

ing to conditions. Laying stock should be kept busy scratching all day long, which will keep up health and vigor, if in comfortable, clean quarters, which should be well lighted and roomy, allowing about six square feet of floor space for each hen. The pen should be cleaned out every week, and the roosts given a coat of coal oil. The course of feeding varied little from Mr. Dilworth's plan. The morning soft feed should not be sloppy, neither should the hens be allowed to gorge themselves. It is good practice to hang a cabbage up by the roots at such a height as the hens can reach by jumping for it, which will furnish splendid exercise. If cabbage cannot be had, turnips or mangels cut in two make splendid substitutes, and are much relished. They should have a feed of raw meat two or three times a week. Well-cured clover, cut finely and mixed with the soft feed, has good properties. An egg is largely made up of nitrogen, phosphoric acid and lime, all of which must be supplied in the feed; therefore, the necessity of feeding meat and bone, which are largely made up of the above elements. Many farmers have wind or horse-powers, which can be used to drive the bone-mill, which may be used once a week in cool weather. Grit must be supplied at all times. In cold weather the water should have the chill taken off it, and after the hens have all had sufficient the water vessel should be emptied. Mr. Duff has learned from many Toronto wholesale egg dealers that it is almost impossible to obtain fresh eggs that can be relied upon. They nearly all expressed themselves as being willing to pay advanced prices for eggs that could be safely recommended. Bad packing, too, is the cause of many lost eggs. It is estimated that eggs cost half a cent each to produce; now these can be sold, if guaranteed right, for 13 cents per dozen the year round. They can be expressed to a city market for 11.5 cents per dozen, which leaves 11.45 cents per dozen for the eggs. This price shows a clear profit of \$1.50 per hen per annum. These profits are based on wholesale figures, which can be greatly increased if private customers are supplied.

A Good Word for Ontario Province.—Mr. C. C. James, Deputy Minister of Agriculture, gave an admirable address on the agricultural resources and capabilities of Ontario, which has a climate and conditions suitable to grow any and every line of products, except those strictly tropical. The southern point of Ontario, situated on Lake Erie, is in the same latitude as Chicago, Boston, and Naples in Italy, and being almost surrounded by water, namely, River St. Lawrence, the chain of great lakes, Lake of the Woods, Georgian and James Bays, and the Ottawa River, the climate is temperate. Our fruit products are second to none in the world; our stock leads in all great contests. We have a class of farmers, many of whom came here from the Old Land well versed in stock raising. We have stocked much of the Western States and the Northwest, and will continue to be looked to for the best. Our conditions for dairying are of the highest order, and are not neglected, which has been shown in the greatest contests of the world. In poultry, we lead every time we meet the fowls of other countries. The show just closed at New Hamburg had more high-scoring birds than any other country can produce. Now, just here we have a monster industry in its infancy. The hen has been looked upon as a small, insignificant animal; but this is the class of stock that has kept many Ontario farmers floating along through the hard times. We may well take a lesson from France just here. We have 130,000 farms in Ontario, averaging 130 acres each. The farms of France are not quarter the size, still their owners are in much better circumstances than our tillers of the soil. The secret lies in the fact that the small things are not neglected, but pushed to their utmost capacity.

How to Make Hens Pay.—Mr. A. G. Gilbert, poultry manager of the Dominion Farm, made many good points in the course of his highly appreciated address. A good hen properly cared for will lay at least 100 eggs per year, worth at least one dollar. She will raise at least ten chickens, worth at least one dollar. She is worth on the market at the end of the year, at least twenty-five cents. She can be properly fed for one dollar, which leaves a margin of \$1.25 profit. Now, if every farmer in the Province kept a reasonable flock, and made \$1.25 on each hen for his trouble, see the revenue that would result. This could easily be done by all. There is a great gulf fixed between the feeding of the hen and picking up the egg. This gulf is science. The hen in her natural state just laid enough eggs to propagate her species, and all that she can be made to do above that requires science to develop; therefore the need of knowledge in caring for the flock. We must exercise wisdom and judgment to supply the demands of a paying market. Old hens should not be kept; her life should terminate at the end of two and a-half years. Mr. Gilbert referred to the improvement that has been made in the cow during the last twenty-five years. She has been made to produce double her former returns by careful training and care. Now, the hen is capable of as much or more improvement. The present demand for freshly-laid eggs in Ottawa and Montreal is enormous; the price offered is about forty-five cents per dozen, and not half enough can be supplied at that price. The difficulty of procuring reliable eggs in July and August has already been touched upon. As an instance, Mr. Gilbert referred to eggs his wife had bought on the market at twelve cents per doz., half of which were bad, some of them half-hatched, etc. This made the price twenty-four cents per dozen.

This is the testimony of almost all who depend on the market for their supply of fresh eggs.

