

then the farmer's wife will find it to her interest to turn her attention in that direction.

To those who have come to this same conclusion yet have not had time to investigate the subject very closely, I should like to offer a few suggestions in regard to the breeds of fowls best adapted to farm life, and the ages at which they can be most profitably kept.

What we want is a hen that will sit upon her own eggs in the spring, raise enough chickens to supply the family the year round, and spend the remainder of the time, summer, fall and winter, in producing eggs. This model, general-purpose fowl, has not come within the somewhat limited range of my experience. If any one else has found her I should be glad to know about it. The Plymouth Rock is the nearest approach. The hen is a fair winter layer, begins to sit at the proper time in the spring, and raises her chicks in the most orthodox manner, but the trouble is she wants to keep this up all summer, so that at the moulting season instead of busying herself with the renewal of her attire she is apt to be hid off in the weeds covering a nestful of eggs, or escorting a young family around that she has hatched in spite of you. This puts back her moulting considerably, so that when the rest of the flock are gorgeous in new dresses she presents a most dilapidated appearance, and often does not get herself into good condition for egg-production until Christmas. In order to fill up this wide gap so as to keep a regular engagement for eggs, we must employ one of the non-sitting varieties. The Brown Leghorns will do this admirably; being active thrifty little birds, not at all troubled with the sitting fever they accomplish their moulting without interruption, and are in good trim for fall work. But when the penetrating north winds come, and the ground is covered with snow, the Leghorns, being more delicate, feel the cold so intensely that every particle of surplus food goes to making heat instead of eggs. So that unless we had some arrangements for heating the poultry house it would not do to depend upon them alone for winter layers, and they in their turn must be complemented by one of the heavier breeds, as Langshans, Brahmans, Plymouth Rocks or Wyandottes. As a rule, those varieties that have the thickest coats of feathers are the best winter layers, their warm clothing rendering it necessary to generate a smaller quantity of heat, so that the surplus food can be used for making eggs. The Langshans are especially recommended for this purpose, as their abundant feathers which lie close to the body in many overlapping layers are remarkably warm, soft and downy.

As there are so many different characteristics to be taken into consideration, it is not strange that no one breed gives perfect satisfaction in every respect. Some have tried to remedy this by crossing judiciously one of the non-sitting varieties which lay well except in winter, upon one of the Asiatic breeds which are exceptionally good winter layers, and profess to be quite successful in obtaining excellent layers at the most profitable seasons of the year.

Now let us consider the question, "At what age is it most profitable to keep hens for winter layers?" The wise ones tell us that pullets of any of the better varieties that are hatched early enough in the season to reach maturity, and begin laying in the fall, will continue throughout the winter with short periods of intermission, provided, of course, that they are fed and cared for in such a manner as to promote the egg-making process. We are also told that hens of the heavier varieties are at their best when two years old, and that a larger per cent. of their eggs are

fertile, and produce finer, healthier chicks than those hatched from pullet's eggs. Of the smaller and more active, the non-sitting breeds, hens can be kept with profit until five years old.

This winter I am going to keep 75 hens for eggs; 25 of this number are Plymouth Rocks over one year old, handsome, broad-breasted, dignified matrons; the second 25 are Brown Leghorns, lovely trim little birds with white earlobes, and great crimson combs and wattles; the third 25 consists of early hatched pullets that were apparently grown in size the first of September, nearly all of which are a cross between the Plymouth Rocks and Brown Leghorns, having the colors of the former though somewhat darker, and the white earlobes and tall red combs of the latter.

I should like to keep them in separate pens, then the experiment would be complete; as it is, however, I shall have to judge of their performance as best I can from observation. The color of the eggs of the pure breeds will testify to their prowess, those of the Plymouths being tinted, and the Leghorns pure white, but the eggs of the third lot will not be so decided. Still, if one goes about the poultry house now and then it is very easy to tell which kind is oftenest on the nest. At any rate I feel pretty sure that among them I shall be able to keep a regular engagement for eggs. Indeed they appear to have the business in question so very much at heart that, although they are at present busily moulting, there is a cheerful sound of cackling coming up from the poultry yard almost all day long, and at evening a goodly number of eggs is the result. —A FARMER'S DAUGHTER, in *Country Gentleman*.

The Apiary.

For the CANADIAN LIVE STOCK AND FARM JOURNAL.
November and Other Notes.

