

POULTRY.

Poultry on the Farm.

BY IDA E. TILSON, WEST SALEM, WIS.

The superintendent of Central Park Museum, New York city, has found, he says, that the carnivorous animals under his care actually thrive better if allowed to gorge and then to fast, or fed irregularly, as when they lived on the chance results of their own hunting. The laws of nature, or shall we say Providence, have never been successfully defied nor escaped. The hen, living largely on grasses and seeds, keeps picking away, eating little at a time but often. Accordingly, nature directs that during winter or in confinement, hens, with their quick digestive processes, should be fed early and late, regularly and often, their food well distributed through the day. This is a commentary on the irregularities of some poulterers who feed just as they happen to think about it. My own fowls have been lately left a day in others' charge. On my return the following conversation took place: "How many eggs were gathered?" I enquired. "Well," was answered, "we forgot all about them till after the hens were shut up; to-morrow morning you will find your eggs all right." "Did you feed my hens?" I continued. "I declare! I never thought of that till this minute." "This is such a windy night, surely you closed the draughts a little." "No, but those hens are well enough." "What did you do?" I asked, in desperation. "I gave them plenty of water," was triumphantly replied. My thankfulness for "small favors" was lessened next morning, when I found those dishes unemptied, soundly frozen over—needing a thawing, of course. Every change of hands is bad for fowls, largely because time is required to get impressed on their caretaker's memory all details of the poultry business, for it is really a business, as one lady said in surprise, when consulting me about her undertaking it and listening to my directions. So complicated did the business seem, that in a few moments she concluded she better abandon her project and go and live with her son. The talent that makes \$200 raising poultry could doubtless secure \$500 in many another business (?) A poulterer should, from long association with his fowls, know well each individual. He can thus detect every premonitory symptom of sickness, favor the timid, outwit the greedy, and, when he sells, tell his old hens from pullets. Although our fowls need their food somewhat distributed through the day, their heaviest meal will be latest, in order to fortify them for a long, cold night, and they will be scantier earlier to induce that exercise without which hens grow fat, diseased, and have tasteless flesh. These birds are very feminine—just excite their curiosity, provide something to search for or find out, and they will give themselves no rest till done. If possible, every season I have stored away under sheds or in the barn, a quantity of autumn leaves, and throw a bushel of them on top each grain feed. Leaves are warm and soft for the feet, and become well scratched over before every kernel is found. They absorb all bad odors, and droppings are more readily removed when resting on some rubbish than when sunken into the ground. A little straw or hay will answer instead of leaves. We are often directed to hang a cabbage or turnip where our hens can peck at it for exercise; such vegetables so soon wilt or freeze, I prefer to feed them chopped or cooked, in shape immediately available, and save, for my hens' longer entertainment, unthreshed grain, unshelled sunflowers, or even corn on its cob. Dry, loamy sand bottoms in my hen-houses convert them to mammoth dusting-boxes, where hens dig and dust in battalions, covering their droppings with a film of dirt that stops all taint. It is always preferable to exercise biddy rather than her attendant. If given liberty, hens find much of their own entertainment, nor in freedom do they often eat feathers and eggs, or study up any such mischief. Some sheds opening south, with paths made here and there, lead biddy out to study nature instead, where she speculates about the depth of snow and strength of sunshine rather than thickness of egg shells. There are probably not a dozen days a year but that hens would go out in the middle of the day, if they had their choice. I wonder whether those men who advocate shutting birds up all winter, treat themselves so. I question which has rosier cheeks, a merry, snow-balling, coasting country lad or a city child, "cribbled, cabined and confined." Speaking of inconsistencies and wonders, mention should be made of a poultry-house I once saw built, for convenience, on the north side of an ice-house! Some fanciers admit that to produce a symmetrical show-bird, muscular, with good frame, well developed in breast and wings, such a one must have considerable range, air and sunshine, and can hardly be raised in a brooder, needing from the very start that daily, varied and enlivening promenade conducted by mother hens. Those who read Longfellow will recognize the following parody taken from an English paper:

"Not enjoyment and not sorrow
Is our destined end or way,
But to scratch, that each to-morrow
Finds us fatter than to-day."

"Lives of old fowls all remind us
We can make our lives sublime,
And when roasted leave behind us
Bird tracks on the sands of time."

"Bird tracks that perhaps another
Chicken, drooping in the rain,
A forlorn and hen-pecked brother,
When he sees, shall crow again."

DAIRY.

Churning Sweet Cream at Low Temperatures.

