalfa Seed?

Old timers used to tell us that alfalfa could not be grown dependably in Michigan. In the light of experiences ten and fifteen years ago, when it was the usual thing to plant seed of unknown origin, which all too frequently lack hardiness, the conclusion that alfalfa was not a safe crop was doubtless justified.



Successful alfalfa seed growers in Michigan learn to determine whether or not a crop will make seed by carefully watching the bloom.

But today alfalfa is the Michigan farmer's most dependable legume. The right kind of seed and the right cultural practices have combined to make the farmers of this state the leading growers of alfalfa in the eastern half of the country.

Nearly all Michigan alfalfa has been grown from seed produced outside the state. Occasionally there has been a farmer who grew his own alfalfa seed, but there has always been a general feeling that this was not a profitable practice in Michigan, a feeling parallel to that concerning the independability of alfalfa for hay a few years earlier.

It seems likely that the belief that alfalfa seed production is unsatisfactory in Michigan may also be dispelled soon. In every section of the state, farmers are beginning to attain success with this venture. In the past three years, alfalfa grown on the heavy soils of the Thumb District has given many yields of four to six bushels of seed per acre.

**Many Profitable
Seed Yields
Reported**

A Deckerville grower reported producing 110 bushels of Grimm Alfalfa seed on twenty acres in 1926. This seed was sold at \$20 per bushel. The alfalfa straw was baled after threshing and sold for \$10 a ton, clear of the press, bringing a total income of \$2500 from the twenty acres. Probably close to 1,000 bushels of alfalfa seed were produced in this one locality the same season.

A farmer near Pigeon secured seven bushels of alfalfa seed per acre in 1925 and 1926. One near Mount Pleasant reported a yield of eight bushels. Several Cheboygan County growers have secured yields of more than four bushels per acre. The same is known to be true of growers near Big Rapids, St. Clair and other points widely scattered over the state. All of these yields have been well above two bushels per acre, a profitable crop.

The performance of fields left for seed has been so consistent that it offers a well founded hope that Michigan may soon produce her own alfalfa seed and this new industry may prove a valuable addition to the business of the grower who is already producing enough alfalfa hay to feed all of his livestock.

**Best on Soil
High in Mineral
Plant Food**

The farmers who have been producing the best yields of alfalfa seed in Michigan have done so on heavy soils naturally supplied with lime and apparently high in mineral plant food. Such soil is characteristic of the seed fields in Monroe County and the entire Thumb District and has in practically every instance been the type on which the big yields of five to eight bushels of seed per acre have been made in every section of the state.

The grower whose land is sandy loam need not be discouraged from seed production. Some good yields have been obtained on such soil, when it has been properly limed and fertilized.

**Use Clean
Stands
For Seed**

If alfalfa seed produced in this state is to win a desirable reputation, it must come from clean stands. It seems likely that this can best be accomplished by thoroughly preparing the seed bed and making the seeding just as though the crop is to be handled for hay.* Frequently it will be advisable to harvest the crop for hay in its first season of production as this practice tends to eliminate weeds. Then, too, the stand is old enough in its third season to permit of vigorous cultivation with the spring tooth harrow or modifications of this implement, so as to leave a thoroughly clean stand of pure alfalfa. Field experience has also indicated that the older stands are more apt to produce satisfactory seed yields.

Watch the Bloom

A careful study of the bloom seems to be the most satisfactory answer to the question of which cutting shall be saved for seed. During 1925 and 1926, the first cuttings were the successful seed producers. In certain other years, weather conditions favored the second. Dry weather during the time when the blossoms are tripping is apparently favorable to seed production, while wet muggy weather is likely to prove fatal to the seed crop.

*For information on securing successful alfalfa stands, see Michigan State College Extension Circular No. 23, entitled "More Alfalfa for Michigan."

The grower who looks forward to profitable seed production might well follow this step by step procedure:—

1. If the weather is reasonably clear and dry when the first cutting begins to bloom, let it come to full bloom.
2. At this time, examine the blossoms carefully to see whether they are forming seed pods or burrs or whether they are falling off. If more than half the blossoms harden into seed pods, the crop is likely to produce a satisfactory seed crop. Unpollinated flowers drop off and leave the little bare stem on which they were carried. This is called stripping. When stripping is prevalent, the crop should be cut for hay and it will still make very desirable forage, though the quality will not be as good as that of hay cut in earlier bloom.
3. With unfavorable, muggy, wet weather, prevailing throughout the blossoming period, experience has shown a seed crop to be unlikely. If such weather occurs during the first blossoming period, cut the alfalfa when it is in best condition for good hay and try for seed on the second crop.