Port Hope was selected to hold the show next year. *Election of Officers.*—The following officers were elected:—President, H. White, Port Hope; First Vice-President, Wm. McNeil, London; Second Vice-President, G. S. Oldrieve, Kingston; Treasurer, Geo. G. McCormick, London; Secretary, Thos. A. Browne, London; Delegates to Industrial Exhibition, J. Dilworth and W. Barber, Toronto; Delegates to Western Fair, J. H. Saunders and G. G. McCormick, London; Directors, Thos. A. Duff, Toronto; S. W. Clemo, Galt; John Crowe, Guelph; John Cole, Hamilton; W. C. Trew, Lindsay; W. T. Gibbard, Napanee; D. Rice, Whitby; A. Bogue, London; C. Massie, Port Hope.

Preparatory Hints for the Hatching Season.

BY IDA E. TILSON.

Everybody has something to be thankful for. Even the turkeys can rejoice that the holiday feasts they give their lives to grace come but once a year. Though my pullets' smooth, glossy, tailor-like suits are so satisfactory, and their tender flesh and numerous eggs so profitable, I am glad raising brand new chickens comes but once a year, because the business needs a person strong enough to stand all weathers and to work an hour any time when already tired. I intend eventually trying an incubator as a means of mental discipline.

In the November *Advocate*, W. E. Harding's points are well taken, that, at his latitude, Amherst, Nova Scotia, 45° degrees, as I make it, late chickens rear easier, and trouble gardens less. The farmer who raises fowls for comfort, eats his surplus cockerels and perhaps all his eggs, and keeps his hens two or three years, might as well consult his own convenience instead of the market. I, myself, in consideration of my own northern latitude, almost 44 degrees, have moved my time of hatching chicks from the last of March to the last of April. But the hen-house has more spare nests for early than for later set hens, and partitions and separate sitting rooms are expensive. Chickens late about their first moult will, the next autumn of their lives, usually be correspondingly behind, and may thus get caught a second time unready for cold weather and winter laying. We often hear dining-car waiters call out, "Don't miss the last chance for breakfast," so, poulterers, don't miss the last chance of good prices. Though the people sometimes make mistakes, figures, as a rule, tell the truth. Last year my first lot of chickens, sold July 1st, at an average age of nine weeks and one day, averaged 2½ lbs., which, at 12½ cents per pound, equaled 28 cents. I might have sold all this, were it not difficult to wisely select breeding stock before there is some maturity and some plain prophecy of future style and condition. Just three weeks later I culled again, then average weight, 3½ lbs., at 8 cents per pound, equalled 28 cents. Though size increased, price lowered so much that my three weeks' feeding was lost. My final culling was at 21 weeks of age, when an average of 5½ lbs., at six cents, equaled 33 cents. I should not, as promising speculations, keep a hearty chicken twelve weeks to gain five cents, nor raise late chicks for low prices, because P. H. Jacobs, who is evidently about correct, rates the cost of chicken and hen flesh respectively at four and five cents per pound. However, one Minnesota woman, with large range, thought one cent per pound covered her outlay. Here I am encouraging the cold Minnesotans by telling them Canada took more prizes at the World's Fair, in proportion to her number of fowls there, than our United States did, and that at last census Maine had more domestic fowls than any other New England State. Now is the time for looking over our hens and carefully deciding which are not to be set, but to be early sold, thus bringing high prices themselves and making room for our prospective chicks. Cull early, fast and often throughout the season. A thorough acquaintance with our flocks, and gained as we have opportunity, will save future mistakes, like those an amateur made who brought a trio to our Fair, two of the three plainly being roosters. Though their shanks looked old, rough and scaly, she thought the birds were hatched in June, and said they had not laid much yet. To further my acquaintance, I have invested in and like a marker. Within a spiral spring is a bar coming down on a tiny platform, and has a little rotary movement, so it cuts besides punches. The small circles it takes out of webs between toes can be so variously placed and arranged as to indicate almost any age or particular desired. In marking, one can hold the fowl's foot, well spread out, on a table, shelf, barrel head, or something solid, while another person slips web into the marker, then presses down quickly and firmly, and, lo! the deed is done without a single grunt from the victim. Whenever, and for whatever cause, there is much squawking, it shows those hens are not tame enough, and their catcher has something yet to learn about handling fowls.

