Suggestions for Control of CANADA THISTLE
Recent years of more ample moisture have been favorable to the spread of Canada Thistle. The infestation is usually confined to patches of varying size which are found particularly in low places where the ground is moist. There are few, if any, cases where a whole field has been taken over by this weed.

An adequate control program on the part of farmers should keep Canada thistle from becoming too troublesome.

Patches quickly become so solid that they crowd out grains completely. The prickly nature of the plant also makes it a nuisance in harvesting or handling hay and grain crops. The large amount of food stored in the roots makes the plant hard to eradicate.

**Habits of Growth**

Canada thistle is a perennial. It spreads both by a creeping root system and by seed. The seed is carried by the wind. This combination of creeping roots and windborne seed makes it easy for Canada thistle to spread. Once it becomes established, it is quite persistent.

The depth of roots varies with soil conditions. Vertical roots will go to a depth of 7 to 9 feet and in some cases, much deeper. Horizontal roots running parallel with the soil surface are usually 6 to 12 inches deep. They are the means by which the plant spreads underground.

New shoots are sent up as the roots grow away from the main plant. Small pieces of root, 1 to 3 inches long, may start a new plant if they are scattered in the field by machinery.

Canada thistle has male flowers on one plant and female flowers on another. Occasionally, a patch of male plants will become established. It, of course, can not produce seed.

A lone patch of female plants can also become established. Unless there are plants carrying male flowers near by to provide pollen, or the pollen is carried in by insects, a female patch cannot produce seed. The tuft of hairs is developed even if the seed is not.
Control Measures

**Tillage**  
Control by tillage depends on starving the root system through the destruction of green top growth. Studies have shown that food reserves in the roots of Canada thistle are low just before the plant blooms. This suggests the ideal time to start tillage operations.

The infested area should be plowed just when the plants are ready to bloom. Cultivations with a "duck-foot" cultivator, or other implement that will cut the new shoots off below the ground surface, should follow from then until freeze-up, whenever green growth appears. Very little, if any, green growth can be permitted between cultivations for effective control.

**Competitive Crops**  
Canada thistle is usually confined to small patches and, therefore, competitive or smother crops are not very practical.

The best competitive crop is alfalfa. The removal of the hay crops and the competition of the alfalfa will in time crowd out the thistle. Alfalfa starts before the thistle in the spring and makes a quick recovery after mowing for hay. Sweet clover can also be used with some success. Sweet clover, however, is short-lived and may not provide competition for a long enough time.

Row crops are of value in following up tillage control done the year before. They offer an opportunity to clean up any remaining plants by cultivation of the row crop.

Special attention should be given the rows. It may be necessary to hand hoe some places or to cultivate out the crop in spots that appear to need it.

**Chemicals**  
Sodium chlorate is effective. It can be used if the infestation is confined to small areas. It is not economical on large areas.

Sodium chlorate should be applied on the ground in dry form. For best results, mow the thistle when starting to bloom and then apply the chlorate at the rate of 4 pounds per square rod.

Sodium chlorate should not be applied until after July 15. It may also be applied later in the fall.
It is not yet known whether 2,4-D, the new hormone weed killer, extensively advertised, will kill Canada thistle.

Remember, in using any chemicals, a careful inspection should be made of the treated area the year following. Any missed plants or new growth should be re-treated.

MOWING No patch should ever be allowed to go to seed. The seed is spread easily by the wind and one small patch can serve to infest a much larger area.

Repeated mowings in pastures or waste land will eventually weaken the plants to a point that they will die.

Livestock generally will not eat Canada thistle, such as they will some other weeds. Sheep, however, will eat the young plants of Canada thistle.