In northern Michigan, it seems likely that nearly all the successful seed yields will have to come from the first cutting, since the second is often unlikely to mature seed before frosts, especially when the first hay cutting is late.

Acid Phosphate Helps Seed Yields An application of acid phosphate and, on certain soils, potash will increase seed yields. The Soils Department of the Michigan State College reported substantial increases in the seed yields where acid phosphate was applied on alfalfa seed plots and found potash also desirable on the lighter soils. Nitrogen fertilizers used in the same experiment reacted unfavorably to seed production, tending to prolong the forage growth.

A desirable practice is to use 250 pounds per acre of 20 per cent acid phosphate or the same rate of 0-12-6, when the alfalfa is sown. If the crop is cultivated two or three years later, 200 pounds per acre of the same fertilizer may be worked in.

It is presupposed that proper attention will have been given to soil acidity and sufficient quantities of lime or marl applied when these have been needed to secure the best possible growth and thrift of the alfalfa whether it is to be used for seed or hay.

Harvest When Two Thirds of the Pods Are Brown Alfalfa seed is ready for harvest when two-thirds of the pods are brown. Most farmers cut it with a mower. It is advantageous to have a buncher attachment to the mower bar, such as is used in harvesting peas.

We know of at least one farmer who uses a binder and likes it very much. Others have been pleased with the way an old fashioned self-rake reaper works on the seed crop.

The clover huller, thoroughly cleaned to prevent mixture, does a good job of hulling, or seed may be threshed with a grain thresher when the right concaves, known to all expert threshermen, are used.

Hardigan Is Best Seed Yielder Hardigan* alfalfa was developed by the late F. A. Spragg, for many years plant breeder at the Michigan State College. His selections were made with the intent of getting the best possible seed producing strain of alfalfa. In doing this, he maintained excellent forage production, and six years of trials under Professor C. R. Megee at the Michigan Experiment Station have clearly demonstrated Hardigan to be fully equal if not somewhat superior to the Grimm or any other of our leading varieties in winter hardiness and hay yielding ability.

E. E. Down, Michigan State College Plant Breeder, has had Hardigan Alfalfa under observation for eleven years, ever since it was included in the alfalfa nursery at the Michigan Experiment Station. Professor Down believes that Hardigan just about doubles the Michigan farmer's seed producing opportunities as compared with other varieties. His belief is substantiated by trials in the west where Hardigan has consistently more than doubled the seed yield of other varieties of alfalfa compared with it.

Sow Six Pounds of Hardigan Per Acre Hardigan Alfalfa at present is being sown almost entirely by those who contemplate seed production. With this in mind, six pounds per acre of this seed is ample. The slightly thinner stands sacrifice practically nothing in the way of forage yield, make valuable seed go much further and are believed to be more favorable to a heavy setting of seed.

Have Your Seed Certified Hardigan Alfalfa was introduced by the Farm Crops Department of the Michigan State College and seed is being produced under the inspection and certification of the Michigan Crop Improvement Association. This organization of growers, working under the supervision of the Farm Crops Department, is increasing the seed of this new and valuable variety so that it may quickly be made available to the agriculture of Michigan without having its purity or value diminished in any way.

The Michigan Crop Improvement Association also maintains certification for Grimm Alfalfa of definite pedigree, and, by means of field inspection at blossom time, it is inaugurating inspection and certification for other alfalfa seed grown in this state. Seed from fields with typical variegated blossoms, the pedigree of which does not clearly establish its variety, is to be certified as Michigan Variegated Alfalfa.

Michigan common of verified origin also has more than average merit and warrants the special favor which such verification will give it.

Every grower contemplating alfalfa seed production in Michigan should write to the Secretary of the Michigan Crop Improvement Association, East Lansing, Michigan, for particulars on inspection and certification.

*(Hard)y Mich(igan)

Michigan State College

Extension Division

R. J. Baldwin, Director, East Lansing

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