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BLACK MINORCA COCKEREL,

1st Ontario Show, Score 96½.

THE CANADIAN POULTRY REVIEW

DEVOTED TO
POULTRY, IN ALL ITS BRANCHES

PUBLISHED BY H. B. DONOVAN.

VOL. XVII.

118 VICTORIA STREET, TORONTO, MAY, 1894.

No. 5.

NOTES AND COMMENTS

INCUBATORS ON TRIAL.

FROM a change in their advertisement we note that the Flower City Incubator Company are now prepared to send their machines out on trial without any money down. This novel arrangement is certainly all in favor of the buyer.

WE MUST THANK THOSE

who so kindly sent us lists of names of those interested in poultry and to all of whom sample copies of REVIEW have been sent. We should be glad to receive further lists from any who have overlooked sending.

MR. WILLIAM ELLIOTT, OSHAWA,

an old REVIEW reader, writes us as follows: "This is my first year of advertising and I certainly am extremely well satisfied. It pays to advertise. The eggs have gone in all directions, where other years I never sold one, and have been breeding fancy poultry for fifteen years. Exhibiting and advertising has paid me well this year."

We make a point to give full names and addresses where we use letters such as the foregoing. They are not from parties a thousand miles off, but often near at hand and known personally to many of our subscribers.

MR. RICHARD MACKAY,

of Hamilton, well known to exhibitors of ten years or so ago as a breeder of light Brahmas, has returned to his early love and is "into it" again.

A NEW ASSOCIATION IN VANCOUVER.

A large number of those interested in poultry and pet stock recently met at Vancouver. After speaking at length as to the importance of the poultry industry, Mr. W. Towler moved the following resolution: "That it is advisable in

the opinion of those present to form a poultry and pet stock association for Vancouver, and that this meeting pledges its assistance and maintenance of such a society." Mr. Harry Lee seconded the motion. The following officers were elected: President, F. Cope; Vice-Presidents, F. C. Cotton, J. C. McLagan, S. W. Lobb, Vancouver, T. R. Pearson, New Westminster, Mayor Anderson, W. Towler, A. M. Beattie and J. Tremble, Vancouver; Secretary, George Bartley; Executive Committee, Messrs. W. Lindsay, W. Bailey, C. N. Davidson, M. Costello, H. Lee, I. Wigglesworth, John A. Gow, W. Spragge, G. W. Phipps, Thos. Lillie, Sam Macey, A. W. Ogilvie, Jonathan Miller and R. Fowler. The committee were given power to add to their number. Mr. Charles Riley was elected Superintendent. The name of the Society was then decided on as the Vancouver Poultry and Pet Stock Association.

EGGS REDUCED FOR BALANCE OF SEASON.

It seems to be coming into fashion now after first of May to reduce the price of eggs for setting. We notice Mr. Aug. D. Arnold has dropped his to half price, though we think it is the usual custom with him.

MESSRS. HAYCOCK & KENT

also announce a discount of ten per cent. on orders after May 1st, and as there is still plenty of time for hatching, no doubt this will be taken advantage of. This firm reports an unprecedented demand for eggs this season, in some instances having so many orders that money has had to be returned to the senders.

MR. GEORGE NICOL,

of the firm of Oldrieve & Nicol, has our sympathy in the recent sudden death of his father, for many years a respected resident of Kingston and Frontenac County.

REVIEWS WANTED.

Can any reader supply us with the REVIEW for November and December, 1891? We want these numbers to complete a file and anyone who can spare them will be conferring a favor.

WE REGRET TO LEARN

that Mr. S. M. Clemo, of Galt, has had his place of business entirely consumed by fire, and to make matters worse there was no insurance thereon.

"TRY, TRY, TRY AGAIN."

says the old saying, and there is nothing like it. We are reminded of the truth of this saying by a little incident of which we heard the other day. An enquiry was made for stock by a breeder in Western Ontario to Messrs. Coulter Bros., Toronto, which was duly replied to. Not hearing from the intending purchaser they wrote him again, when they found out that their first letter had not been received, but their second resulted in a satisfactory sale. It is well to recollect that in most cases all an advertisement can do is to bring you enquiries. Subsequent sales depend on your own push and ability to effect them, coupled of course with the quality and price of the stock you offer.

AN EXCHANGE SAYS THAT

"cats are being extensively used in New Zealand for the destruction of rabbits. The owners of one estate are so pleased with the efficacy of the new "cure" that they have just given an order for 500 cats." We guarantee that if they come round to our back yard during chicken time they can procure an exhaustless supply. No charge for this advice.

MR. WILLIAM HARTLEY, OF SEAFORTH,

shipped by Dominion Express Company a trio each of black Minorcas and white Leghorns to Deloraine, Man., on March 13th, and they arrived in good condition on St. Patrick's Day.

MIDLAND CENTRAL FAIR.

We are informed that the Midland Central Fair, Kingston, to be held from 17th to 22nd September, have just issued their prize list, and that they have a very fine list for poultry; nearly all standard varieties are taken in, and prizes are \$1.50 first and \$1 second on single birds.

INDUSTRIAL EXHIBITION, TORONTO.

At a recent meeting of the Board the work of the poultry committee as reported in April REVIEW was endorsed, so that the list will now stand without any reduction.

THE POULTRY DEPARTMENT

at the Ontario Agricultural College at Guelph will soon be an accomplished fact, as buildings are about to be erected

for poultry. One will be 136 x 15 feet, the other 116 x 15, one story high. The office will be in the centre of the larger building, and will be two stories high.

MR. T. VIRTUE, MONTREAL,

writes as follows: "In the March number of the REVIEW you credit Mr. Daniels of Toronto with being winner of first prize for white Plymouth Rock hen, scoring 92½ points, at Montreal, whereas that prize was awarded to me." We have pleasure in making this correction.

MR. E. DONNELLY

writes us that he has shipped quite a number of light Brahmas and Plymouth Rocks to Winnipeg through the REVIEW since the Ontario show, also a number of settings of eggs to Nanaimo, B.C. Ontario breeders are but now beginning to reach the breeders of our great western country.

