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Facilitate expeditious and nstalled to deal with the ain which reach Bristol adian Pacific steamers.

FRANK DEWHIRST.

R M

Wild Oats

me of the answers re- ly to the query in our etition in the issue of s been awarded to Mr. un., Manitoba, second , North Norfolk Mun., outlined by our various g land of the wild oats, general principle. It ethods of combatting summer fallowing and Mr. Garnett describes thorough means of too are much in line cognized agricultural t of fighting this pest. cutting off in the hay nd rotting the life out eply to germinate, is n one's farm becomes one believes it to be ; them or the method nces. But is one of this pest.

ner's Method

of Feb. 10th, I submit and practical method l of wild oats. This a few features familiar with this weed, has yet are not solely our own, ily known. Frequent- hose who know of our by those who have seen for particulars of same. ightly complicated and k that for our mutual ed in giving them here

the year, after the crop f ground you intend to arrowed—the discs to lengthwise of the way the field plowed. This as it tends to leave the , especially if done in you might haul your t is then left till after g, when simultaneously w to green oats, killing l, and giving the oat and moist soil and an yet to come up. This until harvest; when, in carry out that import- ble in the eradication

As the time for harvesting (about the middle of August—we do it before the harvest rush is on) draws near, get an eye on the oat field and watch it closely. Just as the top shells of the oats are turning white and before there is any sign of rust, pull into the field with your binder and plows. (Some may claim that sheaves cut at this stage are cut too green. Well, that is only a matter of opinion. Our sheaves will satisfy the most particular horse and there is necessarily the shelling of wild oats and the next year's crop to consider.)

And now for your attention. Enter the field with your binder and go once around, a gang plow following turning down two feet of stubble and leaving three to four feet between the furrow and standing grain. The next time around, the horse on the off side of the binder-tongue walks in the furrow made, the binder wheel following on the hard bottom of the furrow eases the draft somewhat, and throws the driver into an ecstasy because he does not have to be always "steering" his horses. Of course, the horse on the plowed ground must be given a little of the advantage and also the binder table be raised two or three inches, according to the depth of the furrow. You should plow as shallow as possible.

Behind the binder should follow enough plows to cut between five and six feet—three twelve inch gang plows; or better still, two fourteen inch gangs and a single plow, which last should go behind. Around the field you go, producing quite a remarkable sight, the binder and plows each doing about six feet at a round; and the binder wheel continually following furrows, beeps the work in the right shape. It is also a good plan for those who can, to put a set of drag-harrows after the plows.

Some people, like ourselves, may not have this full force, which necessitates from twelve to fifteen horses. In that case, as circumstances would permit, what is lacking might be hired, or work might be exchanged with a neighbor who is treating a piece of land in the same way. Another plan—one which we followed last year and three years ago, and found quite as successful—is to cut the grain; then take your plows into the middle of the field to the spot left bare by the binder. You then can arrange your plowing by calculating from the binder tracks, so that it will be an equal distance from the ends and sides. As you plow outward, the sheaves are carried across the furrow and stooked on the plowed ground. The objection to this plan is that it means a lot of work for the stooker. It takes a man for each double plow. But you can turn over a good many acres in a day, as the horses never stop when once you get the corners rounded.

The main object in having the plows and harrows follow the binder is; the stubble, loose straws, weeds and wild oats too short to be cut by the binder are buried green, and early. I might say in late summer, consequently the following decay and growth are both much more thorough. Also, you get the work done in a slack time. The sheaves fall and are stooked on the plowed ground, and as I remarked once before, this makes an excellent curing ground; the air being hotter and drier than on stubble land, and there is no stubble to prevent the wind from sweeping under the stook. The damage of sheaves through dirt is not worthy of notice. Far more dirt is driven into the sheaves in the stacks by the winter winds.

When the field is cut and plowed, and the sheaves cured and stacked; you then proceed to give the land a thorough cultivation. It is at this period that the wild oats make their most vigorous growth. I have heard it said that wild oats will not grow in the fall of the year; but that is a mistake. In our fields, especially around where the stooks had stood and where we had known wild oats to be, the ground has been literally green with sprouts. It is well known that wild oats will thrive anywhere better than where cultivation is going on.

Late in the fall, after the growth has been stopped, plow the land again at a depth of from six to eight inches—we recommend a disc as being most successful—and then you will have a piece of ground that; I think, will surprise you, as to its efficiency to produce a crop of wheat, and to its scarcity of foul seeds.

Lansdowne Mun.