One of the latest innovations in churning sweet cream is reported by H. M. Cottrell, of Ellerslie Stock Farm, in Hoard's Dairyman. He says: "We have been churning all summer at about 38 degrees, and often at 36 degrees, and have had no trouble in getting the butter to 'come'—usually in 60 minutes or less. Since our cows were taken off pasture, we have found it best to raise the temperature, and now churn at 42 degrees. It took 60 minutes to churn at this temperature to-day, and has not taken us longer than that any day this fall. Our method of handling the milk is as follows: As soon as half the cows are milked, a boy begins to carry the milk to the dairy. There it is immediately aerated by forcing cold air (taken through a pipe from out-doors) through it with a Hill aerator. The milk is then run through a separator while warm, and the cream immediately cooled to our churning temperature by Evans & Heuling cooler. At night, after cooling, the cream is put in a cold room at 40 degrees. As soon as the morning's cream is cooled, it is mixed with the night's cream, and both churned at once. Prof. Cooke, of Vermont, told me he had proved it practical to churn at low temperatures if the cream was fresh. He said that cream 24 hours old was not fresh; that, no matter how kept, it would ripen some in that time, and would require a higher temperature at churning."

Winter Dairying and Exhaustion of Soil.

FOR THE FARMER'S ADVOCATE, BY PROF. ROBERTSON, OTTAWA.

Our methods of farming in many districts of Canada have not been conducive to profit or improvement of the lands. We have been ambitious to sell primitive products in large quantities. It would pay us better to direct our attention to the production and sale of more concentrated articles of produce, in the form of animals and their products. The following will illustrate the comparative exhaustion of soil from the sale of one ton each of the different farm products which are mentioned:

	TON EACH.		
	Nitrogen.	Phosphoric Acid.	Potash.
	lb.	lb.	lb.
Wheat	41.6	15.8	10.4
Barley	32	15.4	9
Oats	38.4	12.4	8.8
Peas	70.6	17.2	19.6
Beans	81.6	22.8	26.2
Indian Corn	32	11.8	7.4
Hay	31	8.2	26.4
Clover	39.4	11.2	36.8
Potatoes	6.8	3.2	11.4
Fat cattle (alive) ..	50	31.2	2.8
Fat sheep (alive) ..	44	22.6	2.8
Fat swine (alive) ..	34.8	14.6	2
Cheese	30	23	5
Milk	10.2	3.4	3
Fine butter	.5		

By way of helping and inducing the farmers to turn their attention more and more to this line of agriculture, it was determined upon by the Dominion government last year to establish a number of experimental dairy stations. The object of these was to investigate methods of manufacturing cheese and butter, in order that the quality might be improved, the quantity increased, and the cost reduced. Every active experimental investigation has a two-fold power of service. It may find out something which was not before known, and it may illustrate and demonstrate the best way of carrying on the best known practice. The making of cheese during the summer has absorbed the attention of dairymen in many districts to the exclusion of all thought concerning the economical raising of stock for fattening, and the production of butter of a quality fit for export to foreign markets. With the growth of fodder corn and the use of silos, it has become possible for farmers in most districts to carry and feed many more cattle than they have helpers to milk, in the shape of milking cows. If they can be induced to combine the raising of cattle to fatten with their dairying operations, their profits may be largely increased. The raising of stock and the making of butter go well together in ordinary farm practice. The making of butter can be carried on with most profit during the fall and winter months, when prices are high and the weather offers the most suitable conditions. That season of the year in our climate also affords the best conditions for the raising of the best stock. Hence, the Experimental Dairy Stations are making an effort to induce the patrons of cheese factories to furnish milk for the manufacturing of butter during the winter in co-operative creameries. By that means the skim milk will be left or sent to the farms for the raising of such stock as calves and pigs. At Mount Elgin, Ont., and Woodstock, Ont., two of these Experimental Dairy Stations were operated during the past winter with very great satisfaction to the patrons in these neighborhoods. Every cheese-maker, who so wishes, was welcome to go to these Stations and learn all he could about the art of butter-making, in order to fit himself for carrying on this business in his own cheese factory when the alteration there also comes. A special bulletin or report, setting forth the results of the winter's operations, has been issued for the guidance of those dairymen who desire to adapt and alter their cheese factories for the carrying on of winter butter-making.

VETERINARY.

Veterinary College, Toronto, Canada.

RESULT OF THE DECEMBER EXAMINATIONS—LIST OF GRADUATES—NOTES FROM THE ANNUAL ANNOUNCEMENT.

