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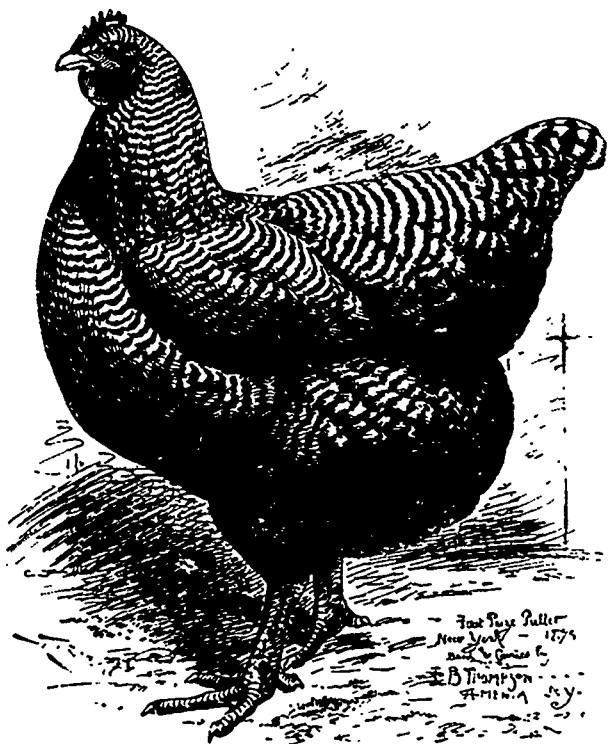
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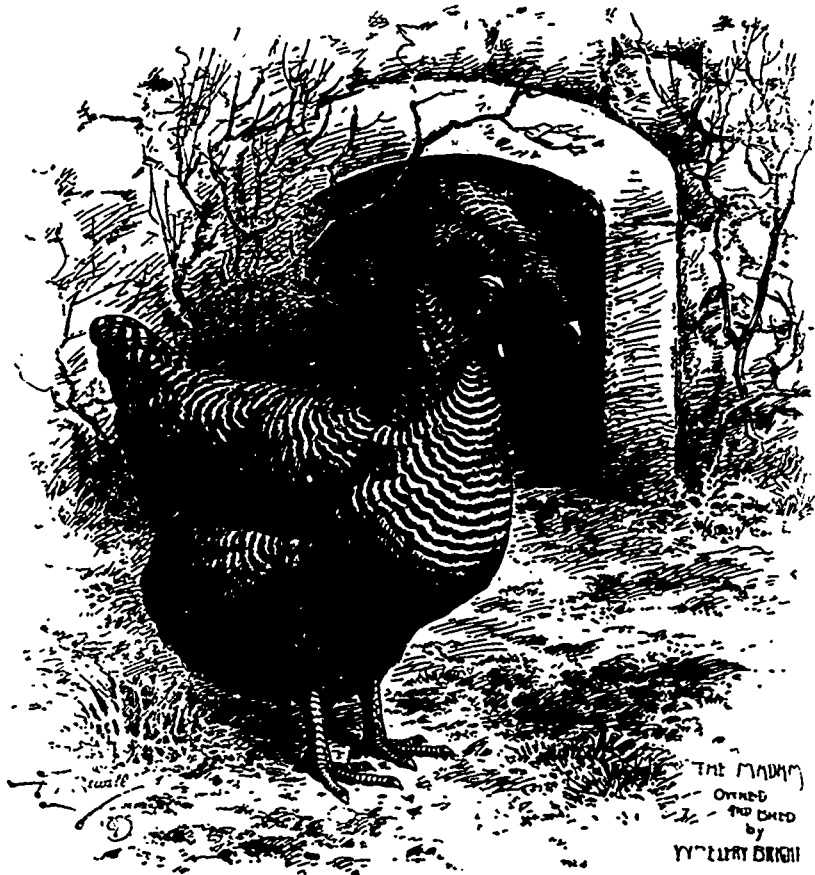
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BARRED PLYMOUTH ROCK PULLET.



BARRED PLYMOUTH ROCK HEN.

THE CANADIAN Poultry REVIEW

DEVOTED TO
POULTRY, IN ALL ITS BRANCHES

Vol. XIX.

124 VICTORIA STREET, TORONTO, JUNE, 1896.

No. 6

NOTES AND COMMENTS

MR. F. H. BROWN, PORT HOPE,

HAS gone into business on his own account and so is unable to devote the proper time to as many breeds as he now keeps. As he is undecided as to which he will ultimately decide to breed he now offers all for sale.

