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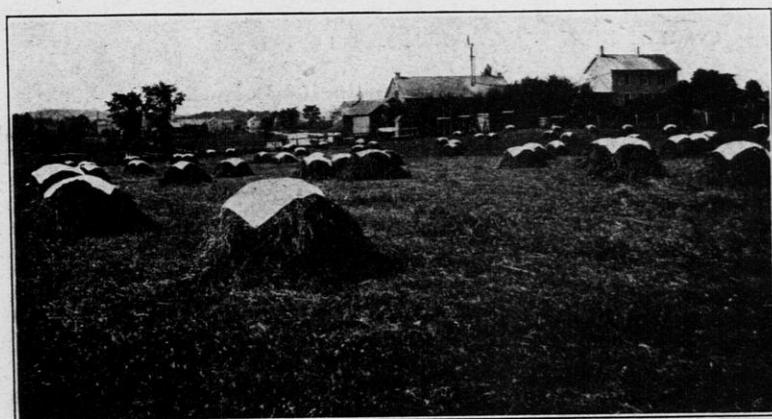
WISCONSIN BANKERS' FARM BULLETIN

"ALFALFA FOR WISCONSIN"

R. A. MOORE

OF THE

UNIVERSITY OF WISCONSIN COLLEGE OF
AGRICULTURE



COVERING ALFALFA UNDER CAPS IN MANITOWOC
COUNTY, WISCONSIN

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WISCONSIN

Alfalfa For Wisconsin

Alfalfa can truly be called the queen of forage plants. No other forage combines so many essentials of merit as alfalfa. No other plant has carried with it more gratification to the dairy farmer, nor fills such a long felt want. No forage plant is more readily relished by farm animals or exercises a more beneficial effect upon the soil.

Alfalfa belongs to the legume family, to which the common red clover belongs. Like other members of the family, it is able to use the free nitrogen of the air to build up plant tissue, through the activities of certain bacteria which inhabit nodules upon the roots. However, it is able to use the nitrogen of the air only when these bacteria are present.

The readiness with which alfalfa is able to take up this atmospheric nitrogen accounts for its high protein content. Well cured alfalfa hay has a digestible protein content of 11%. This large amount of digestible protein makes it rank closely with our grain feeds.

COMPARISON OF GRAIN FEEDS WITH ALFALFA HAY.

Digestible Nutrients in 100 Pounds.

Feeds.	Pounds Protein.	Pounds Carbohydrates.	Pounds Fat.
Alfalfa hay	11.7	40.9	1.0
Wheat bran (spring)	11.9	42.0	2.5
Kernel corn	7.8	66.8	1.0
Corn meal	6.7	64.3	4.3
Oats	10.7	50.3	3.5
Barley	8.4	65.3	1.6
Wheat	8.8	67.5	1.5
Buckwheat	8.1	48.2	3.8

Alfalfa is capable of yielding three times as much total protein per acre as clover, nine times as much protein as timothy, and twelve times as much protein as brome grass.

At \$20 a ton for the hay, good alfalfa will yield forage valued at \$100 an acre. Land that will grow alfalfa is readily worth \$200 an acre. As alfalfa is a perennial plant, if established under the proper environments, it will continue to grow and give three or four cuttings a year for many years.

Selection of the Field. Caution should be exercised as to the location of the field. Alfalfa can be grown on a wide variation of soils yet on its first trial on a farm, it is best to sow on high, well drained land. A rich clay loam on top of gravel or limestone is the ideal location, but it will grow on all types of soil, varying from a heavy clay to a medium sandy loam if other conditions are favorable. A gentle slope should be selected. On level land, water will gather on the surface from rains or melting snow, and if freezing weather follows, ice will form and smother the plants.

Correcting Acid Soils for Alfalfa. The natural home for alfalfa is on limestone soils or soils that have a goodly supply of carbonate of lime in

them. No matter how favorable other conditions may be, if the soil is sour and gives a strong acid reaction, it will be necessary to sweeten the soil to some extent before it will be possible to get the best results.

Acidity can be corrected either through the application of pulverized lime rock (limestone) or dry marl, or by the use of slaked lime. Pulverized raw limestone or dry marl should be scattered over the field at the rate of one to four tons per acre.

The beginner should sow only a small acreage of alfalfa until he has studied the conditions of the farm in relation to this crop. One or two acres is sufficient to start with. Land that has been in young sod the previous year, and then run to potatoes, corn, peas, or some root crop where clean culture was practiced, is most suitable. This should be fall plowed 7 or 8 inches deep so as to have a deep, mellow seed bed.

