

### Feeding Young Calves.

Although the natural way for the young calf to feed is to draw the milk from its dam, the system of raising calves in this way is not practiced among dairymen, while many of those who raise the beef breeds find it to their interest as well to discontinue the practice, especially those who are endeavoring to develop the milking qualities of their herds. When the calf is raised on the dam there is a tendency among many cows to hold back the milk after the calf has taken all its requires. Then the calf is usually weaned at five or six months of age, and though there are cows that will milk for two or three months afterwards, there are others that will cease milking immediately. This, having lowered the profit derived from the cows considerably, has led to the adoption of the system of hand feeding. By this method the amount of milk may be increased or decreased at will as the calf grows older, and skim milk may be used, with the addition of other foods as a substitute for the fat. It is considered by practical men that calves can be raised with as good results on cheaper food than butter-fat after they are three or four weeks old.

Calves dropped at this time of year will require to be kept in the stables. There is no better place than a roomy box stall where a number of them may be allowed to run loose. Care must be taken to have those in the same box as even in size as possible.

The accompanying illustration represents the arrangement of calf pens in the stock barn of Hon. Thos. Ballantyne & Son, Stratford, Ont. The pens are 12 x 13 feet and the feeding stalls are 4 ft. 8 in. in

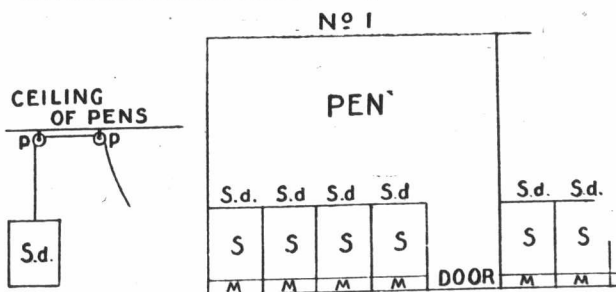


FIG. II. PLAN OF CALF BOX WITH SINGLE STALLS.

length by 20 inches wide, with mangers made of 2-inch plank, 1 foot in width and about the same depth. The partitions between the stalls are 3 feet high, and on the top over the manger a crosspiece, 1½ x 2 inches, is spiked to keep the calf from reaching far enough forward to get his feet in the manger. Mr. W. W. Ballantyne says that he would prefer having the partitions a foot higher, as the larger calves sometimes succeeded in sucking one another's ears by reaching over. The cross-piece might be placed lower in order to keep small calves from getting their fore feet into the manger. The drawing to the left (Fig. II.) is of the slide door, showing how the rope is attached. It passes from the door up to the ceiling, where it runs through a pulley (P), along the ceiling through another pulley (P), and hangs down in the alley in front of the calves. The feeder may by pulling the rope raise the slide door (S D). The milk is placed in each manger in pails, and when the calves run into the stalls the doors are dropped. They are kept in the stall for a short time after taking the milk so as to prevent them sucking one another. M represents manger, S stall, S D slide door. In Fig. II, the rope should pass towards the alley in front of calves after passing through the first pulley instead of running to the right, as shown in figure. The partitions and doors are built of inch lumber, and 2 x 4 scantlings are used for the ends and for the doors to slide up in a groove in the scantling. A member of our staff recently observed in a modern stable the arrangement of a board hinged to the partition between the passage and the manger. It had a hole opposite each stall the size to hold a pail. When the calves are to be fed the board is turned over the mangers to hold the pails, and after the pails are emptied and removed the board is turned back into the passage.

The calf may be taught to drink at once without allowing to suck the dam at all, though it is necessary that it gets the mother's milk the first few days. When two weeks old add a little skim milk to the sweet milk, and gradually increase until the sweet milk is withheld entirely. As soon as the calf will chew a little begin to feed a small quantity of ground oats and oil meal out of the hand. In a short time the meal may be dropped in the pail immediately after it has taken the milk. It is more likely to be eaten while the calf is licking the pail, and in a few days it will begin to look for an additional supply. This method is preferable to boiling and mixing the meal with the milk, as the calf derives more benefit from it. It will not be so liable to scour, overfeeding is easier avoided, and the labor of feeding very much reduced. Where a cream separator is used the milk will be at a proper temperature soon after it comes from the separator. If the cream is raised by deep setting or shallow pans the milk will require heating to raise the temperature before feeding. By setting the milk cans in a small tank of hot water the milk will rise to the required temperature in a few minutes. It should never be allowed to get above 98° Fah. After the feeder becomes accustomed to this method he can ascertain, by dipping the finger into the milk, when it has reached the right temperature. It is well to keep the milk stirred while heating.

