

send to Ontario for them; wages are from \$50 to \$500 a year here greater than in Ontario. Nowhere does faithfulness to work and skill count for more than on a dairy farm with high-class stock. The "Meadow Brook Herd" is a member of the Syracuse Sale Co., so that we have an established outlet for all the products. There are also 1,500 hens kept on the farm. The Western States robbed the Eastern some years ago of men who went out to the Prairie country. Now the East is "getting back" and robbing the West of fertility. The dairy cow is the agent that is restoring men and fertility to the East. Put in the store-house here in the fall, to feed the dairy herd, are over twelve carloads of grain and meal, oats, oil meal, cotton seed meal, gluten meal, Ajax flake, sugar feed, hominy, etc. The fertility accruing from this feed is no small item. The result is increased crops of corn for silage, alfalfa and other clovers. Oats and peas cut green and made into hay is the method of seeding to clover. No grain is grown or threshed. Everything tends to increase fertility. Milk and meat are at a premium. A cow past her usefulness in the dairy, fattened, sold for \$113.00 wholesale, carcass and hide. New Jersey. GEO. RICE.

GARDEN & ORCHARD.

Feeding Apple Refuse.

Editor "The Farmer's Advocate":

I and many others would like to know the feeding value of apple peelings and cores sulphured and dried in an evaporator. What properties of nutriment do they contain? Would they be good to feed to farm stock that is getting dry feed? How do they compare with bran—would they be worth half as much? It has been often said they are equal to bran to feed to horses when on dry feed. How would they do for milking cows? Some say it would have a tendency to dry them up. A neighbor says by feeding cores and some peelings to his hogs he has lessened the cost of production to quite an extent. Was that not due to seeds in the cores? The other feed they got was shorts; the apple stuff was fresh and green. Now, what do apple seeds contain? There are tons of dried peelings and cores that can be bought for \$10 per ton. Would you advise feeding them to farm stock at that price? If so, what quantity would be safe to feed? I think I have seen it stated in a report from the O. A. C. that apples were worth seven cents per bushel to feed to stock. G. R. B.

We have never analyzed apple peelings and cores sulphured and dried in an evaporator, nor have I been able to find a record of any such analysis. We have analyzed the apple pomace, and there are many records of other analysis of this material. The apple pomace, however, will differ slightly from the apple peelings and cores in that it will contain more of the actual pulp of the apple and a less percentage of the fibrous materials of the cores. The following table gives a fair average composition of the apple pomace, together with a few other foods:

	Water	Ash	Protein	Crude Fibre	Nitrogen Free Extract	Fat
R. I. Greening	82.50	.37	.70	1.07	15.09	.30
Apple pomace	76.70	.50	1.40	3.90	16.20	1.30
Swedes	88.60	1.20	1.20	1.30	7.50	.20
Mangels	90.85	1.05	1.39	.87	5.68	.16
Potatoes	78.89	.95	2.14	.56	17.36	.10
Bran	11.91	5.78	15.42	8.99	53.87	4.03

It is probable that the apple peelings and cores would have somewhat the same beneficial effect when stock are on dry feed as roots have, and that the material would have a value in that way greater than its actual composition shows.

With reference to the comparison of the apple pomace with the bran, if we assume that the peelings and the pomace are the same in composition, with the exception of the fact that there will be a greater amount of fibre in the peelings than in the pomace, and then assume the evaporated peelings will be as dry as the bran, we can form a rough idea of the composition of the two substances. Approximately, the apple pomace would contain about 5½ per cent. of the protein, about 16 per cent. of fibre, 65 per cent. of nitrogen-free extract, and about 5 per cent. of crude fat. Comparing this with bran, we find that it is very much lower in the protein, about one-third, that it contains nearly twice as much fibre, about the same or a little more of nitrogen-free extract, and about the same of fat. It is probable, however, that the crude fat contains a great deal of extractive matter not true fats. It would appear that a great deal will depend upon

the nature of the food that it was to be fed with as to whether it would ever be profitable to pay \$10 per ton for these dry peelings and cores. I know of no analysis of the seeds of the apple. Ontario Agriculture College. R. HARCOURT.

Growing Green Goods.

If you are cramped for room start a garden with a few sunflower and other seeds between the ash barrel and the back fence, and the results will surprise you.

From things needing no care you will go to others needing a little, and by and by, working in the garden, feeling the soft ground under your feet, getting the fresh fragrance of the morning air, watching the little green shoots come up and develop, seeing the brilliant colors take the place of the dirty browns and grays of winter, will be more fun than anything you have done since you were a boy or a girl.

There is a greater incentive for gardening now-a-days than ever before. Fresh produce is worth more and home gardens are better than they used to be. There are finer varieties of vegetables and flowers. It is within the memory of some readers that sweet corn and celery and tomatoes came to be generally known; and the flowers of to-day—how they have come into their own! Sweet peas and asters and cosmos, pansies, giant morning glories, California poppies, and all the other poppies, these and many more a generation ago were unknown in their present glory. Think about it. Make your plans now. When ready to plant get seeds that have been proven by some tried seedsman of repute. Experienced gardeners buy only reliable seeds; they do not waste their time on seed of inferior or unknown quality. They depend on some old standby, some firm with ample capital, experience and a reputation to maintain. But do not let another springtime go by without starting a garden in earnest.

