

## Farm Drainage Assistance

by E. M. Wrubleski

Farmers in Halton County are realizing more and more the benefits that drainage could have on their farm. Many are asking about what assistance is available for the construction and financing of drainage systems. Three means of assistance will be discussed.

The Municipal Drainage Act: This Act is administered by the local township. Its purpose is to provide a means by which a covered drain or open ditch can be constructed to engineering standards between two or more landowners. There are certain legislated procedures by which the drainage system is requested by landowners — approved by council — designed by a professional engineer — ratified by the landowners — made a bylaw and — maintained in the future.



E. M. Wrubleski (ODAF Photo)

The advantages of the use of the Municipal Drainage Act are:

- It is administered by an objective body.
- The drain is properly designed.
- The costs are assessed to each landowner according to the amount of water his land contributes and the amount of benefit the land receives.
- The drain is maintained upon request of one of the landowners and decision of an engineer.

The provincial government pays a grant of one third of the cost assessed against agricultural land.

The disadvantages of this type of drain are:

- It will likely be more costly than a mutual agreement ditch.
- It may take longer to get it constructed because of the administrative and legal details.

How do a group of farmers go about getting a drain started? First of all, they must contact the local township clerk to get a petition form. The form must then be signed by a majority of landowners on the watershed which requires drainage. Generally speaking, this means a majority of landowners between and including the first and last landowner on a watercourse which requires improvement.

The council may now act on this petition and appoint an engineer. He does a survey on the watercourse, designs the ditch and

assesses the costs. The landowners have certain rights of protest against the nature of the ditch and their assessment.

These rights are explained when the engineer's proposal is sent to them. A meeting is called to discuss the drain. If a majority are in agreement, a by-law can then be passed. Tenders are then let for the construction.

The Tile Drainage Act: This Act is also

administered by the local township. The purpose of this Act is to provide a means of financing tile drainage on agricultural land at a favourable interest rate. The rate is now four percent.

A farmer may borrow up to 75 percent of the cost of the work. He has up to 10 years to repay the loan. Over the 10 year period the repayment schedule is \$12.33 per year per \$100 borrowed.

A farmer applies for this loan on a form available from the township clerk. He must make application before the tiling is started. The farmer must declare ownership and freedom from encumbrance. The approval of the mortgage is also required.

Capital Grant: This is a grant of \$1000 which is available from the provincial government. This grant covers one third of the cost of drainage (and/or

buildings) up to a total of \$3000. In other words, the drainage work cost \$1500 a grant of \$500 would be received. If the drainage work cost \$3000 a grant of \$1000 would be received. To be eligible for a grant, drainage work must be to proper standards.

For more information on these Acts and grants contact the local office of the Ontario Department of Agriculture and Food.

## Alfalfa Weevil In 1971

by K. Bereta

The alfalfa weevil is now present in all of Southern Ontario (40 counties). It is expected that one-half of the alfalfa grown therein will require a control measure in 1971 to prevent excessive losses. The counties closest to the lake are the most heavily infested.

Although this pest has become widespread and serious, the alfalfa grower should not feel helpless. Several approaches to the management of the weevil are possible.

Parasites of the alfalfa weevil are now established in Ontario as a result of releases made in 1970 and also because of some migration from nearby states. As the populations of these tiny wasps increase, they may exert a considerable influence in controlling the weevil.

Encouragement may be taken from the decline of the weevil to harmless levels in Quebec and in several north-east states where parasite numbers have built up. Although parasites are not a significant force in Ontario at present, they are the long term hope.

Two other approaches in checking the weevil are of immediate value. When 25-50 percent of the leaves in an alfalfa field show feeding damage cutting the alfalfa early, is the easiest and recommended way to control the alfalfa weevil.

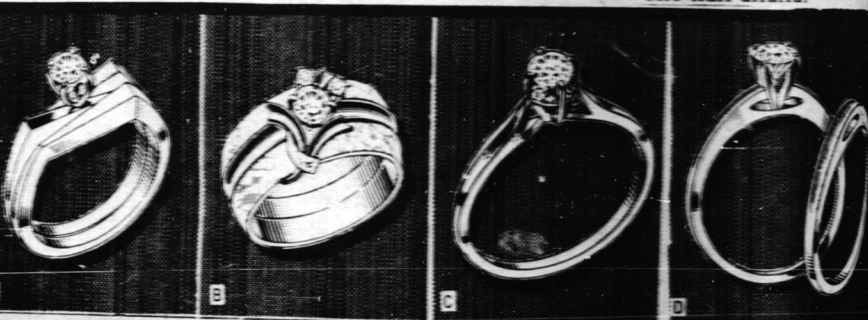
In addition to combatting the insect, this practice increases the value of the forage since "forced" cutting is usually 5-10 days earlier than has been the practice in the past.

It should be noted however, that a two year study in Ontario has established that a forage stand must be at least 50 percent alfalfa before a profitable return is obtained from applying an insecticide.

The larvae (worms) cause the damage because they feed on the alfalfa leaves during late May and early June and frequent inspection of fields at this time must be made.

Properly timed spraying, if necessary, is a costly measure. In addition, parts of the field should be examined since there is often a considerable difference in infestation in different parts of a field as well as from field to field.

It is also essential to check the regrowth of alfalfa after the first crop. Sometimes a substantial larval carryover may occur to cause damage to the second crop. If injury is readily seen, spray should be applied provided the forage stand is one-half alfalfa.



