

### Seventeen Years Alfalfa Experience.

Abstract of an address by Prof. R. A. Moore, Wisconsin Experiment Station, at the Ontario Corn-growers' Convention, Windsor, 1918.

Fourteen years ago we had not fourteen acres of alfalfa in the State of Wisconsin and had not fourteen men who believed it could be successfully grown there. Ex-Governor W. D. Hoard was the only man raising it successfully. We have now been working seventeen years on alfalfa at the Wisconsin Station, and there are at present no less than fifty thousand acres in the State. For one experiment alone we sent out last year nineteen tons of seed, and are now planning to send out forty tons.

From the average of many years' experiments conducted at the Station, we find that an acre of alfalfa yields us three times as much protein as an acre of clover, nine times as much as an acre of timothy, and twelve times as much as an acre of brome grass. The alfalfa produces four cuttings per annum, the clover two, and the grasses one each. When land is worth \$100 or \$160 an acre, we can't afford to fool around on a quarter of a forty-acre lot growing as much protein for our dairy herds as can be grown on one acre under alfalfa.

Alfalfa, by means of the bacteria working up on its roots, enables us to use the free nitrogen of the air, building it up into valuable proteid compounds to take the place of expensive cottonseed meal and other concentrates which our Wisconsin dairymen have been teaming home to balance the rations for their dairy herds. Some experts have figured out that we have been removing nitrogen from the soil at such a rate that in fifty or seventy-five years we would have this continent so poor we couldn't live on it. But we have been farming only the top foot of the soil. Let us, by sending down alfalfa roots, farm the twentieth, twenty-fifth and twenty-sixth foot of our land. If you were to turn the roots of an old alfalfa field upside down, you would have a forest so dense you couldn't get through it. Many of our experimenters are getting six to six and a half tons per acre from four cuttings.

Don't think you're going to jump into this alfalfa game all at once. As a rule, the man who makes the best success with alfalfa is the one who starts four or five years before he expects to grow very much. It is a good plan to put a quart of alfalfa seed into every bushel of the clover and grass seed mixture as a method of inoculating the whole farm with bacteria. A common mistake made by beginners in seeding alfalfa is to shift the crop around from one field to another. The opposite plan should be followed. When you sow a field to alfalfa and it turns yellow the first summer, weakens and partly dies out, break it and put alfalfa right back on that same piece of land. Assuming that the field was well chosen in the first place, your second attempt will have better chances of success right there than on another field, because the land will have been inoculated by the first seeding.

In Wisconsin we have been sending out sacks of soil from the Experiment Station sufficient to inoculate eight or ten square rods of land, and these areas afterwards supply soil for inoculating fields.

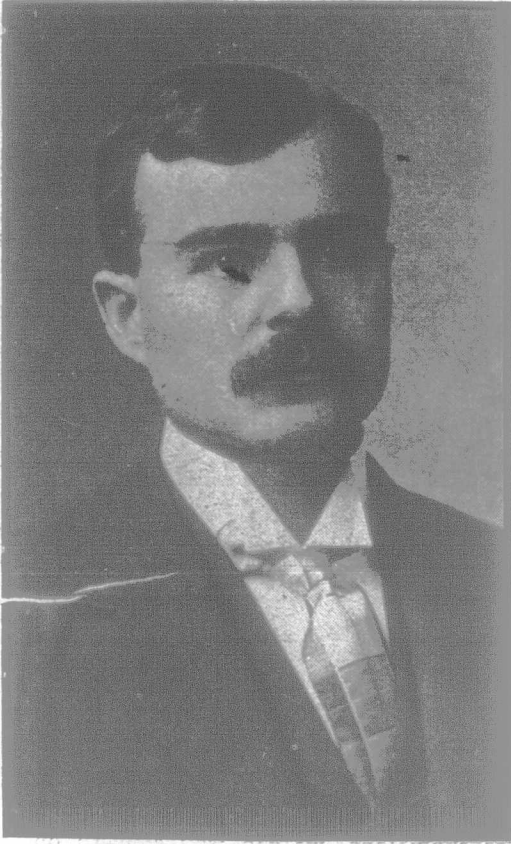
That common roadside weed, sweet clover, has proven a great precursor for alfalfa. When it first came into our State, it was declared to be a noxious weed, and efforts were united to banish it forever from the State. But instead it kept spreading

northward. It has never become a serious field weed, but, on the contrary, wherever it went alfalfa has followed in its train.

