

across the head, and the belly is also whitish. When fully grown, these individuals become ash-coloured on the back, and black on the sides, below which the pale yellowish line remains. Some are found of a dull greenish-yellow, and others of a clay colour, with slender interrupted blackish lines on the sides, and small spots of the same colour on the back. Some are green, with two white stripes on the back. The head and feet partake of the general colour of the body; the belly is paler. When not eating, they remain stretched out at full length, and resting on their fore and hind legs beneath the leaves. When fully grown and well fed they measure nearly or quite one inch in length. They leave off eating when about four weeks old, and begin to quit the trees: some creep down by the trunk, but great numbers let themselves down by their threads from the branches, their instincts prompting them to get to the ground by the most direct and easiest course. After reaching the ground, they immediately burrow in the earth to the depth of from two to six inches, where they make little cavities or cells in the ground, by turning round repeatedly, and fastening the loose grains of earth about them with a few silken threads. Within twenty-four hours afterwards, they are changed to chrysalids in their cells."

The trees most commonly frequented by these worms are the elm and basswood of the forest, and the apple, pear, cherry and plum, of the garden or orchard. When they appear in large numbers, as indeed they commonly do, they completely strip the trees of their foliage, and, though they make an effort to put forth a fresh crop of leaves the same season, and occasionally produce a few blossoms and immature fruit, if the defoliation is repeated the effect is certain death to the afflicted trees.

Remedies.—As the female moth is wingless, and is obliged to crawl up the trunk of the tree in order to deposit her eggs, from which the destructive caterpillars are produced, it is evident that the simplest and most efficacious remedy will be to prevent her from gaining access to the required positions by placing some obstacle around the trunk of the tree. The cheapest and readiest plan is to fasten bandages, three or four inches wide, of old sacking or rags, tightly around the trunk of the tree say two and a half or three feet from the ground, smear them well with a thick clay wash, and on this, when dry, spread as much tar as will cling to the bandage without running over the bark and thus injuring the tree. The tar should be applied shortly before sun-down as the moth is nocturnal in its habits, and should be renewed every warm and mild evening, as long as the moths are about. This may appear a troublesome operation, but where canker worms are prevalent it is far preferable to losing one's choicest fruit-trees. To prevent the tar from becoming dry and hard, any common oil may be mixed with it to advantage.

As this pest is so very destructive and so well known to our ingenious neighbours, it is not at all surprising to find that they have invented and patented various "tree-protectors," and other apparatus for circumventing these insects. One kind consists of a strip of india rubber cloth, an inch wide, which surrounds the trunk of the tree, and has projecting from it, "at an angle of forty-five degrees," a strip of tin or zinc about three inches wide. The smooth sloping surface of the metal is calculated to interfere with the climbing propensities of the moth. Another "Foster's tree-protector" consists of a narrow trough of tin, suspended to the trunk of the tree by a strip of cotton, and intended to be filled with oil. A third "Merri's Patent tree-protector" is much more elaborate and expensive, though possibly more effectual. It is composed of a grooved circle of glass surrounded with iron, and hung to a tent-like piece of cloth, which keeps the glass some inches distant from the tree-trunk. The moths are expected to be all captured within this tent, being unable to ascend any higher.

A belt of sheepskin saturated with kerosene oil, and with the woolly side out, is said to be, and probably is, a useful protector, but we should strongly advise our readers who are in search of a remedy, to have nothing to do with many Yankee nostrums as useless as they are absurd. Such, for instance, is the often recommended plan of boring holes in the tree, and inserting lumps of sulphur in order to poison the worms. This remedy cannot possibly hurt the worms, as the sulphur will remain unchanged in the tree for years, but may possibly be as injurious as the insect itself. Some again, drive nails into the tree with the same object, another has recommended quicksilver as infallible, while yet another speculator sells what he calls "murrate of lime," that is, burnt oyster-shells and salt and declares that a moderate application of this to the base of the tree is a sure preventive! Such are some of the modes in which the unprincipled try to dupe their ignorant or simple-minded fellow creatures, who learn too late that they have bought the nostrum at a price only to be "sold" themselves.

Stock Department.

Raising Calves.

To the Editor of THE CANADA FARMER.

SIR, I was much pleased with the article in your issue of March 15th on the rearing of calves. The subject is one of great importance to the farmers of Canada, and one on which they need line upon line, and precept upon precept. Of all our domestic animals, perhaps calves require the most attention, in order to make them profitable, but yet how shamefully are they neglected in a great many instances. It is really amusing to see the course that some people take in the raising of their calves. In too many cases the farmer thinks it won't pay for him to spend his time in looking after such matters, and they are placed in charge of the boys; and morning and evening these youngsters may be seen, each one provided with a pail, and armed with a good stout stick with which to belabor the poor animals if they manifest too much eagerness for their share of the scanty meal; or if, on the other hand, they show a dislike to the mess that is in all probability entirely unsuited to their tender age, they are at once pronounced to be sulky, and the starvation remedy is adopted, and the poor brutes are left to their fate in a scorching sun for the next twelve hours. And thus they go on, with perhaps a surfeit one day and starvation the next, for a few weeks, when they are turned out to take their chance with the older cattle. In winter they come in to take their chance again at the straw stack. If they die, as is not unusual, the owner at once concludes that stock raising does not pay, or if he happens to have patronised an Agricultural Society that keeps first class stock, he of course pronounces the whole thing a humbug, and reckons they will get no more of his money. If they manage to live through the winter, it will take all the summer for them to get ready to grow again. If tough enough, they may stand it another winter, and then fill the ranks of the bony cows and unruly steers which are the pests of our highways.