The subject of feet and legs reminds me that one great objection against the feathered-legged breeds has been their proneness to scaly legs. The owner of a Buff Cochon flock lately visited never allows an affected fowl to get into that flock, hence has no subsequent battles. Years ago she had some experience, and wrought cures by rubbing kerosene on with her finger, not dipping their legs in at all. This disease mostly affects those grown old, when shanks are less oily, which fact suggests sweet oil, or a soothing grease like it, as a natural remedy. Last fall, having a fine young Cochon given me, the mother hen of which actually died that very day from aggravated scaly, sore legs, I resolved, so

my poultry should run no risk of infection, to wet that young bird's extremities well with sweet oil, but found my supply of the latter gone. I saw some hen's oil we had tried out, concluded its use would be the very essence of the Homeopathic principle, "like cures like," and used it on her and others since with perfect success. Never set a scaly-legged nor ropy hen, neither one affected with bowel complaint, nor any skin disease, as all these are slightly contagious. Sitting in cold weather is not play, hence choose fat, hearty, but not unwieldy cluckers for this hard job. Be sure, by some cheap, movable doors, to screen their nests from intruding layers, else you may have the experience of "Bill Nye," who says he had a hen sitting on a door-knob while all the other biddies laid to her, so she turned out a chick a day for him to father, until he had 83 of them bringing up on the bottle, and the hen became a hopeless maniac. Poor hatches also come from in-bred fowls, from those lacking the natural conditions of exercise and green food during winter, from eggs too roughly handled, or put into a cold, poorly-shaped nest, instead of in one already warmed and packed.

VETERINARY.

The Ontario Veterinary Association.

The annual meeting of this Association was held in the Veterinary College, Toronto, on Friday, Dec. 21st, 1894, the President, Mr. W. Burns, V. S., in the chair. The Secretary's, Registrar's and Auditor's reports were received and adopted.

Considerable discussion ensued on the action of certain parties in issuing so-called Veterinary Dental Diplomas, which was very strongly condemned at the last meeting, tending as it does to bring legitimate veterinary science into disrepute. Reputable members of the profession consider this so-called Veterinary Dentistry a complete humbug. Mr. John Wende, V. S., of the New York State Veterinary Association, remarked that that Association also very strongly condemned the issuing of these Veterinary Dental Diplomas. Major Lloyd, Mr. Gibb, Mr. C. Elliott, Mr. O'Neil and others took part in the discussion, and it was ultimately resolved that the same committee that were appointed last year should be continued, and that their efforts should be directed to arrest this humbug.

Mr. W. J. Wilson, V. S., of London, read an excellent paper on the dangers of using the meat and milk of diseased animals as human food. He recommended the establishment of public abattoirs, and the inspection of meat by qualified men; also, that dairies should be placed under suitable inspection, and that the hygienic conditions of milch cows should be looked to, cleanliness and sufficient air space being essential.

In the discussion that followed, in which Major Lloyd, Messrs. Shaw, Cowan and others took part, it was remarked that the "tuberculin test" was a reliable diagnostic agent, but judgment must be used in applying it; that it is well to take the body temperature of other animals in the herd not injected, as variations in the temperature may be produced by accidental causes.

Mr. Cowan, Veterinary Inspector, said that it was well not to make unnecessary alarm in connection with tuberculosis; that the disease existed only to a slight extent in Canada amongst cattle—less than in most other countries—and that the disease was on the decrease here. He also said that the various boards of health have ample powers in dealing with the milk and meat supply, and in condemning tubercular cases.

Mr. A. Crowforth, V. S., of Lockport, N. Y., U. S., read a paper on "Tuberculosis in relation to animal industry and public health, its prevalence and importance." He said that it prevails so extensively throughout the civilized world that no disease is more deserving of close study, or of the enforcement of effective measures for its suppression. Cholera, yellow fever and small-pox, which occasionally appear, creating universal terror and dismay, claim but few victims in comparison with this malady. These other plagues are quick, severe and fatal, and therefore can be promptly recognized and even stamped out, whereas tuberculosis is slow and uncertain in its progress, and often escapes recognition for a long time. He mentioned its prevalence as the same disease in the domestic animals, produced by the same micro-organism (the bacillus tuberculosis), and the difficulty of obtaining reliable statistics. In the middle ages, tuberculosis in animals was recognized as contagious, and laws were made against the use of affected carcasses as human food, which remain in force in Spain and Italy to the present day. Candid scientific observers now accept the doctrine of its contagious character. He described the germ, its history and mode of propagation, and also the accessory causes which tend to produce the disease. But none of these causes can produce the disease in the absence of the bacillus.

Prof. Smith exhibited from the museum of the Veterinary College specimens of "gangrenous ergotism" of the legs of cattle—from cases he had investigated last spring.

The sum of \$25.00 was appropriated for a medal to be competed for by students of the Ontario Veterinary College at the approaching spring examinations.

The following are the officers for the ensuing year:—President, G. L. Robson; 1st Vice-President, H. Hopkins; 2nd Vice-President, D. Hamilton; Secretary, C. H. Sweetapple; Treasurer, W. Cowan; Auditors, Messrs. J. D. O'Neil and C. Elliott; Directors, Messrs. J. Wende, W. Burns, J. F. Quin, W. Gibb, W. J. Wilson, T. Holder, A. Crowforth and W. Steel.