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MORE ALFALFA FOR MICHIGAN

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Michigan grows nearly three million acres of hay, which, during the past ten years, has given an average yield of 1.3 tons per acre. In 1923 Michigan farmers harvested nearly one-half million acres of alfalfa which yielded an average of 2.3 tons, an increase of a ton per acre over the average yield of all other hay crops.



Michigan farmers are turning to alfalfa as a means of establishing a more permanent and profitable agriculture.

The Federal census shows that in 1919 there were only 74,000 acres of alfalfa in Michigan. The phenomenal acreage increase in the past four years shows a widespread interest on the part of Michigan farmers in the value of this crop, as well as a more thorough understanding of the best cultural practices.

If two-thirds of the present hay acreage in Michigan were seeded to alfalfa, this acreage would produce just as much hay as is being produced in the entire state today, and the hay would be vastly superior in its feeding value.

Michigan Agricultural College

Extension Division

R. J. Baldwin, Director, East Lansing

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Michigan Agricultural College and U. S. Department of Agriculture cooperating.

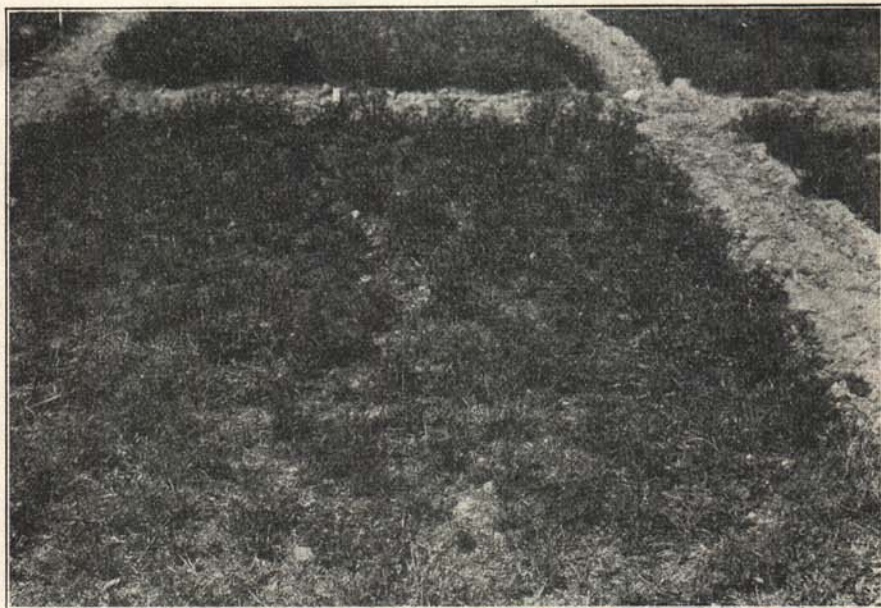
Not all Michigan lands are suited to alfalfa growing, but it would seem, with the beneficial influence which alfalfa exerts on more economical livestock, dairy and crop production, and with the location of this state favorable to a fuller development of these industries, that ordinary hay and forage crops might well be supplanted with alfalfa seedings to such an extent that Michigan would be growing from one and one-half to two million acres.

WHY GROW ALFALFA?

The average yield of alfalfa hay is fully one ton per acre more than that of any other hay crop. Yields of from four to six tons per acre of this splendid forage are frequently secured.

The deep feeding roots of alfalfa enable it to draw plant food and moisture from depths of soil untouched by other crops. Its drought resistance and summer hardihood are due to this failure.

Alfalfa is a legume. Bacteria working on its roots take free nitrogen from the air and convert it into nitrates available for plant food. It is the cheapest



Too frequently farmers purchase "Just Alfalfa" seed. This plot from southern grown seed is representative of a large portion of alfalfa stands from seed of unknown origin. It was grown on Farm Crops Experimental Plats, Michigan Agricultural College, under the same conditions as was the Hardigan shown on the opposite page.

source of nitrogen, and this, along with the organic matter which alfalfa leaves in the soil, makes for a better and more economical production of the crops which follow.

Alfalfa is also the cheapest source of protein roughage for livestock. When alfalfa is fed instead of timothy in the dairy ration, only one-half as much of the expensive concentrates need be fed to maintain the same production.

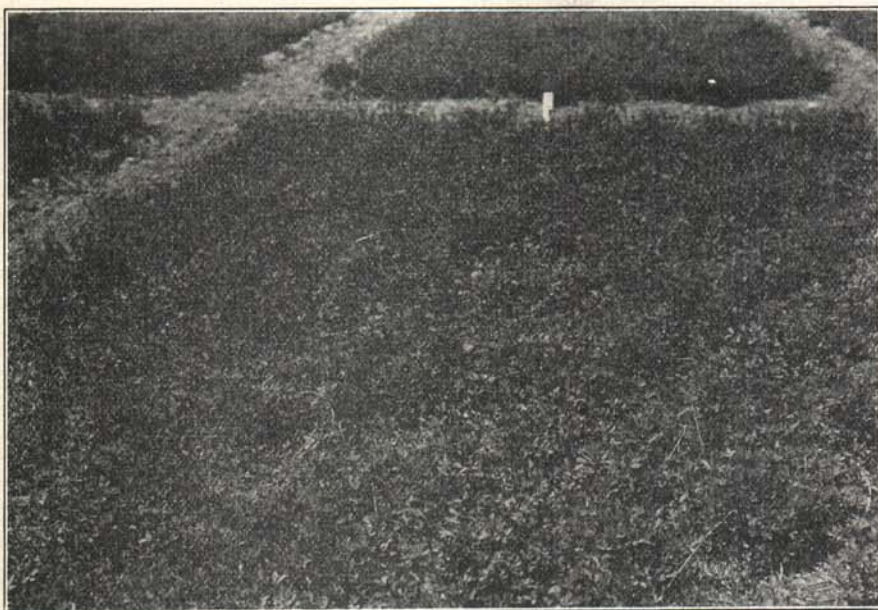
According to the experience of the Animal Husbandry Department of the