We want to sow alfalfa on a well-drained soil, and we like it a little rolling so as to give a run off for surface water. Alfalfa will stand more cold than our common clovers, but it soon smothers under a sheet of ice.

Our seventeen years' experience at the Wisconsin Station indicate that in seeding alfalfa it is best, first of all, to go through a weed-killing process, sowing the alfalfa early in June without a nurse crop.

The second best plan is to sow in early spring with a nurse crop of a bushel of barley per acre. In a field not perfectly clean a nurse crop has the one advantage of helping to keep down weeds. Nevertheless, at the Wisconsin Station



Prof. R. A. Moore, University of Wisconsin.

fields of alfalfa seeded years ago alone are still producing well, while others seeded with a nurse crop are not growing alfalfa any more, grass and weeds having come into the fields. It is best to kill the weeds first. Put a mulch on your field in the early spring to check evaporation, and the land will warm up promptly, causing countless weed seeds to germinate. Then go over with the harrow from time to time, and every second with the harrow on that field you will be killing thousands of weed-seeds. With this plan of summer seeding, if the season is favorable, we count on getting one good cutting the first season. After that it is not difficult to secure three and four cuttings per annum, if one will observe the cutting stage. If cut in, early bloom, the plants spring up vigorously again. We have had alfalfa grow an inch and a half in a day.

Our practice in haying, when weather permits, is to cut in the morning, ted after dinner, then cock up and put under cover, using hay caps which not only protect from rain, but also prevent bleaching by dew or sun.

Q.—How many varieties of alfalfa are there?

A.—There are a great many, some for which they are charging a dollar a pound. I don't approve of these new and high-priced varieties. We have had best results from high-vitality, high-testing samples of the common alfalfa. We haven't found that the Grimm alfalfa gave us any better results than seed grown in the North-western States.

Q.—How about seed production?

A.—As a rule in Wisconsin we have not been able to produce seed very successfully, our very best yields being about 3 or 3½ bushels per acre.

Q.—Will the roots of alfalfa give trouble in tile drains?

A.—We have been growing alfalfa on tile-drained land, and, as yet, have experienced no trouble from the roots getting into the drains.

Q.—Do you recommend pasturing?

A.—I wouldn't recommend pasturing alfalfa the first or the second year. After that it might be done with care. We have so far advocated putting alfalfa on a field by itself, and leaving it out of the regular rotation.

Three years ago we took over a farm that had been practically run out. We sowed it to alfalfa, afterwards breaking the alfalfa and putting in rye, and reaped 49½ bushels of rye per acre.

Alfalfa will pay on an investment of \$500 per acre.

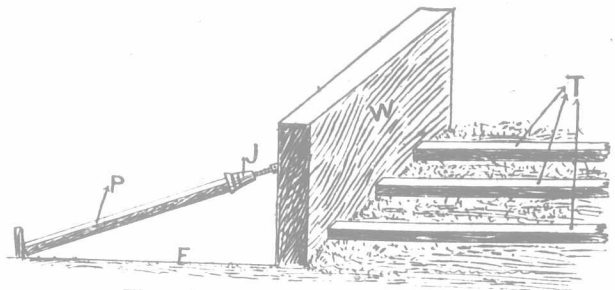
### Taking Down a Concrete Wall.

Editor "The Farmer's Advocate":

Replying to R.C.A. as to possibility of taking down concrete walls and using the material again, I wish to say I took down and removed a wall which had been up seven years. Length of wall, 250 feet; height, 9 feet; thickness, 1 foot; footing, 18 inches to 2 feet.

