encouraged anyone by this article, I shall feel that I have been well rewarded for my trouble. My prominent success at the late exhibition has encouraged me greatly, and the kind words of those who knew the disadvantages I labored under to obtain that success, I shall not soon forget, and hope that the readers of this article will be satisfied with my effort to give a true account of my garden for 1901.

Black Rot of Grapes in Essex.

To the Editor "Farmer's Advocate":

Sir,—Many grape-growers in Essex lost heavily this season from the attacks of the fungus called "Black Rot," or, locally, "Dry Rot." The vineyards about Sandwich, Walkerville, and along the lake shore near Kingsville and elsewhere were badly affected.

Unable to visit Essex personally, I asked Mr. F. P. Gavin, B. A., Science Master of the Windsor Collegiate Institute, to investigate the extent of the injuries, and to send me specimens of the diseased grapes. He reported that the damage at Sandwich and Petite Cote was most serious in vineyards not well cared for, and more especially on the old vines. In the vicinity of Walkerville, the average crop of grapes was less than one-third that of previous years, and there, too, the injury was greatest on the old wood. The large rainfall of July and August is largely responsible for the rapid spread of the disease.

The disease is not a new one. In fact, it is indigenous to America. Ever since 1885, when it was discovered in France, much attention has been given to it, and now it is considered one of the most destructive enemies of the grape throughout the U. S. and Canada.

The disease usually makes its first appearance on the leaves, and afterwards appears on the berry, when it is more than half-grown, as a small brown spot, which rapidly enlarges. In a few days the entire berry becomes diseased, and a soft rot ensues. A collapse and drying of the tissues follows, so that the berries become shrunken, shrivelled, black, and hard. The surface becomes prominently marked with strong, irregular ridges. With the aid of a pocket lens, the surface will be seen to be studded with minute black pustules, which contain the summer spores of the fungus. The spores ooze out of the surface, and are scattered by the rain and wind to unaffected grapes, which soon show signs of disease. The disease also rapidly spreads, especially in moist weather, by contact of diseased berries with unaffected ones in a cluster, and by the spread of the original threads from one berry to another through the stalks of the cluster.

Another kind of spore is produced later, during the winter, on the shrivelled grapes and leaves left on the vine or on the ground. These spores are set free in spring, and are capable of starting the disease afresh on the leaves.

With a knowledge of the life-history of the fungus, it is clear that the main remedy is one of prevention. The following preventive remedies will be found effective: 1. Destroy all leaves and dead grapes in the autumn, so as to kill all wintering spores. 2. Spray the vines with Bordeaux mixture just as the leaf-buds are beginning to expand, and again at intervals of ten days or two weeks until the berries are half-grown. If rain occurs frequently to wash off the mixture, frequent applications should be made, for spores will germinate when the vines are not covered with the Bordeaux.

W. LOCHHEAD.

Ontario Agricultural College, Guelph, Nov. 23, 1901.

POULTRY.

Chicken Fattening and Profits.

The Department of Agriculture at Ottawa has received returns regarding the first shipment of 2,592 fattened chickens sent this season. These were fattened at the poultry-fattening station at Bondville, Quebec. They were sold in Liverpool, wholesale, at fourteen cents per pound, and the net returns were equal to $1.31 per pair of chickens at Montreal.

The experiments at the Whitby, Ont., fattening-station go to show that as a rule farmers hold their chickens too long to reap as much profit from them as they ought. The younger a chicken can be placed on the market the more money can be made out of it. According to recent experiments, the cost of feed for one pound of gain in live weight for a chicken three months old is four and one-half cents. If the same chicken is kept until twenty weeks old the cost of feed per pound of gain in live weight is six and three-quarter cents. A saving of two and one-half cents per pound can thus be made by selling a chicken when it is three months old instead of waiting until it reaches the age of five months. The experiments also show that a chicken fed in crate makes more gain than a bird that is left running around. This denotes that greater profit is made by feeding a chicken in crate when young than by allowing it to run outside.

Farm Poultry Profits.

Last year about this time I gave the readers of the "Farmer's Advocate" an account of my year's profits and losses in the hen business, and as I have just been going over my accounts and closing up my poultry year, which ends on the last of October, I have been reminded to send it forward again, as it may be a matter of some interest.

We Northwesters all know that last season was very unprofitable to farmers along almost all lines. When crops are especially good and all wheat grades "No. 1 hard," it is sometimes difficult to make ourselves believe it pays to feed it to hens.

When there is a small crop and the wheat grades low, it is very difficult to make ourselves believe that even the screenings can be spared for hen feed. Last fall the remark was made to me by several people that I would find my hens would not pay this year. I began the winter with a fine stock of fowl, but also with fear and trembling, for I knew it would be a very hard task to carry them over the winter. I had some advantages to count upon: a good, warm, dry henhouse, help enough to keep it clean, and no vermin or disease to get rid of.