THE *British Fancier* SAYS:

"Dr. Lea, a well known transatlantic fancier, is so well pleased with the birds sent out to him from Miss Croad's yard that he has ordered another consignment." We shall be pleased to hear from the Doctor of their safe arrival.

MR. J. W. HOLMES,

of Brown's Corners, a well known breeder of Leghorns, and who has been ill for some months, we are sorry to say, succumbed on the 25th April. Several fanciers from Toronto and vicinity paid their last tribute of respect to his memory at the interment on the following Saturday.

MR. A. G. GILBERT'S REPORT.

We have to thank Mr. Gilbert for a copy of his report of the Experimental Farm Poultry Department, which in the letter-press part certainly excels in interest any yet issued from his ready pen. But the illustrations!!! What are they? Certainly the very worst we have ever seen. The veriest tyro would enjoy a laugh at their expense. If published as caricatures of the breeds they are supposed to represent they have well done their part. Mr. Gilbert, we feel assured, is in no way responsible for these portraits (?). Andalusians are represented by an engraving, rough and uncouth in the extreme, of a pair of nondescript white culls; Light Brahmas of the type of fifty years ago, and bad at that; Langshans as illustrated are an unknown variety. We have pleasure in using copious extracts from the report.

WHILE ON REPORTS

we may say that from a glimpse which we have had of that of the Poultry Association of Ontario, we think it will exceed anything of a similar nature yet put out. It will be illustrated with some fifteen or twenty full page cuts of modern design, many of which our readers have already seen in REVIEW.

ANOTHER SUFFERER FROM FIRE

is the well known and popular Judge, Mr. L. G. Jarvis, whose premises, together with contents, were lately entirely consumed. A total loss even to the wearing apparel of Mr. Jarvis and his family was the result.

POULTRY

CHICKENS' ROOSTING HOUSE.

BY W. HAY, CORRIE, ARRAN, SCOTLAND.

ROOSTING.—Chickens are better to be bedded down until they are two months old, when they should be allowed to roost in a small well-ventilated house apart from the other fowls, preparatory to being introduced to the ordinary fowl house.

ARTIFICIAL HEAT.—Some writers on poultry recommend the use of artificial heat in the roosting house in severe weather, but we have often noticed that fowls so treated contract disease more readily than others to which no heat is given.

LIGHT.—A little movable window is a great convenience in the chicken house. In warm weather it should be kept open during the night to improve the ventilation. It should be placed high above the roosting perches, that the birds may not be subjected to a draught.

PERCHES.—The perches should be placed eighteen inches apart at an elevation of no more than two feet from the ground, as the delicate breast-bones of chickens are frequently injured on alighting from high roosting places. This height should not be exceeded in the ordinary roosting houses, and the heavy breeds, even in the moulting season, will be able to reach them. The precaution of adopting low perches may seem unnecessary when we remember that fowls often roost on high trees, from which they descend to the ground without injury; but it will be noticed that they always fly down with a gradual swoop, which in a confined fowl house they are unable to do. As round rough perches

seem to be preferred by chickens as well as adult fowls, the bark should be kept on.

FLOOR.—The ordinary flooring materials are to be condemned for a roosting house, being too hard, and causing injury, as we have said, to the breast-bones and feet of the fowls. A floor composed of loose earth, dry ashes and mortar mixed in equal proportions, is more suitable than anything we have seen tried. The ground should be levelled and the materials beaten together to a uniform depth of from four to six inches. A little water may require to be added when the work is being done to render the mass compact. This forms an excellent floor, sufficiently flexible for the feet of the fowls, and will last for years. Dry earth should be used in preference to straw, hay, or other litter, as the manure adheres readily to this, and can be easily removed. The health of the chickens will be impaired if dirt be allowed to accumulate on the floor from week to week. Cleanliness in the roosting-house is an important matter, meriting more attention than it generally receives, and the neglect of which often produces fatal results.

CLEANING ROOSTING-HOUSE.—The manure should be removed at least once a week, and this will be a very easy matter, and add to the comfort of the fowls, if the duty be regularly performed. A little dry sifted earth should always be in readiness for this purpose, and for use in the chicken coops. As the chickens at this age will be able to take a larger supply of food at a time, three or four meals daily will be sufficient for them; but the morning meal should always be of soft food and served warm. After their long nights' fast this kind of food is necessary, as the chickens derive always immediate benefit from it. The last should consist entirely of grain, which will provide warmth and sustenance for a longer time than soft food.

COCKERELS.—At the age of three months the cockerels should be separated from the pullets. The most promising of them only should be preserved for stock purposes and the remainder fattened for table use.

FRESH BLOOD.—As in-breeding causes degeneracy in fowls, a few unrelated cockerels should occasionally be introduced to infuse fresh blood into the stock. Precocious pullets that are intended to be used for stock purposes should not be encouraged to lay before they are fully grown. To retard egg production, the pullets should be moved about from place to place and excluded from the society of the male fowls.

SHED FOR CHICKENS.—A prominent feature in every poultry yard should be an open shed, where the chickens can find shelter in severe weather. Perches should be erected at a suitable distance from the ground, and these

will be taken advantage of by the chickens to adjust their plumage after their meals, and when protection from the sun or storm is required.

DUST-BATH.—Under the shed the dust-bath should be made, that it may be kept dry and be of service in all seasons.

SUPERFLUOUS MALES.

BY H. S. BABCOCK, PROVIDENCE, R. I.

IV.

THERE is one suggestion that needs to be made before leaving this interesting subject. Granting that nutrition is the solution of the problem of controlling the sex, and that by proper feeding the nutriment in the eggs can be increased or decreased, there yet remains the consideration of the ability of the embryo to appropriate and assimilate this nutriment. May it not be possible that one embryo will assimilate more nutriment or the same amount of nutriment more perfectly than another embryo, so that from eggs containing exactly the same amount of nutriment, males or females will be hatched according to the assimilative powers of the embryos, those having the most perfect capacity for assimilation developing into females, those with less capacity into males? If this can be answered in the affirmative it may throw some light upon the controlling of sex, and may give us a method of some value to be used in connection with the proportioning of the food. This method will be to produce assimilative capacity in the embryo as well as to provide the proper amount of nutriment, in a large degree and amount if pullets are needed, in a smaller degree and amount if cockerels are desired.

