

CORRESPONDENCE.

WHAT KILLED THE BEES?

SIR,—I was surprised yesterday evening to find the ground in front of one of my hives strewn with dead bees, and began to think they must have found some poisonous plant, still, as there were no dead bees outside any of the other hives, could hardly accept that as a solution of the mystery, and on going a little later to look at the hive, I noticed the bees dragging out the insect I have enclosed in a small box to send to you. It appeared to have been just killed, and the bees dragging it out seemed very angry with it. Do you know the insect? and is it a bee killer? I do not see any more dead bees to-day, and there was a handful of the slaughtered yesterday when they were gathered up. I send the specimen to you, knowing you to be very wise and learned on every subject connected with agriculture, and hope in your next issue of the RURAL CANADIAN you will tell me what the insect I have sent you is, and whether it was what killed the bees, etc.

—Yours respectfully, HENRIETTA F. BULLER.
Campbellford, Ontario, July 31st.

You may recommend Tincture of Myrrh as being an excellent thing to apply for either bee or wasp stings. I saw it recommended in the *American Bee Journal*, and we have given it a fair trial, and find it the best remedy we have tried so far.

H. F. B.

We are not sufficiently versed in entomology to identify the dead insect sent with the foregoing letter, but inasmuch as it is not figured or described in any agricultural book on our shelves, as a bee-killing insect, we are inclined to think it is not the perpetrator of the slaughter in question. The probability is that attempted robbing is the real explanation of the case, although July 31st is rather early in the season for that to occur. Mrs. or Miss B. is probably a sufficiently experienced beekeeper to know that, when there are signs of robbing, the entrance to the attacked hive should be contracted so as to enable the bees to defend themselves. Our fair correspondent will excuse our dubious mode of alluding to her personality. It is a pity there is not a common title for ladies, both married and single, as is the case with gentlemen, who may be addressed or referred to as "Mr." without regard to their condition in a matrimonial point of view. Lady correspondents will oblige us by indicating whether Mrs. or Miss is their proper title, when we have occasion to reply to their communications. As we expect to be in the United States with the Canadian Press excursion shortly, we purpose forwarding this insect specimen to Prof. Cook, of the Michigan Agricultural College, who is at once an accomplished entomologist and a skilful beekeeper. Any information obtained from him will be duly published in a future issue of the RURAL CANADIAN.

THE steam threshers of Cherry Grove have struck for higher wages. They want an advance from \$10 to \$12 per day. The farmers say that they will employ the old reliable horse power before they satisfy their demands.

THE Central exhibit on of the united counties of Victoria, Peterborough, Durham and Northumberland is to be held this year in Cobourg. The exhibition opens on September 26th, and will continue for the two following days.

MR. DONALD ROBINSON has sold his farm, lot 3, concession 12, Tuckersmith, to Mr. Henry Ayer, from near St. Mary's, for the handsome sum of \$8,000. The farm contains 130 acres, and is an excellent property. The new proprietor takes possession on the 20th October.

THE DAIRY.

PRECAUTIONS AGAINST DROUGHT.

A prudent business man eliminates from his business every possible element of uncertainty. He not only secures his capital and investments against loss, but he makes sure that his income shall not fail of being received. Nothing is trusted to chance that can be avoided. He will leave open or unguarded no avenue liable to lead to loss. He would rather pay insurance where there is but one chance in a hundred for him to lose than to take that chance.

A prudent dairyman should be as cautious. He should insure not only his buildings and other combustible property, but he should effect an insurance on his annual income as well. It happens that unless special precautions are taken, the income of a dairyman is liable to great and frequent fluctuations, but it runs very evenly when properly regulated. A dairyman is said to be a manufacturer, and cattle food his raw material. Milk is his manufactured product, and cows are his machines. They are compound machines, combining both motive power and executive or mechanical apparatus. When properly supplied with material, they run with all the regularity and certainty of any other machines, but when out of supplies or scantily furnished, both power and product at once diminish.

