

clover and grass seeds, by threshing machines and farm implements.

Weeds are classified by many according to the length of time they live. As annuals, for example—wild oats and mustard; as biennials such as annual flax and evening primrose, and as perennials such as bind weed and couch grass.

The most injurious weeds in my locality are wild tares, wild oats, mustard, false flax, ches, Canada thistle, bind weed, and couch grass. There are many others but they are of less importance.

To eradicate weeds it is important to know something of their nature and growth. Wild tares, wild oats, mustard, false flax and ches are either annuals or biennials and are all destroyed practically the same way. The seed of all these have great vitality and if down below the reach of air they will live for many years, but will germinate as soon as brought to the surface. The best way to destroy these is thorough and frequent shallow cultivation. Plow or disc the land immediately after harvest and work down fine; this will cause many of the seeds to germinate and by the introduction of a hoed crop the following season the majority of the weeds will be disposed of. By all means grow clover as much as possible. It is the best means of destroying weeds of this sort. Avoid growing fall wheat for the destruction of such weeds as wild flax, red root and ches, as these weeds grow principally in this crop.

The Canada thistle, sow thistle, bind weed and couch grass are perennials. They can be destroyed by the following method. In the middle of May gang-plow the land about three inches deep and harrow thoroughly. In two weeks when the weeds are nicely up cultivate with a broad-sheared cultivator so as to cut every plant two or three inches below the surface; then harrow to pull up the plants and leave them to die. In the middle of June repeat operations and you will find that the weeds which grow after this will be very few and a third trial in July will finish them.

SECOND PRIZE—MISS LIZZIE TAYLOR, Grenville, Ontario.

Weeds are one of the greatest hindrances to successful agriculture; they are a source of constant annoyance and destruction of capital.

Our first consideration relative to the destruction of weeds is the condition of our soil. It must be well fertilized and in a good healthy condition. The means adopted for the extermination of weeds depend largely on the variety of the pest and the foothold it has attained, but the main methods include (1) hand-pulling, (2) the use of the spud, (3) the growing of hoed crops, and (4) autumn cultivation.

Hand-pulling is specially applicable to the eradication of wild mustard where it exists in limited quantities in the crops. It can be best done in connection with spading when other weeds requiring this are present.

Spading when thoroughly done will destroy almost every form of weed life. Its utility is subject to the same restrictions as hand-pulling, depending largely on the numbers in which the weeds are present. When they are very numerous some other mode of eradication must be resorted to. It is found specially serviceable with the more troublesome forms of weed life which can be detected at the outset and so do not easily get a foothold. This method applies to ox-eye daisy, blueweed, tooth-flax, etc.

Our main reliance for the destruction of weeds here is the growing of hoed crops which include clover, mustard, and turnips. In some cases the ground is plowed late in the fall and again late in June and turnips then drilled in. The turning over of the soil in June and after cultivation during a dry period of summer is most efficacious in destroying weeds. Then the growth of the turnip leaves so excludes the light after cultivation ceases that there is small chance for the growth of weeds.

The cheapest labor factor in the destruction of weeds is probably that of autumn cultivation. It consists in plowing the land lightly, immediately after harvest, with a gang plow where thistles or quack-grass are not plentiful, but where they are, the ordinary plow with a clean cutting share should be used and the plowing most thoroughly done. When fresh weeds appear plentifully on the upturned soil it is then harrowed, and finally, turned over just when freezing time is approaching.

Couch (quack) grass (one of our worst weeds), where it has gained a firm foothold, requires different treatment from the above methods. It is plowed shallow, then run over with the hay rake and the roots piled up. Plow it again and run a large-toothed cultivator through it, then sow wheat, and finally, turned over down and if not too late sow a crop of buckwheat or peas. Next year sow fodder corn and in course of time the couch-grass is subdued.

THIRD PRIZE—ERNEST GORDON, Carleton County, Ont.

There are three classes of weeds, annuals, biennials, and perennials. Annuals are those which seed themselves the first year and the seeds are ready to sprout the next season. The most common of these are wild mustard, lamb's quarter, shepherd's purse and wild oats. Of all these, farmers in this section of the country find wild mustard and wild oats the most injurious and troublesome. These weeds are extremely hard to get rid of, and various methods are employed for their eradication. In order to get rid of mustard the most effective way is to pull by hand and burn. Other methods are sometimes resorted to, such as summer fallowing, and then sowing the next year some crop that requires a great deal of hoeing. However, of these methods the first is the safest and easiest. The methods used to eradicate wild oats are numerous and some of them very effective. One instance is the piece of ground with barley and cut it green. This method is sometimes effective, but if it fails, try sowing a crop of rye and follow this by a crop of rape.