Michigan Agricultural College, alfalfa hay is the equal of clover hay of the same quality for steer or lamb feeding, with the advantage that it furnishes more protein and thus reduces the amount of protein supplement which must be supplied when feeding corn.

Alfalfa is decidedly more acceptable to swine than clover and can be used to supply the protein necessary to supplement corn, rye, or barley for wintering brood sows, where mixed hay from timothy and other grasses is useless. Alfalfa pasture for swine is unexcelled, and, being drought resistant, it furnishes succulent feed throughout the summer. Alfalfa hay is excellent for horses, when properly fed.

HOW TO GROW ALFALFA

A summary of Michigan farm experience teaches us that alfalfa should be planted only on deep, well drained soils. Poorly drained lands should be tilled before being seeded to alfalfa. Until this can be done sweet clover or alsike will thrive better on the wetter lands.



Dependable seed is essential to alfalfa success. This plot of Hardigan, grown on Farm Crops Experimental Plats, Michigan Agricultural College, represents the kind of stands which can be maintained with northern grown seed of known origin.

A firm, well packed seed bed is essential to getting a successful stand. The seed should be planted at a depth of from one-half to three-quarters of an inch. When planted at a depth of one to two inches or more, unsatisfactory stands result.

Spring seedings made with wheat, rye, or light seedings of oats or barley are desirable on land of good fertility, favorable to alfalfa growing. Summer seedings with alfalfa alone on a thoroughly cleaned seed bed are more satis-

factory where the soil is light or droughty, or where conditions are less favorable. Seedings later than August 20th are not dependable, because the alfalfa may not get sufficient growth to withstand the winter.

Lime is essential to alfalfa success. The Soils Department of the Michigan Agricultural College will test soil for its lime requirement. Samples should come from various parts of the field, both surface and sub-soil, and may be sent in in small tin boxes. Sour soils are deficient in lime and need on the average an application of **two tons of finely ground limestone per acre**, or the equivalent in some other form of lime.

The following applications are equivalent to two tons of finely ground limestone:

Three to five wagon loads of marl.

Four to seven wagon loads refuse lime from sugar factories.

One and one-half tons hydrated lime.

Inoculate alfalfa seed with fresh pure culture, this insuring the presence of the nitrogen-fixing bacteria. This may be secured from the Department of Bacteriology, Michigan Agricultural College, East Lansing, at 25 cents per bottle. One bottle is sufficient for a bushel of seed. Care should be used to keep the culture out of direct sunlight and to get the seed covered immediately to avoid injury to the bacteria.

Northern grown seed insures hardiness. Seed from warmer climates winter kills readily and causes alfalfa failures.

Grimm is an exceptionally hardy strain of alfalfa suited to the north. It has variegated blossoms, a low-set spreading crown, and a deep and somewhat branching root system. Its hardiness and productivity make for long-enduring and profitable fields of alfalfa.

Many Michigan farmers have been successful in the production of alfalfa seed, and the supply thus made available is well adapted for use on Michigan farms.

Hardigan is a new winter-hardy variety developed by the Michigan Agricultural College to further this development of a Michigan alfalfa seed industry. In type it is similar to Grimm, and it ranks with Grimm in the abundant production of forage. It has proved to be the state's most dependable seed producer, and farmers who secure sufficient forage from the first cutting and desire to use the second for seed will do well to give Hardigan a trial. Seed is now being produced under inspection by the Michigan Crop Improvement Association.

Next in desirability to Grimm and Hardigan is the LeBeau alfalfa, Michigan grown seed of which is available in quantity. This variety has a history of nearly 40 years of successful production in Monroe County and now seeds an important acreage throughout the state. Northern grown common alfalfa is also giving good results, but it is not as reliable as the Grimm, Hardigan or LeBeau varieties.

In any event seed used in Michigan should be northern grown. It should be purchased from sources of utmost reliability where the origin and history of each lot is known, thus avoiding the payment of unduly high prices for seed of inferior hardiness and productivity.

Eight to twelve pounds per acre with Grimm or Hardigan, and **twelve to fifteen pounds** of northern grown common should prove a sufficient rate of seeding.

The **spring tooth harrow** used early in the spring or immediately after the first cutting will materially retard June grass and rejuvenate old stands.

Alfalfa hay is ready to cut when the new shoots show at the crown.

The best quality of hay is obtained by allowing the alfalfa to wilt in the swath, then curing it in windrows or cocks.