SEVERAL FURTHER COMPLAINTS

of unsatisfactory or dishonest dealings in which John Gray played a leading part have reached us, but enough has been said in the last two issues on this matter.

MR. W. MCNEIL

the well known London breeder sends us a photograph of himself, the first he has ever had taken alone and truthful to life in every respect. One can almost see the keen look in his eye.

MONTREAL EXPOSITION.

We are advised that the Montreal Exposition Co. will hold their annual exhibition from September 10th to 19th inclusive, at which the poultry department will be made a special feature and we hope better accommodation provided than was the case last year. Mr. S. C. Stevenson is the Manager and Secretary, and he no doubt will announce further particulars to REVIEW readers in due time to those who purpose exhibiting.

A BACKWARD SEASON.

From all accounts that we can get in so far we fear that the "early chick" this year is almost an unknown quantity. Eggs have hatched badly and those who were depending on "Biddy" have little cause to bless her.

THE FALL EXHIBITIONS

will however we trust show that the deductions of many who have written us are not quite correct as so many are now breeding fancy, thoroughbred stock a certain number are bound to have at least a small proportion of early hatched chicks:

LATE APRIL AND MAY CHICKS

we still incline to think are after all the most reliable. Coming at a time when the weather begins to feel a bit spring like and balmy they grow, under other favorable conditions, from shell to maturity without a check, and ultimately outstrip their older relatives, both in size and lustre of plumage, both so desirable in many varieties.

CRUSHED CHICKS.

We have often and doubtless many others have also, been troubled with awkward or refractory hens who will crush a chick or two or often more, out of each hatch. Our hatchings have been free from this this year, and we account for it by using setting coops in which the hen had room to walk on to the eggs and not be compelled to jump on. A platform extends some nine inches on two sides of the nest, in some instances the latter being confined within the limits of a slat two inches high, others four inches, but none higher than this. From seventeen Bantam eggs we had seventeen chicks this past month and from another lot of sixteen eggs, fourteen chicks resulted. Both sitters were exceptionally large hens.

BROKEN EGGS

may also be avoided by adopting this method. Another hint, *treat the hens kindly*, don't frighten them all over the place. Our hens are fed once a day only and are during the interim confined closely to their nests after a day or two we can pick them up in any part of the hatching room.

A CHEAP AND WARM POULTRY HOUSE.

BY J. H. PATON, TORONTO.

THE house was built 12 x 12 feet inside, with 2 x 4 scantling laid 4 inch way. When the outside was nailed on the whole inside was covered with newspapers, pasted on, and overlapping so as to cover broken joints. I laid the papers about two thick all over the sides and ceiling, making the pen air-tight. Then inside lining was put up with any rough stuff and covered again the same way with newspapers, and tar felt nailed on top, so as to keep the inside paper to its place in case the frost should gather inside and draw it off. I found afterwards that it would have done so, and would say, to be perfectly safe, that a few lathes nailed over the newspapers on outside wall, near corners, and a few over the large surfaces, would be a good thing, as moisture getting in might loosen the paper and it could not be got at to repair. Any light, tough paper would be better than the newspapers, as they are apt to be brittle, besides, present day newspapers are very apt to demoralize the hens! For ventilation, put in a box or pipe, running it from about four inches above the litter on the floor to one foot above the roof, with full sized opening at the bottom, and an opening with slide just inside the ceiling. Keep the upper ventilator closed, except on moist days, when, if opened, it will prevent frost gathering on inside wall. On extra cold days, when there was no sun, I sometimes found it necessary to close up the ventilator altogether. It is easier and looks better to put the ventilator between the walls, by just putting in two 4 inch strips, say 8 inches apart. I find that the best window for a hen-house is one put lengthways, say 2 feet 6 inches by 8 feet for above sized house, with lower sash coming even with top of litter or dust boxes, and made double; the door should also be double, and lower frame a foot from the floor, the outside door to open outward and inside one inward; both can be made tight by tacking strips of soft cloth or old tweed around the edges. The roof was just single board with tar-felt and gravel on the outside and tarpaper drawn tight over the rafters. Run the paper up and down with laths over the joints. Any other good roof would do, only have the house as near air-tight as possible. The sides were built 7½ x 4½, the lowest to the south, and window in south side, so as to get as much of the surface exposed to the sun as possible. Put door in east end, if possible. This house would hold a good many hens, but I find they do best with plenty of room, and are not so apt

to get into bad habits when they are kept at work. Bear in mind, no matter what shape you build your house, keep the windows near the floor. The heat that comes from them will rise and warm the upper part of the house, and at night the cold sinks to the floor and is in the best place to be warmed by the light of day. If possible, arrange your house so that there will be no dark corners on the floor, let the light get everywhere. Put your nest boxes each side of the window, with openings away from the light, and at least one foot off the floor.

