

again early in June, with the result that the foliage was practically all burned off the trees. Some others had secured similar results, even when only $\frac{1}{2}$ strength had been used. Mr. Pettit said that he had used the fluids on some cherry, plum, peach, pear and apple trees. The plum was slightly burned, the peach seriously injured, while no results were noticed on apples and cherries. In view of this, the contention of the meeting was that great care must be exercised in the handling of these mixtures. The commercial lime-sulphur solution was not considered equal to the boiled mixture, and was much more expensive.

E. D. Smith will be the next President of the Association. The following directors were appointed: Niagara Township—F. A. Goring, A. Onslow, W. O. Burgess, H. Fisher, W. Armstrong. Grantham—W. H. Bunting, Geo. A. Robertson, F. G. Stewart, W. C. McCalla, R. Thompson, Louth—S. H. Rittenhouse, J. H. Broderick, C. M. Honsberger, F. Blaikie. Pelham—G. A. Brown, A. Railton, D. Lightle. Clinton—S. M. Culp, W. J. Andrews, W. B. Rittenhouse, H. S. Peart, J. Brennan. N. Grimsby—A. H. Pettit, J. M. Metcalf, H. L. Roberts, T. Wolverton, A. J. Pettit. Saltfleet—J. Carpenter, J. W. Smith, E. D. Smith, Murray Pettit, J. E. Henry, Erland Lee. Wainfleet—C. Henderson, L. Weaver. S. Grimsby—A. E. Adams, J. Ayson Merrit. Barton—Geo. Aurey, Thos. Maclem, H. Burcholder, R. H. Lewis. Ancaster—J. T. H. Regan. Stamford—C. F. Munroe, Thos. Berriman.

A resolution was passed, giving power to vote to as many directors as were present at a directors' meeting from any municipality, so long as the total number of votes to which that municipality is entitled is not exceeded.

The following spray committee was appointed to supervise the work with new spraying mixtures this year: H. S. Peart, R. Thompson, W. C. McCalla, J. W. Smith and Jos. Tweedle.

J. Nelson, of Toronto, stated that rates on manure from that place were likely to be raised, and he advised the association to act accordingly. In regard to this matter, it was resolved that, in the opinion of the association, the rates on manure were excessive. G. H. C.

POULTRY.

Turkeys Need no Housing.

In the opinion of D. A. Graham, of Lambton County, Ont., turkeys thrive much better in the open than when housed. For over twenty years large flocks of bronze turkeys have been raised each season. About 20 hens are wintered, and one gobbler kept for each seven hens.

"My turkeys always are outside," said Mr. Graham to "The Farmer's Advocate" recently, "and I am never troubled with disease. To provide roosts I simply put four posts in the ground and fasten rails, about six feet from the ground. A hopping rail is placed lower down. There is no difficulty in inducing the birds to roost here. They prefer to go higher, but by having a yard twenty feet square, or larger, and keeping the mother hen and her young there during early summer, they recognize this as their home. For a time after the young birds begin to roost they remain on the hopping rail, but before long they mount higher. Some people claim that turkeys do not come home at night, but I find no fault with them in this regard. For two or three days I watch that they do not wander too far, and I always see that some grain awaits them in the evening.

"Eggs should be put to hatch as early as possible in the spring. It is remarkable the adverse treatment turkey eggs will withstand. Frequently I have known eggs laid in a brush pile to lie in snow and wet and still remain fertile. It is well to start hatching in an incubator, and then before they are hatched the turkey hen will have taken to the nest and the eggs can be placed under her. The youngsters can take care of themselves as soon as they are big enough to run through the grass. An old turkey gives ample protection in wet weather. I do not recommend the use of ordinary hens as foster mothers. Very frequently lice are transmitted to the newly-hatched turkeys, with disastrous results. Many cases of scours are due to lice. I believe fully two-thirds of the mortality in young turkeys is due to lice rather than to disease. As a general rule, turkeys reared around the house do not thrive as well as those that run through the fields. When they are not with a hen turkey the tendency is to go to roost while too young, and in many instances crooked breast bones are developed.