The eggs from hens are larger than those from pullets, but whether the proportion of white, out of which the chicken is formed, and the yolk, which is stored nutriment for his growth, vary, it would require a delicate analysis to determine. This at least is certain, hens give a greater quantity of yolk, and from hens one naturally should expect, other things equal, to hatch a greater number of pullets than from females yet immature. And so far as my experience goes, with numerous exceptions to the rule, there is a tendency for hens to produce more females than for pullets to do so. And this tendency is considerably increased when a two or three year old cock is used to mate with the hens. Being fully mature is it unreasonable to

suppose that the union of his sperms with the mature ova of the hens should produce a stronger embryo than would a young male bird, not yet fully matured and especially if he is mated to pullets, and an embryo which has greater assimilative capacity? And if the supposition is not unreasonable and nutrition really is a very important factor in determining sex, then if we wish pullets rather than cockerels, is it not wise to have our matings to consist of fully matured hens, and females are not fully matured until they are about two years old, and cocks two or three years of age?

I am aware of the fact that sometimes two and three year old cocks are less reliable breeders than yearlings, yet where they are so it is usually the fault of the breeder, for by over feeding over or showing he has reduced the fertility of the cock. If the cock had been kept well nourished and yet not loaded down with fat, if he had been exhibited but a little or not at all, and if he had not been used for breeding in his first year but kept by himself, or if used he had been taken out of the yard and kept separate and apart from females till his services were again needed, he doubtless would have been more valuable as a stock bird in his second than in his first year. I have had four year old Indian Game cocks prove as reliable breeders as any yearlings, but they were properly treated to insure the preservation of their vitality and activity. And in Game Bantams I have known a six year old cock to be a perfectly reliable breeder, fertilizing nearly every egg laid by the hens with which he was yarded.

And if we would use mature stock and could so feed it as to cause the hens to lay eggs with large yolks, packed with nutriment, so to speak, we might be reasonably successful in controlling sex and be able to secure a high percentage of pullets, while on the other hand we should look to younger stock, fed somewhat differently, to secure for us the high percentage of males desired.

So far as the application of this method to fowls is concerned it is largely theory and it now needs practical demonstration. What we wish to know with some degree of positiveness, can be found in the following questions.

- 1st. Can sex of chickens be regulated?
- 2nd. Can it be regulated by feeding?
- 3rd. What must we feed to secure a preponderance of pullets?
- 4th. What must we feed to secure a preponderance of cockerels?
- 5th. What mating, in respect to age will give us the largest percentage of pullets?
- 6th. What mating, in respect to age, will give us the

largest percentage of cockerels?

7th. What are the other factors, if any there are, which must be taken into account in controlling sex in fowls?

PRACTICAL POINTS.

BY BLACK WYANDOT.

RED oxide of iron added to crude petroleum in the proportion of a pound of the oxide to a gallon of oil, makes a cheap red paint, quite suitable for painting poultry houses and other out buildings. It pays to keep neat looking poultry houses and yards, not only in satisfaction to the owner but also in the good impression it gives the visiting buyer of fowls. This is the season when the fancier's mind turns to "cleaning up." It is a good time to give the inside of the poultry house a general cleaning and a liberal disinfecting and also to look after outside appearances.

Some of the remedies for egg-eating are cruel, and in fact it would be better to kill the offending hen in the start, rather than to apply the so-called cures. One party advises burning off the point of the beak with a red hot iron. We doubt not this will cure the hen of the eating habit effectually.

It is a mistake to keep a lot of useless males and old hens on hand. They "eat their heads off" several times a year and cut down the average profits on the flock. Get rid of them.

The "non-sitting" hens will want to set sometimes in spite of assertions to the contrary. I have found rose-comb brown Leghorn hens often make good sitters and mothers. No doubt however, this breed has a little foreign blood in its make-up. Hamburgs often become broody. Single-comb Leghorns and even black Spanish occasionally get the same notion, especially if a number of eggs be left in the nest for some time.

The Leghorn has the advantage of all other non-sitters in the fact that it has a nice yellow leg and an attractive skin. They are undoubtedly the hardiest and easiest raised of the non-sitters. One wing must be kept clipped to confine them in any ordinary yard, as they fly like pigeons if they become nervous. The experienced breeder of Leghorns understands the value of keeping his flock tame and avoids startling them. Make pets of your breeding fowls no matter what breed you keep.

SOME TORONTO BREEDERS.

NOTES OF A BROTHER FANCIER'S VISITS.

HAVING lately utilized some leisure time in visiting a number of the poultry fanciers in, and in the vicinity of, Toronto, it has occurred to me that perhaps an account of what I saw might be of interest to your readers. Therefore, Mr. Editor, if you are of this opinion you may publish the following:

The first place visited was an establishment, unique of its kind in Canada, viz., the duck farm of C. H. Grantham, Esq. This farm is situated just outside the city in East Toronto, and comprises about twenty-five acres of land. I am indebted to Mr. Barton, the foreman, for his kindness in showing me over the place and also for his very lucid explanations of its workings. At the time of my visit (March) they had on hand about 300 females and 50 males of Pekin ducks. At least this is the number supposed to be there, but were I to judge by the noise, I should say there were a million. These are all kept under one roof, but are divided into flocks of (I think) 25 each. Mr. Barton informed me that they were at that time getting on an average of 200 eggs per day, and that the ducks had been laying since the early part of January. He showed me about 50 ducklings just hatched. The house for the ducklings is heated with hot water, and having glass front, should, I judge, be very comfortable. In the incubator house I was shown six or eight incubators of 600 egg capacity each. These were all filled with eggs, some of which were just due to hatch. Mr. Grantham told me that he expects to raise about 5,000 ducklings this summer. He also stated that he sells no eggs nor fancy stock. They all go to market, and that in Canada.

The next on the list was that most obliging of fanciers, Mr. C. J. Daniels, who, I regret to say, was from home. However, his son very kindly let me see the stock. Of course everything was in tip top order. The varieties he breeds are too well known to require to be named, yet, I might mention a pen of white Javas which struck me as being extra fine, also a handsome pair of Silkies.

