GRAND TRUNK RAILWAY SYSTEM

TIME TABLE

Trains leave Watford station as follows :—

GOING WEST

Accommodation, 111....	8.44 a.m.
Chicago Express, 17....	12.47 p.m.
Detroit Express, 83....	6.48 p.m.
(a) Express, 5.....	9.11 p.m.
(c) Express, 15.....	10.10 p.m.

GOING EAST

Ontario Limited, 80....	7.38 a.m.
Chicago Express, 6.....	11.16 a.m.
Accommodation, 110....	2.28 p.m.
Accommodation, 112....	5.45 p.m.

(a)—Stops to let off passengers from Toronto.
(c.—Stops to let off passengers.
C. W. VAIL, Agent, Watford.

EUROPEAN CORN-BORER

Something About a New and Most Undesirable Pest.

Found This Summer In Many Western Ontario Counties — Description and Life History — Methods of Control.

(Contributed by Ontario Department of Agriculture, Toronto.)

IT is always a matter of concern when a new pest is introduced into a country and especially when that insect attacks an important crop such as corn. In August the European Corn-borer—a European insect—was discovered in Ontario and extensive scouting by entomologists revealed the unpleasant fact that it was distributed over about three thousand square miles, being found in the counties of Welland, Halidmand, Elgin, Middlesex, Oxford, Kent and Huron. In somo of these counties only small areas here and there seem to be infested, but in others the infestation is much more extensive. The worst infestation is in Elgin County, between St. Thomas and Port Stanley where several cornfields showed from 50 to 90 per cent. of all the plants to have been attacked. There is no doubt that the insect could not be so widely distributed or abundant unless it had been here for several years. It seems strange that no corn-grower reported it, but the explanation doubtless is that they thought it was some old pest that had become abundant for a year or two and would soon pass away or become of no importance.

It is impossible at this stage to say how great a menace the insect will be; for no one knows, not even the best informed entomologists. Judging, however, from what we have seen this fall it cannot be exterminated and will gradually spread throughout the province and prove a greater menace than any other corn insect of the province. Yet, there is very little doubt that by the joint cooperation of the Dominion and Provincial Entomologists, together with entomologists of the United States (for the insect occurs in New York and Massachusetts), a practicable method of control will be discovered and corn continue to be as successfully grown in the future as in the past.

It may be of interest to know that ever since the insect has been discovered vigorous efforts have been made by the Provincial and Dominion Departments of Agriculture, through their entomologists, to find out everything they could about it by scouting expeditions throughout the southwestern part of the province and by studying the insect in the field. They have also brought the Agricultural Representatives to see its work and discussed with them methods of control. Plans are moreover on foot for a very careful study of the insect by both Departments next year, including methods of control. Valuable information of any kind as soon as discovered will, of course, be furnished to the press so as to be available to every farmer.

Brief Description and Life History of the Insect.

The borer, full grown, is a moderately stout caterpillar about one inch long, pale brownish to white in color on the upper surface and white beneath, with a brown head and several brown spots on each segment of the body. These spots are not very conspicuous to the naked eye but can be seen easily with a hand lens. The winter is passed in the larval stage in burrows inside corn-stalks or cobs, and sometimes in weeds. In the spring the larvae feed to a slight extent and then pupate in their burrows. In June the moths begin to appear and lay their eggs in small white clusters on the leaves. The larvae hatching from these feed for a time on the leaves or developing tassels and then begin to bore into the stalks and ears, making holes and tunnels in the former and eating the kernels in the latter. As the cold weather approaches the larvae all make comfortable burrows for themselves in the stalks or inside the cobs or in weeds. There is only one brood a year in Ontario as far as is known.

Nature of the Injury.

Injury is done chiefly by the larvae burrowing into the canes and pushing them to break over with the wind, tassels especially [illegible] easily. A further injury is due to larvae feeding upon the kernels in the ears and by disease, especially in wet, warm weather, entering through the holes, both in ears and stalks, and causing rot. Although all kinds of corn are attacked, table and flint varieties suffer most and dent least.

Methods of Control.

