THE CORN BORER SITUATION IN 1926

Ontario Agricultural College Issues Statement.

The writer spent the last two weeks in August inspecting the corn fields of Essex, Kent, Lambton, Elgin, Middlesex, Oxford, Norfolk and Prince Edward. The local inspector under the Corn Borer Act accompanied him in each county.

A LARGE INCREASE.

The season has been favorable to the borer, with the result that there has been a large increase in every district in which the control measures were not generally practiced last fall or this spring. Essex and Kent, as predicted last autumn, have at least twice as many borers as in 1925, most of the early and also much of the later corn in these two counties being riddled by the borers. The farmers in these counties at last realize what the borer means and most of them feel that it is useless to attempt to grow corn there until the pest has been brought under control.

In Lambton, especially southern Lambton, the increase has been very rapid, due partly to the flight of moths from Kent and Essex and partly to failing to dispose of the remnants of last year's corn crop and to not plowing the stubble under. Many fine fields in southern Lambton have practically every stalk infested and will be nearly ruined.

In Elgin and Middlesex there has also been an increase over last year, but not nearly so great as in Essex and Kent, because most of the corn last year was cut low and the stubble better buried than usual. Fields can be found, however, in both of these counties with every stalk infested.

Oxford and Norfolk also show an increase, especially in the southern half in each case.

Prince Edward County has a remarkable increase. It is only two years since the first borer was found in this county. Yet in our tour of over thirty miles through it we could easily find the insect in every field and even in every small plot inspected.

There is no doubt that taking the province as a whole there are double the number of borers there were last year. This is a very serious situation and one that every farmer must take to heart if he wishes to continue growing corn, and many of our farmers feel that for them no other crop can take its place.

WHAT MUST BE DONE.

The eight counties mentioned above have been put under the Corn Borer Act and every farmer is now obliged by law to carry out the Regulations under the Act. An inspector has been appointed in each of these counties to see that this is done. But this does not mean that farmers in other counties may sit back and do nothing. It is the duty of every farmer to do his part in control. Common sense and the farmer's own welfare demands it. Let any man who has the least doubt as to the destructiveness of the borer visit Essex and Kent and talk with the farmer there and he will come home a changed man. Many people think that because there is a large number of silos in their county and most of the corn stalks are consumed therefore the borer will not increase in that county, but experience shows it is increasing almost everywhere. The number of the borers in the province has at least doubled every year since their discovery six years ago.

The cause of this in every county has been the failure of many men either to see that unfed corn stalks were burned or plowed under, or to plow the corn stubble under well and not drag it up again. In every county there have been each year scores of men who merely tore up the corn stubble and sowed the field to another crop, and dozens of others who plowed the stubble under but dragged it nearly all up again. Scores also left corn stalks all summer lying around the barns or in the fields. Control is not possible under such conditions.

CONTROL MEASURES SUMMARIZED.

1. Cut the corn low, even if this means cutting only one way this year.
2. Ensile or feed or shred all the stalks possible, and burn any that are left over, wherever they may be.
3. Plow under completely with a wide furrow plow and a chain where necessary, all the stubble, weeds and corn debris in the field.

This year, owing to storms, much of the stubble will have been left long. In such a case run a plow just beneath the stubble row and throw it all out, then harrow and then plow.

4. In the spring roll the field before cultivating and use a disc, not a toothed, implement in working the soil. Use a disc drill in sowing.

There are hundreds of farmers all over the country who are doing all that is necessary and not finding it hard. The rest can do the same if they try. In no other way is there any hope of holding the borer.

Outdoor Wintering.

Though outdoor wintering is becoming very popular and is considered highly successful, there still come in reports of losses which, however, are usually the result of inadequate preparations being made for the winter.

Wintering outdoors means more than merely placing one's colonies in their winter cases and leaving them there to pass the winter. It means preparing the bees in the best way possible that they may come out strong in the spring, for the strong colonies are the profitable ones.

With this in view, preparations should be started about the end of July by seeing that the colonies are headed by young queens or at least vigorous ones, in order that a large force of young bees may be produced. Should there be no fall flow to stimulate brood rearing it may be necessary to feed.

