

in. Then, again, others—and, I believe, the wisest—haul the alsike into the barn, and thresh it when they can. They lose nothing from wet, nor do they lose at time of threshing by seed being left on the ground, or by the blowing away of seed by the wind.

We frequently have what we call a "catch" crop; that is, after the alsike is taken off, the ground is plowed and sown to fall wheat. Then, when the wheat is harvested, the young alsike is growing up fresh, ready to be a crop the following year. Too much pains cannot be taken with the clover when ripe, as it is very easily shelled. It is in this that the great profit lies. When the seed is ripe and ready to cut, the little stems holding the heads will be quite yellow, and the seed, when rubbed in the hand, will readily be shelled.

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INFLUENCE OF ALFALFA ROOTS ON THE SOIL.

In the years 1900, 1902 and 1903, experiments were conducted in the Field Husbandry Department of the Ontario Agricultural College to ascertain the comparative value of the sods of alfalfa and of timothy. After the crops were removed from the plots, the land containing the roots of these crops was plowed. On the sods of 1900, winter wheat was sown in the autumn of the same year; on those of 1901, barley was sown in the spring of 1902, and on those of 1902, corn was planted in the spring of 1903. The average yields of the crops produced per acre are shown in the following table:

	1900.	1902.	1903.
	Winter Wheat.	Barley.	Corn.
Sod.	Bushels.	Bushels.	Tons.
Alfalfa sod	61.5	30.2	24.0
Timothy sod	42.1	19.7	17.9

In 1902, the test with alfalfa and with timothy sods was repeated four times. Barley was sown on each of the eight plots in the spring of the year. The detailed results of yields per acre are very interesting, and are as follows:

Tests.	Alfalfa Sod.	Timothy Sod.
	(bush.)	(bush.)
Number 1.	27.9	13.4
" 2.	31.7	20.1
" 3.	31.0	19.6
" 4.	30.3	25.7

In comparing the mechanical condition of the soil on which alfalfa and different varieties of clovers and of grasses had been grown, it was found that there was a marked difference resulting from the action of the roots of the different crops on the soil. This influence was shown in two ways in particular: First, by the difficulty or the ease in plowing the land; and, second, by the stiffness or the mellowness of the up-turned sods. In the spring of 1902, twenty-eight plots of sod were plowed. These were made up of four separate tests, each consisting of seven plots. Each test contained the sods of one variety of alfalfa, and the three varieties each of clover and of grass. When the three varieties of each of the four tests were plowed, careful examinations were made, and detailed notes were taken regarding the physical condition of the soil in each instance. It was found that the alfalfa sod was more difficult to plow than that of any of the clovers or the grasses, but that the inverted sod of the alfalfa plots was exceedingly mellow and friable, surpassing all others in this particular. The comparative differences of the various sods can be understood fairly well from the following figures:

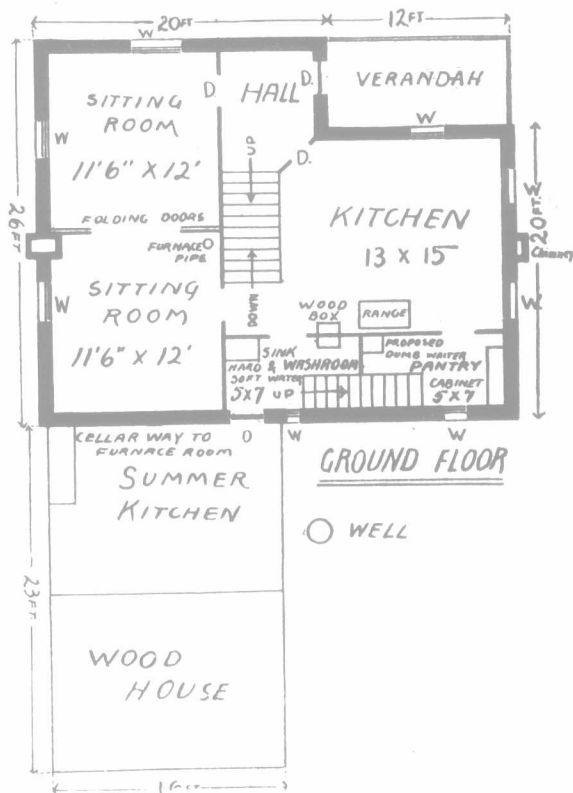
Sods.	Difficulty or ease in plowing, 10 being most difficult.	Loose, friable condition of inverted sod, 10 being most friable.
Alfalfa	10	10
Common red clover	5	7
Mammoth clover	6	6
Alsike clover	4	8
Timothy	8	3
Meadow fescue	7	4
Orchard grass	7	4

An alfalfa sod is usually a little more difficult to plow than that of some of the clovers and the grasses, owing to the very large roots of the alfalfa plants, which are frequently pulled out of the subsoil instead of being broken or cut in two. When the roots, to the length of two, three, four or five feet, or even more, are pulled out of the subsoil and left in the surface soil, a large amount of root material is thus deposited in the land at the very surface. The land is thus left in excellent physical condition, and as the roots decay they supply a large amount of humus, rich in fertilizing elements. The roots of young alfalfa plants were found to contain larger percentages of fertilizing materials than those of the plants which were seventeen months old.

The aggregate value of Canadian cheese and butter exports for 1907 was \$20,186,398.

COMBINED NITROGEN IN SNOW.