"As to feeding, nothing is better for newly-hatched turkeys than curdled milk. It is not a softening food. Hard-boiled eggs and rolled oats can be used to advantage, but granulated oat meal is more desirable. After a time wheat can be given. Turkeys require dry food. Curdled milk is good at all times, and for all sizes of turkeys."

Farm Poultry Account.

Editor "The Farmer's Advocate":

In a recent issue you ask for the account and experience of poultry-keeping.

Last winter I sent you the results of the winter months, with method of feeding, plans and description of the poultry house, so will now send you the year's account. On January 1st we started with 30 Barred Plymouth Rock pullets, 1 cock and 1 cockerel. During the summer 7 of the (now) hens died or were killed by a ravenous brood sow, which was in the barnyard, which leaves 23 hens; so that our flock now consists of 23 hens, 24 pullets and 3 cockerels, which are not akin to either hens or pullets.

I might just say that during the winter the pullets were fed a warm mash in the morning, with some poultry food (which was omitted after the pullets were in a good laying condition), and a feed of mixed grain, mixed in the litter of chaff on the floor, at noon; a medium-sized mangel every day, and an occasional feed of meat scraps, grit and fresh water always being before the fowl. After the ground was dried in the spring the fowl were fed on the ground out of doors. The following is the monthly egg record, and the account in full: Jan., 93; Feb., 336; Mar., 539; Apr. 516; May, 358; June, 297; July, 388; Aug., 339; Sept., 235; Oct., 125; Nov., 38; Dec., 27; total, 3,321.

RECEIPTS.

	Average price.	
145 dozen sold at	18 38/145c.	\$26.48
7 settings of 13 each, at	25c.	1.75
67 eggs, for hatching, at	25c.	1.30
117½ dozen consumed, at	18 38/145c.	21.42
24 pullets, valued at	50c.	12.00
16 cockerels, at	60c.	9.60
1 setting eggs, 15, at	\$1	1.00
Total		\$73.55

EXPENDITURE.

25 cwt. of mixed grain and chop, at \$1.20 per cwt.	\$30.00
10 bush. of mangels, at 10c. per bush.	1.00
Poultry food	1.00
Meat scraps, bread for chicks, etc.	3.00
Total	\$35.00

SUMMARY.

Receipts	\$73.55
Expenses	35.00
Profit	\$38.55

The chicks were all hatched by hens, and the labor in caring for them is not counted in the account. Hoping that this may be worth publishing, and wishing you every success in the future. Perth Co., Ont. GEO. S. HAMMOND.

Poultry and Incubator Experience.

Editor "The Farmer's Advocate":

In "The Farmer's Advocate" of December 24, contributions are invited from those who have been keeping poultry, and who have been keeping track of what they were doing as to profit or loss. I do not profess to be an expert at all, and my experience may seem to some quite commonplace; but at the same time, in the hope that it may prove of interest to some of your large circle of readers, I give it for what it is worth. I may say I have been keeping poultry for years, but what I wish to speak of here is principally the experience of the past year, with a flock of incubator-hatched chickens, of the Barred Rock persuasion. In past years I changed breeds sometimes. I started with Barred Rocks. They got so broody in summer I lost patience, and crossed them with S. C. White Leghorns. The pullets from this cross were good layers from early spring until late summer, or, rather, fall, but did not do so well in winter; yet this flock made a profit of a dollar each over cost of their feed for the year. I tried Wyandottes for a few years, but finally came back to the Barred Rocks, and perhaps there is no better all-round breed, if rightly handled and cared for.

I had no end of trouble trying to raise chickens in the natural way by means of the hen; and right here I do not wish it to be inferred that I do not consider it the best way, providing you are successful. But in my case the hens insisted on sitting in the henhouse—quite natural, too—where they had been laying their eggs. But it's a bad place to brood in. The other hens insist on laying in the same nest, and break the eggs, or often get the brooding hen shuffled off to another nest, and the eggs are spoiled. If you shut them off from the interference of the others, you have to take them off for feed and water every day, and see that they get back again all right. Getting them induced to sit in another building, by removing them at night, and setting them on china eggs for a few days at first, etc., is a mighty sight easier said than done, so that some years we had scarcely any chickens at all.

