

POULTRY.

Gapes.

Gapes is one of the most common disorders and about the first annoying and troublesome, as well as amazingly fatal, disease to visit the poultry yards, irrespective of the breed, of the amateur or beginner in breeding.

This disease is caused by red worms, about the size of a cambric needle, shaped somewhat like the letter "Y," which originates from the chicken louse and the chicken worm, after which it multiplies very rapidly.

This Y-shaped worm adheres to the lining of the trachea or windpipe with its small arm or tendril, which gives it the Y shape. Its head under microscopic view is all mouth, wherewith it sucks blood from the windpipe in sufficient quantity to conceal itself, where it lays eggs in great numbers, which can be found under its body, in this small mass of blood wherein this worm lies secluded.

As these small worms which are incubated under the body of the worm enlarge, it forms an obstruction to breathing, therefore a constant gaping.

Where, when or what the gape worm comes from is quite a speculative subject with the poultry fraternity, one on which even the professional fancier of the present cannot throw much light. Read the statements of the vast number of fanciers as to what the origin and cause

of gape is, and learn that they are of an enormous difference in opinion. Some say its causes are numerous—dirty drinking water, lack of nourishing food, exposure to wet, damp roosting places—while others claim the cause to be chicks eating angle or earth worms, which have nits about their bodies that produce the gape-worm, or a small insect or jigger found in dry, mouldy wood or under leaves, that when picked up and eaten by the chick produces the gape, while the farmers in general claim the microbe of the parasite to be already deposited in the embryo of the egg wherefrom the chick is hatched.

Not one of all the stated causes produces the gape-worm, neither can all consolidated produce it.

Let us reason together and see whether this will not be our conclusion.

It is caused by the lice and by the lice only.

The first symptom of gapes is sneezing, which is caused by the tickling sensation produced by the feet of the little vermin as it crawls over the sensitive mucous membrane of the chick's nostril, and as this sensation arouses the mucous glands to so great an activity, it secretes an overplus of mucus, wherein these microscopic parasites, with their nits, are buried, and by the process of respiration conveyed in their transmutation chamber to the trachea and deposited along its walls, where the transformation and development takes place.

Is there not a small worm or parasite on the ground which the chicks pick up and eat that produces the gape?

Certainly they do, but it's not the angleworm or the small jigger found under leaves or mouldy wood that produces it, neither the damp roosting place, nor the exposure to wet, but the lice.

Are the lice of which the chicks get the gapes on the ground? No, but on the chicks. How do the chicks get the gape of the lice that are on the old hens?

The chickens that are lousy are all the time annoyed and troubled by these little blood suckers, of which they try to rid themselves. Watch such a chicken and notice how she tries to dispose of her trouble by digging in the feathers, and on clasping one between her mandible, as you have often seen, she does not drop it, but instead deposits it in her craw, and if the digestion is impaired these myriads of nits as they pass through the various compartments of the elementary canal are transformed into small worms, which are deposited on the ground in the droppings.

Examine the droppings of your chickens with a magnifying glass and discover the innumerable number of minute worms lying exposed on the ground, with their nits about them, for the chick to prey upon, and so convey the very microbe of fatality to its prosperity parlor.

The transformation of the nit of a louse into the destructive gape-worm is after the similitude of the egg of a species of fly depositing same on the hair of the horse, which when eaten will transform into the pernicious bot.—[H. J. Opplinger, in American Poultry Advocate.

THE FARM BULLETIN.

It is easy to form a good habit. Ed. H. Morgan, of Stanbridge, has been reading "The Farmer's Advocate" for 36 years.

Mr. Rittenhouse and the Niagara District Experimental Fruit Farm.