The next class of weeds, biennials are so called because they do not form seed until the second year. They are usually taprooted and in order that they may not spring up again, it is usually necessary to completely remove the root. However, some of them can be removed in other ways. The commonest of this class are wild carrots, wild parsnips, burdocks and blueweed. The first two have generally to be removed by the root. Burdock can be removed in other ways, for instance, by summer fallowing and then sowing a hoed crop.

The third and last class of weeds called the perennials live from year to year. The weeds of this last class are the greatest nuisance, because most of them, such as wild vetches, couch grass, Canada thistle, sow thistle, etc., have all creeping roots and because of this are very difficult to remove. The weeds of this class are too numerous to deal separately with each, so we shall describe the means employed to destroy what we consider the most injurious. Take for instance the Canada thistle, several methods are employed for the removal of this weed. Some farmers summer fallow, and then sow a hoed crop, which they carefully cultivate. Another plan is to take off two soiling crops in a season and if this fails try seeding heavily with clover. Another very injurious perennial weed is couch grass. In order to eradicate this, plow deeply and sow a heavy crop of buckwheat. Plow this under when in blossom, and sow with buckwheat again. If this fails try sowing a heavy pea crop, followed by a hoed crop. Again, take the ox-eye daisy, another weed of this class, which is injurious and somewhat hard to get

rid of. Some farmers have succeeded in eradicating it by plowing down, and sowing a corn crop. Another method is to summer fallow the ground.

FOURTH PRIZE—WM. BRITTAIN, Carleton County, N. B.

Two of the worst weeds the farmer has to contend with here are the bind-weed and couch-grass on account of their underground stems. When the bind-weed first begins to grow it is well to kill it before it has time to spread. This is very hard to do, for a very small piece of the underground stalk will be the means of growing a vine. To kill it when it has not made much headway it would be good to cut the stem off even with the ground, then take your finger and scoop out a little earth all around it forming a cup. This cup should be filled with coarse salt and left there. If left to itself long enough it will kill the plant entirely.

When Indian corn is quite young and only a few inches high it can be killed by means of a harrow. The harrow is drawn over the field without much regard for the rows of corn. It kills the sprouting weeds, but does not destroy very much corn on account of their very deep roots. After the corn is too high for this, a cultivator can be used, and when it gets too big for the cultivator the plants are established and ahead of the weeds.

The cultivator is also used with all kinds of vegetables.

If you keep cultivating them it will kill the weeds and also loosen the soil around them. To make good manure you can rake the weeds together and pour boiler water on them. Then lay them in a pile to rot and put on the soil next year.

When weeds get too thick in a hay field the best thing to do is to plow it up, cultivate the soil well, and plant something else in its place. As soon as a plant is called a weed most people lose all interest in it, but if they would only watch them many interesting things could be found out about each one.

Our Weed Contest

The following letter from Miss S. Levina Bayne, Welland Co., Ont., a competitor in our weed competition, who did not win a prize, shows how the work was appreciated by the young people on the farm. Many similar letters have been received from other unsuccessful ones:

"I have received your letter of the 23th telling me of the weed contest. I thank you sincerely for the information sent, and although not a winner in the contest, I feel that I have not lost, as I had never taken a lesson in botany, or thought of doing so until I got interested in this collection. Since making the collection I have had the pleasure of looking at a '1st Prize' collection, and I know that mine must have been very poor indeed."

"Before closing I must tell you that we value THE FARMING WORLD, very highly in our home as it contains something that interests every member of the family."

That Rainy Thursday

Thursday has evidently gotten into dispute with the amount of fall fair showings. On that particular day of the week it has rained at several of our large fairs this season, and rained so hard as to lessen the receipts very materially, and in many cases to turn the financial side of the exhibition into a loss instead of a profit. Our special correspondent in reporting the Charlottetown show, states that the heavy rain on Thursday meant a loss of over \$1,000 to the exhibition association. London, Ottawa, Whitty, and others that might be named, had similar experiences with wet Thursday's. The weather has been the bane of many a fall fair this season.

If this kind of thing is to continue it might be well to give shows a holiday in future on that day of the week.