Winter cases having been made according to one's own design or to drawing which may be had by writing to the Bee Division, Central Experimental Farm, Ottawa, about the end of September the colonies, after being weighed, are placed in the cases and four inches of packing is placed underneath and about the sides of the hives. The colonies are then fed, if necessary. Any ten-frame Langstroth hive without its outer cover that does not weigh at least 75 pounds, should be fed 1 pound of sugar for every pound lacking in a syrup composed of 2 parts best granulated sugar to 1 part water. For straight wintering, sugar which contains no residue to clog the bees' intestines is superior to honey, in that sugar breaks down into gas and water, whereas honey leaves a residue—honey, however, is necessary for brood rearing in the spring.

The bees being fed the required amount of syrup or as much as they will take down, the top packing is put in place.

Natural windbreaks should be used if available; otherwise wooden fences similar to the snow fences of the railroad should be provided to break the piercing winds that would strike and chill the colonies.

The above requirements for good wintering being satisfied no further attention will be required until spring.

Succulent Annual Pastures.

There are three succulent annual pastures particularly grown in this country. There are rape, kale and cabbage. The last named is not often referred to as regards its quality as a forage plant, but as stated in a recently issued pamphlet by the Forage Crop division of the Central Experimental Farm at Ottawa, the Savoy (wrinkled leaf) and Drumhead (smooth-leaf) types make a succulent, palatable and profitable addition to our annual pastures. Experiments in the cultivation of these crops have been conducted for several years at the Central and branch farms and stations throughout Canada. High moisture makes them difficult to cure, but also is responsible for their giving satisfactory results when pastured or fed green.

In the pamphlet, which is available at the Publications Branch of the Dept. of Agriculture, Ottawa, is given a table of results from tests at the Central Experimental Farm and also quotations from reports received from different branch farms and stations in all the provinces, showing the suitability of these fleshy annual crops for a wide range of soil and climatic conditions. In Prince Edward Island rape has proved good pasture in the fall for steers. In Nova Scotia it has proven the same for hogs. Brandon, Manitoba, results indicate that rape has an important place as a quick pasture for cattle, sheep and hogs. It recovers quickly from frost. Rape is generally known throughout the west as affording good pasture for lambs, brood sows and growing pigs.

Kale is grown extensively in the Fraser Valley and on Vancouver Island and has proven one of the best available green foods for poultry and for milch cows.

Thistle Eradication.

Some growers have got rid of Canada thistle by applying salt. This calls for enough salt to make the land actually alkaline. Other growers have tried smothering the weeds with tar paper. This usually fails, as the tar paper is too often trampled by livestock or blown away.

Methods of cultivating infested areas, then planting a smother crop, have been advocated. For the smother crop vetches, hemp or sunflowers have been used. This has not always been successful. In some rich soils where moisture is adequate a thick planting of hemp at about one and a half bushels an acre has so completely overshadowed the thistles as to eliminate them. The only known control for thistle is the clean-culture system of root-starvation followed by a cultivated crop. Any system that will permit thistle growth without leaves getting to the light will sap the energy of the plant, use up the food supply stored in the rooting system and prevent a new supply being formed. As with bindweed, intensive cultivation is the most practical way of destroying large areas of thistle.

Thorough plowing, taking narrow furrow slices with sharp implements has been most effective. Where cultivation can be started early in the season and kept up throughout the year, not allowing greenleaf growth, the plants usually are killed out by the end of the first year.

Meal is poor feed for horses if their teeth are in good shape. It is eaten too fast and sticks in the horse's throat. Give the horse a chance to use his grinders—that's what they are for.

Bleeding Market Poultry.

Bleeding through the mouth is the most effective method of handling market poultry. One cut correctly made is all that is necessary. With the bird suspended by its feet, and with its breast toward the killer, the knife is inserted so that the point of the blade is just back of the skull and to the left. It is then presed down and drawn forward and across the base of the skull to the right.

As soon as a free flow of blood starts, the bird should be killed by debraining. In doing this, as well as in picking the bird by the dry method, it is important that no pressure be exerted on the neck or throat which will interfere with free bleeding.

Other factors of importance in securing good bleeding are starving the bird for twenty-four hours previous to killing, clean cutting of the gugular vein, protection of the cut blood vessel from the outside air, an inverted position of the bird while it is bleeding, and the involuntary convulsions which occur after the bird is killed.

Frozen Combs.

The easiest, as well as the most humane, treatment for frozen combs and wattles in the majority of cases is to cut off the affected parts with a pair of shears.

Some of the most practical-minded Leghorn breeders in the country make a practice of dubbing all male birds at the beginning of winter. This avoids all danger of freezing provided both comb and wattles are closely clipped.

Furthermore, there is some justification for the belief that the dubbed fowls are less affected by ordinary cold weather. Certainly a male bird with badly frozen comb or wattles is useless as a breeder for some time.