THE RED PYLE GAME BANTAM.

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



AT the last Providence show there was a strong class of red pyle Game Bantams. For second on cockerel there were three birds which tied on a score of 94 points, which goes to show, inasmuch as the Game Bantams were judged by experts on this class of birds, that the red pyle stands well up in station and color.

It is, in fact, an exceedingly interesting little bird, and illustrates an interesting fact in relation to color breeding. Its origination is due to a cross of the black-breasted red and the white, and in this cross the white obliterates the black of the black-breasted red, but the red persists. The red pyle is thus, in color, a black breasted red with all the black parts changed to white. Black is thus seen to be a less permanent color than red and much more easily obliterated. One would naturally think that it would be the most persistent of colors and that the red would be the factor most easily eliminated by a cross, but such is not the case. A little consideration will show us that red ought to be the more persistent color. We all have noticed—all at least who have bred many white fowls with yellow legs—that in white fowls, especially in the males, there is an almost ineradicable tendency to yellow in the plumage. Black specks sometimes come, but they are gotten rid of without great difficulty, but the yellow is there and cannot be got rid of. Yellow, however, is but a weaker form of red, for we find it in all buff breeds changing into red, especially on the shoulders. In the cross, then, of a bird of the black-red type with a white one, we have the tendency to red in both specimens. Black, however, as any breeder of light Brahmas, for example, knows, is a color that can be kept up

with difficulty. It has a marked tendency towards fading out of the hackles, tail and wings. In solid black fowls it tends to become white, and the black fades into a reddish brown, or the feathers are marked transversely with narrow reddish bands, giving the color defects, for which black fowls are most often cut. Even black, by fading into rusty brown, by showing purple bars and by turning to white, shows a tendency to red, and therefore, the black part of the bird has a red tendency. Consequently in a cross of a black-red with a white one ought not to be surprised at the disappearance of the black and the persistence of the red. Any other result would be a good cause for surprise. Breeders of red pyles find it necessary to have an occasional resort to the black-breasted red in order to keep up the richness of coloring and the clear distinction between the red and white in the plumage. The pyle, as it fades, gets rid of some of the red, and thus loses the depth of color in the parts which should be red, and adds some of this lost red to the parts which should be white. It is almost as if the colors ran together, the white becoming tinged and the red losing enough color to do the tingeing. But a cross with the black breasted red, when needed, restores the desired brilliancy and beauty.

GALT POULTRY CLUB.

TAKE this opportunity of informing you that we organized a club in Galt on the 18th Sept. last, said club to be known as the Galt Poultry Club for the purpose of the improvement of the poultry of this country and find we are meeting with unvaried success. Several of the members of the club imported from the best breeders in England and the United States a number of different kinds of eggs for hatching, and have had remarkably good luck with the result of their hatch and expect to be at the front this coming fall, as we have one of the strongest clubs in the country it being only some eight months since its organization, and has at present nearly all the poultry fanciers, breeders and sporting men of the town of Galt, and feel assured with such men taking the interest they are at present we can accomplish the end we have in view. Officers:—R. Minto, President; Wm. McNaughton, Vice-President; John Caldwell, H. Patcheto and F. Wolfe, Directors; A. W. Thompson and Henry Hancock, Auditors.

Jos. Powley, Secretary and Treasurer.

STANDARD SHAPE FOR COCHINS.

RECOMMENDED BY THE AMERICAN COCHIN CLUB.

DISQUALIFICATIONS

As may be decided by the Club.

STANDARD WEIGHTS.

| | | | |
|---------------|---------|---------------|---------|
| Cock, - - - | 11 lbs. | Hen, - - - | 8½ lbs. |
| Cockerel, - - | 9 lbs. | Pullet, - - - | 7 lbs. |

THE COCHIN MALE.

General Outline—The Cochin male should be a very deep, massive bird; showing great constitution; with a dignified carriage and a tendency to lean forward, the neck rather tending forward; the keel low down between the legs, and the saddle or cushion well up. The outline of every section should be well rounded and free from any flat or concaved surface.