Whether the calf is to be raised for beef or dairy purposes, it is not wise to allow it to become too fat. Foods that will induce rapid growth should constitute the daily ration. For the bulky part clover hay is perhaps the best food for young calves. Ground oats, oil cake and bran will keep the calf in a thrifty condition. As it grows older corn ensilage and pulped roots may be fed advantageously. Calves like variety, though sudden changes are likely to produce scouring. Where this trouble occurs a handful of scorched wheat-flour mixed with the milk will give satisfactory results.

### Science Prevailed Over Brute Force.

"MANITOBA" writes:—"I fully intended to write to thank the author of an article entitled 'That Kicking Cow' which appeared a few issues back. I had been fighting with a newly-calved heifer for a month—a quiet little beast naturally—but her bag got very sore and teats cracked, therefore making her for the time being a tiger to milk, but science prevailed over brute force. After trying the plan recommended for a week, I have now a nice, quiet little heifer; and, by the way, she is a Jersey and calved at eighteen months, but she is hale and hearty and gives five quarts per diem. Three months calved, and yet the majority of people tell me I will spoil her growth, etc. I say I am not raising beef cattle, and that I will certainly be a calf ahead. Will you kindly give me your ideas on the subject?"

[Eighteen months is certainly young for heifers to calve, but Jerseys are frequently brought in at about that age with apparently no ill effects. However, it is generally conceded that at two years old is soon enough for heifers to drop their first calves.—Ed.]

## POULTRY.

### Good Suggestions for Winter Egg Production.

To the Editor FARMER'S ADVOCATE.

SIR,—In considering the production of eggs in winter, there are four very important factors if success is to be obtained: a person thoroughly in sympathy with the business, a suitable house, a well-bred flock, and a ration suitable for egg production.

1. To be a successful poultryman one must be constantly studying the characteristics and needs of the fowls under his management just as much as the successful stock raiser must study each individual in his flock or herd, and in order to reach the greatest possible gain from a flock, we must breed as to individual merit as to the production of the largest number of eggs during the winter months. One dozen eggs in winter is worth three or four in summer. I would be very glad if some reader would suggest some plan so that we could tell accurately the number of eggs each hen laid, so that we could get some idea of our flock as to individual merit, as does the dairyman, who will say such a cow gave so many pounds of milk testing such a percentage of fat. Now, what we want to be able to say, is that such a hen laid such a number of eggs, each weighing so many ounces. Then, and only then, will one be in a position to reach the top.

2. We must have a house warm enough so that during the coldest weather the fowls' combs will not freeze. The house should face the south or south-east. It should have plenty of light, about one-third of the front glass is plenty. Allow each fowl six square feet of room. The perches should be so placed as to be on a level, and so that the droppings can be easily cleaned. A dust bath is very essential.

3. Yearling hens and early pullets make the best winter layers. Hens not yet moulted will likely be of little service to produce eggs this winter. Weak and small late-hatched pullets are only a nuisance, as they will not lay, and are more prone to disease. Fowls bred for a number of years with the object of eggs in winter are more easily made lay than the ordinary scrub. Fancy fowls that are not encouraged in winter laying should not be used in the flock any more than should a male from a dairy herd that milks only seven months of the year. This is one of the causes why some farmers have been disappointed in pure-bred fowls. They were not bred to produce eggs, only in spring when they would be wanted for hatching. The idea that hens that lay in winter never produce strong, healthy chicks is folly.

4. Just now is the time to feed for eggs. A little meat, or better, ground green bone, helps wonderfully. The moulting season is shortened, and the general tone and appearance of the fowls is improved. A warm mash, consisting of bran, shorts, and ground oats and barley, makes a good morning feed. Give a variety of grains in the evening. Wheat is, perhaps, the best mainstay. Buckwheat is a good grain, but all kinds are relished as a change. Give all they will eat up clean. Any fowls showing symptoms of disease should be isolated or slaughtered. The latter treatment is preferable. If taken in the earlier stages the flesh is good to eat, and all danger of contagious disease is avoided. Clean out all droppings once or twice a week; coal oil the roosts once every two weeks; use the oil freely, getting it into all cracks. Give plenty of good water, and have a liberal supply of grit within easy reach.

Hastings Co., Ont.