On Monday, May 28th, Prof. C. C. James, Deputy Minister of Agriculture for Ontario, with President G. C. Creelman and Prof. G. E. Day, visited the 47-acre farm near Jordan, Ont., recently given to the Ontario Government by Mr. M. F. Rittenhouse, of Chicago, formerly of the neighborhood where the farm is situated, to be used as an experimental fruit farm. As guests of Mr. Rittenhouse, the party inspected the farm and neighborhood, and expressed themselves as pleased with the property, which is on the west side of Jordan Pond, and very suitable for the purpose for which it has been donated. A united effort will be made by the donor, as well as by the Department and by fruit-growers living between Beamsville and the Pond, to have the Grand Trunk erect a new station where the railroad crosses the Town Line, a point within half a mile of the farm. A grant of two thousand dollars was included in the Provincial estimates this year to make the land ready for extensive planting next summer, and the long-felt need for systematic, comprehensive and up-to-date experimenting in horticultural problems peculiar to the Niagara District will soon be supplied. A member of "The Farmer's Advocate" staff, delayed by an accident on the Hamilton, Grimsby & Beamsville Electric Road, had the good fortune to be picked up by Mr. Rittenhouse, who had chartered a private car for his party from Beamsville to Hamilton. He learned from President Creelman that it is the intention to give the four-year students at Guelph who take the Horticultural option as full benefit as possible of the work carried on at the Jordan station. They will, in all probability, be employed there as work hands during the summers following their second and third years at the College. Provision will also be made to bring the men taking the two-year course into touch with the station, and in various ways the results obtained will be utilized to advantage. It is proposed to put a first-class man in charge, and the establishment of this station will redound to the advantage, not only of the Niagara District, but the Province at large. It will for all practical purposes, be part of the Guelph institution.

Experiments in fruit-growing conducted at Guelph cannot meet the needs of the regular fruit sections of Ontario. Varieties, climate and soils are widely different. The fruit industry of the Niagara Peninsula, although grown to large proportions, is yet in its infancy. Great strides must be made in commercial culture and in marketing. So far the industry has lacked leadership and light where these were needed most. Ontario agriculture would be a long way behind its present stage of progress had it not had the assistance of an up-to-date educational and investigative station like Guelph; and on the same principle it is understandable that the small-fruit business, lacking such accurate information and leadership as a public station can afford, has realized but a fraction of its possibilities. The new station deserves generous backing from the Provincial treasury, in order that exhaustive work may be done, and results broadcasted as speedily as is consistent with reliability.

Following the recent biographical sketch of Mr. Rittenhouse in "The Farmer's Advocate" and the account of his munificent contribution to his old neighborhood, in the form of the fine school and library illustrated in the Home Magazine Department of May 3rd, our readers may be interested in a few further notes about the author of so many public spirited gifts. Unassuming in appearance, jovial in a quiet way, cor-

dial and simple of manner and speech, he is never so happy as when playing the host. He enjoys making money, and also spending it. He has done much for his old neighborhood, and will do more. He was immediately interested in "The Farmer's Advocate," because, as he said, we have "a mutual desire to improve the rural schools." Mr. Rittenhouse's aim is to do something which will be a tangible benefit to his old home, and likewise provide an object lesson for others. He is now planning to construct a piece of model road on the Town Line mentioned above. He has already provided for the erection of a thousand-dollar bridge. This summer and next year he will have the roadside all graded, levelled and seeded. The driveway will then be put in shape and metalled according to the advice of the Provincial Good Roads Commissioner. He has already been instrumental in having some encroaching fences moved back, in one case paying the man for the land, as well as for the work of moving the fence. Mr. Rittenhouse, although resident in Chicago, spends a great part of his time in Canada, making frequent trips over. He says the happiest days of his life are those spent at the old home, especially when he is engaged in doing something to improve conditions. His eldest son is a farmer, and doing well. After graduating from the Chicago High School and Business College, he surprised his father by desiring to go and work on a farm, rather than enter the office. He stayed two years doing ordinary farm work, and, after a brief period in the city, went back to it again in another locality. Concluding that a boy who stuck to it like that must mean business, the father bought him a piece of land, erected buildings, and deeded that portion of it to the son. He has stuck to the farm, worked it on modern principles, and made it pay. He must be a good sort. It is the men of ability who choose the farm and work it with faithful energy and intelligent enterprise who are going to revolutionize the agriculture of the twentieth century. All honor to them.

Government Grant to Spring Horse Shows.

At the recent session of the Legislature, special votes were made in the interest of horse-breeding. The Minister has decided that \$1,000 of the money voted shall be set aside to assist spring stallion shows.

Any society desiring to participate in this grant must apply not later than the 15th of June next. Each application should contain information regarding the show held previous to 1906, as well as the show of 1906. A statement must be made that the prize-list has amounted to at least one hundred dollars (\$100.00), and that prizes given for stallions have been for pure-bred stallions only, recorded in a reliable record. The application must be signed by the President and Secretary of the organization under which the stallion show is held.