The great profusion of long loose plumage gives a large and bulky appearance, conveying the idea of even greater weight than in reality. The peculiarity of the feathers which are convexed both lengthwise and across, together with the great abundance of downy fibre in the under plumage is most essential to this fullsome appearance. Hard or close plumage is a very serious fault.

The Comb should be single, of medium size, low in front, beautifully rounded to the rear and divided into five even, handsome points, the centre ones being the highest. The notches should be moderately deep. Less than four or more than six points are not desirable. The comb should be firm, of fine texture, stout at the base, perfectly erect and straight from front to rear and free from any wrinkles or side sprigs; in color, bright red.

The Head should be carried forward, rather small, medium wide in skull, flat across the crown, with a slight prominence over the eyes; the cranium well rounded and the juncture with the neck well defined. *Deep in the face*, which should be of fine texture; smooth and bright red; the cheek bones high and the dew lap well developed. The head as a whole should look short and have a neat appearance.

The Eyes should be of medium size and mild in expression. Color ?

The Beak should be short, stout at base and gently curved to the point; in color rich yellow.

The Wattles should be pendant, rather long and well rounded; in texture, fine, smooth and thin; in color, bright red.

The Earlobes should be well developed, hanging about two-thirds as low as the wattles; of very fine texture, free from any discoloration, which is very objectionable; in color, bright red.

The Neck should be short, full and well proportioned; handsomely curved from rear of head to the back. The hackle plumage very long and abundant, flowing well over the shoulders and cape, forming a nicely curved back from tip of head to end of cushion.

The Back should be short with a full convexed sweep to the tail.

The Shoulders should be very broad, and flat across under the hackle.

The Saddle should rise from the middle of the back; be very broad and large. Convexed from side to side; the sides well rounded and the plumage very profuse and long, flowing over the tips of the wings and mingling with the fluff and under plumage of the tail.

The Tail as a whole should be carried low; the formation of cushion very full, giving the appearance of being more horizontal than upright; full, broad and short; the main tail well spread at the base; well filled underneath with soft curly feathers and enveloped in the profusion of coverts and lesser sickles, showing as little stiff feathers as possible, following the flow of the lesser sickles and coverts, giving the tail as a whole a soft appearance.

The Body should be broad, deep and medium in length, full and rounded in rear of breast bone well up to vent. Well let down between the legs.

The Breast should be carried forward; full and well rounded; of great breadth and depth from base of neck to point of breast bone; pectoral muscles very full and high up, tapering down to the breast bone, which should be carried low.

The Abdomen should be well rounded up from breast bone to tail, depending more for its fullness on the length of the feathers than upon the muscular development.

The Wings should be carried well up, small and completely folded; the fronts embedded in plumage of the breast and the tips nicely tucked under the saddle plumage.

The Wing Bows should be smooth and exceedingly well cupped. Loose or hanging flights very objectionable.

The Legs should be very strong and large, straight and set well apart.

The Upper Thigh should be short.

The Lower Thigh should be moderately long; the more long, soft, outstanding plumage about them the better, giving the appearance of two great globes of feathers complete-

ly concealing the legs from view well down the shanks and covering the hocks.

The Hock Joints should be covered with soft convexed feathers curving inward about the hocks and free from "vulture hock plumage."

The Shanks should be stout in bone. The plumage should be long; begin at the hock joint and should cover the front and outer side of the shanks, from which it should be outstanding; the upper part growing out from under the thigh plumage and continuing into toe feather. There should be no marked break in the outlines between the plumage at these sections and each should merge naturally into the other and blend together.

The Toes should be straight, stout and well spread; the middle and outer toes being completely covered with the continuation of the shank plumage.

THE COCHIN FEMALE.

General Outline—The Cochin female should correspond in a feminine way to the male; but should be shorter jointed and rounder, with a more plump appearance.

The back seems longer on account of the difference in the character of the neck and cushion plumage.

The cushion more pronounced, being very large and full, rising from as far forward as possible and very nearly covering the main tail, which should be carried more nearly horizontal.

The abdomen should be more fully developed.

The head, comb, wattles and earlobes should be much smaller than in the male and of the finest texture.

To be a perfect Cochin female there must be at least as much of the bird forward of the legs in the breast line as to the rear. A long well rounded body is one of the most important features of a Cochin female.

Comb—Single, small, perfectly straight and upright, thick at base, gently tapering the flat way to the top; low in front; free from all side sprigs or imperfections of any kind; divided into not less than four nor more than six points, and well rounded to conform to the shape of the head. Color, bright red.

