

Clover Seeding---Practical Experience.

In reply to the same questions as were published in our last week's issue on the subject of growing clover, we have received the following interesting letters.

Editor "The Farmer's Advocate":

Clover is commonly spoken of as one of the most important of all crops grown on the Ontario farms. As for myself I would place it in premier position of all. It holds a place in every system of rotation yet devised. From a clover crop we get, directly or indirectly, four sources of revenue or gain: (1) a valuable feed; (2) a valuable fertilizer; (3) a chemical action which stores up nitrogen for succeeding crops; (4) a mechanical subsoiling process carried on by its vigorous root system, that aids greatly in making clay land mellow and friable, a condition very necessary in all heavy lands. No other one crop pays four dividends per year, hence its undisputed claim for first place.

On our land which is fairly strong clay-loam with clay subsoil, we follow a six-year rotation, namely: first, clover; second, mixed hay; third, peas or fall wheat; fourth, oats; fifth, roots and fallow; sixth, barley or goose wheat (seeded).

We seed down after our hoe crop for two reasons: first, having applied all the farmyard manure on hoe crop the land is in the highest state of fertility, a prime essential in securing a good stand; second, clover following the cleaning crop supplements the good work done with the hoe in keeping the land from weeds, and in case you are fortunate in getting a crop of seed, freedom from weed seeds means everything today in clover seed.

A great many consider they should get one grain crop and seed down with the second after a hoe crop; but there will be just one-half the chance of getting a good catch of seeds.

We have on our farm at the present time a very clear illustration along this line. In a field of 14 acres 2 acres were cropped one year and seeded the following year along with the remaining 12 acres, the result being that last summer we cut twice as much per acre off the 12-acre that we did off the 2 acres.

Have no choice between barley and goose wheat as a nurse crop. We always try to sow the field to be seeded the first, using 1½ bushels barley or 2 bushels goose wheat, and 5 lbs. timothy and 6 lbs. clover per acre. In sowing clover alone would sow more than 6 lbs.

If sowing is done with drill would prefer sowing grass seed ahead of the drill, the field having been previously harrowed. The main thing to be kept in mind is that "seeds" need only a very light covering. We have followed the practice for years of using a 14-foot hand seeder, and depend on the roller to cover the seed sufficiently. This plan I consider the ideal one, but necessarily entails an extra amount of labor, so much so, that at times we have recourse to the grain drill with very good results.

The advantages of a late or early maturing nurse crop are almost wholly dependent on weather conditions after crop is removed.

As for seed, prefer Ontario grown seed in every case, and the plumper and more highly colored the better, from the standpoint of germinating possibilities. Have never inoculated any seed.

Leave nurse-crop stubble as long as convenient, as it will afford additional protection and help to hold the winter's snow. Above everything else be careful of pasturing in the fall, especially with sheep, as they are nearly as hard on the "new seeds" as the most-to-be feared evil, frost.

Have read a good many articles about building up run-down farms by the growing of clover, but clover alone would never do what was required unless supplemented by liberal dressings of farmyard manure, for the simple reason that you cannot insure getting good crops of clover unless the land you are seeding is in the pink of condition for raising grain or other crops.

York Co., Ont. JAMES A. RENNIE.

Editor "The Farmer's Advocate":

For growing clover I aim to have the soil as clean and free from weeds as possible, and harrow before cultivating and I do not cultivate too deep. I do not mean to harrow just once but harrow until the soil is thoroughly worked.

A great many farmers cultivate before harrowing which is a mistake, for the soil cannot be made as fine by that method no matter how much harrowing is done after cultivating, and a fine seed-bed is needed for clover.

If farmers would take a little more time in preparing the seed-bed for clover they would be well paid, particularly on poor soil.

I generally sow about eight pounds of clover and four of timothy to the acre. I sow behind

the drill, and always harrow after it with a light harrow.

I would prefer to seed barley at about sixty-five pounds to the acre, but have had some splendid catches with oats. The seeding needs to be done as early in the spring as possible.

The soil in this section is clay limestone or clay loam. The clover for a hay crop is just as good on the one soil as the other, but generally get more and better seed from the limestone.

It is advisable to leave a good stubble to protect the young plants.

It is a mistake to pasture clover in the fall unless it has an extra growth, and it should never be pastured out of sight nor should stock be allowed on clover when the soil is wet.

Some sell the best seed and sow what they can't sell, and then wonder why they can't grow clover.

The only secret I know is to prepare the soil, sow the best seed and plenty of it regardless of cost, and sow it every year, and the man who follows that rule will do best in growing clover. Prince Edward Co., Ont. WM. MONAHAN.

Editor "The Farmer's Advocate":

Regarding your enquiry as to best methods of securing catch of red clover, we always make a practice of sowing clover on our fall wheat, of which we still grow a good deal in this vicinity. We usually wait until the ground is dry enough to put a team on, and harrow with a light harrow with slanting teeth before sowing, and give another stroke of the harrow the opposite way after the seed is sown. In sowing with spring grain, we prefer to sow with the grain drill and always in front of the tubes. We have found barley the best spring grain to seed with, sowing not more than a bushel and a half of grain to the acre, we have never sacrificed the barley crop in the endeavor to secure a good stand of clover, and have so far usually had good success in getting a fair stand. As to quantity of seed per acre, we sow ten pounds of red clover when sowing it alone, and eight pounds of clover and two of timothy for a mixture. I think, as a rule, farmers do not sow enough seed. One of the most successful clover growers we ever had in this locality sowed fifteen pounds of clover alone. We have always found the earlier sown fields came through the dry weather the best. The dry weather after the grain crop is harvested is often the cause of the failure in getting a catch of clover. We never have made a practice of giving a field any special preparation for seeding any more than having it clean and in a fair state of fertility.

