

codling moths, and they can be bred in sufficient numbers to distribute at favorable points, there may be accomplished a very valuable work in helping our apple-growers to hold in check this most destructive enemy to our most valuable fruit crop. Apple-growers all over Ontario should be interested in this important investigation.

First Institute Judging Class.

To the Editor "Farmer's Advocate":

I noticed in your paper of February 25th, a report of a judging class held by the Halton Farmers' Institute, and was pleased to learn that this class of educational work was being taken up. Your correspondent is slightly in error when he says that "to Halton Institute belongs the credit of inaugurating the first stock-judging class by a Farmer's Institute." If your readers will look up the "Report of Farmers' Institutes for 1902 and 1903, part 1," they will find there a short report of a series of stock-judging classes held by the South Brant Farmers' Institute during March, 1903.

During the fall of 1902, at one of our township fairs, we held a judging contest, at which a number of the young men of the riding took part, and following this up, we held, in all, five classes during last year on beef and dairy cattle, sheep, hogs and horses, at all of which the interest shown by those attending was very good, and we again had a judging contest last fall at the Burford Fair, the sum of thirty dollars being given by the Institute as prizes in the four classes, beef and dairy cattle, sheep and swine.

We have arranged for a series of classes to be held during March, and had one on the 26th Feb. on the bacon hog, at the farm of Mr. J. E. Brethour, Burford, conducted by Mr. Brethour himself. The method of conducting the class was as follows: A Yorkshire sow of the proper bacon type was put in the ring, and the different points necessary to the proper type were explained by Mr. B., after which a pen of five bacon hogs were brought in, and the class asked to place them the same as in a show-ring, each member being asked to give his reasons for his judgment. This occupied considerable time, and brought out a good discussion of the different animals. Another class of three sows were placed in the ring, and judged in the same manner. These three sows were the same as used at the short-course judging classes held at Guelph in January, so that this lesson was quite as practical as those held at that time.

It has been my privilege to attend all of the classes and contests held by our Institute during the past two years, and I must say that I know of nothing in the line of Institute work that is more practical and worthy of being followed up. I think it could be very well managed in connection with the regular work, as has been done by the Halton Institute on the 11th, and I hope that other Institutes will fall in line.

T. P. TAYLOR.

Secretary South Brant Institute.

Back Numbers Reviewed.

A man asks in the "Farmer's Advocate," is alfalfa sod hard to break up. I had a rich, warm hill, containing two acres, which I seeded with alfalfa in wheat in 1902. Both the wheat and the clover grew very rank, and I cut it as high as the binder would cut, leaving a foot of stubble to protect the young clover through the winter. In 1903, I mowed it twice, and in fall I went to break it up. It was on the end of a long, narrow field containing seven acres. We plowed it all in together from end to end, and every time we came round to this piece the horses would stop every few yards, being hardly able to pull the plow through. They are a young team, heavy enough for any other sod on the farm, but they were not nearly heavy enough for this. After we finished one of them had a large watery abscess gather on its shoulder, and was off work for two months. If I had left the alfalfa another year I am sure I would have had to put two teams on the plow.

Another man asks, in February 18th number, what is the best kind of grain to sow on mucky land. I have some land that I never could get any kind of grain to stand on until I got spelt. It stands up well, is a good yielder, and perfectly free from rust.

I am pleased to see so many articles in favor of sheep lately. Dairying has paid so well the last two years that my neighbors have nearly all discarded their flocks as unprofitable stock. I keep a flock of twenty ewes, and I think they bring the easiest made money we get on the farm. JOHN M. RITCHIE.

Lanark Co., Ont.

[Editorial Note.—Mr. F. C. Elford, of Huron County, Ontario, who has had twenty years' experience with alfalfa, says, in a Farmers' Institute address: "If you attempt to plow a fresh green sod you may think you have struck a lot of pine stumps, the roots are so strong, but if, after first cutting in the season, you pasture down short, especially with sheep, the whole thing will plow up like an ash heap in fall."]

Sowing Clover to Increase Fertility.

When this country was in forest it had the means within itself of maintaining sufficient fertility to induce good growth, but as the axe of the settler laid low the monarchs of the forest, and fire and time have rid the land of the refuse, clear fields have been the result, and many farmers have worked and cropped the clear and level fields till, in some cases, they have become so poor and devoid of vegetable matter that they hardly grow sufficient to pay for the work of seeding and harvesting, to say nothing of profit. This condition of things set men to thinking and experimenting, with the result that now sowing clover is believed to be the best means of increasing fertility. But, says someone, we cannot afford to pay eight or nine dollars a bushel for clover to sow as a fertilizer and nothing else. But my experience tells me that a farmer cannot afford not to sow clover, whether he takes a crop from it or not. I believe it will pay any man to sow clover with all spring grain, and if he does not want it for hay the next season he can plow it under, and derive great benefit therefrom, equal, I believe, to eight or ten loads of manure per acre. If he wishes to harvest a crop from it he can do so, and it will make choice feed if properly cured, and then, by letting the second growth come along, he can plow that down lightly, say, about four inches, and work the top frequently during the autumn to keep moisture and hasten the decay of the clover, and so be ready to drill or rib for winter, which will allow the frost to penetrate much deeper, and so make the soil ready to work earlier in spring, which is very desirable, besides, the plant food derived from the clover and its roots decaying in the soil, will be just where the young plants can get it at the start, and so flourish and produce an abundant harvest. But however good clover may prove, it will not do its best if the land is wet, and, therefore, low land should be underdrained to obtain the best results. Be sure and sow plenty of seed, say fifteen pounds to the acre, or more if land is rather poor, as you will be more apt to secure a catch, and thin sowing is, I think, in many instances, the reason of no catch. Perth Co., Ont. THOMAS JOHNSON.