After this I took in the yard of the veteran B. Rock breeder, Mr. Downs. It is needless to say that I saw an extra fine breeding pen of Rocks, and as for chicks, well, I believe Mr. Downs can always lead the van in early chicks.

Then came the chicken man of chicken men, Mr. Thomas Duff. Surely I need not here particularize, for it is a well known fact that all his "geese are swans." But really those B. Rocks are beauties.

Next came Mr. Jos. Bennett's, where I was shown some

extra early chicks, which Joe thinks are bound to beat the world's best next fall. I also had the pleasure of seeing some very choice B. Rock hens.

From here I took the Bathurst street car to West Toronto Junction, where I called upon Mr. Johnston and saw another fine pen of Rocks.

Then, having grown somewhat tired of fine Rocks, I decided to peep at Mr. John Gray's extensive domain in Todmorden, where I saw very fine breeding pens of golden and white Wyandottes, buff Cochins and S. G. Dorkings. By the bye, some of the old Dorking breeders had better look to their laurels. Mr. Gray has the largest flock of early chicks I have seen.

Next came Messrs. Wood Bros, whose specialty seems to be white Wyandottes.

The last visit was made to Messrs. Coulter Bros, where I was shown very healthy pens of Spanish, Minorcas, light Brahmas and S. L. Wyandottes. Judging from the excellent manner in which these young men keep their flocks and houses, I am of the opinion that some day they will prove dangerous rivals to the Canadian poultry king, Mr. William McNeil.

In conclusion, Mr. Editor, I regret I have not had the pleasure of visiting Mr. Bonnick, Mr Barber and yourself. However, these are pleasures yet in store for me

Parkdale, April 17, '1894.

J. I. CORCORAN.

JUSTICE IN JUDGING.

Editor Review :

YOU say in a friendly way in your criticism of my letter in last REVIEW, under above heading, that you differ with me firstly, in that the interest in shows is greater than ever it has been in the past. I never intended to convey the impression that it was less, but wish to encourage it, by giving every exhibitor a chance of getting justice if he considers he has not received such at the hands of the judge. Secondly, you seem to take me as referring to only one breed. In my former letter I intended it to apply to all breeds, as there have been mistakes in judging all breeds. Next, you say that every bird has a distinguishing property, and may excel in one point and fail in another, etc.; correct, but we do not want the judge's idea. We have had too much of that in the past. What we want is a correct interpretation of the Standard and nothing thrown in. Lastly, neither do we believe that judging will ever be done entirely satisfactorily to all. But, let the exhibitor have the satisfaction

of knowing that he can place his protest where he will have a chance of having it fairly dealt with. A committee of five is hardly as liable to ride some hobby for a year at a time, as our judges sometimes do. One year it is comb, again tail; next, if a bird has good coverts, or a proper sweep in the back, he is the winner. Let us have the Standard while we accept it as our guide, and until something better turns up

Thanking you for giving space to this and former letter, I am ever, respectfully yours,

J H PATON.

167 Ossington ave., Toronto.

Editor Review :

NOTICED in last month's REVIEW a letter from Mr. J. H. Paton, under the heading "Justice in Judging." As I feel deeply interested in the same subject, with your permission I would like to express my opinion also. There should be a system of judging in force that every fancier, no matter who he is, though he may be a greenhorn at the business, would know that his birds would have justice meted out to them. It certainly would be a great stimulus to fancy poultry breeding. Does such a state of things exist at the present time? I fancy I hear the readers of the REVIEW say "No." And I say no. Can the present system be improved upon. I say yes, it can. We have a Standard of Excellence, but one would imagine, as we behold some of the work done in our exhibitions, that some of our judges have set up a standard of their own and ignored that which is law. This ought not to be. I certainly think the views, as set forth by Mr. Paton, of appointing a jury of the breeders of variety under protest, would in a large measure bring about a better state of things. Yours truly,

118 Ossington ave., Toronto.

A. HOWE.

TORONTO P. P. AND P. S. ASSOCIATION.

THE above Association held its regular monthly meeting April 12th, in Temperance Hall, Mr. Charles Bonnick, the President, in the chair. There was a good attendance of members. Mr. George Bell and Mr. Fred. K. Lemon were accepted as members. The report of delegates to the Industrial Exhibition took up most of the evening. The following were the prize winners: Blk. B. red Game cock, 1st John Miles; pyle hen, 1st John Miles; lop-ear Rabbit buck, 1st F. & C. Coulter; lop ear Rabbit doe, 1st F. & C. Coulter. There being no further business the meeting adjourned.

E. J. OTTER, Secretary.

BLACK SPANISH FOWLS.

BY J. C. BOWES, THORNTON DALE, YORKS.

GENERAL CHARACTERISTICS.

FROM *Fanciers Gazette*, LONDON.

THE true fancier, like the true lover, concentrates his thoughts and affections upon one beloved object, and though for a time he may be tempted to transfer his affections, yet in the end he generally returns with redoubled fervor and enthusiasm to his first love.

Speaking for myself, I may say that the black Spanish fowl was my first youthful fancy, having begun to keep them when a mere lad of fifteen; and up to the time of writing I have never for a moment wavered in my allegiance to what I still consider to be the king of birds. An enthusiast is proverbially consumed with a burning desire to communicate some of his own enthusiasm to others. This desire has in me been strengthened by the repeated request of friends, known and unknown, that I would give the public the benefit of my own personal experience and observation of my particular fancy from the embryo to the prize pen. With this end in view, I propose to set forth the results of many years' experience in the following order: 1. General characteristics. 2. The cock bird. 3. The hen bird. 4. Mating. 5. The hatching and rearing of chickens. 6. Getting up for the show pen.

The black Spanish fowl has many claims upon the consideration of the fancier. It is, I believe, in common with the Dorking, one of the oldest-established breeds known within these islands, and held a recognized position among breeders of poultry long before many other breeds, such as Cochins and Brahmas, were even heard of. There can also be little doubt that the remote ancestors of the existing type had their home around the shores of the Mediterranean, and that they were introduced into England some time during the middle ages, when we had a very intimate intercourse with the Spanish Peninsular. They moreover found their way into the Netherlands, probably at the time of the Spanish occupation in the 16th century.