Head—Small and neat looking; fairly full in skull; fashioned after the male's, only finer of form.

Face—Bright red.

Eyes of medium size and mild in expression. Color ?

Beak short, stout at base and gently curved to the front.

In color, rich yellow.

Wattles small, perfect in form; nicely rounded; of fine texture. Color, bright red.

Earlobes well developed, fine in texture; free from any discoloration which is very objectionable. Color, bright red.

Neck short; well proportioned; carried forward; the hackle plumage very full and flowing well over the shoulders.

Back short, broad and convex in shape.

Shoulders broad and flat across under the hackle.

Saddle or Cushion rising very full from the middle of the back; very large and round in form; the profuse plumage flowing over the tips of the wings and mingling with the fluff, almost covering the tail feathers.

Tail carried low; more horizontal than upright, but not drooped; to be so carried that no part of it rises above a level with the highest point of cushion.

Body broad, deep and medium in length; full and rounded in rear of breast bone well up to vent; well let down between the legs.

Breast low in front; full and well rounded, with great breadth and depth from base of neck to point of breast bone; very broad and full at point of wing bow.

Abdomen very full and round from breast bone to tail, with great length and fullness of feather.

Wings small and completely folded; the fronts embedded in plumage of the breast; the tips concealed under the saddle plumage.

Wing Bows smooth and exceedingly well cupped. Loose or hanging flights very objectionable.

Legs medium in size, straight, strong and set well apart.

Upper Thigh short.

Lower Thigh moderately long, with great profusion of long soft outstanding fluff and plumage completely hiding the hock and covering the shank almost to the feet.

Hock—The joints should be strong and well covered with flexible convex feathers curving inward about the hocks and free from stiff or vulture plumage.

Shanks short and stout in bone. The plumage long and very profuse.

Toes stout, straight and well spread; the middle and outer toes completely covered with the continuation of the shank plumage.

T. F. MCGREW,
JOHN C. SHARP, JR.,
GEO. W. MITCHELL,
PHILANDER WILLIAMS, } Committee
on Shape.

TORONTO, POULTRY, PIGEON AND PET STOCK ASSOCIATION.

THE regular monthly meeting of the above Association was held in Temperance Hall, May 14th. The President, Mr. Barber in the chair. The minutes of previous meeting were read and confirmed.

Mr. W. Fox was the only exhibitor in pet stock showing twelve rabbits and guinea pigs.

After considerable discussion in regard to the coming Industrial Exhibition, the meeting adjourned to meet the third Thursday in August. Receipts, \$1.80.

R. DURSTON, Secretary.

QUESTIONS AND ANSWERS.

I WANT to know a few questions about bone-cutters 1. Will hens eat more bone ground up than is good for them. 2. As I have only a few hens and I want to get a very cheap bone-cutter, where do you think the best and cheapest are near here? 3. I have read that Summer's blood meal is better to make hens lay than ground bone. Do you think a bone-cutter would be better, or do you think Summer's blood meal is the best? 4. When hens are too fat, what is the quickest way to make them thinner?

G. ANTHONY PEARSON, Brown's Corners.

ANS.—1. Not as a rule, feed three times per week only. 2. Can be bought from \$6 or \$7 up. See advs. in REVIEW of local agents. 3. Do not know the meal. Nothing can be better than green cut bone with a little meat on. 4. Make up feed in greater part of sound heavy oats, and feed but twice a day, and not too much then. Give all the exercise possible.

I have a very fine black cock that got his comb and wattle frozen. I have cured the comb and wattle so they don't trouble him any more, but he has a continual rattling in the throat and is swelled a little around the eyes. Will you please tell me the reason, what it is, and give a cure, as the cock cost me quite a bit of money. Please let me hear from you without delay and oblige. GEO. E. BARCLAY.

Poplar Hill, Ont.

ANS.—It is probably the after effects. Bathe face in a weak lotion of hot water and vinegar, say 1 to 20, dry well and keep out of all cold and draughts; give a little vaseline once a day by placing it down the bird's throat. The advent of warmer weather will likely bring him round.

RE INCUBATOR COMPETITION.

Editor Review :

IN last issue of REVIEW I notice report of sub-committee of Poultry Department of Industrial Exhibition. I wish to make a few suggestions and remarks thereon.

I see in section 1 that no machine less than 75 egg capacity can compete for the \$10 prize. I believe a machine which would hold 50 eggs would be of great service and why shut it out when the best percentage of live chicks is to govern in the contest?