Detailed rules governing the disposition of the grant will be sent upon application. The grants will be divided immediately after June 15th.

Eastern Dairy School.

The following is a list of the successful candidates for diplomas from the Eastern Dairy School for 1907: Z. K. Anderson, Brandon, Man.; J. R. Ballard, McArthur's Mills; H. E. Brintnell, Belleville; Geo. Coxhill, Arnprior; Thos. J. Ellis, Chesterville; J. J. Hogan, Jernyn; Geo. Hudgin, South Bay; A. E. Murphy, Stanley Bridge, P.E.I.; W. J. Quinn, Martin-town; J. W. Smith, Campbellcroft.

Some few applications have been held over for another year, either on account of the conditions laid down in the regulations of the school not being fully carried out, or the applicants not satisfying the school entirely with regard to their ability to manage their factories satisfactorily. We make a point of being very particular with regard to the issuing of diplomas.

J. W. MITCHELL, Supt.

South Perth, Ont.

Prospects for a good season for the farmer are bright at this date. It is the growing time, and the abundant warmth and moisture are making the land to "blossom like a rose." I think there is no crop but what is doing well, i.e., allowing for the few exceptions which are said to always prove the rule. Of course some stock were turned out rather thin, but that is a common occurrence every spring, and is rather an indication of poor management than a general scarcity of feed. Cheese factories and creameries are again in full operation, the former taking the lead in favor. As usual a comparatively limited acreage (mostly virgin sod) has been leased for flax-growing at the usual price, the ostensible object of which is the manufacture of binder twine by the newly-discovered process, and for which it is understood a strong company has leased the buildings and site of the only flax mill now in St. Mary's. It is understood by the public generally that the manufacture of this twine will be commenced on a small scale this season, and that a bonus for a permanent site for a factory will not be asked till the promoters demonstrate that the plan is feasible. If the profits on the manufacture will result in higher rentals for grass land it should prove a boon to our farmers, as there is a lot of land under grass which might be profitably broken up if the owner could save the expense of harvesting, storing, threshing, etc.

The St. Mary's creamery, which is said to be the largest in Canada, is scarcely getting its share of the milk production of our rich pastures. The competition of cheese is too strong in summer, and winter dairying has not as yet been generally adopted here. Many of the cheese factories, too, have put in butter plants, and as they are co-operative concerns, in which the patrons are financially interested, they are able to hold the patronage. A large part of the stock of the big creamery is held by citizens of the town, and the natural jealousy existing between town and country has fostered a spirit of dissatisfaction, of which the ignorance and uncertainty of patrons regarding the system of paying by the Babcock test furnishes a good second. The manufacture of hand separators, and the consequent better results from feeding the separated milk warm and sweet, also greatly militated against the success of a creamery founded on the power-separator system, until gradually the separator stations have been closed up and cream gathering from the farms adopted, so that of fourteen or fifteen separators originally installed, but one sole survivor now remains as the relic of an antiquated system of buttermaking. The moral to those thinking of starting a creamery, then, would be, first, be sure you have the best system; and, second, let it be a farmers' company. The present output of the creamery is about twelve hundred pounds of butter daily, made into pound prints for local consumption.

J. H. BURNS.

Spearmint Won the Derby.

The annual race for the English Derby Stakes of \$34,125, for entire colts and fillies foaled in 1903, distance about one mile and a half, was run at Epsom, May 30th, and was won by a length by the bay colt Spearmint, owned by Sir Tatton Sykes, Mr. Dugdale's Pecten being second, and the Duke of Westminster's Troutbeck, third. Twenty-two horses started in the race. Lally, the favorite, finished in fifteenth place. The attendance was a record one. King Edward and a party of friends went down by special train to see the race. Spearmint was ridden by Dan Maher, and this was his third Derby win, his previous wins being on Rock Sand and Cicero. Spearmint's sire is Carbine, and his dam Maid of the Mist. Pecten is by Orvieto, dam Hecla. Troutbeck is by Ladas, dam Rydal Mount. A later despatch states that Spearmint is not owned by Sir Tatton Sykes, but by Major Eastice Feder.

Harsh treatment of the cow lessens the quantity of milk.