As a result of analyses of snow taken in the arboretum of the Central Experimental Farm, Ottawa, the Chemist, Frank T. Shutt, has estimated that the amount of atmospheric nitrogen precipitated in the form of ammonia, nitrates and nitrites each year in the snowfall is about one pound (of nitrogen) per acre. Assuming that rain water has the same ammonia content, pound for pound, as snow, the total quantity of combined nitrogen annually precipitated would be about four pounds per acre. At regular commercial prices for nitrogen, in the form of nitrate of soda or ammonium sulphate, this would be worth approximately one dollar, providing it were all conserved and utilized, which is probably not the case. It should be remembered that a heavy loss of nitrogen occurs annually from the soil, however. The small amount contributed by snow and rain is a partial restoration of this wastage.



Plan of House Belonging to John R. Philp, Grey Co., Ontario.

A GREY COUNTY FARM HOME.

The accompanying illustrations of farm home and plans have been kindly sent us by Mr. John R. Philp, of Grey Co., Ont., with the assurance that the house, "if not strictly up-to-date in every particular," is, for a small family, "both comfortable and convenient."

As will be seen, this house is exceedingly compact, a provision which always insures easy heating. Another feature which will recommend it to many is the position of the kitchen, which, with its cheery front window, affords a pleasant



Farmhouse of Mr. John R. Philp, Grey Co., Ontario.

spot for the housewife, who must needs spend so much of her time in this apartment.

As shown, the plan provides for no especial dining-room, hence, unless the back sitting-room be transformed into such, the kitchen must be used as a dining-room, also. . . . A large cellar, with a furnace, underlies the whole building, while directly under the washroom is a cistern, which supplies abundance of soft water the year round. Hard water is pumped to both house and barns by a windmill.

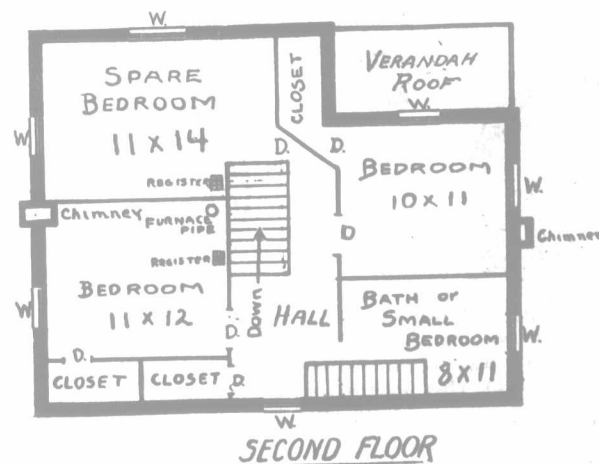
ALSIKE IN PEEL COUNTY.

Editor "The Farmer's Advocate":

Last season, the growing of alsike clover for seed, for those who were fortunate enough to have their catch survive the winter of 1906-1907, was a very profitable one, as large yields and big prices have been commonly reported.

In this locality, farmers usually select the cleanest of the fields they intend seeding down for alsike, as weeds have a better chance to thrive in this crop than red clover, and sow about five pounds of seed per acre, either on fall wheat or with spring grain. I think one is more sure of a catch on fall wheat, but as the growing of two biennial crops in succession is favorable to weeds of the same nature, some have abandoned this plan.

As to the part taken by bees in the successful



growing of alsike, opinion is divided. We have always had bees in this neighborhood, but have had some splendid failures in alsike. If we could control the weather during the ripening period, we would not worry about bees. If a few bumblebees are sufficient to fertilize our red-clover crops, I would think most localities have enough bees to fertilize the alsike.

The harvesting of this crop is very important, as no crop suffers more from rain and rough handling than alsike. Promising crops have often been made worthless by a period of wet weather. Cutting is done by different methods. Some use a mower, followed by rake; some a mower with patent bed attached; others a mower with pea-harvester attachment. In my opinion, a five-foot rear-cut mower, with a bed or table made for the purpose attached, followed by a man who will pull the clover off into windrows, gives the best satisfaction with most farmers. "Pulling off" is considered a pretty stiff job, and a man at this finds himself fully occupied. Some farmers make this job easier by making the table large and strong enough for the man who pulls off to ride upon. If the clover is left in bundles, they should be small, so that if rain comes they will dry out without turning. Turning means heavy loss.

Threshing is done at different times. Some think the fall is the proper time, while others prefer to wait till it freezes up, claiming that it threshes better then, and that time is not so valuable. However, with the improved hullers now in use, threshing can be done at almost any time, providing the clover is dry.

The yield varies in different sections. Here, would say that three or three and one-half bushels per acre would be an average yield.

Peel Co., Ont.

C. R. M.

RE TWO-HORSE CORN CULTIVATORS.

Editor "The Farmer's Advocate":

I am interested in the kind of cultivator with which your correspondent, who signs "Alone on a 100-acre Farm" claims he can do two rows of corn at once. A little discussion re two-horse corn cultivators, through the columns of your valuable paper just at this time might prove of interest to others besides myself. Some say that two rows cannot be done at once and make a good job. Others say that those who have two-horse riding cultivators have, as a general thing, a pretty dirty piece of corn. I would like to hear from those who know by experience. My father has taken this paper almost ever since it was founded; I get a great deal of help from it. "INTERESTED."

[Note.—Where introduced, two-horse corn cultivators are soon acknowledged an indisputable success, though a single-horse scuffler is required for late use, after the corn is too large to admit of straddling the rows. We know one man in Brant Co., Ont., who adapted a spring-tooth cultivator to straddle two rows. It did quite good work.—Editor.]