In rule 1 of the above competition "each competitor is to sign a certificate to the effect that all the eggs in machine have been in incubator the full time required for hatch, and that none of such eggs have been set under hens or ducks." Why not make exhibitors verify this by declaration, a mere certificate is in my opinion very loose. An affidavit would be more likely to hold them to facts. I would also suggest that this rule be made to read that all eggs have been in *incubator exhibited only* and that no chicks have been slipped in or eggs taken out during any period of the competition.

In section 3, I would suggest that each exhibitor furnish an affidavit to the effect that he sells that class of machine in competition for \$15 or less.

The only way I see to have a real fair test is to make all exhibitors produce their incubators three weeks before the exhibition and let some disinterested party have charge of them and see that all is fair throughout the contest.

CHAS. F. WAGNER.

Toronto, May 27, 1896.

MR. MYERS' IDEAS.

Editor Review :

IN the May issue of your valuable paper I notice that the Poultry Committee of the Industrial Exhibition have again offered prizes for incubators and brooders, to be competed for in September next. I did think that after the experience of last year, which should have proved to every fair-minded man the utter unfairness and impracticability of awarding prizes to these machines, that this year every exhibitor would be placed on an equal footing, as are the manufacturers of binders, threshing machines, and all other machines that require to be tested side by side under exactly the same conditions, in order to tell which is the best

Take Sec. 1. In this class a first prize of \$10 and a second prize of a diploma are to be awarded to the incubator hatching the largest percentage of live chickens out of at least 75 fertile eggs. This would not be so bad if every machine were placed on an equal footing. A large majority

of the machines competing will, no doubt, as last year, be run right in Toronto, and so the partly hatched eggs will need to be moved to the exhibition grounds only. Not so those outside, like myself. Last year (and I would be forced to do the same this year), I took a machine to the exhibition grounds and prepared it to receive the eggs that I had in a machine at home; I then, one morning, placed these eggs that were almost hatched, in a basket, drove them six miles to Guelph, took the train from there to Parkdale, drove from Parkdale to the grounds and placed them in my machine, after being exposed and shaken about for between four and five hours. I had between 90 and 100 untested eggs (they were almost all fertile) and got nearly 60 chickens—57 or 58, if I remember rightly. Is it fair that my machine should compete in such a contest under such adverse conditions?

Then again, I question that it would be a fair contest if the machines were side by side, to award the prize to the one hatching the largest number out of 75 fertile eggs and not in some way like it the number of eggs started with. We know very well, Mr. Editor, that these great incubator records of the show room are made by testing out, first all clear (unfertile) eggs, on the fifth or sixth day, then again on the twelfth or thirteenth day testing out all weak, doubtful, poorly-fertilized eggs, and again, a few days later a final test with a good tester will discard a few more dead or suspicious eggs. The result of all this care, together with the excellence of the machine, to say nothing of the man at the helm, will be a magnificent hatch of perhaps 73 chickens out of 75 fertile eggs, or to put it differently (the way that is never told to the public), 73 beautiful chickens out of from 200 to 300 eggs; or perchance 600 to 800 eggs were used, and the result will be more chickens hatched than all other competitors combined. The public were never told that twice as many eggs were used as all others combined. Verily "there are tricks in all trades but ours."

I should like to know who is going to be on hand to see that there are not say 100 fertile eggs in each machine, and that fifteen or twenty that refuse to hatch are not by some silver-medalist quietly removed?

Let us turn to Sec. 2, which awards a silver medal as first and a diploma as second prize to the best incubator "In deciding this award workmanship, ventilation, moisture, regulator and general simplicity and ease of operation will be considered."

(1.) Workmanship deserves consideration, and we doubt not that there is enough mechanical genius in the judges to decide correctly on this point.

(2.) Ventilation. Scarcely two incubators of the scores

manufactured are ventilated exactly alike. What a boon it will be to incubator manufacturers when our judges tell them which is the *best* method! Every manufacturer now claims his method THE BEST.

(3). Moisture. The remarks under ventilation apply equally well here. There is the moisture applied from below the eggs, from above the eggs, from the centre and from the side, and the moisture applied from the end. Which makes the best machine? Our experienced judges will tell.

(4) Regulation. Even more varied are the methods of regulation adopted by incubator manufacturers. We are safe in saying that no two are exactly alike. One uses water expansion, another brass, another steel, another vulcanized rubber, another brass and rubber, another brass, rubber and wood, another alcohol and mercury, etc., etc. Is it possible for the judges to tell which is the best regulated machine by simply looking at them for a few days or a few minutes?

