

should be repeated at intervals of about three days for two or three weeks, in order to kill the mites that are subsequently hatched from the eggs deposited previous to the first spraying.

Lice, unlike the mites, live all the time on the fowls, and can be easily seen. These may be killed, as may also fleas, by dusting with some good insect powder, those containing tobacco dust being the best. The proper way to dust a fowl is to hold it by the legs, head down, and with the free hand work the powder thoroughly into the feathers and down into the skin, an operation which should be repeated at least three times. This should be supplemented by keeping the hens supplied with dust baths, which will enable them to do much in cleansing themselves. Lastly, by observing a few preventive measures, by keeping the poultry quarters clean and pure, there will be no trouble with the flock being molested by parasites. "M."

Elgin Co., Ont.

GARDEN ORCHARD.

"Onions as a Money Crop."

All farmers, as a rule, are doing their best, each in his own way, to get along, and at the same time make some money, and in these days it is just as well not to depend altogether on the making of beef, pork, or dairying, but to have some crop as a money crop outside of those branches.

To my mind onions, provided one has good land, good implements, and patience to care for them, will pay as well or better than almost any farm crop. First have land that has been in a hoed crop for one year at least, more if possible (new or sod land is almost sure to run to thicknecks), well manured in the fall. In the spring, as early as possible, harrow well and drag or roll (drag or lump crusher is best), and rake if necessary; it will pay in the after care. Sow your seed in rows 12 to 14 inches apart; the former suits me the best, on account of the wheel hoe doing better work. Then as soon as rows can be seen, start the wheel hoe, and keep on if possible twice a week. If your land is not too weedy you will find the hoe, with the aid of a knife carried along in the hand, will do nearly all the work necessary. If very weedy, there is nothing for it but to get down on all fours and pick the weeds out, which is better than having them dirty. If the cutworms attack them, as they generally do, there will also be a fight with them. I have found the best way to go after them with a knife.

As soon as they begin to ripen, pull and leave on the ground to dry—the longer the better. If not ripe in August they should be pulled while the weather is hot, as they will not likely ripen afterward, and it needs hot days to dry the tops. Then get them on the market as soon and as early as possible, to not only get the best price—which here in N. B. is about 2 cts. a lb.—but to have them out of the way of the main farm crops. First, good land, good seed (be sure of it), and good cultivation early and often, then sell as soon as possible, and I think it will be found that one acre will pay as well as quite a number of cows for the time and labor spent. H.

King's Co., N. B.

Varieties of Dessert Apples.

Would you please inform me as to:

1. The best varieties of dessert apples for an orchard?
2. Number of trees per acre?
3. Best method and time of planting?
4. Average yield per tree?
5. Average cost per acre?

Ans.—1. The best varieties of dessert apples, named in order of ripening, are Early Harvest, Sweet Bough, Chenango, Shiawassee, Fameuse, McIntosh, Swazie, Louise and Spy.

2. At the usual distance, viz., 33 feet apart each way, the number of trees required per acre would be 40.

3. The best time for planting is in April or May; just as soon as the ground is in fit condition for working. The whole field should be thoroughly plowed and harrowed, and put in as good condition as for planting corn or potatoes; then it should be staked, showing where each tree should go, so as to be in rows at least two ways. The trees should be planted about as deeply as they grew in the nursery rows; filling in first with fine earth, and firming it well about the roots.

4. The average yield of apple trees varies with the varieties. The dessert kinds, mentioned above, would yield from three to five barrels each alternate year, except Spy, and possibly McIntosh, which might give from four to six barrels. Commercial varieties, such as Baldwin and Greening, often give from eight to twelve barrels of apples each alternate year.

5. The cost of preparing the land and work of planting would be about \$10.00 per acre; and the trees could be bought from a nursery by the hundred, for about \$25.00, or about \$10.00 for the number required for an acre. These are outside figures. L. W.

APIARY.

Bees on the Farm.