Frozen Oranges.

As a result of a three-days frost in Southern California, ending Jan. 8th, the loss sustained by the growers of citrus fruit is estimated at \$25,000,000. One immediate consequence was a rise of 50 cents per box on the Los Angeles wholesale market. Grape fruit also went up 25 cents per box. This will probably have a stimulating effect on what is yet held in storage of the United States and Canadian apple crop of 1912.

Returns to the True Fold.

I have taken "The Farmer's Advocate." I suppose, for fifteen years. A year ago I was persuaded to try another farm paper, and unfortunately stopped "Advocate." Now I have stopped the other paper and want "The Farmer's Advocate" to come again. If you have a Christmas Number to spare, I would very much like to have one—\$1.50 enclosed. JACOB G. WIDEMAN. York Co., Ont.

APIARY.

Spring Management of Bees.

The honey harvest, according to Burton N. Gates, Ph. D., Inspector of Apiaries for Massachusetts, depends upon correct management of the colonies in the spring. Spring conditions depend upon success in wintering, and it is said wintering depends upon preparation the previous season. But with the first flight of the bees, when trees are beginning to swell their buds, the beekeeper's season commences.

Each colony should be thoroughly overhauled, provided, of course, that spring has really come. Opening colonies when bees are not flying should be avoided. A great deal of labor for the bees can be saved by scraping from the bottom boards the winter's accumulation of debris. At this season the beekeeper should scrape the top bars of the frames, remove surplus bee glue (propolis), that the parts may handle more freely during the rest of the summer. Also look for the queens, which sometimes fail to survive the hardships of

winter. The presence of brood or eggs should be a guide. If there seems to be a failure of the queen, or if she is lost, a new one should be provided immediately, or else the rapidity with which the colony may dwindle will be surprising.

The honey stores, as the colony expands brood rearing, vanish almost mysteriously. Consequently it is imperative that provisions be constantly available. Remember, too, that very little nectar can be gathered in the field, since perhaps maple and skunk cabbage are the only flowers yet open. It is frequently desirable and necessary to feed.

To know what to do with small or weak colonies is often a problem. They had better be united, a queenless one with a queenwright, some advise. To nurse along a weak colony means care, which is not always repaid by a surplus of honey.

E. W. Alexander has given a method of building up weak colonies in the spring. Those who have tried it do not all report it a success, but the writer's experience is favorable. Beekeepers should undertake it with caution, but nevertheless surprising results have been obtained.

According to Alexander, the apiary should be divided into an equal number of strong and weak colonies. Again, mark each of the weak colonies which has brood. Placing queen-excluding zinc over the strong colonies without disturbance, and, preferably, without smoke, set the weak colonies having brood over strong ones. It will be necessary to give a frame of brood to each of the weak colonies having none. These may then be set upon strong colonies, in each case using a perforated zinc between the upper and lower hive, as before.

Alexander's caution is: "In every case where the method is reported a failure it has been from one of two causes—either lack of brood in the weak colony, in order to hold the queen and her few bees in the upper hive, or smoking the strong colony so that, as soon as the weak one was set on top, the bees rush from below and sting every one above. Therefore, avoid using smoke or doing anything to excite the strong colony." The whole should be done so that neither colony realizes that it has been disturbed. In about thirty days each hive will be crowded with bees and maturing brood. Then, when you wish to separate them, set the strongest colony on the new stand.

A further spring duty is to clean up the apiary. On the first day that bees fly examine each hive and determine whether it contains a living colony. Immediately close bee-tight any hive in which the colony has died; furthermore, remove the hives and contents to bee-tight building. This is not only a wholesome practice to prevent robbing, but it is vital in order to check the spread of diseases. For a similar reason beekeepers are warned against exposing any comb, honey or section, so that the "bees may clean it up," as is so thoughtlessly done.

Contraction of the entrance is a matter of judgment. As a general rule, never give more entrance than can be guarded by the bees within, and this is especially applicable in spring and fall. Entrance contraction as is erroneously and frequently thought, is not of so much importance in controlling ventilation as in reducing or preventing robbing.

Weak colonies benefit in the early spring by being outwardly protected. Outside cases of wood or paper coverings, used as winter protection, are of much service in early spring, when a high temperature must be maintained for brood rearing.

THE FARM BULLETIN.

Philosophy re Hired Help.

Editor "The Farmer's Advocate":

Speaking of the hired help problem, I truly believe that I am speaking of one of the most important of all problems which must be solved by the extensive farmer. Not only the extensive farmer, either, but by anyone who controls a business large enough to always, or even generally, require extra help. As farmers, we very often forget how important it is to have reliable help until through carelessness or, perhaps I might say, slothfulness loss occurs. Then when it is too late, we say, "Well, sir, I believe the best is the cheapest, after all."

Experience is a great teacher, so let us be apt scholars. We also very often learn that it is a very expensive teacher. All the more reason why we should not require many lessons.

Now, let us reason, dear reader, on this question. Let us put our question into the form of a debate, and let it be resolved that "The best is the cheapest, after all."

Our opponent may say: Let us consider our poor immigrants—for example, the Englishman. Let us forget their faults and look upon their better qualities. They must live as well as we. Hundreds of these poor boys—yes, I might say