So we resolved to try artificial hatching, and in the spring of last year bought an incubator and brooder, but by some mischance the machine

was delayed in transit so long that it was on in the month of June before we got our first hatch out. We immediately started a second one, and in both cases got a 75-per-cent. hatch, which was not bad for beginners. Our machine is a 100-egg one, of Canadian make, uses hot water instead of hot air for heating, which, I think, must be an advantage, as it is very easy to maintain an even temperature in it. The chicks were healthy and strong, and thrived remarkably well. They were fed granulated oatmeal, hard-boiled eggs (those infertile eggs that have been tried out of the incubator are all right for this purpose), stale bread soaked in sweet milk and then squeezed dry, finely-chopped onion tops, etc. They were supplied with plenty of grit. This I consider very important with very young chicks. When they were removed from the brooder they were put in a covered pen, where they had room to move about freely without crowding, and were soon afterwards placed in yards enclosed with poultry netting, and with a covered shelter in one corner for protection from rain, etc. They were fed wheat as their principal grain food after removal to the yards, and often some offal from the butchers, such as finely-chopped liver, etc. As soon as mangels were available they were fed some, which they seemed to relish. Grit was kept before them always, and they had always as much skim milk as they could drink. Under this treatment they continued to thrive very well. When winter approached I had some difficulty in housing them. My poultry house was built many years ago, and not up-to-date or large enough, so I had to make the best I could of an empty hoggpen as an improvised chicken house. I had a lot of cockerels which should have been coop fattened in the fall. I made the mistake of keeping these until January, all running with the pullets. Kept in this way the cockerels were not properly fattened, but they weighed from four to five pounds dressed, and sold at 14c. per pound. We killed some of them for our own use, which is not taken into account.

After these were disposed of we had 64 pullets, and it is with the performance of these as layers that I purpose particularly to deal. Owing to the lateness of the hatch, and being in rather crowded quarters previous to the disposal of the cockerels, these pullets did not commence to lay until well on in February, and then only a few of the oldest ones. By the middle of March they were doing fairly well, and through the months of April, May and June the 64 averaged 50 eggs a day. They did nearly as well in July and August, and kept up a good average until they began to moult late in the fall, and even then they still continued to lay a few, so that egg production never entirely stopped. Their total production for the year was 840 dozen. In early spring the price was 25c., then dropped to 20c., but during summer never below 15c., and that only for a short time. In the fall they gradually rose again to 20c. and 25c. We use a large quantity of eggs ourselves, and it is only fair to put these at the selling price, and a fair average price for the year would be 18c. per dozen, which gives a total of \$151.20 for eggs alone. To this add \$34 for dressed poultry, making a total of \$185.20. As up to the time the cockerels were marketed they and the pullets were fed together, it is difficult at arrive at correct estimate of the cost of feed for each. But as near as I can figure out cost it is safe to say that these pullets have made a net profit of \$1.27 per head. There was very little profit on the cockerels, if any, as they eat nearly twice as much as pullets. However, this on the whole is not a bad showing, and goes to prove that even under adverse conditions there is profit in poultry. The adverse conditions in this case were lateness of the hatch, keeping the cockerels too long, and rather crowded quarters.

This last year we hatched early, and the pullets began to lay in December, and the cockerels were shipped alive in August, and brought nearly as much money as the others that were kept until winter. Now, a word as to the feed and treatment of the laying hens. Usually the morning feed was a mash, made of a mixture of finely-chopped oats and barley mixed with shorts, to which was added oil-cake meal. The mixture was scalded and then mixed and stirred until nearly dry. The grain feed was varied for the evening meal, using wheat, oats and barley. They had grit and crushed oyster-shells constantly before them, and all the time as much skim milk as they would drink. They got no cut bone, and seldom any meat of any kind, but they had plenty of room to range all through the summer and fall. Their quarters were kept fairly clean, the dropping boards under roosts cleaned off frequently and sprinkled with land plaster. Did they get broody? Yes, of course they did, although pullets are not so bad as older hens are. I manage them by taking them off the nest as soon as they begin to sit, and shutting them in a pen with an active young cockerel. This usually breaks them up in three or four days, and they go to laying again. This is the best remedy I have ever tried. I would sometimes have a half dozen in the pen at once. The cockerel kept for this purpose should be well fed, and let out of the pen occasionally for a day or two.