Of course this practice cannot be followed with show birds or with breeding stock held for sale. If found in time, frozen parts can be thawed out slowly with snow and light rubbing to re-establish the circulation. They should then be greased once or twice daily with an ointment such as equal parts of vaseline, glycerine and turpentine.

Artificial Lights.

It is a comparatively easy matter to overdo the matter of increasing the length of the hen's day by the use of artificial lights. Some persons have reasoned that if a little light is a good thing, more is better, and so have increased the hen's working hours beyond the safety point.

It is not difficult to get a flock of pullets to laying at better than 50 per cent. by the use of lights, but experience has proved that in most cases those who do this lose out in the long run.

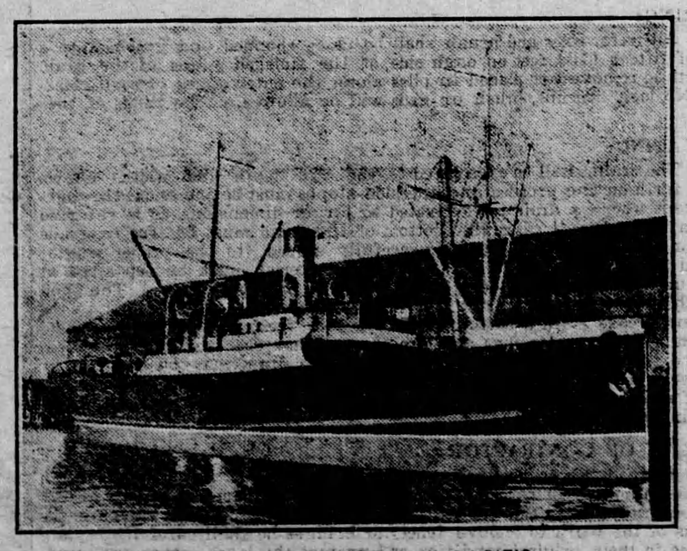
Unduly forced production at this season is certain to be followed sooner or later by a slump and perhaps a partial molt, so that the average egg yield for the year may fall below what might have been obtained without the use of lights. This may mean also a smaller total return for the year.

It is generally considered best to use only enough light to bring the flock production up to forty eggs daily for each hundred hens during the winter months.

Headlights Deserve Care.

Your headlights should receive the proper attention so they won't cause inconvenience and danger to other people.

If yearling colts are still wearing last year's coat, and have poor appetites, give them some worm medicine. There are some good remedies on the market. Or, if you have a medicine cabinet, mix three drams of powdered iron-sulphate and three of gentian root. Use this dose twice a week if necessary.



THE PILCHARDS OF THE PACIFIC

The salmon is about to find a keen rival for supremacy in the British Columbia fishing industry in the opinion of John Babcock, assistant commissioner of fisheries for the Province. During the past year the pilchard has advanced to a position of great importance. The one subject of conversation all along the coast from Barkley to Quatsino is pilchards. During the past winter and spring fourteen new plants have been constructed, most of which are in a position to operate as soon as the pilchards strike the coast. Only three plants operated last year. The whaling plant at Cachelot, Kyuquot Sound, will hereafter be operated as a pilchard reduction plant. The same with the old whaling station at Sechart. Upwards of $2,000,000 will be spent to remodel the old cannery at Ucuelet where pilchards will be handled.

Pilchards are on the average larger than herrings and are rich in oil which is used in making oleomargarine, fine soaps and varnish. This year the oil will be shipped in bulk, and the Canadian Pacific vessels have been equipped with great tanks for its transportation. The above photograph shows the S.S. Princess Ena, berthed at the C.P.R. pier at Vancouver, where she arrived with the first cargo of pilchard oil of the season.

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BULBS SUITABLE FOR SMALL GARDENS

By Henry J. Moore.

It is indeed a very small garden where space cannot be found to plant a few kinds of the bulbous plants of which there are many hardy and satisfactory ones. The purchase of bulbs should be looked upon as an investment as not only do the plants give of their beauty perennially but they increase in numbers as the years go by and thus their money value is increased.

Use of the Bulbs.

The bulbs which flower in spring, of which the following can safely be recommended for the small garden, may be planted in beds or borders according to the desires of the owner. They are useful for formal garden schemes or for planting naturally and for massing in the perennial border. Narcissi (Daffodils), Tulips and Hyacinths are generally used to fill beds and are planted five or six inches apart.