W. R. GRAHAM.

### Getting Eggs in Winter.

There are several factors in the production of eggs in winter. Let us see what they are.

#### FACTOR 1.

A fairly comfortable house. Temperature at 35 or 40, if possible, particularly for the Mediterranean breeds. For acclimatized breeds, such as Plymouth Rocks, Wyandottes, Javas, Brahmas, Langshans, Cochins, a few degrees less will not hurt, provided the birds are kept in activity.

#### FACTOR 2.

The layers may be kept in activity by having the grain fed to them thrown in the litter, which should always be on the floor to the depth of one to two feet. This litter may be composed of cut straw, chaff, oat hulls, dry leaves, etc., etc.; whatever suitable material is in most abundance on the farm and cheapest.

#### FACTOR 3.

A wooden floor has been found to be dry as compared with an earth one. What litter is put on it is more likely to remain dry. It is not as cold in the winter season. Therefore, when circumstances permit, have a wooden floor, and let it be four or six inches above ground.

#### FACTOR 4.

For morning ration feed three times per week meal of some kind. Cut green bone preferred, if it can be procured. The cut bone is valuable because it furnishes lime for shell as well as egg-making constituents. Other three mornings of the week feed a mash composed of table and kitchen scraps, boiled vegetables, steamed lawn clippings or clover hay, and ground grains of some sort. Mix with boiling water until in a crumbly condition. On Sunday morning feed whole grain, so as to make as little work as possible. Feed the meal in proportion of two ounces to each hen. Out bone in ratio of one ounce to each layer. Mash in quantity of one quart to every twenty hens. Never gorge the hens at this morning meal. Overfeeding of this early ration (as well as others) is the rock on which many are wrecked. The layers should be fed only enough to barely satisfy. Then scatter a couple of handfuls of grain in the litter on the floor, so as to start the hens busily searching for it. You now see the object in not overfeeding. Hens fed to repletion will not exercise. If possible, keep the layers in exercise all day.

Noon ration—Nothing. Unmarketable vegetables such as turnips, carrots, mangels, etc., should always be placed where the fowls can get easily at them. If cabbage be occasionally given, suspend it from the ceiling until about three feet from the floor.

Afternoon ration—Should be of sound grain and fed early enough to permit the fowls searching for it in the litter. The layers should go to roost with crops full, and should, if possible, be so fed that the filling of their crops will be a gradual process, the hens being kept in constant exercise in so doing.

#### FACTOR 5.

Have the minor essentials, grit, lime, dust bath, and drinking water, in regular supply. Different forms of grit are cheap and will be found wholesome. It is the means whereby the fowls grind up their food in their gizzards. Lime in some shape is necessary to furnish material for egg shell. The dust bath is the means by which the hens keep themselves free from lice.

#### FACTOR 6.

In the artificial housing and treatment of the laying stock the natural conditions should be imitated as much as possible. Use intelligence and energy. Remember that the laying hen while at large during the summer picks up for herself all that is required to make egg and shell, grit wherewith to grind up her food, green stuff in the shape of grass and clover; rolls in the dust to keep her body free from vermin, withal keeping herself in constant activity. Remember that experience is necessary in every department of business before success can be attained. Do not be discouraged at first failures.

Hens properly fed will neither eat eggs nor pick feathers.

And having got your product at a season when it is worth most, sell it to the best possible advantage. Produce as cheaply as possible. Sell at the highest price.

A. G. GILBERT,

Exp'l Farm, Ottawa. Manager Poultry Dept.

### Build a Henhouse.

Winter is coming on. Have you a good, warm, comfortable house for your poultry? If not, build one. Eggs in the winter always pay big, and you can't have them without a comfortable house. It needn't cost much. The chickens care nothing about the architecture. All they want is comfort. You can put up the building yourself. Make it plain. A house 12x15 feet, and 6 feet high to eaves, will accommodate twenty-five laying hens. Line it up air-tight. Batten the outside. Put in a hall, with nests easy of access from it. Put in a board floor, as it is the warmest. Have everything tight and snug around the bottom, so that there are no drafts of air. Get a little oil stove for \$2 or \$3, to use in very cold weather, and don't let the temperature go below 40 degrees. You can build such a house with hemlock lumber, roofing paper, and sheathing paper, for \$25 outlay, besides your own labor. With eggs at 20 cents a dozen, 25 hens ought to bring \$30 during the winter. That is a good profit. Without the house you would get nothing, and would be minus the feed. A. L.