While, for various reasons, it would not be profitable for every farmer to keep bees on his farm, there are, nevertheless, many cases in which a few hives could be kept to advantage where none are kept at present. There is often a small local demand for honey that will not be supplied at all unless by someone at home, for honey is one of those things which most people like, but will not use unless it is convenient to obtain. But the farmer should not undertake to keep many bees. He should make it a side line—a very side line—unless there be someone in his household who has a particular liking for bees, and prefers working with them to doing anything else; who likes them to such an extent that he will spend all his spare time watching them and studying their habits. This does not mean that a person who is too lazy to do anything else will make a successful beekeeper, but that anyone, to make a success of bees on any kind of a large scale, must have a special liking for the work—wherein beekeeping is like most other occupations. Where there is no such person the apiary should be limited to a dozen colonies or so, as that is about as many as can be handled to the best advantage by a man whose time is taken up with his farm work. While the natural home of the bee is in the country, the science of apiculture is so entirely different from that of agriculture that the two cannot be followed to any great extent conjointly without one or both suffering from neglect more or less—usually more.

For the farmer who has never kept bees, but is thinking of getting a few next summer, some words of general instruction may not be out of place at this season. I say "a few," for no person, without experience, should attempt to handle more than a colony or two the first season. If he does—well, he will find out before he is through, for the inside of a beehive, to a person who is not familiar with the natural history, habits and requirements of its occupants, is a risky thing to play with, and a little careless or ignorant bungling in handling it will go a long way towards spoiling the chances for a honey crop. So, first of all, start small. Also, in selecting a hive for your bees, get a good one. It costs very little more to put up the bees in a good, movable frame hive than in a cheap affair, and bees in standard hives are worth, any time, fifty per cent. more if you want to sell them than are those in odd-sized or box hives. And get a book on the subject of bees and beekeeping. Get it now, and read it up before spring. It will only cost a dollar or two, and will pay for itself over and over again, even if you only have two colonies of bees; and you can't run them properly without it. E. G. H.

THE FARM BULLETIN.

After serving thirty-eight years in the capacity of Secretary-Treasurer of the East Peterborough Agricultural Society, Mr. W. E. Roxburgh resigned this year, owing to ill-health. The President, Mr. F. Birdsall, was re-elected, after a similar period of thirty-eight years official connection with the society.

N. B. Provincial Dairy School.

The thirteenth session of the New Brunswick Provincial Dairy School will open at Sussex on Tuesday, February 27th. The creamery course, intended especially for buttermakers and their assistants, will run from February 27th to March 9th. The cheese course will begin March 12th and close March 23rd. Tuition is free to all students from the Maritime Provinces. Applications should be addressed to Superintendent of Dairy School, Sussex, N.B.

Stock-breeders' Meetings and Shows.

We give below the dates of the annual meetings of Breed Associations, to be held in Toronto next week, also of the Spring Clydesdale and Shire Stallion Show:

Dominion Shorthorn Breeders	Feb. 6
Canadian Ayrshire Breeders	Feb. 6
Canadian Holstein Breeders	Feb. 6
Hunter, Harness and Saddle Association	Feb. 6
Canadian Clydesdale Breeders	Feb. 8
Canadian Shire Breeders	Feb. 8
Canadian Hackney Breeders	Feb. 7
Canadian Shire and Clydesdale Stallion Show	Feb. 7-9
Canadian Horse-breeders' Association	Feb. 9
Dominion Cattle Breeders	Feb. 8
Dominion Swine Breeders	Feb. 8
Dominion Sheep Breeders	Feb. 9
Ontario Winter Fair Association	Feb. 9

For place and hours of these meetings, see "Farmer's Advocate" Dec. 28, Jan. 11th and Jan. 25.

Western View of the Live-stock Commission-ship.