In taking a look around us at this season of the year, we see the sad effects of such treatment in the appearance of hundreds of poor animals on too many of our farms. That many take a better course we admit, a course more satisfactory to the merciful man, and in the result which follows more profitable to the man of business. That the profitable raising of calves on dairy farms will be attended with some considerable trouble, there is I think no doubt, but on ordinary farms, where, as on the great majority of the farms in this country, only a limited number of cows are kept for the purpose of making butter, there exists no difficulty in the way of the profitable raising of good calves. The course I would recommend is the following.—Take the calf from the cow when two or three days old, and teach it to drink new milk. I know that some good farmers are in favor of taking the calf away as soon as calved; but having tried both ways, I am entirely in favor of leaving the calf with the cow for a day or two. I think it is decidedly better for the cow. All will admit that for some time after calving, the cow requires extra care and nourishment, from which she is more likely to derive benefit while she remains contented, with the calf by her side, than if her young is taken away from her, and she is further weakened by bawling herself nearly to death, before she has in some measure regained her strength. And as regards the calf, I find less trouble in teaching it to drink when two or three days old, than if attempted sooner. As soon as it will drink milk readily, or when ten or twelve days old, part skim milk may be added, first warming it sufficiently, with the addition of a small handful of sifted meal, stirring it while drinking, the skim milk may be gradually increased and the new milk diminished until it is about three weeks old, when the whole feed may consist of skim milk. The meal should also be gradually increased, as it is useless to expect a calf to thrive on skim milk alone, any kind of meal, or a mixture of different kinds, will answer for the purpose. A little

sweet hay should now be given. When the calf is about four weeks old, a little sour milk may be added, and gradually increased until the whole feed may consist of sour milk. Some calves drink it readily the first time, others require considerable coaxing, but by adding a little at a time, and increasing gradually, they will soon drink it. It must be borne in mind that all changes should be gradual, as there is much danger of bringing on the scours. Feed milk regularly twice a day, until four months old, when once a day will be sufficient; or if necessary they may be weaned entirely; but continue to feed liberally with meal, as every peck fed the first year will be equal to a bushel at any subsequent time. The feeding of the calves should not be left entirely to the boys, but they should be carefully watched, as it is very important that calves should be well fed and cared for during the first year of their lives, if we would make them profitable in the end.

AN OLD COUNTRY MAN.

Brook, March 29th. 1867.

NOTE BY ED. C. F.—We cannot endorse the recommendation to feed on sour milk. We should entertain no high opinion of the good sense of the calf that did not require "considerable coaxing" to take it.

Poisoning of Horses by Arsenic.

Two valuable horses, the property of Mr. Riggall Trushope, Lincolnshire, England, have just fallen a sacrifice to poisoning by arsenic, which had been given by the carter for the purpose of improving the condition of their coats. It is not always that such a deadly poison is given by "horsemen" for this purpose; but whatever may be used, is fraught with danger in the hands of such persons. It behoves farmers to prevent their servants having recourse to the exhibition of medicinal agents of any kind for such an object. *Farmer, (Scottish.)*

A CURIOSITY WANTED.—A gentleman advertises for a horse "for a lady of dark colour, a good trotter, and of stylish action!" The horse "must be young, and have a long tail, about 15 hands high!"

STOCK-RAISING IN ILLINOIS.—Stock-raising in Illinois has grown to enormous proportions. This State furnishes New York with more live stock than all the other states combined. During 1866 the total number of cattle received at New York was 298,882. Of this number, it is stated upon reliable authority, 165,287 were received from Illinois alone. The aggregate value of all this live stock was \$33,223,723 12 and of the shipments from the state was \$18,373,302 62. This exhibit gives a glimpse of the gigantic proportions of Illinois agriculture.—*American Stock Journal.*

A VERY LARGE LAMB.—A Leicester ewe belonging to Mr. Robt. Scott, Nichol, gave birth on the 15th to a ewe lamb weighing 15½ lbs. It measured from the eyes to the root of the tail 24 inches, 17½ inches high, 20 inches in girth, not including the length of the wool. This is better than the one whose dimensions we gave two weeks ago, belonging to Mr. John White, of Halton, as his measured only 20 inches, including the length of the wool. Mr. Scott has realized \$60 from lambs from the same ewe in the last three years. Both facts are worth recording.

SOILING CATTLE.—E. W. Stewart, North Epsom, Erie county, N. Y., writes to the New York Farmers Club as follows:—"From ten years' experience, I can most emphatically say that soiling will pay, with or without peat or muck, and especially where manure is scarce. As this process will double the manure, and only one-sixth of the land is required, it is easier to manure one acre than six. From a strong clay soil, in poor condition, one cutting of clover from forty rods kept twelve cows fifteen days. Such a crop can be grown on almost any farm near the barn, with a preparation of a year or so. Can we not afford to put an acre in fine condition, that we may get the use of five gratis? Soiling also will enable the feeder to command his stock better than in the pasture, it will enable him to double his stock, and almost double his manure. I kept a strict account of the labour bestowed on thirty-five cows and steers one entire season, and found it only sixty-five dollars. The expense is paid four times over in the extra product—saying nothing about keeping up fences. No man can afford to pasture land worth more than twenty-five dollars an acre. Because few have adopted it, is no reason; if it were, it is a reason for poor tillage, poor sheep, poor cattle and horses. Because few have a good grindstone, is no reason why I should not have a good one."