

A Good Six-year Rotation.

Editor "The Farmer's Advocate":

The subject of crop rotation is a very important one, and one to which too few of our farmers pay sufficient attention. No farmer can farm to the best advantage unless he has some systematic plan of procedure, and crop rotation is one of the most important ones. If you are going to get the best results from your labors, and at the same time improve the fertility of your soil, you must carry out some rotation, and one in which clover forms a prominent part, as that should be the foundation of all our crops. The man who farms in a haphazard way is working at a great disadvantage. He is not getting from his land all that he might, and, at the same time, his farm is deteriorating in value every year.

Of course, the same rotation will not meet the needs of every farmer. Each one must adopt a plan that will best suit his circumstances. The rotation which I purpose following is: Clover, corn, roots and potatoes; oats and barley; clover; peas and rape; winter wheat and oats, seeded to clover again. My farm consists of 200 acres, part of which is still in its rough state, but bearing abundance of good pasture. My plan is to keep just 75 acres under cultivation, the remainder to be in permanent pasture. The 75 acres is divided into six fields or sections, containing 12½ acres each. Therefore, I have 12½ acres of corn, roots and potatoes, 12½ acres of oats and barley, 12½ acres half of peas, the other of rape, the rape being fed off in the fall to cattle intended for fattening the following winter. The field is divided by a portable fence of hurdles, which can be put up in a very short time. The half of the field which had peas on it will be sown to winter wheat that fall, and the part the rape was on will be sown to oats the following spring, all of which is seeded to clover again. In this way I have 25 acres of clover hay each year, making a lot of excellent feed for the stock during the winter. This plan seems to suit my circumstances, as I keep only one hired man. If I were keeping more help, then I might keep more land under cultivation, but the price of labor nowadays is a great drawback to agriculture, so we must cut our coat according to our cloth.

Bruce Co., Ont.

W. H. ARKELL.

A Modern Three-year Rotation.

Editor "The Farmer's Advocate":

Successful farming in the Province of Ontario depends largely upon a proper rotation of crops. Every farmer should have some systematic plan of crop rotation. There may be times and circumstances that it will be difficult for him to follow the plan mapped out—such as the loss of the clover crop from winter-killing—but this does not frequently occur if the land is properly under-drained, either naturally or artificially.

For a number of years we have followed a regular rotation. We first started out with a four-years' rotation, consisting of, first year, grain; second and third years, grass; fourth year, roots, corn and peas, but we have gradually worked into—and now almost entirely—a three-year rotation, having only one year in grass instead of two. We found this suited to our case better, as we grow considerable alsike clover for seed, and as the sod has to be plowed up as soon as the first crop is removed, this put part of the farm under a three-year and part under a four-year rotation, which made it somewhat inconvenient; therefore, we have gradually changed to a three-year course: First, grain; second, clover; third, roots and peas. I may state that we have a large amount of permanent pasture which enables us to carry out this system with greater ease, but a considerable portion of the red clover is pastured up until about the 20th of June, and then it is left to produce a crop of seed. By keeping the stock principally on the clover fields in June, it allows our permanent pastures to get a good growth, which is a great help in carrying the stock through the dry time in the summer. (There is none of this pasture land of the thin, dry or rocky kind, as some might infer, but good, deep soil.)

Objections are sometimes raised to the large acreage of root, corn and pea land, especially where peas have not been doing well, but we have been able to depend upon peas pretty well. Permit me to instance a case where we departed from the usual course the past year. On a farm we purchased two years ago, some fields were very bad with couch grass. We cultivated those fields until about the middle of June, and then put in a crop of buckwheat. After the buckwheat stubble was plowed shallowly, we applied a top dressing of manure, which puts it in good condition for seeding with grain and clover next spring. One of the principal advantages of the short rotation is that we get clover into the land every third year. This adds a great deal of fertility to the land, in the form of nitrogen, that is gathered from the atmosphere, and costs the farmer nothing; the roots of the clover plant go deep into the soil, and bring back the fertilizing elements that have been washed down beyond the reach of the roots of ordinary plants. The combined fertility—that which is taken from the atmosphere, and that which had been buried deep in the soil and brought back—goes to build up the stems and leaves of the plant, which is one of the most nutritious the

farmer grows for the feeding of stock, and in turn makes one of the most valuable manures when returned to the land.