By R. F. HOLTERMANN, Romney, Ont.

Bee-keeping, to be a success, depends largely upon the careful doing of little things, and making an effort to do them at the right time. November is a very trying month for bees, and a large portion of the success in wintering may depend upon management for this month. As has before been stated, the hives should have been packed about with chaff or saw-dust, and if it is intended to place them into a winter repository, it should be done as quickly as the indications are that the bees can be kept sufficiently cool. If bees are allowed to chill they will manifest symptoms of dysentery and be weakened, or if they cannot fly, they will through restlessness, daubing of combs, etc., cause the other bees in the hive to have the disease, and, as we all know, an attack of this malady will result either in death to the colony or very serious decimation.

All old cloths and quilts should be removed from the hive and fresh porous ones put in their place, unless it is intended to winter them in a repository, when the advisability of the step advised above may be questioned. When the propolized cloth is removed, the new cloth or quilt should have enough packing above it to prevent the warmth from passing off readily from the bees.

Bees, should, as far as handling combs is concerned be left alone. Even now, after opening a few hives, the results are very unpleasant. Bees will, after being disturbed, try to rob one another, and sting people and horses for some hours upon very slight

provocation. Just here it may be a question how much of an inconvenience a bee-keeper may allow his bees to become. My bees were close to a lane, through which a great many people and horses passed. The honey season passed without giving any trouble, there being an incessant flow of honey until the first night of severe frost, when next morning the bees found themselves out of employment and in a very pugilistic state of mind on account of the nipping of the flowers. The bees stung several horses and people, and one man came to me saying: "I want no trouble, yet I want you to move your bees away from there." I knew I had the law on my side and could not be made to move the bees, yet considering it was only just and right that I should do all I could to prevent any unpleasantness, and my neighbor having by his courteous, out-spoken speech made it none the harder to do what I could to meet him, I moved them away from the lane, and thus ended that little unpleasantness. The bees, too, as all bee-keepers should know, soon became reconciled to having no honey to gather and quieted down.

THE AMERICAN INTERNATIONAL BEE ASSOCIATION.

The above Association will meet at Brantford, Dec. 4th to 6th next, the first session being at 2 p.m. on the 4th. This promises to be one of the best bee-keepers' conventions ever held. Reduced hotel rates may be secured at the Kirby House, and reduced railway rates may be secured by applying to me for railroad certificates, which must be used before starting for Brantford. The programme is already partially complete, and is as follows: "Bee-keeping as an Occupation for Women," by Miss F. F. Buller, Campbellford, Ont. Mr. E. Root, Medina, Ohio, will treat on, "Riding Hobby Horses," and "Bee-keeping, a Recreation from other Pursuits and an Antidote for Disease." Mr. R. McKnight, Owen Sound, Ont., promises a paper upon "Cellars. Outdoor Wintering." Prof. A. J. Cook, Agricultural College, Michigan, will lecture on "The Alimentary System or Apparatus of the Honey Bee." Prof. Cook is a most pleasing lecturer and has a world-wide reputation as a scientific and practical bee-keeper. Mr. S. T. Pettit, Belmont, Ont., will give a paper upon "The Specialist and his Relation to Progress of the World." Mr. F. H. Macpherson, Beeton, Ont., will give in a paper his experience in "Shipping Queens," a matter of much importance, directly or indirectly, to all bee-keepers. Thomas G. Newman, Chicago, Ill., will give an address upon that important subject, "The Disposal of the Honey Crop." This should be a bill of fare palatable to every bee-keeper. Then there will be times for the discussion of questions asked by bee-keepers, and this alone should attract many. The Rev. L. L. Langstroth, that father of modern bee-keeping, has been invited to attend, though his poor health may prevent his being present.

MOULD OF COMBS AND HIVES.

A subscriber wishes to know how to get rid of mould in combs and hives. If it is the mould that is found in combs and hives in the spring, I dry out the hives and combs, and perhaps afterwards scrape the hives; then put the combs into strong colonies, alternating them with good combs, and the bees will do the cleaning out. It is better not to put too many of these combs in a hive at a time, as it may cause a swarm to abscond. However, give them to strong colonies (hives and combs) when perfectly dry and all will be well, the bees at a time the better. If the hives or combs have become mouldy in other ways, treat in the same manner, unless rotten, when destroy.