

is not very successful. The deep plowing causes the soil to dry out near the surface and no germination takes place until late the following season after which it is impossible to have all the seed germinate.

Second Plowing of Summer-fallow—

The plowing of the present year's summer-fallow the second time late in the fall is not good practice when the control of wild oats is the main point at issue. When the summer fallow has been plowed early in the season, packed, harrowed and cultivated to keep it black during the summer, there should be few ungerminated weed seeds left in the surface soil. If this land is plowed again the second time in the autumn that clean surface is turned down and a comparatively dirty one turned up. It is too late for all these seeds to germinate that fall and the result is they grow the following season in the crop.

Surface Cultivation of the Fallows in the Fall—

If wild oats are the only weeds present, fall cultivation will be of little use, for the frost will kill the late weeds as effectively as the cultivator and it will be much cheaper. The dead plants will also have a tendency to prevent the fallow from drifting.

Fall and Spring Plowing—

Where the land is to be cropped the following season the best results are obtained with wheat when the land is fall plowed from four to six inches deep early in the autumn and the soil packed and harrowed immediately after the plow. This will allow some growth to take place in the fall which will be killed by the frost. Where oats and barley are to be sown it is believed that skim plowing in the fall and deeper plowing the next spring will kill some wild oats.

STINK WEED AND OTHER WINTER ANNUALS

Fall treatment that is effective for wild oats would also be useful for stink weed, because the object is the same—to germinate the seed and kill the plant while young. There is just this difference, however, the frost will not kill the latter weed, so that it requires a late fall or early spring cultivation.

SOW THISTLE AND OTHER PERENNIAL WEEDS

Since this type of weed spreads by both seed and root, an entirely different method of cultivation must be adopted. Bare fallow is the method used by most people for cleaning the sow thistle out of the worst field on the farm. It is sometimes effective and other times it fails. This might be due to misunderstanding the nature of the plant. The leaf of this plant performs the same function as a stomach in an animal. If the stomach could be removed without injuring the body the animal would soon die of starvation. The same is true with the plant; if it can be prevented from forming green leaves it will starve to death.

Fall Cultivation of Fallow—

Cultivation of the summer-fallow in the late spring and summer keeps the leaves from appearing above ground and the starving-out process has started but when haying and harvesting begin the fallow is sometimes neglected and the sow thistle acquires leaves two or three inches long. The result is that it has had time