The methods of control that naturally suggest themselves are as follows:

1. Sow dent corn unless there is some special reason for preferring flint.

2. Cultivate well in the early season to keep down weeds so that these may not harbor the pest.

3. If you have not a silo build one if you can because all borers in corn put into the silo are killed.

4. Cut the corn just as low as possible for otherwise many borers will be left in the stubble, but if cut very low over 90 per cent. will be taken into the silo.

5. Put the corn into the silo as soon as possible after cutting to prevent borers coming out of the cut stalks and entering the stubble.

6. If there is no silo and the borers are present it will be necessary to burn the stalks and cobs or to run them through a shredder to kill all borers present.

In conclusion we request any person outside of the counties referred to above, on finding a borer in his corn, to put it in a tin box and send it either to Mr. Arthur Gibson, Dominion Entomologist, Ottawa, or to L. Caesar, Provincial Entomologist, O. A. College, Guelph. This will help us in our work against the pest.—L. Caesar, O. A. College, Guelph.

WHEN THE HORSE FALLS

First Unhitch and Speak Kindly to Him.

Asphalt and Ice a Bad Combination —Special Shoeing Sometimes Necessary—Sheep Raising In the Movies.

(Contributed by Ontario Department of Agriculture, Toronto.)

WHEN a horse falls in harness he almost immediately struggles to regain his feet. A strong, healthy horse will not remain down voluntarily, but in his efforts to rise he may become frightened. If the driver will give the right kind of first aid he can prevent serious injury to the animal, says the United States Department of Agriculture.

First Unhitch Horse.

Held down by the harness the horse seldom has sufficient freedom to rise to his feet, though enough to struggle and injure himself by pounding his head on the ground. Accordingly, the driver should calm the horse first by speaking in a reassuring tone, and, by placing his knees upon the animal's neck just back of the ears, endeavor to prevent injury from struggling or from bruising his head. An intelligent horse quickly learns to place great confidence in the voice of a good driver.

The traces and breeching straps should be unfastened and the vehicle rolled back from the fallen animal. If the horse is in double hitch, the traces and yoke strap should be unfastened and the pole, vehicle, and working mate moved a short distance away. An injured horse will then regain his feet readily if he has suitable footing. In case the ground is icy, scatter some fine sand, sawdust, or straw under and in front of him. If nothing of this kind is available, spread a blanket or burlap bagging on the pavement to give him better footing as he attempts to stand.

When the Horse Lies Broadside.

In case the horse needs more help and encouragement, and especially if he lies broadside, roll him on to his chest, with the hind legs under the belly. Then work both front legs forward until the feet are firmly on the ground and knees flexed. If after repeated efforts and good footing he continues to fall back upon the ground there is possibly some injury to the hind parts, such as a fracture of the hip or leg, which should be examined by a qualified veterinarian.

In all effort to assist a fallen horse do not forget that in rising to his feet he raises the head and fore parts first. This is directly opposite to the habit of the cow, which elevates the hind parts first.

Asphalt Especially Treacherous.

Injuries to horses are common during the winter months in cities where snow becomes packed and forms an icy coating on the pavement. In most cities above the frost belt there are times when pavements are slippery.

Asphalt is especially troublesome and when covered by a very light sleet or snow makes a very treacherous footing for horses. The milkman or baker, who drove upon a clean pavement the night before, may find the streets at 4 a.m. so nearly impassable from a coat of smooth ice as to delay his deliveries very greatly or even prevent them entirely.

Special Shoes and Careful Driving.

In country districts horses remain sharp or rough shod for a considerable [illegible] much on city streets paved with stone, cement, or asphalt, from which the snow has been removed, their shoes quickly become smooth and it is difficult for the horses to keep their feet.

When the front feet slip backward a horse is likely to fall and injure his knees, while side slipping generally causes him to come down broadside. Shoeing with rubber pads, or the use of emergency appliances may lessen the chance of slipping, but as there is always the possibility of a horse falling, even when well shod, careful driving and precautions against overloading are important additional means for reducing these accidents and injuries to a minimum.—U. S. Weekly News Letter.

Methods In Sheep Raising Shown In Moving Picture.