One of the misfortunes of dairying is that every section is liable every few years to be afflicted with a drought that stops the growth of grass and cuts off the necessary supply, from those especially who depend wholly on grazing; and here is where the security of insurance discloses its importance and merits recognition, but often fails to receive it. Men seem strangely indifferent and dull in appreciating the liabilities of their situation, even after repeated losses have been endured. A man whose house stands but one chance in a thousand of being annually burned will not allow it to go a day without being insured, while the income from his dairy, which stands about one chance out of five of being cut down every year, will be allowed to run indefinitely without making any effort to secure himself against oft-recurring losses. Where scholars are so inapt and tuition expensive, experience may be said to keep a dear school.

The indifference seems all the more strange since it is so easy to secure one's self against such losses by planting every year a piece of fodder corn, or other green crop, which will be sure to withstand drought and bridge over a dry time if it comes, but which, if not wanted for such an emergency, will pay more than its cost to lay by for winter use.

The folly of attempting to go on, year after year, risking the profits of a whole year on the uncertainty of the weather, was well illustrated last winter on the plains in the west. There is a large extent of territory on which cattle can ordinarily squeeze through the winter without foddering. But every few years an unusually snowy winter occurs, and snow covers the ground so long that the stock perishes if not provided for. Last winter was one of this kind, and it swept off hundreds of thousands of cattle by starvation, and millions of dollars were lost which might have been saved by a little precaution in collecting fodder, which would have made grazing a sure and lucrative business. It is the boast of civilization and intelligence that they can control the very elements and mould them to their use; but this risking everything on a turn in the weather, whether on the plains or on a dairy farm, is in the end a costly way of farming, and seems a sort of reversion from the prudence and forecast of civilization

back to the uncertainties incident to savage and barbaric life.

These remarks have been suggested by frequent notices in the papers of localities in which the crop of butter or cheese is now being seriously out short by prolonged dry weather—a circumstance which seems to indicate want of common prudence, we may almost say inexcusable neglect, in failing to provide suitable food for the cows to meet a common emergency, and one to which dairy stock all over the country are liable. It is a good time now for those who are suffering by such needless losses to consider how easily all their losses might have been prevented, and, when they do so, it is to be hoped they will frankly take the blame home where it belongs, and not wickedly charge it to Providence.—*Professor L. B. Arnold, in Rural New Yorker.*

ANNATTO.

ARTIFICIAL COLOURING FOR BUTTER AND CHEESE.

The culture of the plant producing the colouring matter known as annatto is chiefly carried on in the French colonies of Guadeloupe and Cayenne, also in some parts of South America. It is a small evergreen tree, growing ten to fifteen feet high; the leaves are heart-shaped, smooth and shining; flowers in a tapering panicle, pale pink; capsule two-valved, prickly on the outside; the fruit is like a chestnut, and contains a certain number of seeds smaller than peas. These seeds are covered with a soft, viscous, waxen pulp or pellicle of beautiful vermilion colour, and this latter is the substance known as annatto.

The annatto is separated from the seed by several different processes, such as washing, steaming and fermentation. The common mode in which it is obtained is by pouring hot water over the pulp and seeds, and leaving them to macerate, finally separating them by pounding with a wooden pestle. The seeds are removed by straining the mass through a sieve. The pulp being allowed to settle, the water is poured off gently, the pulp placed in shallow vessels, in which it is gradually dried in the shade. After acquiring a proper consistence it is made into cylindrical rolls or balls. This roll annatto is largely used for colouring cheese and butter in the British and Continental dairies.

Much of the superior American butter colour has more or less annatto in its composition. Annatto, when genuine, neither affects the taste or smell of the cheese or butter to which it may be applied. It is entirely harmless, the Spanish Americans mixing it with their chocolate for producing a beautiful tint. The Indians in the tropical climes employ the leaves and roots in cooking to increase the flavour and give a saffron colour. Mixed with lemon juice and gum it forms the crimson paint with which the Indians adorn their bodies.

Colouring cheese with annatto is a very old practice among English and Dutch as well as American dairymen. At first it was only used by mixing with lard for rubbing on the crumb, afterwards it was dissolved in a weak solution of potash and mixed with the milk at the time rennet was applied. Years ago no dairyman thought of colouring butter, nor would such an article have been easy of sale. Now, since public taste and fashion demand it, nearly all gilt-edge butter is artificially coloured, and especially is this true during the winter months. To annatto are we largely indebted for June butter at Christmas. In fact the eye must be pleased in this respect as well as the taste, and if the colouring matter be as simple and as harmless as annatto, this adornment of a market product is unobjectionable.