The small garden owner who has not much money at his command, should not purchase the early spring flowering Tulips as these deteriorate after the first flowering in Canada, but should depend on the Darwins, which at least endure and sometimes increase their numbers every year. Thus if they are planted in a bed they may be left after flowering and annual plants may be sown or be planted in the bed when the leaves and stems of the Darwins have decayed, which will be about the 1st of June.

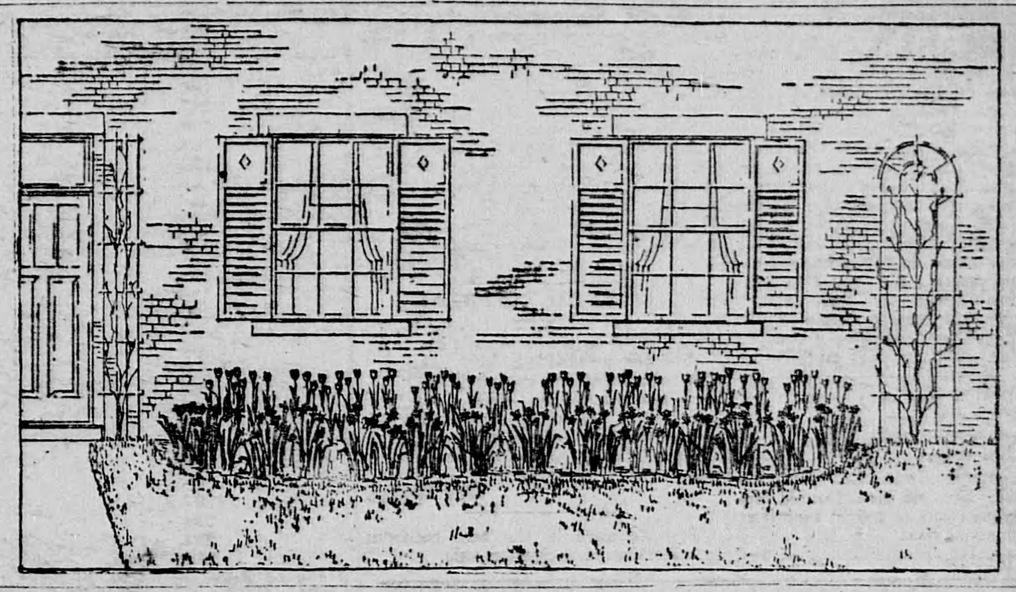
To buy Hyacinths will also be folly where money is to be considered, as these also deteriorate after flowering, especially is it an expensive procedure where a whole bed is to be filled. Daffodils, however, may safely be purchased because they are even more reliable than the Darwin Tulips and may be relied upon not only to maintain their numbers year by year but certain kinds are likely to increase largely their numbers. Like the Darwin Tulips the Daffodils may be planted in beds and annual flowering plants be grown over the dormant bulbs in summer, thus assuring both a spring and summer display of flowers in one bed.

It is perhaps for use in the perennial border, however, that the small garden owner will purchase bulbs. For this purpose he need not procure many of any kind. The practice in planting should be to mass the bulbs in numbers of perhaps a dozen of the larger kinds such as Daffodils, Tulips, Hyacinths, and from this number to twenty of the smaller ones to each mass, such as Snowdrops—white, Crocus—various, Scilla—blue, Glory of the Snow—blue, Winter Aconite—yellow, Meadow Saffron—rosy purple, Dog's Tooth—violet, white purple, Rose, red, Leucojum, Spring and Summer Snowflakes—white flowers tipped with green or yellow. For beds or borders the distance between the Daffodils, Tulips, and Hyacinths should be about five inches in their masses. For the rest of the bulbs the distance between should be considerably reduced, three or four inches apart will be proper.

The time to plant the forementioned subjects is during October. The large kinds such as the first mentioned should be planted in holes which are five or six inches deep and the other kinds three to four inches. With the exception of the Daffodils and Tulips which may be planted in masses throughout the border the rest should be passed along the front as they are of a very dwarf nature.