The mechanical effect that these deep-rooted plants have upon the soil is to break it up and pulverize it to a greater depth than any subsoil implement yet invented, without any wear or tear to horseflesh or implements.

The decayed stubble and roots that are left in the ground adds a large amount of humus to the soil, which warms it up, makes it more retentive of soil moisture, easier to work and more certain of getting a catch of clover when it is again seeded.

By a short rotation we get rid of many troublesome weeds without much labor, and the crops of all kinds are greatly increased.

Ontario Co., Ont.

HY. GLENDINNING.

Plans of a 1905 Middlesex Barn.

The accompanying plans are of a barn built in 1905, and have proved very convenient. Many of the timbers of the new barn were from the frames of two old ones, while the old lumber was used for sheeting and for flooring of mows in the new. The wall posts are 18 feet, the roof being what is known as a double-hip roof, the ridge being 38 feet from the sill. The purline posts run

maining boxes and to the horse stable, and the manure is drawn direct to the fields, excepting when the weather is unfit or the land too soft, then a wheelbarrow is used. The doors of boxes open inwards, and are hung four inches clear of the floor, these boxes being cleaned out at least once a week, some of them daily. We do not find any inconvenience from litter, etc., getting behind the doors, and we find them much more convenient than the old stables where the doors opened out; while, should one accidentally be left unfurnished, the danger of an animal finding its way out is reduced to a minimum. The door connecting boxes 5 and 6 allows, either separately or together, of both boxes of calves being turned out to the same pasture. Box 7 has a door which may be fastened against the partition, and is really a passage where hay, etc., is put down for sheep, but, in emergency, may be used for sucking calves. Boxes 1 and 2 are fitted with stanchions. No. 1 is for calves being fed from pail, and No. 2 holds eight young cattle. The stanchions are only used at feeding time, so that one may get extra food, and none may get more than its share.

All box mangers have concrete bottoms; these rise six inches to twelve inches from the floor, and all posts are used as door or stall posts, and there is no post in the way.

The cow mangers slope up towards the feed room, while the side next the cows is made with a movable plank which can be slipped between cleats fastened to the sides of the stall. This plan permits of a long stall being made into a short one in a few minutes; the upright on which the chain hangs being also movable, by changing its bolts to other holes bored in the stall for that purpose.

The horse mangers swing into the feed room (see plan, Fig. 3).

We consider both cattle and horses keep in better health in a fairly cool stable, and have no objection to having both in one basement. Plenty of light being a necessity, in addition to the fourteen windows of eight ten-by-twelve panes, there are faulights above all the outside doors, thus allowing the sunlight at all hours of the day to reach all the way across the stables, all stalls and divisions being low. The windows are in two sections, the upper half being hinged to the lower, allowing them to be opened inwards from the top, providing for much or little ventilation, as required. Up to the present there have been

no stable odors, and the thermometer registering 45 to 50 degrees. The 7-foot doors are on rollers, all others being hinged, while the 3-foot door on the east end, being nearest the house, is the main entry.