The December examinations of this successful institution were concluded on the 23rd ult., when the following gentlemen passed a successful examination, and received the diploma of the Council of the Agriculture and Arts Association of Ontario:—Charles W. Baker, London, Ont.; Abraham L. Baum, Shelly, Penn., U. S.; Robert S. Beattie, Markham, Ont.; Eugene D. Block, Buffalo, N. Y., U. S.; Elvin L. Button, Durand, Mich., U. S.; William S. Cook, Stouffville, Ont.; James F. Cox, Muscatine, Iowa, U. S.; Henry T. Creagan, Decatur, Mich., U. S.; Thomas E. Early, Aylmer, Ont.; William H. Geddes, Indian Head, N. W. T.; David Glendenning, Belfontaine, Ont.; Charles Wesley Gosnel, Ridgeway, Ont.; William E. McCandless, Capac, Mich., U. S.; James H. McLean, Poplar Hill, Ont.; Clyde L. Sawyer, Kankakee, Ill., U. S.; John W. Smelser, Davenport, Ont.; John B. Stevens, Yale, Mich., U. S.; Thomas Stewart, Boness, Scotland; Charles E. Wright, Grenfell, Assa.

The primary examinations resulted as follows:—Anatomy—V. Lathrop, W. J. Morgan, F. L. Phelps. Materia Medica—W. R. Hunter, J. M. Klinck, W. J. Morgan.

In connection with the examinations the following remarks, clipped from the annual announcement, will be interesting:

The new college is a large and spacious building, possessing ample accommodation for the large class of students attending. Its lecture and class rooms are warmed, ventilated and lighted upon the most improved principles to ensure health and comfort. It contains two large lecture rooms, rooms for microscopic and other demonstrations, and every convenience for the thorough teaching of all departments necessary to the equipment of the veterinary surgeon, both as a scientific and practical man. The whole of the new building is so connected with the present college as to give very large and almost perfect accommodation. The establishment forms undoubtedly the finest college building for veterinary purposes in America, and good authorities give it as their opinion that few even of the great European colleges can furnish more admirable facilities to their students than are afforded by this college.

A number of the graduates of the college have during the past year obtained important appointments in colleges, and as veterinary inspectors in various parts of the United States.

The staff of the college and subjects taught are as follows:—

Prof. Andrew Smith, V. S., Edinburgh, F. R. C. V. S., and honorary associate R. C. V. S. (principal), diseases of domesticated animals.

J. Thorburn, M. D., Edinburgh, veterinary materia medica.

G. A. Peters, M. B., F. R. C. S., England, animal physiology.

Prof. Andrew Smith, V. S., and assistants, clinical instructors.

C. Gordon Richardson, F. G. S., chemistry.

J. T. Duncan, M. D., V. S., honorary associate R. C. V. S., anatomy.

J. Caven, M. D., L. R. C. P., London, pathology and normal histology.

C. H. Sweetapple, V. S., veterinary obstetrics and diseases of cattle.

S. Sisson, V. S., demonstrator of anatomy.

A Fine Exhibit.

A very interesting and attractive feature of the Guelph Fat Stock Show was the display of dairy goods and appliances made by John S. Pearce & Co., of London. Two prominent features of the display were the "Alexandra" Hand Separator and the Babcock Tester. These are coming into use very fast, and the day is not far distant when every dairyman of any note or dairy of any size will have both of these machines. Every dairyman who desires to own a good herd of milkers should have the Babcock Tester, and know how to use it. Another feature of this exhibit was an attractive collection of butter workers, butter moulds, butter shipping boxes, and that most important accessory to the putting up and shipping of fine butter, viz., parchment paper. Those who have not seen this article should write to the above firm for a price list and samples.

Wm. Leinie, Toronto, Ont., made a fine display of roots and vegetables and grain grown from seed supplied by him. The exhibit was an excellent one and should prove a valuable advertisement.

So varied are the requirements of a horse-trainer that a volume could be written on the subject, but of all his virtues none is more conspicuous by its absence than is a want of patience.

See that the stables are well ventilated, but keep them warm. Animals grow in summer because of the saving effects of the warmth. Ill-cared-for animals do not grow in winter, because the system is carrying on a contest with the cold, both day and night.

It is not the work that drives the boys off the farm; it is the social isolation and the humdrum routine of their daily duties, unrelieved by the relaxation of the wholesome amusements that every young nature craves. Let the boys make a business of farming; give them abundant opportunities for enjoying themselves by going to lectures, concerts, dramatic entertainments and home sociables, and they won't hunger and thirst to an alarming extent for the excitement and pleasures of city life.