

In the first place, I would say that all obstructions to cultivation, such as piles of stone, must be removed—hailed away to the woods or an out-of-the-way corner in winter or some other slack time. Secondly, places for harboring weeds, such, for example, as snake fences, should be got rid of as soon as possible. On the Ontario Experimental Farm, nearly all field fences have been removed. The outside and lane fences are almost the only ones left. Portable fences are used when required for pasturing live stock.

*Annuals and Biennials.*—Wild oats, wild mustard seed, and some other seeds belonging to these classes, have great vitality. If down pretty well beyond the reach of the air, they will live for twenty years, and will germinate as soon as they are brought near the surface.

The best way to destroy annuals and biennials is by thorough and frequent shallow cultivation, early after harvest in stubble ground and in sod plowed for the following year, and at the proper season (spring and summer) among what are called "hoed crops," that is, potatoes, carrots, turnips, mangels, Indian corn, etc. By shallow cultivation the seeds are kept near the surface, and by frequent stirring of the soil they are made to sprout; and having sprouted, they can be killed by further cultivation. Those which sprout late in the fall are destroyed by the winter frost. It is impossible to get rid of such weeds by plowing the ordinary depth, say seven or eight inches, once in the fall or at any other time. Plow shallow (not more than four inches in sod and three inches in stubble ground), and harrow and cultivate frequently, as by each stirring of the soil fresh seed is made to sprout and what has already sprouted is destroyed. When necessary to loosen the soil to a greater depth, use a grubber or a subsoil plow.

*Perennials.*—It is necessary to study the habits of perennial weeds, to see how they grow and propagate themselves from year to year, in order to keep them in check; and a close examination of almost any of them will show that the buds from which the young plants start are near the surface of the soil. Hence shallow cultivation, similar to that mentioned above, is the effective method of destroying them. Deep plowing only transplants the buds to a greater depth and increases the trouble. Plow shallow (see preceding paragraph), and harrow and cultivate frequently, using a grubber or subsoil plow when it is necessary to stir the soil to a greater depth. As above, the cultivation must be early after harvest and throughout the fall in stubble ground and sod, and in spring and summer among corn, potatoes, and root crops. Ill-timed, irregular or partial cultivation only makes all weeds grow more vigorously.

*Canada thistles, sow thistles, couch-grass, bindweed, etc.*, can be destroyed by the following method: 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 common or spring-tooth cultiva-