There is a way by which we can learn which is the best incubator, and it is only by actually using them side by side under exactly the same conditions, or seeing them worked side by side under exactly the same conditions for three weeks. The incubator placed in such a contest that with the least trouble and least expense hatches the largest percentage of *good* chickens is the best incubator in ventilation, moisture, regulation, and in every other respect, providing the workmanship is in keeping, i.e., that it is substantially built of good lasting material. The brooder that will raise the most chickens and the best chickens to six weeks of age is the best brooder.

I maintain, Mr. Editor, that it is utterly impossible for any one man or any body of men to say which is the best incubator and brooder without either using them or seeing them used for at least three weeks. The machine that does its work the best with the least trouble and expense is the best machine. It is the best machine for the people of Canada to buy, and it is the machine that the people of Canada are after.

If we must have an incubator and brooder contest at the Industrial, give us a fair one—one that will favor no manufacturer. If you cannot give us a fair one, give us none. Just imagine six or eight farmers, two or three of whom have used binders, while the rest are acquainted with reapers and cradles only, awarding a silver medal for the best binder at next Industrial! This is exactly the way that the awards on incubators and brooders were given last year. How many of the judges ever used any other incubator and brooder

than old Bidg,? Is it not a ridiculous farce from beginning to end.

Thanking you, Mr. Editor, for the space you have given me, I remain,
Respectfully yours,
J. E. MEYER.
Kossuth, May 28th, '96.

POPULAR POULTRY TALKS BY PRACTICAL BREEDERS.

NO. 6.

UNDER the above heading it is the purpose of the REVIEW to discuss one leading question in each issue of 1896, and we would ask you to lay your views on each question, as concisely as may be, before our readers. Kindly answer each question on a separate slip, numbering each slip to correspond with the number of the question. Do not fear to write because your spelling or grammar may not be quite up to date. We will gladly see that all errors of this kind are corrected before being printed.

QUESTION FOR THIS MONTH.

If you have been troubled with insect pests, lice, etc., say so and give remedy.

By A. A. Whitteker, Morrisburg.

I have never been troubled. Prevention is better than cure. Plenty of dust, lime and coal oil and perfect cleanliness is my preventative.

By Joseph Kinsey, Doon, Ont.

I always guard against insects by thoroughly cleaning all pens early in the spring, first by sweeping walls and ceiling, then whitewashing the whole with fresh lime slacked in boiling water and applied hot. Nests are built in the wall and are given the same treatment and the roosts are removed, scalded with hot water and cleaned. In June, which is the worst month for lice, the coops are gone over again, and with the necessary every day cleaning there is no room for insects.

By J. H. Minshall, Brantford.

I was troubled with lice on my fowls last year after I had bought setting hens. I used a good deal of insect powder, it seemed to drive them away for a time, but I do not think it kills many. I have used a good many things, and find that chewing tobacco beats all. I take one ten cent plug of strong black strap and steep it well and put it into enough water to dip the hen or chicks in, seeing that all the feathers are wet. I put a couple of tablespoonsful of coal oil in

with the tobacco and use it just warm. After doing this I never saw a louse till I bought more setters this spring.

By J. H. Houser, Canboro.

Yes, Sir, I have been troubled with insect pests. Cure. First, go inside your hen house with a plentiful supply of sulphur, seeing that every hole is fastened, burn a lot of it, so that it will get into every nook and corner; then whitewash inside with lime and water, adding a small quantity of carbolic acid. Make a dust bath of fine sand and ashes and a little sulphur and black pepper. Every week for three weeks burn some more sulphur and that will be the last of the insect pests.

By G. Anthony Pearson, Brown's Corners.

I expect to see a great number of answers to the question in June issue, as every poultryman has had to fight with lice and can give some remedy. I have frequently been troubled with these pests, but never seriously as I never allow them to get a strong foothold. If your fowls are running out all the time they wont be bothered much with lice, especially if you breed birds of the Mediterranean class. I think the best way to kill them quickly is to whitewash your henhouse and dust every hen thoroughly with Persian insect powder, especially on the back of the head and neck, around the tail and under the wings, as they are worst in those places.

NEXT MONTH'S SUBJECT

is as follows. Give us your experience: What shade do you provide, artificial or growing, and how do you keep water cool and clean in runs?