This latter fact is interesting, for to judicious mating with fine specimens of these Dutch bred birds, whose characteristic was a peculiar smoothness and fine quality of face, we doubtless owe in some measure the beautiful texture of the present English type, which is said to have originally been of a much coarser quality. To most members of the brotherhood a general description of the bird is unnecessary; but to others, and especially to prospective Spanish fanciers, it may be useful. At once the distinguishing characteristic and great glory of this bird is its long, pure white "face,"

which, in startling contrast with its lustrous black body, must, even to the eye of the uninitiated, give it a position of distinction and interest, whether seen alone or among a crowd of less conspicuous feathered beauties. This face presents a striking example of what may be attained by a careful and persevering selection of suitable specimens for mating. The present marvellous development of face, which, to instance the case of a bird now in my possession, may reach the length of seven and a half inches, has unquestionably been evolved from a mere tendency to white in the face of the original progenitors. Another conspicuous feature is a very large, single, perfectly upright, finely serrated comb. Nor is this large comb peculiar to the cocks. The hens of this breed have it more largely developed than the cocks of some other breeds. The important questions of face and comb, here necessarily lightly touched upon, will be treated in much greater detail in my second and third articles. Second only in beauty to the face and comb is the body, which in all typical specimens is large in chest, and somewhat tapering towards the tail. The plumage is of a deep, glossy black, shining with a beautiful green metallic lustre. The tail is rather large, with finely-curved sickle feathers.

All this comeliness is supported upon a pair of long slender legs and thighs, by means of which our pure-blooded Spaniard struts in a truly aristocratic fashion worthy of his high lineage. His whole carriage is marked by much vivacity and intelligence, especially remarkable in the movement of head and neck.

From a purely economic point of view the black Spanish is by no means the least profitable of fowls. The hens are excellent layers, and their eggs are very large, smooth, of a beautiful white color. Having kept no very accurate records of their egg-producing powers, I am not in a position to speak with great authority on this point, but I do not hesitate to say that, under proper treatment, their average would be quite 120 eggs a year. A peculiarity of these fowls, which to most will be no disadvantage, is they rarely show any inclination to sit. As far as my own experience goes, I may say that I have never possessed a Spanish hen who would sit.

It adds a further advantage to that of being a non-sitter, especially to the many who live in towns and who have scant space at their disposal. Probably of all fowls, it is best adapted to retain its health and beauty within the limits of a few square feet of run. Thus the potentiality of having new-laid eggs—nay, of even becoming a successful exhibitor—is within the reach of those who dwell within cities.

As a table bird it must be admitted the black Spanish fowl does not take a foremost place. In comparison with

some varieties specially bred for the poulterer it lacks weight and flavour; but one cannot combine all excellencies.

I have always found the sale of eggs for hatching purposes and the prize pen most remunerative.

(To be Continued.)

DOMINION EXPERIMENTAL FARM.

EXTRACTS FROM THE REPORT OF THE POULTRY
MANAGER MR. A. G. GILBERT.

I BEG to submit the sixth annual report of the Poultry Department. During the winter of 1891—92 careful watch was taken of the laying stock in order to discover, if possible, the cause of and remedy for egg and feather eating, the two vices fowls in close confinement are most addicted to. The subject is one of the greatest importance, necessitating the closest attention in order that correct conclusions may be arrived at. If the fowls eat their eggs, it is apparent the whole means of money making is gone from the poultryman, until the practice ceases. Observation was continued last winter and to the notes already made and published the following may be added:—

1. That the vicious practices are most indulged in during the months of February and March.
2. That, unless at once checked on first showing, they continue until the fowls are allowed outside.
3. That the non layers do not indulge in the vices, until the others commence.
4. That the inactivity of the layers, caused by overfeeding, leads to the vices.
5. That the breeds of the more nervous temperaments viz., black Minorcas, Andalusians, Red Caps, &c., &c., are most addicted to the practices.
6. That the vices first show among the fowls in the greatest number in one pen.
7. That egg eating began where the laying nests were most exposed to view of the fowls.

CONCLUSIONS ARRIVED AT.

It must be understood that the fowls were closely confined to their pens from the time winter prevented their running outside, until the snow disappeared in early spring. The conclusions to be arrived at from the foregoing are:

1. It is imperative that the layers be kept in constant activity.
2. That they must have plenty of room to scratch in.
3. That the pullets are better separated (when possible) from the other fowls.

4. That plenty of green stuff should be fed in the shape of clover hay, cabbage, mangels, turnips, &c.

5. That green bones, cut up and fed regularly, are the best preventatives.

6. That the laying stock should have access to barn, shed or stable to scratch, whenever circumstances permit.

7. That the nest boxes *must* be so arranged that they will be dark and not too easy to get to.

8. The more limited the quarters, the greater the necessity of exercise.

9. The more natural the conditions under which the layers are kept, during the close season, the better for them, the more profitable the result.

In the portions of the Dominion where the winters are comparatively mild the care and treatment of the stock are attended by a *minimum* amount of labor and anxiety. In such localities opportunities to let the layers out for a run frequently occur and the vices mentioned above are not experienced. On the other hand there are portions of the country where necessity compels the housing and the artificial treatment of layers during certain months. As remarked in report of 1891, it is to persons so situated that the experiments relating to the care and management of fowls in winter quarters will be most valuable.

THE PROPER TREATMENT OF THE LAYING STOCK IN AN IMPORTANT CONDITION.

Before going on with the consideration of this subject, it must be insisted that the laying stock be under two years of age, and that they should never be allowed to exceed that age. The winter quarters may be according to the most approved designs; the treatment the very best known, and yet eggs will be few in number, if the hens are over the age mentioned. It has been remarked, in previous reports, that in the case of Leghorns, Minorcas or Andalusians another year may be permitted, but except in the case of experts, it is best to be on the safe side. And in the case of selecting breeders from the best layers, it may be necessary to keep a hen two and a half or three years of age, but at present we are strictly speaking of how best to secure eggs in paying quantities. It is like going over old ground to repeat the instructions so fully given in 1889 report as to treatment of the laying stock, but as the conditions as to housing, etc., etc., in the present case are somewhat different, it may be admissible so to do.

