

## The Dairy.

### London Cow-Houses.

A London cow-house may be, and often is, a piece of ill conditioned, rather rickety old stabling, with a sor. of brick-built manger on the floor, the length divided by short and scanty stall divisions, 7 feet or 7½ feet apart, furnished with ropes or straps or chains, with running rings, so as to tie up two between each pair. This floor is roughly causewayed, and there is a gutter lengthwise down it, parallel with the manger, and a little more than a cow's length from it. The house may be only wide enough for a single row of cows, or there may be one on either side, with the gutter between them for the drainage of both. I am now referring to the average style of the smaller and inferior cow-houses of the city; and in the poorer districts of the metropolis, you come upon one from some street of third-rate houses through an archway, perhaps under a dwelling house, which leads you into a small back yard, half-filled with this poor shedding. There may be a small pit for the dung, a store of some sort for the grains; and the small quantity of hay and roots which are kept on hand are stowed away in any convenient corner—at present there is room enough—for a full cow-house, even of this small class, in London now is a very rare exception. The roof is rather low, with plenty of ventilation through its loosely-lying tiles, or if higher, there is a "tallet," or floor overhead where hay and other food is placed, and in which wide spaces are left next the walls and over the heads of the cattle, and then the space of this upper room is measured into the 1000 cubic feet per cow, which is the rule that must be observed (for instance, in St. Pancras) if the cowkeeper wishes to avoid being opposed for a renewal of his license. There are window places, which during winter are closed, perhaps with a bit of sacking nailed over them.

This is the ordinary style of a small cow-house—such as the majority of them are. You find in them six or eight or ten capital shorthorn cows, or perhaps here and there occasionally along with them, a few black and white Dutch cattle. It is either a clean and tidy place, where both the cowmen and their stock are clean and dry and comfortable, everything in its place, the animals all lying down, having comfortably fed, and the air with no other perceptible smell than that of the chloride which the careful owners sprinkle once or twice a day along the gutter—or, it is a filthy hole. In some cases the dung pit is boarded over with a loose slab, to be replaced after every fresh addition to its contents; and the yard is clean and orderly and sweet. In others, you will find the dirty straw, originally purchased after use in a neighbouring stable, spread abroad to dry and clean itself over poles and hurdles for repeated use as litter. In some, fresh grains, good mangolds, and the best hay, with oilcake and peasmeal—the very best of cow-food—are kept tidily, and served out regularly and neatly, and the whole management is punctual, clean, and systematic. In others you will find a bin of some distillery wash, and a heap of stinking turnip tops and cabbage refuse, and the whole place dirty and offensive. In general, the accommodation—limited as it is—is quite apart from the dwelling-house, but there are exceptions even to this.—J. C. MONROE, before the Society of Arts.

### Outlines for Establishing a Cheese and Butter Factory.

A CORRESPONDENT of the *Country Gentleman*, writing from Sandy Springs, Maryland, asks for information in regard to a Cheese and Butter Factory. He says: "We live in an improving neighbourhood, about 20 miles north of Washington, D. C., and as hay and grain are not selling at war prices, would like to know something more about making cheese and butter. Could you send some enterprising men with capital sufficient to start a cheese and butter factory of, say 200 cows, as a beginning, with every prospect of enlargement? The only knowledge of a factory that I have is from the Co. GENL, from which I do not find the size of building necessary, &c. I know of a farm near, with fine springs, building materials, and, so far as I know, every requisite for a suitable location, and would be very glad to see some suitable persons engage in it, hoping that it would be to the advantage of all. Any light that can be thrown on this matter will be gratefully received," &c.

Mr. X. A. Willard of Utica, N. Y., replies as follows:—It is not considered profitable to carry on a cheese factory when the milk received is less than from 300 cows. The help, and general expense account, would be nearly the same for a small factory as for one receiving the milk of 500 cows. For a small factory, say of 300 cows, a building 25 feet by 50 feet, two stories, would perhaps be large enough—the lower story to be divided off into manufacturing department and press room, and the upper story, the dry-house for storing cheese. Ralph & Co. of Utica, N. Y., have a very good vat and heater, which serves a good purpose for cheese-making, and could be fitted up at less than half the expense of steam apparatus. If butter was to be made in connection with cheese, a spring-room should be connected with the main structure, with vats sunk even with the floor, in size about 9 feet by 12 feet, 2 feet deep, and arranged so as to be filled with water—the water constantly flowing in and out. The temperature of the water should not be above 56°. Long tin pails, 20 inches deep and 8 inches in diameter, have been found of desirable shape to receive the milk, which on being filled within 4 inches of the top, are immediately plunged in the water. The milk in the pails should never be higher than the flow of water. Adjoining the main structure also, and running back forming an L, should be erected a churn-room, cellar, and ice-house. The churn-room may be 20 feet by 30 feet, and leading out of it a broad alley, on one side of which is the ice-house. This broad alley may be constructed large enough to serve as a cellar or place for storing butter and cream in summer, so arranged in connection with the ice-house that it may always be kept cool. A building or buildings like those above described, cost here in the dairy region, when properly fitted up with apparatus and in running order, about \$3,000.