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## Chemical Weed Control In Corn

The Jarvis Record, Thursday, March 11, 1971 — 3A

by Howard Henry

Lasso-Atrazine has been an excellent control of broadleaf annual weeds in corn but sometimes grass, foxtail and old John grass escape, causing yield reductions and other problems. This is especially true if dry weather follows spraying.

Lasso-Atrazine gives better control if applied when the corn is at the one to two leaf stage. Sometimes other farm work, break downs or wet weather delay spraying, resulting in poor control.

If you have this problem, consider using Sutan or Lasso, two chemicals which give good control of annual grasses. Their weakness is that they miss some broadleaf weeds such as ragweed, lamb's quarters and mustard. Atrazine, on the other hand, gives good control of broadleaf weeds but sometimes misses annual grasses.

Sutan-Atrazine or Lasso-Atrazine mixtures usually give better overall control than any one of these chemicals used alone. Sutan also gives good control of nut grass and fair control of horsetail, two weeds which sometimes build up in corn.

Sutan-Atrazine mixtures must be applied before planting and immediately worked into the soil with two double disc harrows or cultivations at angles to each other. If impossible to work a field crossways, it must be worked twice.

Equipment is now available that can be used to a disc or harrow to apply the spray. If the field is worked, thus eliminating the necessity of two tractors, one of the sprayer and harrow following with the

harrow works best when applied to a dry soil surface. It is very effective even in dry weather follows spraying. One disadvantage is, since it must be applied before seeding, spraying may be delayed, especially in late, wet weather. However, this can

also be an advantage if it turns too wet to spray after planting.

The Lasso-Atrazine mixture should be applied as soon as possible after planting, before weeds or corn emerge. It is most effective if at least 1/3 of an inch of rain falls within 10 days after application.



Howard Henry, (ODAF Photo)

If it stays dry, and seed bed moisture was low at time of spraying, weed control may be poor. Lasso does not have to be worked into the soil like Sutan but it is more likely to fail in dry weather.

A new herbicide called Bladex will be for sale in 1971. It must be applied as soon as possible after planting, before corn or weeds emerge. Bladex applied alone usually gives good control of most annual broadleaf weeds and grasses. However, it sometimes misses pigweed and barnyard grass. Atrazine is good on these two weeds but misses crabgrass.

Bladex, on the other hand, is good on crabgrass so Bladex mixed with Atrazine usually gives better overall weed control than either chemical used alone. Bladex works well on coarse-textured soils such as sandy and silt loams but is not sufficiently active to give good weed control on heavy clay or muck soils. Bladex should be applied to a level, firm seed bed and is most effective if at least 1/2 inch of rain falls within seven to ten days after application. If rain does not occur weed control may be poor.

A further advantage of using Sutan, Lasso or Bladex mixed with Atrazine is that the rate of Atrazine can be reduced, thus decreasing the risk of Atrazine injury to other crops seeded the following spring. Sutan, Lasso and Bladex are short residual chemicals which break down in the soil during the growing season in which they are applied.

Sutan, Lasso and Bladex do not control perennial quackgrass, just annual grasses which grow from seed each spring. If quackgrass is the main weed problem and corn can be grown for three years, Atrazine should be applied in the fall or early spring on actively growing quackgrass foliage, the land plowed, corn planted and Oil-Atrazine applied when the annual grasses in the corn crop have reached the one to two leaf stage. Corn must be grown for three years following this treatment because Atrazine residue will damage other crops during this time.

If it is desired to grow corn for one year only and still control quackgrass, apply Amitrole T on actively growing quackgrass foliage in the spring. This chemical disappears from the soil shortly after application, so will not damage the corn or other crops grown the following year. The Amitrole T treatment is followed by Oil-Atrazine applied when the annual grasses in the corn have reached the one to two leaf stage. If no more than two pounds of 80 W Atrazine product is applied per acre, crops other than corn can be grown the following year with little risk of Atrazine injury.

One of the first herbicides used in corn was 2,4-D. This still gives good control of many broadleaf annual and perennial weeds but has little or no effect on annual grasses or quackgrass. In fact, 2,4-D can actually hasten the build-up of grasses in corn fields by controlling most other weeds and thus leaving the grasses with no competition other than the

crop itself. In addition, 2,4-D can seriously injure corn if applied overall after the corn is six inches tall (leaf extended), especially if the corn is growing rapidly. Injury by 2,4-D makes the stalks brittle and causes twisting of the roots, sometimes resulting in lodging. If 2,4-D is used, apply the amine form and use drop-pipes to direct the spray under the leaves if the crop is past the six inch stage.

Canada thistle may be a problem in corn fields. It can be controlled with herbicide products such as Tropitox plus, Embutox E, Banvel 3 and Kil-Mor. They

should be applied with drop-pipes which place the spray under the corn leaves onto the emerged weeds when the crop is one to two feet tall.

Kil-Mor and Banvel 3 also give good control of field bindweed, wild buckwheat and smartweed. Again, they should be applied with drop-pipes, under the corn leaves, onto the emerged weeds when the corn is one to two feet tall.

For full information on these treatments, including rates of chemical to be used per acre, refer to Publication 75 — "Guide to Chemical Weed Control," available at county offices of the Ontario Department of Agriculture and Food.

available at county offices of the Ontario Department of Agriculture and Food, and study all label directions very carefully.

For complete information on weed spraying, always follow the instructions on the herbicide container very carefully and refer to Publication No. 75 — "Guide to Chemical Weed Control," available at county offices of the Ontario Department of Agriculture and Food.

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