In addition to the spring flowering bulbous plants which have been mentioned, there are a few summer flowering ones which are grown in many gardens. The Gladiolus is perhaps the best known of these. It should be planted during the latter half of May and where ornamental effects or rather natural effects are desired it will appear to greater advantage when massed in numbers of twelve or so to the mass in the middle of the border. Lilies which are usually planted in the fall are also often grown. Of these we have in order of hardiness, the Tiger Lily, Regal Lily, Madonna or Ascension Lily, and the Golden Banded one of Japan. These when massed in numbers of three to five look very fine in the perennial border and if planted in a porous sandy loam which is well drained will endure in our climate. To plant them in a heavy unlightened clay may result in failure as where moisture is held in the soil for any length of time the bulbs will rot away. Lilies which are received too late in the autumn to plant may be potted and be carried over winter in a garden frame, protected by litter or in a cool cellar, where stem growth will not take place. They may be planted out in spring.

Lilies should be planted about twelve inches apart, and to the depth of their vertical diameter, thus if a lily bulb is four inches through vertically, it should be set down in the soil to a depth of eight inches. That is the bottom of the bulb should be this deep. Lilies, and in fact all the bulbs should be covered by means of a layer of strawy litter during early winter, partly for protection, although practically all the subjects mentioned herein are hardy (if covered with snow), with the exception of the Gladiolus, which must be lifted and be stored away over winter.



THE HANDY GLUE POT

BY HELENA KORTE.

Where there are children the glue pot and the paste pot are always in demand. Children love to paste things, cut-outs, puzzles, pictures, all sorts of scraps in all sorts of crapbooks. They are certain to learn something in the process, if it is nothing more than increased deftness in the handling of delicate articles. Even that is worth while. Their efforts may be guided but they should not be discouraged, however messy and useless they may seem to be at times. The materials needed are not numerous or costly. Many serviceable varieties of glue, paste, mucilage, even cement, may be easily and cheaply made at home.

A simple and excellent paste for scrap-books, and for any pasting of paper or cloth where great strength is not required, is made from flour. Mix flour and cold water into a smooth batter. It must be absolutely free from lumpiness. Put into it a pinch or two of pulverized alum. Then pour on boiling water, stirring briskly to keep it evenly scalded and smooth and until a thick paste is formed. If it is for more than tmporary use, cook in a few drops of carbolic acid or oil of cloves. Either will prevent fermentation. This paste will not cause the leaves of a book to curl as gum mucilage usually does and so is best for the scrapbook. If a light weight is put on the book while the leaves are still damp, they will dry straight and smooth.

For mounting photographs and other kinds of work requiring care in order to secure dainty effects and neat finish, the best paste is made of laundry starch. Rub the starch smooth in cold water. Pour boiling water over it, stirring all the time until it is smooth and transparent. It should be thick but not quite as stiff as the flour paste described. Add a few drops of carbolic acid to give it lasting qualities.

A fine, strong library paste is made by using both flour and glue. Dissolve in hot water one ounce of good glue and one ounce of alum. Let this boil up, then add gradually flour that has been rubbed smooth in cold water. Stir constantly to prevent lumps and use enough flour to make the paste as thick as stiff starch. When it has cooled, beat in a teaspoonful of oil of lavender. Pour into jars and keep closely covered. This paste is very adhesive. It is sweet smelling, agreeable to use and will keep for months.

A liquid glue is quickly made by dissolving one pound of best glue in one and one-half pints of hot water, and then adding one pint of vinegar. Keep it corked.

If a stronger glue is desired, dissolve one ounce of borax in a pint of boiling water. Add two ounces of gum shellac and boil in a covered granite dish until the gum is dissolved. This makes a good cheap cement. It is not injured by dampness, being nearly waterproof. This can be used for fastening labels on metals and glass.

Ordinary glue may very easily be made waterproof. Soak it soft in warm water, then melt it in linseed oil, heating slowly. Another way, convenient for farm folks, is to boil one pound of glue in two quarts of skimmed milk.

An old and good cement for metals and glass is made with oxide of lead and glycerin. Oxide of lead is merely "red lead." It comes in a reddish powder and can be bought at any paint shop or drug store. Stir the powder into glycerin until a thick paste is formed but do not mix more than is needed for immediate use, as it hardens quickly and then is useless. It is a very hard and strong cement, and will serve many uses, among them fixing glass in metal frames, repairing holes and cracks in iron pipes, cooking dishes and so forth.

To make a strong white cement, dissolve ten or eleven ounces of white fish glue in a pint and a half of soft water. Put the dish containing the glue into another dish of hot water to avoid all danger of scorching. When dissolved, add three ounces of dry white lead. Stir and boil until it is thoroughly mixed and smooth. When a little cool, add one-half pint of alcohol. Bottle while warm and keep closely corked. This is one of the best cements known for mending china. If carefully done, the broken pieces will not come apart again even though washed in hot water.