JOHN EDWIN SLATER.

The Only Effective Method

EDITOR FARMER'S ADVOCATE:

I am submitting my experience as to the quickest, surest and most practicable method of getting rid of wild oats. I have made a study of wild oats problem for several years and have found that the chief obstacle in exterminating this pest is the difficulty in getting all the kernels to germinate in one season, as the wild oat is most fastidious and if buried a little too deeply or the temperature does not quite suit, it will lie and sulk until the following spring, when it will loom up as large as life in the growing grain, which the owner fondly imagined would be perfectly clean.

Before stating what I think is the only way to get all the oats to germinate in one season, (take it for granted that that is the idea of this discussion, if feasible). I will give briefly some of my experiences with different methods.

In my first attack on the enemy I left the infested field until about June 7th when I chained under the weeds and ploughed the land five inches deep, culti-

vating the rest of the season. The succeeding crop was fairly clean, but the first time the field was ploughed, the next crop was as dirty as ever, as evidently the oats on the surface had been buried too deeply and did not germinate until brought up again by the plough. In my next attempt I ploughed lightly at the end of May, harrowed directly after the plough, let the weeds grow till the first week in August, when I ploughed the second time, deeper than the first.

I thought I certainly had them then, but the crop I had figured in my mind—about thirty bushels to the acre—was about half wild oats, my second ploughing had brought the oats up from the bottom of the furrow and left them near the surface and the land being dry and loose from the two ploughings the oats did not grow until the next spring. I next tried ploughing in spring, seeding oats and mowing for feed as soon as the heads began to appear, then ploughing again and harrowing until fall. A great number of wild oats came up with the tame ones, and these I caught with the mower, but the crop had taken the moisture from the land and left it in too dry a condition for the oats which did not germinate at the first ploughing to grow at the second, they did not forget to grow next year with the wheat though.

I then skimmed the land in the fall, waited until the oats were well up in June, ploughed again and seeded to barley. I cut the barley before the oats had filled, but some ripened in the shock and shelled out during stacking, and in patches where the wild oats were very thick and short, the binder would not cut low enough to get them all. These ripened before I could plough after stacking the barley, and I found this would inevitably happen when the binder was used.

Now I come to the only way in which I consider you can be sure of every oat growing, and being destroyed without reseeded the land. Skim your land in the fall, harrow and leave until, say, June 1st, when all the oats on the surface will have grown. Then plough deeply, say, half an inch deeper than the land has ever been ploughed, follow right after with the packer and harrow crossways. This will keep most of the moisture in the land, and you will have it and all the rain that may follow during the rest of the season to germinate the oats which will be all fairly near the top.

Cultivate until fall with a duck's-foot cultivator and harrows, never letting the weeds get so far ahead that the teeth will not cut them, and I do not think you will find many wild oats in the next crop or when the land is again ploughed, as is the case with any other method.

North Norfolk, Man.

R. A. P. MARGETSON

Favors Growing Barley

EDITOR FARMER'S ADVOCATE:

It is somewhat difficult for some of us who do not often use the pen to put our ideas upon paper, but I thought I would try and state what I have found to be the quickest, surest and a very practical method of getting rid of wild oats.

It will make no difference what the size of our field may be, the same treatment will apply to a field of ten acres or one of fifty or a hundred. As soon as the crop is shifted from the land plow a good, safe fire-guard around the field and burn the stubble, usually there is no difficulty in getting a good, clean burn where there is any quantity of wild oats. Then plow very shallow or disc the land thoroughly, of course, you can cover more land with the disc than with the plow, but some object to disc because it ridges the land, but if the land is well harrowed, as it should be, to encourage all seeds to germinate, the trouble from this source will not amount to much.

If this work is done early in fall, long before freeze-up, there will be a good growth of oats and other seeds, and the cattle will pick round on it till snow comes, and the land will be in fine shape for working any time the following spring.

From experiments made it is pretty certain that wild oats require more moisture to germinate than the cultivated varieties, and then it may very likely be—if the fall be a dry one—a considerable number of oats left in the ground that have not as yet germinated. For this reason it will be found advisable to leave the land until, say, the middle of May, when it should be plowed again, not too deeply. I think it a mistake to plow dirty land too deep for seeds to grow as they simply lie there awaiting more favorable conditions to germinate. It is good policy to keep the harrows and seeder, right up to the plow—and sow barley not too deeply at the rate of two and one-half bushels per acre. Harrow again after seeding, and under anything like favorable climatic conditions, the barley will grow right away from start and be fit for harvest before the oats are filled. Get the grain off the field as quickly as possible and plow and harrow again, and I should not be afraid of wild oats in succeeding crop, but I would follow with oats next year as there would be barley left on land, and barley and wheat are not a good mixture on account of the difficulty in separating them.