Remove all window and door frames, taking off the top piece of each frame and drawing sides of frame away from concrete, shove frame out. Place timbers or posts flat on the ground about four feet apart on the outside of wall, taking in whatever length of wall there happens to be between two doorways. The larger the section the more complete the work. Take two or more jackscrews, place as shown in sketch, taking care to place them at the solid part of wall, away from window openings, etc.

Place jacks against wall about 2 feet up from surface of floor. Start all jacks at same time. Wall invariably broke at every timber crossways and in many places lengthwise at the same time.



Throwing a cement-concrete wall.

W—Section of wall.  
T—Timbers on which wall falls.  
J—Jackscrew against which jacks are placed.  
F—Floor of concrete into which a hole may be cut for prop.

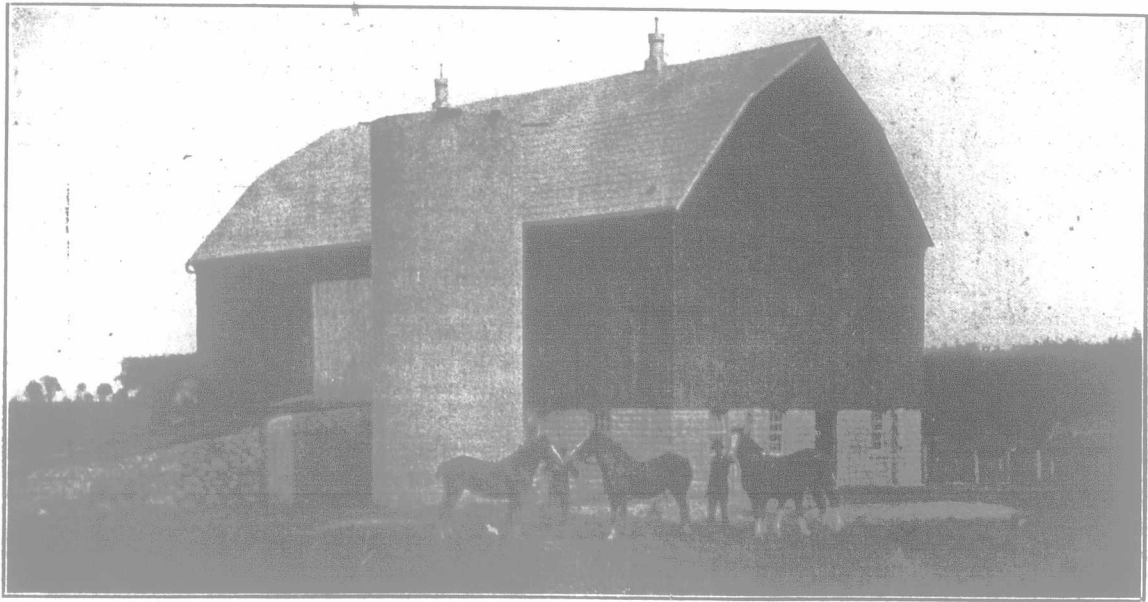
Loading.—Back stoneboat between timbers on ground, on which concrete now lies, and shove concrete on with crowbars and rollers, if necessary. These pieces of broken wall, varying in size from 1 x 4 feet to 4 x 5 feet, may be further reduced in size by using a sledge and heavy wide-pointed chisel, striking on the seams where the layers came together when the wall was just first made.

I have sold some of the material, and the mason had no difficulty in making a good wall out of the pieces.

I also took up the concrete floor and used it in my cow stable. By placing a pry underneath and raising gently, at the same time striking with a heavy sledge at the place desired and then marking the edges with paint, we placed them back in the same position they formerly occupied, including stall, floor, gutter and passage behind. After laying, all in joints with thin cement. A casual observer would notice the difference between it and a floor in one complete section.

I was told before I started I would never get this wall down without using explosives.

YORK CO., ONT. FRED MULHOLLAND.



A Perth County Barn.

This new barn is situated on the farm of Charles Barnett, Perth Co., Ont. A severe gale destroyed it while in course of construction, but it was rebuilt. Is modern and well ventilated through the buttresses.