THE EARLY RATION.

The first essential to success is proper feeding. If a mash is prepared for the morning ration only enough to satisfy

should be fed. On page 107 of 1889 report, the following rule is laid down *re* the early morning ration: "Feed only enough soft food to *barely satisfy*, never so much as to gorge. When a hen has had so much food that she will go to a corner and mope, she has had too much and if the overfeeding is continued, will soon cease to lay." The rule is *emphasized* on the present occasion. Where opportunity permits the cutting, or breaking up (not grinding) of green bones they might be given for the morning ration and nothing else. There is really no rule as to the quantity of green bones to feed, so much depends upon the breed, but one pound to 15 or 20 hens, may be mentioned as a guide. If the hens are exercising well and laying freely, and the latter generally follows the former, a small quantity of grain may be fed at noon, but it must be so scattered in the straw, or buried in the sand, that the hens will have to search for every grain of it. A plan that has been found successful is the suspension of a cabbage by a string from the ceiling, about three feet from the ground, so that the hens will have to jump to get at it. Substituting a piece of tough meat, raw, or partially cooked, will be found to answer well. Experience has proved that green stuff in the shape of any of the dry clovers steamed and mixed in the morning mash, or exposed by itself, is much relished by the fowls. When mixed in the mash it should be cut up into inch pieces. Vegetables of some kind must be kept before the layers at all times. It is astonishing the quantity of grass, fowls and chickens eat, when at large, and if we are to make the conditions of their artificial treatment as natural as possible, green food must be liberally supplied. It is not necessary to use every kind of vegetable in rotation, but vegetables of one kind or another, are as a rule, abundant on a farm and the inferior or unmarketable specimens may be given to the poultry. Small potatoes boiled and mixed with wheat bran to which may be added the table and kitchen waste and a couple of handfulls of coarse sand or ground mortar, the whole fed warm for the morning ration, will be found an excellent variation.

LIGHT FEEDING OR NONE, AT NOON.

Where meat, bones, and vegetables are furnished liberally and regularly there will be no necessity for a noon ration. It must be borne in mind that the tendency is to overfeed than otherwise where poultry are cared for, and on the other hand where poultry are not looked after, they get neither care nor comfortable quarters, and of course there is little likelihood of results of any kind being obtained.

THE AFTERNOON RATION.

The evening or rather early afternoon ration, for winter days are short, should be a generous one. It is well to re-

member that the long nights fast is before the layers and it is proper to have them go to roost with a full crop. It is better to feed whole grain for the afternoon ration. Should cut, or broken up green bones, not have been fed in the morning, it might be well to give a half ration, reducing the grain in proportion to the quantity of bone fed. Neither bones, nor mash, should be fed in anything or anywhere, but in the clean narrow trough at the side of the scratching room. Mr Alexander Stewart, the well known market gardener and farmer of Hintonburg, told me that he always found his Plymouth Rock hens to lay well in winter on oats and plenty of cabbage. His poultry house was not a particularly warm one.

KEEP THE WATER FROM FREEZING IF POSSIBLE.

It would be a very great gain if the shed or house for scratching in, could be so constructed or situated, as to prevent the freezing of the drink water. And where the water does freeze care should be taken to have the chill taken off before it is given to the layers. It should be supplied in this luke warm condition at least three times a day. Laying hens drink a large quantity of water. But a cold house has other disadvantages such as vegetables freezing solid; droppings freezing hard to platform and the floor becoming very cold. It has been before remarked that when the layers are kept in a very cold house, the food instead of going to make eggs is drawn upon to supply animal heat. And yet artificial heat is not desirable when it can possibly be done without. If the house could be kept at the freezing point, or three or four degrees higher, it would be found suitable. Before going further it may be as well to summarize the information so far given as to the exercise and feeding of layers. In that shape the points may be easier to remember.

SUMMARY OF EXERCISE AND FEEDING POINTS.

1. Do not gorge the layers by overfeeding.
2. Use every incentive to keep them from idleness.
3. Feed as much cut or broken green bones as possible.
4. Less grain is to be fed when bones and vegetables are supplied in abundance.
5. The evening ration should be a grain one and generously fed.
6. The object being to keep the crops of the layers full during the long night fast.
7. The soft food and cut bones should be fed in a clean narrow trough.
8. When necessary take the chill off the drink water and supply regularly.
9. Keep only young, active, prolific layers, and select from them to breed from.

10. Kill the non-layers, for they are only eating away the profit margin.

11. Keep no male birds with the laying fowls. They do better without them.

12. Keep a sharp watch on the layers and anticipate every want.

THERE MUST BE NO COMPLAINT ABOUT TROUBLE.

"Oh! all this entails a great deal of trouble," may be remarked. Of course it does, but is it as much, or any more, than that experienced by the successful dairy farmer, the market gardener, the cattle breeder, or that peculiar to any other department of the farm?

"And it requires a lot of study to learn the proper management of the farm," is the next objection heard. And so it does, but when that knowledge is acquired there is no department of the farm that will pay a larger percentage of return for the time invested. The great drawback to the poultry department heretofore has been that no systematic or intelligent efforts have been made to develop its true value. Eggs have been put on the market when the warm spring weather made everybody's hens to lay, and prices were, in consequence, at the very lowest. During the winter the fowls were non-productive and their keep was likely a loss to the farmer. And they were so kept because the farmer did not care to make them remunerative. Taken even at the lowest, the egg and poultry trade of Canada and the United States represent enormous figures. But the object is not to discuss the poultry interests at this time, but to glance at the inducements held out in different parts of the country to the farmer to produce eggs in winter.

INDUCEMENTS TO PRODUCE EGGS IN WINTER.