I prefer this method because you do not lose a crop. If the work is done right, you will have a barley crop fully equal in value to wheat, and you will have done a good deal towards ridding your land of this troublesome pest.

I have seen land bare fallowed on account of wild oats, and well done too, and yet following crop of wheat has been about as bad with wild oats as ever. I have also observed that a barley crop seems to impart more humus to soil than either wheat, oats or bare fallow.

Stanley Mun. Man.,

R. BAYLISS.

The Best and Quickest Method of Killing Wild Oats

There are several ways by which we may attack a field infested with wild oats. If it is convenient, seed down a field and use for a meadow or pasture for five or six years. There is no surer way of killing them, the land will be enriched and the oats will have rotted. This method, however, would be impracticable where the whole farm is more or less infested with them, because no farmer could have his whole farm for a meadow or pasture for five or six years. I would, however, advise those who have land infested with wild oats, to set apart a portion of it for pasture and seed it down. Every farmer needs a pasture so no loss is entailed by treating wild oats in this way.

Another very successful method is growing two crops of barley in succession. Some farmers claim that they have killed them with one crop, but my experience has been that you cannot get rid of them all in a single year. There is sure to be enough left to reseed the land in the course of two or three years. The best method to follow, when growing barley for this purpose is to double disc the land as early as possible after the crop is taken off, and if time permits, give it a stroke with a drag harrow a little later on. This encourages a growth during the fall, and all plants germinated at this time are killed by the winter frosts. As early as possible the next spring, double disc again and then harrow or cultivate at intervals of about two weeks. If there is sufficient moisture to promote a rapid growth, most of the oats lying on the surface will be killed by the shallow cultivator. About June 10th or 15th, plow about six inches deep and then pack and sow to barley. It is well to cut the barley a little on the green side so as to catch all the oats before any have time to ripen and fall off. In seasons of ample rainfall, you may be successful in killing them in one year, but I have never, during my experience, seen a field thoroughly cleaned by one year's work. To make a sure job of it, you ought to cultivate in the same manner and sow barley for a second year, then if your work has been done properly, you should be rid of the wild oats. The great advantage in growing barley is that you get something to pay you for your work without waiting a year, which you would have to do in case of summer fallow.

The best and quickest method, if you wish to do it in one season, is a thorough summer fallow, but it must be done properly if the best results are to be expected. The best method to follow in summer fallowing is to double disc as soon after harvest as possible, so as to get a growth during the fall. As soon as the rush of seeding is over, the following spring, double disc again and then harrow with a drag harrow. This ought to leave a good surface mulch, and if there is ample moisture, the weed seeds will germinate rapidly. Cultivate and harrow frequently especially after any heavy rains. This will not only destroy the weeds that have already sprouted, but will start a fresh growth. Destroying weeds, however, is not the only object in summer fallowing. The frequent cultivation increases available plant food and forms a mulch which retains the moisture for the next year's crop. By the last week in June you should have killed all the wild oats on the surface soil, if your work has been done properly. You should then plow to a depth of six or eight inches and pack and then harrow.

The land should be packed the same day as it is plowed, to prevent the evaporation of moisture. It is now in such a condition that any seeds that were buried too deep to germinate before will do so. There ought to be sufficient moisture to promote growth, even if there is very little rainfall, because most of the moisture that came during the early part of the season has been retained by good cultivation. Cultivate before and after harvest to destroy the late summer and autumn growth. It is well to cultivate after a rain because it is then that the best results are obtained. The moisture is retained and an ideal mulch is formed, in which the weed seeds will germinate rapidly.

The method outlined above requires a lot of work but if we wish to rid ourselves of wild oats we must work hard and persistently. Some farmers may think that they can do it easier than by following a method like that which I have outlined. It takes at least one season to get rid of them and it is my experience that the most thorough methods is always the best and quickest method.

Dufferin Mun., Man.

A. GARNETT.

Crops to Barley for Two Years

EDITOR FARMER'S ADVOCATE:

This question of getting rid of wild oats is one of the burning ones with the farmers in this country to-day. There is no doubt but that there are several ways of getting rid of this pest, but I will sketch the method which I have found most effective in eradicating them. It is by growing beardless barley.