A motion- picture film dealing with sheep on the farm has recently been completed by the film laboratories of the United States Department of Agriculture in co-operation with the Bureau of Animal Industry. The film is used by county agents, county or state sheep-breeders' associations, agricultural colleges, and other department or co-operative workers or agencies.

The film is in three sections and four reels. About 45 minutes is required for the showing of the whole production.

The subject treated in the first and second reels is a year with the flock on the farm, beginning in the fall at the time that the ewe flock should be culled prior to breeding, and carrying it on through until the lambs are sold. Each seasonal practice is brought out and educational points are featured. The third reel deals with the co-operative marketing of wool and lambs, and the fourth reel with the slaughtering of a mutton sheep, dressing the carcass, and then cutting it up for meat consumption.

The average farm implement is only about half worn out by use alone. The rest of the wear is due to rust and decay. The greatest possible profit is made out of machinery when it is used continuously for profitable work until it is worn out.

A tree will make a million matches—a match may destroy a million trees.

Solving the Problem.

Mr. Knowall was the sort of man who, if he doesn't know, will never say so. Thus, when his wife asks him a question to which he doesn't know the answer, he does his best. "Herbert," she said recently, "what is a canard?" "Surely you know that?" he replied snappily, thinking hard. "Why, the word itself conveys its own meaning." "Does it, dear?" said wifey soothingly. "But I don't see it. Do, please, explain it to me!" "Well, a canard is something one 'canardly' believe, of course!"

No existing species of birds have teeth.

Ninety-eight per cent. of Coldstreram and Grenadier Guards are English.

.Read the Guide-Advocate "Wants."

Rose' Fuel From Dried Leaves.

The proposal of an inventor to run trolley cars around the streets of large cities with fuel made from straw may soon be overshadowed by a scheme upon which the Bureau of Chemistry of the Agricultural Department is at work to make motor fuel from straw, cornstalks, cotton stalks or even dried leaves.

The United States bureau is erecting on its experimental farm near Arlington, Va., a small plant for the manufacture of this fuel, which will resemble in its properties water gas, whereas the scheme for using straw involves the making of fuel alcohol.

The principal features of the plant consist of a large retort, a cleanser and a gas container or reservoir. Through a process of "destructive distillation" the straw, stalks or leaves placed in the retort would be transformed into gas.

With this gas it would be possible to run motor-driven trolley cars, autombiles and stationary engines. Given such equipment the farmer could run his farm machinery, fill his water tanks and light his house and barn.

According to H. B. Roethe of the U. S. Bureau of Chemistry, there is no doubt that gas of these qualities can be made from the materials named. The question to be solved is as to whether the gas can be made for these purposes economically enough to make it practicable, and whether the necessary container for the gas can be made compact enough to be carried around on automobiles and trolley cars and thus extend its use to ordinary transportation needs.

"So far as making the gas is concerned," says Mr. Roethe, "the problem already has been solved at the University of Saskatchewan, in Canada, where I worked for some time. There we made the gas from straw, and rigged up a large bag as a container, with a capacity for about 1,000 cubic feet of the gas. This bag we attached to the roof of an automobile, and ran the gas directly into the carburetor, which was of the ordinary type used on automobiles. The engine of the automobile also was of a standard type. With this fuel we ran the automobile around the neighboring country without the slightest difficulty."

Ever Read the "Wawa"?

With a circulation of nearly 4,000 copies a week, and an advertising revenue which many more important newspapers might envy, the Kamloops Wawa, a journal printed entirely in shorthand, and circulating among the Red Indians of British Columbia, may claim to be the most curious newspaper in the world, says Tit-Bits.

A sixteen-page paper, it was started by a French-Canadian priest who, while engaged in missionary enterprise among the Kamloops Indians, hit on the idea of furthering his work by printing the Gospels and distributing them in leaflet form to members of the tribe.

Before he could do so, however, it was necessary to teach the Indians the characters in which the leaflets were to be printed, since their own language was too difficult to set down on paper. Shorthand was chosen as being the simplest method.

From this modest beginning sprang the newspaper, the arrival of which is eagerly awaited by the tribesmen.