In rapidly scanning the Dominion the following are the phases presented by the different provinces. In the sections where the winters are comparatively mild, and the procuring of eggs a matter of little difficulty—prices are cheap. On the other hand in those portions where the winter season is more severe and the production of eggs attended with greater difficulty—prices are high. In Montreal new laid eggs command a high figure during December, January, February and the earlier portion of March. Mr. Thomas Hall, poultry breeder and market gardener of Outremont, a suburb of Montreal, says he has no trouble in obtaining 45 cents per dozen from choice customers for *new laid* eggs during the months mentioned, and in periods of scarcity as high as 60 cents is sometimes got, at retail. It is to be remembered that there is a great difference in the fresh egg of the grocer which may be several months old, but good enough for cooking purposes, and the new laid egg only two or three days, or even a week old. The flavor

of the first named is seriously affected, while it is perfect in the new laid article.

In Toronto, new laid eggs are quoted at 30 cents per dozen by retailers and THE POULTRY REVIEW of the same city, says there is plenty of money in eggs at that price.

From Fort William a correspondent writes "that eggs are at a good price there at any time."

A correspondent at Ashcroft, B.C., says, "The average price of eggs in this locality, all the year round, is 25 cents per dozen."

Another correspondent from the neighborhood of Calgary, N.W.T., wishes "he had a number of good laying fowls, for eggs here are 50 cents per dozen in winter and command a good price at any time."

From what can be learned there is a good market for new laid eggs at Halifax and St. John, during the winter months.

In our own locality the price obtainable at the grocers for new laid eggs during the cold season is from 30 to 35 cents per dozen according to the severity of the season; when retailed to special customers they occasionally bring as high as 50 cents per dozen.

And when and where eggs are at their very cheapest there is the British market to be taken into consideration. Speaking of that market, a bulletin issued by the Finance Department in relation thereto says, "Canadian poultry and eggs which arrived in excellent condition realized the very highest prices in the London market," and again that a leading Canadian dealer who had made a handsome profit out of a shipment of Canadian turkeys expressed himself confident, "that an unlimited, steady and profitable trade can be done in England with Canadian poultry and eggs." The complaints made about some of the shipments were small size of the egg and bad packing. The shipper can easily remedy the latter, but it is only the farmer, who can by breeding the right kind of fowls, put the large egg on the market.

WHEN AND HOW HE CAN DO IT.

After the farmer has taken advantage of the high prices of the winter home market, he can on the return of the warm spring weather—if he has the proper breed of fowls—allow them free range outside. After a short season of rest they will begin to lay again, and if non-sitters will continue to do so, until the moulting period begins—in the latter part of the month of September—and which will continue for the next two months. But by this time his layers will have well earned their rest. And by the end of September his early hatched pullets ought to begin to lay. Thus a large number of eggs can be had to put on the best market offering. If he has non-sitters and does not use an incubator and brooder, the farmer will have to keep a cer-

tain number of one of the sitting breeds to hatch out his chickens. All depends upon intelligent management. And he will require to reserve a certain number of his two-year old hens for breeding purposes. His male bird should be a vigorous yearling cockerel. He should make it a strict rule to allow no male bird among the laying stock. The reason for so doing has been given in report for 1889, p. 167, as follows:—"Take away the male birds from the laying hens. The cock bird is a nuisance in the pen of layers. He not only monopolizes the most of the food, but teaches the hens to break eggs and so learn to eat them. Besides the stimulating diet is too fattening for him and will ruin him as a breeder." The separation of the male bird from the breeding stock during the winter, is also insisted upon by a great many of the leading breeders. The experience of five years at the Experimental Farm at Ottawa, when the winter season is long, leads to the same conclusion, But the farmer with one breed and one or two cock birds need have little trouble in keeping the birds apart, if he thinks it necessary so to do in the case of his breeding stock.

DIFFERENT BREEDS.

THEIR APPEARANCE AND CHARACTERISTICS—EGGS, THEIR SIZE AND COLOR—MARKET CHICKENS.

It will be noticed that the foregoing remarks apply particularly to egg production, but should eggs and poultry be sold by weight throughout the Dominion, a probability of the near future, rapidly maturing chickens, as well as large eggs will be more profitable for the home market. The following information as to the colour and size of eggs laid by the fowls of the different breeds named, as well as to the weight put on per month by the chickens hatched and reared at the Experimental Farm may be useful. Some of the breeds are represented by cuts.

WHITE LEGHORNS.

An active prolific layer of white eggs. Some strains lay much larger eggs than others. The hens of a good strain will lay eggs $2\frac{1}{4}$ oz. each, or 1 lb. 10 oz. to 1 lb. 11 oz. per doz. Pullets' eggs $1\frac{1}{2}$ oz. each, or 1 lb. 8 ozs. per doz. Chickens hardy and grow quickly. Require to be kept active in close confinement and regularly supplied with lime, grit, &c. There is no Standard weight for the Leghorn family.

BLACK MINORCAS.

The females lay large white egg, weighing as follows: Hen $2\frac{2}{3}$ to $2\frac{1}{4}$ oz. each, or 1 lb. 11 oz. per doz. Pullets egg, 2 oz. each, or 1 lb 7 oz. per doz. The hens lay from 130 to 150 eggs each according to room and range. The chickens are hardy and make vigorous growth. The plumage is jet black. The Standard weight of the cockerel must

be $6\frac{1}{2}$ lbs.; pullet $5\frac{1}{2}$ lbs; cock 8 lbs.; hen $6\frac{1}{2}$ lbs. Must be kept busy in winter quarters and regularly supplied with egg shell making material.

ANDALUSIANS.

Another member of the Spanish or Mediteranean class but of blue colour in feather. Indeed they are sometime called the blue Spanish. They are prolific layers of large white eggs. Chickens are hardy and grow vigorously, of the same type as the black Minorcas, and require the same conditions of treatment in winter quarters. Hens' eggs weigh $2\frac{1}{2}$ to $2\frac{1}{4}$ oz. each, or 1 lb, 11 oz. per doz. No weight qualification is demanded by the Standard.

RED CAPS.

A prolific layer of eggs, of medium size, but not quite so white in shell as those laid by the Leghorn family. Some strains lay larger eggs than others. Dr. Niven, of London, Ont., claims for his Red Cap hens a yield of 150 eggs in a year. If properly cared for, they lay well in winter. Chickens are hardy and grow rapidly. They are an English breed and have gained many friends.

HOUDANS.