"Manitoban" writes "The Farmer's Advocate" as follows: "It seems to be pretty well understood that the country is shortly to lose the services of the present energetic Live-stock Commissioner, and that the appointment of a successor will shortly become necessary. The position is an important one, and the suggestion has been made that the work done under the present Commissioner's able direction should be merged in future with that of the Veterinary Branch, and all administered by the one head, who would, of necessity, be a veterinarian, similar to the procedure followed in the Bureau of Animal Industry at Washington. To this suggestion we are opposed, for reasons as follows: The present Veterinary Director General, well and favorably known throughout Canada, finds the work of his branch a severe tax on his physical powers; his branch even yet, in spite of the immense amount of constructive work done by him, being in the formative stage, it yet lacks a Meat Inspection Division, and it is neither just or advisable to unduly tax a public official because he is willing or capable. Generally speaking, however, the appointment of a veterinarian would be undesirable; the men capable of filling the dual position are so few as to be practically non-existent, while then the present V. D. S. is fully capable, it would be an unsafe precedent to establish, due to the meagre supply of properly-trained veterinarians. It does not yet seem to have dawned upon the teaching portion of the veterinary or agricultural professions that the ideal animal husbandman is the veterinarian who has been properly educated and trained; up to date the average veterinarian's education is narrow and lopsided. The two positions must then remain entirely separate, and it will not be amiss to point out, now that the time is opportune, to make the appointment of a Deputy Live-stock Commissioner, with headquarters west of the Great Lakes. One gentleman well known has practically been filling such a position without either proper official recognition or status, and without adequate salary as recompense for the high class and effective service rendered. The development of educational work in live-stock lines, the guidance of fat-stock shows and superintendence of the spending of moneys granted for the work in the different Provinces, and other important matters arising from time to time, demand a lot of attention which can hardly be attended to properly by one man stationed more or less permanently at Ottawa. New conditions are arising all the time, the influx of immigrants, and the consequent rapid change of conditions, necessitate the presence of man on the ground, not for the purpose of straightening tangles or smoothing over things, but rather to avoid friction, by being able to advise his chief of matters as such arise, even to being able to do a little forecasting when necessary. This division of the civil service has done some good work, but the fringe has only yet been touched. Good men, although not plentiful at any time, happen in this particular case to be available, in Messrs. J. H. Grisdale and George H. Greig, and should these two be given the appointments, respectively, of Live-stock Commissioner and Deputy Live-stock Commissioner for West Canada, the public most interested—stockmen and farmers—would be well satisfied, the Minister could look forward to progress in that particular division with a minimum of friction, and the taxpayers could rest assured that moneys expended by the division would be used in the proper manner, and value got for the same."

John Gordon & Sons' Sale.

The dispersion sale, on January 9th, of the herd of Shorthorn cattle belonging to John Gordon & Sons, Sunderland, Ont., was largely attended, and the best of the females brought fairly good prices, but for the young bulls, with two or three exceptions, the bidding was slow, and the prices were low. We give below the list of those selling for \$100 and over:

COWS AND HEIFERS.

Gloster Annie, age 4 years; James Leask, Greenbank	\$145
Crimson Maud 2nd, 7 years; Adam Dawson, Cannington	120
Crimson Jennie 3rd, 7 years; D. C. Ross, Woodville	155
Stamford Lucy 3rd, 8 years; Samuel White, Wilfred	145
Annie's Favorite, 8 years; Geo. Miller, Vroomanton	105
Edna, 4 years; Samuel Miller	115
Snowflake, 3 years; James Wills, Sunderland	100
Princess Blackwell 5th, 9 years; John Miller, Wilfred	115
Blanche, 4 years; Alex. Gourlay, Udora	110

BULLS.

Prince Arthur, 3 years; David McHattie, Beaverton	\$145
Crimson Arthur, 15 months; John Taylor, Bobcaygeon	100

Every Copy Since 1882.

I am very glad that you have commenced "The Farmer's Advocate and Home Magazine" Literary Society, and I would ask you to enroll me as a member of it. I am 24 years old. I enjoy reading the paper very much, and I may say that my father has been a subscriber since 1882, and that he has preserved each copy of the paper which he has received. I wish you success in the carrying on of your work this year. LESLIE TENNANT.

Brant Co., Ont.