The Utility of Changing Seed.

There have been many and various reasons given why seed should be changed every few years, the cause usually being attributed to its having "run out." This evidently means that it has lost its vigor, and fails longer to produce a paying crop. No one will doubt for a moment that much advantage is frequently gained by changing seed from one locality to another, and this even without paying any particular heed to the rules laid down by authorities on the subject to change only from poorer to better conditions, or from a light to heavy soil. There undoubtedly is often a marked improvement in yield and vigor, but there is not always, and it is from the exceptions that possibly the facts of the case can most satisfactorily be adduced.

To go back a step or two, consider for a moment the nature of the plants with which we are dealing. It is pretty generally known that our improved types and varieties of field crops have been brought to their present degree of excellence by the work of a great many years in selecting of the superior and discarding the inferior types of plants, and propagating only from the most desirable. Thus to improve a race of plants, no doubt required not only much persistent effort, but the furnishing of conditions most favorable for the fullest development of the desirable qualities of the plant. This would result in the acquisition of the characteristics that distinguish types and varieties at the present. It will thus be seen that to a certain extent our improved grains have some qualities which are artificial or acquired.

Now it seems reasonable to say that the trouble that arises in grains "running out" is due to their losing these special qualities. Breeders of pure-bred stock will appreciate the fact that a great deal of culling and selecting is required in their herds to maintain a high standard of excellence, not to speak of improving. Should not breeders of grain, who also are dealing with organisms capable of being moulded by their treatment and environment recognize the same principle? Live-stock breeders pay more attention to constitution in the animals they breed than to any other one quality. They also give their breeding herd all the most favorable conditions to their perfect development. Would it not pay to apply these principles more generally to the selection of the seed from which is to be bred the next year's crop?

Any one who seriously has thought of this point of selecting only the best seed grain, will

have noticed that some farmers do not require to change their seed nearly as frequently as others farming under the same conditions of climate and soil, and in the majority of cases they will find it has been due to their following a more intelligent system of selecting their grain for seed. Of course to follow this system up to get the most out of it requires some considerable attention, as it will be seen that not only must care be taken to select the best grain, but attention must be given to do the selecting from vigorous, thrifty plants of the type most suitable to their particular conditions.

The hand selection that is here involved requires some little time and considerable care in carrying out, and this may deter many from resorting to it. It is true that the best results would be no doubt attained by a comparatively few making a specialty of this, but it would redound greater to the benefit of themselves and their neighbors. No particular trouble, however, is involved in the thin sowing of a well-prepared plot of ground large enough to yield the seed for another year, and by thus doing we would derive in a limited degree all the benefits that accrue from a closer selection. The value of thoroughly cleaning out the light grains is in no way depreciated by giving due credit to the worth of this system. B.

Farm Bookkeeping.

Having noticed in the last few numbers of your valuable paper a number of different systems of bookkeeping for the farm, I would like to say that while they are all good, some I think would be too difficult to comprehend for a person that has no knowledge of double entry or single entry books. Now a system that I have found very satisfactory for a number of years is this: Let the man who is running the farm get a diary, a good big one; I mean one that has a good big space for every day in the week, and every week in the year, and every night before retiring let him, besides jotting down the doings for the day, also enter any money received or any money paid out; no matter how large or how small, or from what source it comes, put it down. Then at the end of every month turn over to the back of your diary and you will find some space that does not interfere with the days of the year, and use two headings—moneys received for January, 1904; expenditures for January, 1904. Under these headings put the amount and what it was received or paid out for; then at the end of the twelve months take off a trial balance, as it is known to bookkeepers, and you will be able to tell exactly how much it takes to run the farm, and how much money you have taken in.

Keeping books this way, the greatest advantage is that you never neglect to make an entry. On the farm a week may pass and you may never take in or spend a cent, but if you write your diary every night it is always fresh in your memory. SUBSCRIBER.

Plan of Modern Farmhouse.

The following description of the plan of Mr. John McDougall's house, Indian Head, will be found interesting to those who contemplate the erection of a dwelling next season:

Under the foundation there is a footing course of broad, flat stone. The foundation walls are 22 inches thick and 7 feet high to the bottom of the joist, but all stonework is built to the top of the joist, and all window and door jambs are built on the level to the inside.

The walls of the first story are composed of two thicknesses of brick, the inside row being laid endways, making the wall 13 inches in thickness. For the upper story the wall is 9 inches thick, and all the best bricks were, of course, selected for the face.

The joist for both lower and upper floors are 2x8 inches, and set 16 inches from center to center. The studding for the walls is all set on a sub-floor, which covers the entire first story. Over the sub-floor, and also on the two floors of the building, there is a finished floor of red fir, 1x4 inches. All hip and valley rafters are 2x6 inches; all other rafters 2x4 inches, and set 16 inches from center to center. Over the rafters there is a covering of 1-inch boards, and upon them was laid a 1/2-inch coating of rich, well mixed mortar, and over the mortar was laid British Columbia cedar shingles.

The walls of the entire house are plastered down to the floor, and done in three-coat work. The kitchen is wainscoted with fir lumber, and every alternate board is moulded on the face. The bathrooms are properly fitted; the sink is complete, and the house is modern in every particular.