

Method No. 1. This method is suggested by Professor Zavitz, who found it effective in the eradication of Quack Grass. Cultivate the field until about the middle of June, running over it frequently with the cultivator so as to keep the tops down and thus weaken the "roots." Then apply manure at the rate of about 20 bushels per acre (12 good loads). Cultivate the manure in thoroughly and with a double mould plow slightly ridge up the land, making the ridges about 26 inches apart. On the ridges sow pasture rape at the rate of $1\frac{1}{2}$ lbs. per acre. It must be remembered that the right amount of rape should be sown, for if too little is sown the plants will not be thick enough to smother the weeds, and if, on the other hand, too much is sown the plants will be too crowded and not grow vigorously enough to keep ahead of the thistle. Sow the rape when the land is sufficiently moist to insure quick germination of the seed. If the rape is slow in starting the Sow Thistle will start in the rows and thus necessitate hand cultivation there. Cultivate every week or ten days until it occupies all the ground and makes further hand cultivation impossible. If, when the rape is cut or pastured, any Sow Thistles remain, the field should be ridged up the last thing in the fall and put in with a good crop the following year. This should not be necessary if a good stand of rape is obtained.

Method No. 2. This is a system of intensive cropping suggested by Professor Zavitz. As soon as a cereal crop is harvested, plow the land and give frequent cultivation until the first or middle of September. Then sow winter rye at the rate of about two bushels per acre. This can be pastured the following spring, or cut for hay or silage. As soon as the crop is off the land, put in rape, turnips, or buckwheat. The advantage of this system is that three crops are harvested in two years and the Sow Thistle fought at the same time.

Method No. 3. This method is recommended by Professor Day. Immediately after harvest gang-plow shallow and run over the field several times with the broad-swing cultivator. Later in the fall plow a little deeper, and continue cultivating every week or ten days as long as the season permits. Last thing before the ground freezes ridge up the land with a double mould board plow. The following spring give frequent cultivation up to the first of July, then sow pasture rape.

Method No. 4. This is a short rotation which has been recommended by several Cornell Institute workers. Clover is followed by a crop of grain, then clover again. The clover is cut in June, and the land plowed about four inches deep and given frequent and thorough cultivation during the rest of the summer. The following spring a grain crop is sown, seeding down with clover. For best results the grain crop should be one which can be cut early enough to prevent the thistle from coming in.

Method No. 5. Directly after harvest plow the land lightly, and then give frequent cultivation as long as the season permits. The following spring gang-plow and leave in summer fallow until it is time to sow fall wheat. The summer fallow which is effective must be a *bare fallow*. The field must be cultivated thoroughly and frequently, with the object of keeping the tops down and breaking up and bringing to the surface of the ground as many of the "roots" as possible. The gang-plow should occasionally be run over the field in order to insure the cutting of the roots. Bare summer fallow has given excellent results on the College farm in seasons when other methods were at best only partially effective.