In the case of seeding to alfalfa, we give a special treatment in the way of cultivation until the middle of July, and then sow at the rate of twenty pounds to the acre without any nurse crop. We never have inoculated any of our seed. We never pasture new seeding unless it gets very rank in the fall like it did last year, and then only with calves or lambs for a short time. We always buy the best seed regardless of price, and try to get seed of dark color and plump. It is advisable to leave a fairly long stubble in cutting the grain crop to hold the snow. Wentworth Co., Ont. R. S. STEVENSON.

Editor "The Farmer's Advocate":

I have always sown with grains, and at the rate of from 10 to 12 lbs. clover and 4 lbs. timothy per acre. This amount of clover, if the germination tests are good, should give a good stand without the timothy, as we find when the stand of clover is vigorous the timothy does not amount to much the first season, but will come in a good mixture for the second year, we just take two crops of hay and turn down for grain. We always sow in front of the drill, and cross harrow after. This is to spread the grain in the drill, also to cover any clover or grass seed that should be missed. There is little danger of covering too deep. We like barley best as a nurse crop, and wheat is our next choice. Barley is more open, and when sown early is harvested early, and gives clover a good long season to harden up and make root growth. We sometimes sow with oats with good results when sown with about two bushels per acre. With barley we sow six pecks of the barley, and with wheat six pecks of wheat.

We prefer seeding early, as the young plants get a good start while the ground is cool and moist, and will be more able to stand the hot, dry weather when it comes. Our soil is heavy clay, but think clover should do well on any soil if well prepared. We always put the ground in as good condition for all crops as time will allow, as it is necessary to have a fine even mulch on top to exclude the air and conserve moisture. We use nitro-culture and find it gives good success. Poor soil gives more difficulty in getting a catch. We always try to top-dress

hard places with manure when in pasture or meadow. When the ground is not too wet and the clover a good stand we pasture. Last fall we pastured 10 head of cattle on 10 acres spring seeding for six weeks, one day on and one day off, and clover increased in growth on the cattle, and the stand was about 10 inches high. This was seeded with barley.

We think it is very important to always leave a good stubble to protect the crop, and we always select the darkest seed, but have not given this any special attention. Renfrew Co., Ont. PETER WILSON.

Editor "The Farmer's Advocate":

In securing a catch of red clover we have always found it necessary to have the land clean, fertile and in fine mellow tilth.

In the rotation we follow, we seed to clover and grass, after cleaning the field with corn and roots. We apply for corn twelve loads manure per acre, and for other roots sixteen per acre. With thorough and persistent cultivation in corn we find the land in just as good condition for sowing grain and clover as it would have been if we had fall-plowed it six inches deep, and I think fully better, as we almost completely cleaned out all the weed seeds in two inches deep over the entire field. That two inches produced practically no crop last season, as our persistent cultivation prevented its producing any growth. If wild oats and mustard seeds are in the soil this method secures a crop of grain and catch of clover without ripening any more of them, as those seeds which were near enough to the surface to grow were germinated and killed by cultivation last season; and there may still be plenty more of these in the soil, but they are buried too deep for germination this season.

To get rid of the corn stubble, which appears above ground, we find that with the action of the winter weather they are quite brittle by March and April, and by using a stick of timber 5 by 10 or 12 inches and 8 or 10 feet long which will cover three rows of corn; when by drawing this flat stick broadside along each three rows and back again, "use this when the land is frozen quite hard on top", it will break off all the stubble close to the surface.

We use a disc harrow doubled to pulverize the soil two inches deep. We harrow and roll before sowing to thoroughly pulverize the soil into fine particles. In sowing on this rolled land we find the drill will not sow more than about one inch deep, which we very much favor, as the grain stools out when sown shallow, but not when too deep. We thoroughly clean our seed grain three times with the fanning mill, securing only the best and largest plump grains that way. What blows out is good enough for seed, but not for seed.

As a preventive treat all seed for smut with formalin (2 ounces mixed in 1½ gallons of water to 10 bushels of grain) sprinkle this on the grain. Shovel over several times and let dry on the grain before sowing.

When seeding with oats we use five pecks of oats per acre, and with barley seven pecks of seed. With the stooing we find this quantity quite thick enough. We usually sow eight pounds red clover, two alsike and four pounds of timothy per acre. Always in front of the drill, as in that way the bulk of grasses are distributed in between the rows of grain. And we invariably sow the grain east and west on the field, because from the time the grain reaches knee-high that ground is pretty well shaded from the direct rays of the sun, which, if allowed to strike on the ground and overheat the soil, a large quantity of moisture is evaporated, which, if saved, would have gone to fill out the grain crop.

We always purchase No. 1 grass seeds, would not take any lower grades on any account.

As to fall pasturing we do very little of it, only enough to keep the clover from coming out in head. Our belief is that clover five inches high in the fall is a complete protection from heaving in spring. We leave our grain stubble five or six inches long, with the expectation that it will hold more snow during the winter months. In a real dry season we get a better catch of clover with barley than with oats, on account of not being so leafy and being earlier in maturing.

I have found the lighter class of soils not to heave so readily as stiff clay, but with the winter protection formerly provided I have had little difficulty with two clay fields that I have to deal with on our farm.

As the grass seeds seem to be getting higher in price each year, it seems to me to be well worth the while of every farmer to try and find out just how to prepare his soil, and sow nothing but the very best grade of grass seed. Oxford So., Ont. W. C. SHEARER.