The labour required to keep a factory of this kind in running order, could not well be less than three hands, in addition to a good superintendent. We hardly think any one North would be willing to invest the amount of capital required for a factory, without the prospect of a large number of cows from which milk was to be received, together with good assurance of ample remuneration. We should advise our correspondent to join with his neighbours, send here for a carpenter who understands cheese factory buildings, and erect a factory on the joint stock principle. After it is erected, employ a first-rate superintendent from the dairy region, who is well posted in all that pertains to butter and cheese-making, and then there will be no doubt of its proving a success. The general plan North in the management of cheese factories is to form a company to build and fit up a factory. The company then employ a superintendent to manufacture the cheese, paying him a salary or a certain per centage on the product manufactured. Patrons, or those delivering milk at the factory, are charged from 1½c. to 2c. per pound for making up milk into cheese. We suppose a good superintendent could be employed at a salary of about \$800 for the season, including board. This would be for his own services, and would not include any expense on his part for other labour. A first rate manufacturer or superintendent could doubtless get along in a small factory by taking raw hands, and directing their operations at the factory.

### How to Make Milkers.

No matter what breed you have, something is necessary to reach the highest success in raising good milkers. It's a great thing to have good blood, whether it be Ayrshire, Jersey or Shorthorn grades. But apart from this important advantage, the course of treatment in raising a milker is somewhat different from that in raising a beef animal, or an animal for labour. The calf should be well fed and petted while young. Well fed, to induce a rapid growth, so as to enable the heifer to come in early; petted, to make her gentle and fond of the presence of her keepers. Fondling helps to create a quiet disposition, so important in a dairy cow, and this education must begin when young. For a milker we would have the heifer come in at two years old, and if she has been well kept, so as to have attained a good size, she is then old enough to become a cow. She will give more milk for coming in early. It forms the habit of giving milk, and habit, you know, is a sort of second nature. An older bull is better. We use too many young bulls. A three or four year old is far better as a stock getter than a yearling, and many prefer a five or six year old to any other. After the heifer has come in, let her feed be regular. Clover is preferred to all others for the stall feed. A little oatmeal induces a large flow, Indian meal is rather fattening. In bad weather, give her a clean, airy stall.—*Massachusetts Ploughman.*

## Entomology.

### The Hessian Fly and Wheat-joint Fly.

In a former number of THE CANADA FARMER (vol. ii, p. 371), we published some extracts from the "Practical Entomologist," referring to our notice of a supposed wheat-joint fly (C. F., vol. ii, p. 297), specimens of the pupæ of which we had received from a correspondent at Cobourg.

Mr. Walsh, of Rock Island, Illinois, to whom the investigation of the matter had been committed by the editors of the "Practical Entomologist," earnestly requested that a quantity of specimens might be sent to him, in order that he might be able to judge whether the insect were a true joint-fly or not. This our correspondent very promptly did, and he has since kindly favoured us with Mr. Walsh's reply, from which it will be seen that it was no joint-fly after all. He states that "the insect is the common Hessian fly (*Cecidomyia destructor*, Say), in what is commonly called the 'flax-seed state.' It is, in reality, a brown cocoon enveloping the larva, and at this time of year you can find the larva inside it, as it does not change to the pupa state till towards the spring. You were mistaken in supposing that these pupæ (so called) occur inside the straw; they lie between the straw and the shank of the leaf that enwraps the straw above every knot, though there is often a very deep depression in the straw, at the spot where the insect lies." It is very satisfactory to have the question thus settled by so experienced and competent an entomologist as Mr. Walsh. Our supposition that the insect was a joint-fly, arose from the pupæ being (in the two little bits of straw sent us), apparently inside the straw and not between the straw and the shank of the leaf, which is always the position of the Hessian fly larva and pupa. Out of our scanty materials it was impossible to determine, with any precision, to what genus or species the insect should be referred.

While upon this subject, we take the opportunity of begging those of our correspondents who are desirous of information in this department of THE CANADA FARMER, to send us a good supply, in fact as many specimens as possible and convenient, of any insect they wish identified or described, and also to pack them carefully. It is often nearly impossible to make anything out of one or two specimens only, and those frequently injured in transmission. A similar request is made by Mr. Walsh in the "Practical Entomologist." We cannot do better than quote his words: "Let me impress once more upon the minds of the farmers, that when they send specimens they should enclose them in a stout paste-board box—a gun-cap box, for example—and put in enough cotton-wool, or some other such substance, to prevent their rattling themselves to pieces in the mail-bags. For lack of these precautions, I have often received specimens pressed as flat as a pan-cake, or broken into a hundred pieces. A farmer would stare if he was asked to determine the particular variety of wheat—whether Mediterranean, or Tea, or Club, or whatever else it might be—from examining a handful of bran. An orchardist would smile if he was asked to determine the particular variety of peach, from inspecting a sack of the dried fruit. And yet they often expect entomologists to decide from inspecting a mass of shapeless fragments, to which of the 30,000 species of insects, that inhabit the United States, these shapeless fragments formerly appertained."

THE CUT WORM.—Dr. Fitch, Entomologist to the New York State Agricultural Society, recommends ploughing or digging late in the autumn for killing cut worms. The worms burrow beneath the soil at this season, and lie dormant till spring.

"They can be killed by thawing and freezing them. Gradual thawing in the earth does not hurt them; if they are exposed so that the sun thaws them rapidly, they are destroyed. With this object, late ploughing in the fall is beneficial. Early ploughing in the spring, if we have freezing and thawing weather afterwards, would be useful."