On the other hand, all I could count upon for food in the shape of grain was oats, and not a large supply of them even. I had a few bushels of wheat left over, by strict economy, from the year before, and a little bran to mix with what skim milk I could spare from three cows which had been milking all summer. Then I had an almost unlimited supply of pigweed seed and the parings of vegetables. I went bravely to work and continued at it until spring opened, so I could turn my flock out of doors to pick and scratch for themselves. I kept my fowls alive, clean and free from disease, and until spring I lost only five, and these were too young to keep over winter under the best of conditions. But if any one thinks my advice worth paying the slightest attention to, I would say, "never try my experiments." Pigweed seed may keep hens alive, but they will not thrive on it, much less will they lay eggs in winter, and it is simply heart-breaking to me to see the poor things hunting for the grains of wheat which are not there. Now, I believe if people in any business wish to be of any use to others in the way of object-lessons, it is their duty to show the dark side of the picture as well as the bright, at the risk of any criticisms that they may call forth.

When the bright spring days arrived, and I heard once more the happy songs of my feathered favorites as they went scratching hither and thither, my heart was lightened, and I felt as if I could look my hens once more in the face.

It was not long before the egg crates began to fill, and I never had hens lay better all summer, but as they began to lay late in spring, and I had nothing to feed young chickens upon, I raised but few.

As soon as any wheat was ripe I fed sheaves to my fowl, and, fortunately, the prospects are good for this coming winter's feeding. I am keeping over this year only the few pullets I raised, and one-year-old hens. I think it is unnecessary to give items of receipts and expenditure this time, so I will just give the aggregate:

I wintered 100 fowls.

My cash expenditure was $15.

My receipts were $86.85.

My profits were $71.85.

I hope, if spared, to show a better acco[unt] next year.

MRS. A. NEVILLE.

Central Assiniboia.

A PEN OF BUTCHER'S STOCK, WINNIPEG STOCK-YARDS.

Pure-bred Fowl vs. "Any Old Kind."

It is just possible there may be some exceptionally good layers or some birds of exceptionally large size among our flocks of "any old kinds," but they will never show so great uniformity of size nor good laying qualities, to say nothing of shape and color of flesh and color of plumage, as will a flock of pure-bred fowls of no matter what favorite breed. When we are marketing poultry it adds greatly to our prices when the birds are of a uniform size and shape, instead of some little, some big, some long, some short, some thin, some broad, some with well-meated breast, while others are most heavily meated on the legs.

Probably this is not so important when one is selling by the pound, dead weight, but in selling broilers with a mixed lot of poultry, the prices usually rule not according to the few large, plump birds in the collection, but we are paid at the price they would bring were all of them small and thin, as are a few of the number.

With pure breeds one can usually offer birds very similar in appearance, and though they may be of the smaller breeds, yet they will command better prices than the mixed lots.

But it is perhaps in the color of plumage one derives greatest satisfaction. It is a constant source of pleasure to me to view my flock of pure-bred Barred Rocks. Though all are not equally well colored, it is a delight to notice the clear, even barrings through the entire flock as compared with that of the flock of grades and crosses. The pleasure is greater as we get birds more nearly approaching the standard type. Nor is this all: I am surprised at the extra size, shape and weight, finding that though they were sold by the pound dressed, they would be far more profitable than would any flock of mongrels. I feel sure the breeders of 'Dottes, Leghorns, Dorkings, or even Bantams, must experience the same pleasure as their birds show the uniformity of markings and come near the ideal in coloring.

The same holds good in breeding turkeys, geese and ducks, and it is perhaps in these lines that the size is more noticeable. I remember seeing what I thought some fine, large white ducks disporting themselves near a stream of water, but on approaching nearer I found them to be white geese of the old type. Were these placed beside a flock of Embdens, they would indeed appear as dwarfs, and we find the larger breeds are even more prolific than were the old types. There is also a vast difference in size between the old-fashioned turkey (which is yet too plentiful through the country) and the Mammoth Bronze and Mammoth White as seen in the show-rooms as representative of the flocks in our country, which, I am pleased to see, can hold its own at the large shows, even including the Pan-American. I hope very many farmers will take their wives to the Ontario Poultry Show at Guelph this month, or if this be not possible, that they will send their wives there, where they may see and compare with their poultry at home not only the live birds but the same breeds dressed for market in the approved manner.

Middlesex Co., Ont. M. E. GRAHAM.

How to Keep the Boys on the Farm.

Morley Burroughs, Carleton Co., Ont., writes, in renewing for the "Farmer's Advocate" for 1902, that the paper has helped him in every line of farming. He adds: "We look for its arrival every two weeks with pleasure. It helps to keep the boys on the farm."