Sowing Without a Nurse Crop. In the early spring, run the disc over the land and then follow with a fine tooth harrow at weekly intervals until about June 1, so the weeds will sprout and be killed. The alfalfa seed is then sown without any nurse crop, using 20 pounds of seed per acre. If conditions are favorable and seed is sown during the month of June, one cutting of alfalfa hay may be secured the same season. If sown during July we usually get a good stand for winter protection. Sufficient growth will be secured before freezing weather to protect the plant through winter. The seed can be sown with a hand seeder or a grass seeder attachment to good advantage. A slant tooth harrow should be run over the land once after seeding, to cover lightly. Land plowed in spring for alfalfa should be dragged as soon as plowed to prevent drying out, and planker or roller should be run over the land before and after seeding.

Sowing with a Nurse Crop. Where the conditions are extremely favorable or where alfalfa has been grown successfully, alfalfa seed can be sown with a nurse crop of oats, wheat or barley, at the usual time of putting in grains. The nurse crop assists in holding weeds in check so that the alfalfa gets possession of the ground before the weeds come up to smother the tiny plants. If there is sufficient moisture in the ground the nurse crop can be left to ripen and be harvested in the usual manner. Barley is preferred on rich soils and, in barley sections, is considered the best nurse crop to use. Only one-half the usual amount of seed grain is used when seeding with alfalfa. Land that has been summer fallowed the latter part of the season can be seeded down to alfalfa with a nurse crop in early spring. While best results have been obtained at the Station Farm in seeding without a nurse crop, yet, where conditions were favorable very good stands have been secured by using a light nurse crop.

Soil Inoculation. Alfalfa requires certain bacteria to act in conjunction with the plant for the successful growing of good crops. In some sections of the state the ground is sufficiently supplied with the alfalfa bacteria, but there are localities where they are present in so limited a number that it seems impossible to get a good catch of alfalfa that will survive the first winter.

Sweet clover is one of the alfalfa bacteria distributors. When a farmer is in doubt as to whether his land contains the proper bacteria, he can successfully inoculate his fields by scattering on them, soil from an old alfalfa field, or soil on which sweet clover has grown. Alfalfa responds readily to these methods of inoculation. If the infected soil is mixed with the alfalfa seed and then sown a small amount of soil will inoculate a considerable area.

Commercial cultures of organisms are advertised for inoculating alfalfa seed. The experiments carried on at the station during the past eight years with these cultures show so much uncertainty that alfalfa growers would not seem justified in expending money for such cultures. Experiments indicate that much more certain results can be obtained by the use of infected soil.

Harvesting and Curing Alfalfa. Where alfalfa is sown with a nurse crop, no hay crop can be expected the first season except under the most favorable conditions. In no event should the alfalfa be cut or clipped after September 5. The year following seeding, three good crops may be expected. The first crop will be ready for cutting early in June, a trying time for curing alfalfa. Cut when the alfalfa is in advanced bud and a few plants in blossom.

In the afternoon of the same day of cutting, if weather has been favorable, the alfalfa can be raked and put into small cocks. The cocks should not be left standing in the field more than two or three days during wet weather without moving, or the alfalfa plants underneath the cocks will be smothered. If alfalfa is exceedingly green when cocked, or rainy weather sets in, it will heat unless the cocks are opened every day or two. In favorable weather no more difficulty will be experienced in curing alfalfa than in curing heavy growths of clover. Alfalfa leaves drop off readily when dry. As the leaves are richest in nitrogen the aim of the farmer should be to cure the alfalfa with the least possible handling.

A much better quality of hay will be secured if the crop is cured under hay caps than in open cocks or windrows, as dew and sunshine hurt alfalfa hay.

CAUTION.

A word of caution is not out of place at this time. Alfalfa thrives best on old, well subdued soil and farmers should hesitate about sowing the crop on newly cleared land. Farmers should remember that on the new unsubdued soils common red clover is much easier and more certain to establish than alfalfa. All farmers who seed down to clover or grass should mix from a pint to a quart of alfalfa seed per acre with their regular seeding. This practice will enable a few plants to become established throughout the farm as bacteria distributors, so in later years when these particular fields are plowed the ground will be amply supplied with the proper bacteria for the successful growing of alfalfa.

There seems to be a tendency of many to over-emphasize the growing of alfalfa. It is far better for the farmer to start with an acre or two and study the soil conditions of his farm and the habits of the plant rather than to sow a large acreage of a crop he has not studied. The most successful alfalfa growers of the state started in a modest way and gradually increased their acreage. On many farms, until the proper conditions obtain, our clovers are more certain of giving a successful crop than is alfalfa. GO SLOW.

ALFALFA DON'TS.

- Don't sow on poorly drained land.
- Don't sow on poor soil unless manured heavily.
- Don't sow on sour land. Use three or more tons lime per acre to sweeten it.
- Don't sow on weedy land.
- Don't forget to put seed bed in good condition.
- Don't sow a large acreage until you have learned how to grow the crop.
- Don't fail to inoculate your soil.
- Don't lose the leaves; they are the best part of the crop.
- Don't give up—keep trying.