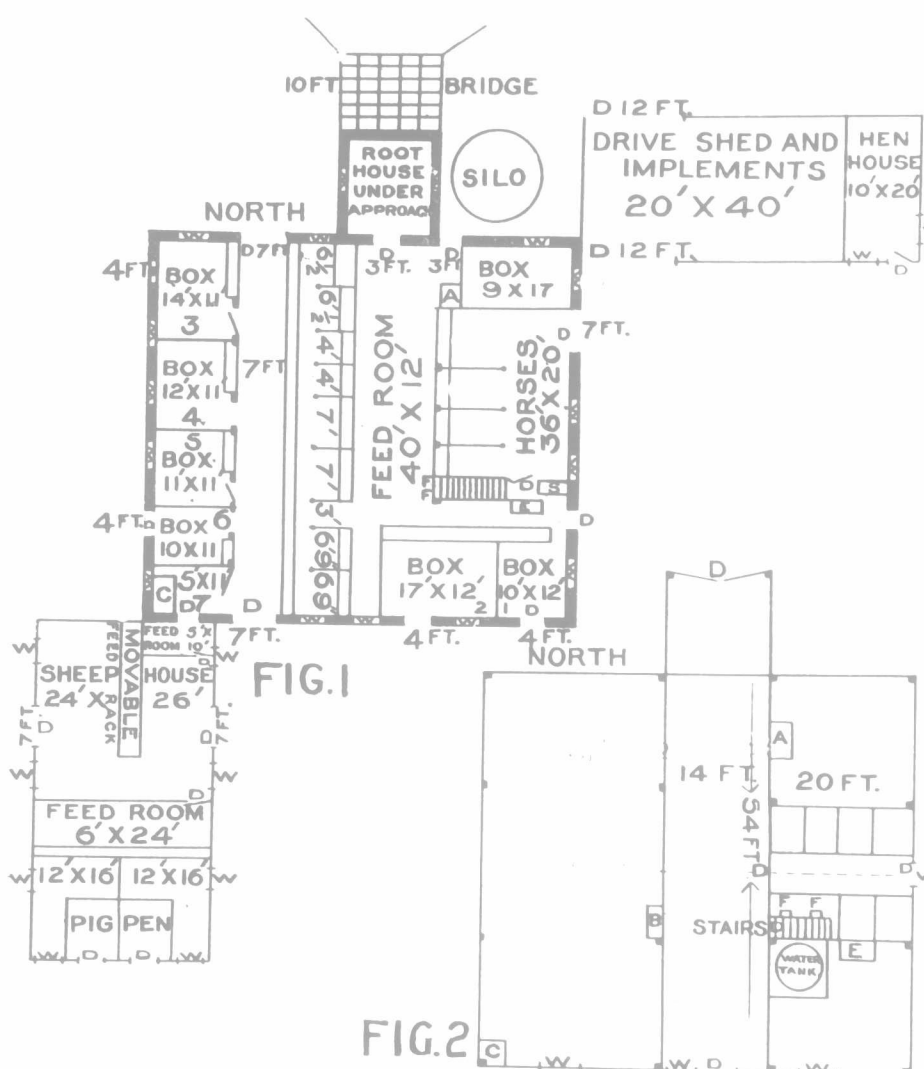
Middlesex Co., Ont.

H. C. GRAHAM.

Likes the Gasoline Engine.

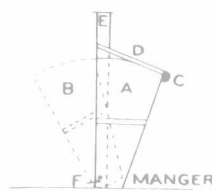
Editor "The Farmer's Advocate":

In the Feb. 15th issue, D. W. B. enquires what kind of power is most convenient for farm uses. Two years ago I purchased a 4-h.-p. gasoline engine. I have it mounted, and take it any place you can take a wagon, as they weigh only 2,700 pounds. As regards danger, I start mine in the barn, with the exhaust pipe within one foot of a stack of grain or hay. The only danger I see is when putting gasoline in tank, when one must be careful and not have any light near; but once the tank is corked up there is no danger. As regards gasoline, you can buy five or ten gallons at a time, and 1½ gallons will run a 2 h.-p. threshing mill all day. I always get a barrel of Paris, then lower them into an old potato hole that I do not use since I have built a cellar. It keeps there fine and cool, and does not evaporate, but never go to the hole with a light for fear of a leak. The hole is about five feet deep, and 200 yards from all buildings. I consider the gasoline



Basement and second-floor plans of H. C. Graham's barn, with plan of other out-buildings. Key to Fig. 1: A, chute for hay, 3x3½ ft.; C, chute for hay or cut straw, 3x3½ ft.; D, doors; E, chute for cut straw, 2x3 ft.; F, F, spouts from bins in granary; S, cream separator; W, windows; ■, posts.

perpendicular, which, in a barn 54 feet wide, leaves room for a horse fork to work between posts (see Fig. 2). The chutes for hay and straw extend nearly to the roof, with the mow side of shaft made in sections of four or five feet, a six-inch board being nailed across between each section. A button on this board holds these sections or doors in place, allowing for their easy removal, as needed. In the basement, a canvas



A—Manger in place.
B—Manger open.
C—Stationary scantling.
D—Bars, 12 inches apart.
E—Post.
F—Bolt on which manger swings.

bag, open at top and bottom, and the same circumference as the chute, is used; this is a continuation of the chute, and reaches the basement floor, thus preventing dust from flying through the stables, while it may be hung out of the way when not in use.

The feed room, centrally located, is large, but not too large, the space usually taken by passages being added to it.

A team is used for cleaning stables, driving right through behind cows and in front of most of the box stalls, and to outside doors of the re-