A breed of French origin, but having the five toes of the Dorking. The plumage is mottled black and white and there is a heavy crest on the head. The females lay a large white egg. Hens' eggs $2\frac{1}{4}$ oz. each 1 lb. 11 oz. to 1 lb. 13 oz. per doz. The flesh is white and very superior quality and the body of the fowl is plump and heavy. The chickens are hardy and grow rapidly, the cockerels showing a development of 1 lb. per month. They are great foragers and require range. They do not seem to lay as many eggs during the close confinement of winter. It is the intention, another year, to give a number of pullets of the same age a trial as winter layers. The Standard demands the following weights:—Cock, 7 lbs.; hen, 6 lbs.; cockerel, 6 lbs.; pullet, 5 lbs. It will be noticed that the weights are not as great as those called for in the case of the black Minorcas.

LAYERS OF EGGS OF DARK COLOUR.

LIGHT BRAHMAS.

Hens are layers of large coloured eggs, in number about 100 to 110 per year. When in the winter quarters eggs are not quite so large as when hens are running at large. Hens' eggs from $2\frac{1}{4}$ to $2\frac{1}{2}$ oz. each; per dozen 1 lb. $9\frac{1}{2}$ oz. to 1 lb. 13 oz. Chickens hardy and grow well at development of 14 to 16 oz. per month for cockerels. Layers require to be kept busy in winter quarters and must not be over fed or will get too fat. They are a very popular breed, being quiet and easily kept in bounds by a low fence. The weights demanded by the Standard are: cocks, 12 lbs.;

hens, 9½ lbs.; cockerel, 10 lbs.; pullets, 8 lbs. They are classed among the Asiatics.

BUFF COCHINS.

Of the Asiatic type. A fair layer of richly coloured eggs. Some strains lay much larger eggs than others. At the farm a hen of one strain layed eggs weighing only 1¾ oz. each, while a hen of another strain layed eggs 2¼ oz. each. They require to be kept active when in close quarters, as they put on fat very easily. The weights are: cock, 11 lbs.; hen, 8½ lbs.; cockerel, 9 lbs.; pullet, 7 lbs. The chickens are hardy and grow well, showing about the same development as the light Brahma cockerels. They are great favourites with many fanciers and some very fine specimens are held in Ontario.

LANGSHANS

are classed as belonging to the Asiatic family. They are a very valuable breed. In England they are much prized as a market fowl on account of their white flesh. The hens lay a rich dark brown egg of fair size and in goodly number. The chickens are hardy and grow well. The Standard demands the following weights: cock, 9½ lbs.; hen, 7 lbs.; cockerel, 8 lbs.; pullet, 6 lbs. Although these weights are necessary to permit of a successful exhibition in the show room, they are as a rule exceeded by the male birds.

PLYMOUTH ROCKS.

One of the best known breeds on the continent and one of the best for the farmer, who wishes an all round fowl. The pullets and young hens are good layers and the cockerels put on more flesh per month than any breed so far tried at the Experimental Farm. The chickens are hard and grow well, the cockerels putting on 1 lb. to 1¼ lbs. of flesh per month, when properly cared for and fed. Early pullets will lay at the age of five to five and a half months. The laying stock require to be kept busy, and the hens must not be overfed as they get fat very easily. The pullets will stand a little more pushing, as the pullets of all heavy breeds will. The hens make excellent mothers. There are three varieties of this popular breed, viz.: Barred, white and buff. The latter is a new comer.

SILVER LACED WYANDOTTES.

Another breed of American origin and a great favorite with a great many, on account of their laying and table qualities. The cockerels make good growth, showing a development equal to 14 to 16 oz. per month. They are square and compact in shape. They are excellent layers of eggs of fair size: some strains lay large brown eggs, and they make excellent mothers. They come close after the Plymouth Rock as a general pur-

pose fowl. There are three other varieties, the white, golden and buff. The white variety is described later on. The weights called for are: cock, 8½ lbs.; hen, 6½ lbs.; cockerel, 7½ lbs.; pullet, 5½ lbs.

THE NEW VARIETIES ON TRIAL.

The white Plymouth Rocks, white Wyandottes and the coloured Dorkings are the three new breeds on trial at the Experimental Farm. The value of the Dorkings, as table fowls, in Great Britain, is well known, and its hoped by their numerous admirers that they will be much more extensively bred in this country than they have been. The characteristics of the three breeds are given as follows:—

WHITE PLYMOUTH ROCKS.

All the good points of the barred are claimed for this variety with the additional ones of greater size and whiter appearance of flesh when dressed for market. The latter claim is advanced on the ground that the white "pin" feathers do not show so darkly as in the barred. In order to give them a fair trial, eggs from two of the best strains in the country were procured and from them 17 pullets and 8 cockerels were hatched. The chickens were strong from their hatching out and made good progress, a cockerel hatched on the 20th May last showing 6 lbs. on the 21st September. The two others weighed 4 lbs. 5 oz. and 4 lbs. 8½ oz. respectively. The pullets are large and handsome. So far they are fully equal, if not superior, to the barred in growth and robust health. Careful observation will be made of the one variety as compared with the other. The Standard weights required are: cock, 9½ lbs.; hen, 7½ lbs.; cockerel, 8 lbs.; pullet, 6 lbs.

WHITE WYANDOTTES.

A very promising variety, showing so far, all the good points of the silver laced. They are claimed to dress better for market on account of the white pin feathers showing less. The same point it may be remembered, is claimed for the white Plymouth Rocks. From eggs of different strains procured, eleven pullets and ten cockerels were hatched. The chicks displayed hardiness and grew well. A cockerel hatched on the 30th May last, weighed on 2nd October following, 4 lbs. Two cockerels hatched 12th June, weighed 4 lbs. 6 oz., and 3 lbs. 15½ oz. on 13th October. Other weights were 3 lbs. 14 oz., 3 lbs. 11½ oz., 3 lbs. 10 oz.

The merits of the breed as furnishing early cockerels for market will be seen. Careful note will be taken of the laying qualities of the pullets. The weights required are: cock, 8½ lbs.; hen, 6½ lb.; cockerel, 7½ lbs.; pullet, 5½ lbs.