POULTRY ON THE BRANDON (MANITOBA), EXPERIMENTAL FARM.

REPORT OF THE MANAGER, MR. S. A. BEDFORD.

THE breeds kept during the past year were barred Plymouth Rocks, white Leghorns, black Minorcas and common barn-yard fowl.

Owing no doubt to a liberal use of ground green bone no soft-shelled eggs were laid. Beef heads were largely used for bone, these were ground during winter with a bone cutter driven by wind power; in a moderate breeze 60 lbs. per hour can be finely ground, during winter. One ounce per day is fed to each fowl.

POULTRY FOOD.

Soft food consisting of half boiled roots and half ground wheat, wet with skim milk, is fed in the morning, dry grain is used in the evening—this generally consists of 25 per

cent. of barley, 25 per cent of oats and 50 per cent of wheat; a liberal allowance of lettuce is fed during summer and is much relished.

Fresh water, lime and grit were kept constantly before the fowls, and the dry grain being scattered among chaff ensures plenty of exercise.

HATCHING.

Hens only were used for hatching. The first chickens were hatched on 25th April and the last on the 9th of July. These late chicks were not well feathered when cold weather set in, and the latter date is too late for hatching chickens in this country.

The white Leghorn eggs were the most fertile, closely followed by black Minorca and Plymouth Rock. Thirty-six chicks of white Leghorns, 12 black Minorcas and 40 Plymouth Rocks were raised. The white Leghorn chicks feathered very quickly and for that reason are the easiest to raise. The black Minorca come next, while the Plymouth Rock, being very slow to feather, have a higher death rate as chicks, but are very healthy after full feathering.

Ready sale has been found for all the surplus stock of poultry raised on the farm.

All breeds have been very free from disease. There were two cases of "crop bound" among the white Leghorns. The crops were cut open, cleaned, and then sown up, and when the disease had not progressed too far, the fowls recovered.

The following statistics give the average number of eggs obtained each month from each hen of the different breeds, when kept in confinement. No doubt the eggs would be more numerous if the birds were allowed full range.

Eggs from barred Plymouth Rocks, December, 1894, 1 8-10; January, 1895, 3 4 10; February, 4 7-10; March, 6 8-10; April, 18 3-10; May, 20 7-10; June, 16 4-10; July, 12 1-10; August, 16 5-10; September, 12 1-10; total, 112 8-10.

Eggs from white Leghorns, December, 1894, 4 9-10; January, 1895, 8 1-16; February, 6; March, 13 5-10; April, 21; May, 22 4-10; June, 20 4-10; July, 14 2-10; August, 9 2-10; September, 1; total, 120 7-10.

Eggs from black Minorcas, February, 1895, 2 3-10; March, 14 3-10; April, 20 6-10; May, 20 6-10; June, 17 6-10; July, 14; August, 7; September, 2; total, 98 4-10.

The bottomless nest spoken of in my last report was again successful in preventing egg eating. I find that this vice is very prevalent throughout the province. At a season when eggs are high priced, this might be avoided by using the proper kind of nest.

The following are the live weights reached by fowls of the different breeds: Barred Plymouth Rock cock, 17 months,

9 lbs. 8 ozs ; cockerel, 5½ mos., 5 lbs. 4 ozs. ; hen, 17 mos., 6 lbs. 3 ozs ; pullet, 5½ mos., 4 lbs. 4 ozs. Black Minorca cock, 17 mos., 7 lbs. ; cockerel, 6 mos., 5 lbs. 4 ozs. ; hen, 17 mos., 4 lbs. 3 ozs., pullet, 6 mos., 3 lbs. 8 ozs. White Leghorn cock, 14 mos., 4 lbs. 12 ozs. ; cockerel, 6 mos., 4 lbs. 8 ozs. ; hen, 14 mos., 3 lbs. 8 ozs. ; pullet, 6 mos., 3 lbs.

TABLE FOWLS.

Although the white Leghorns are excellent layers they are under weight for table fowl, and having prominent breast bones their shape is also against them for that purpose. The Plymouth Rocks sell readily as table fowls. The black Minorcas appear to be in many respects midway between the white Leghorns and Plymouth Rocks.

SCRAPS FROM REVIEW CORRESPONDENCE.

SEND you under separate cover the report of the American Cochin Club and trust you will find it of interest and that you will give our Club such notice as you deem worthy. We are trying to make the Cochin Club the best specialty Club in the country and look to the poultry press for aid. Another year we propose to bring out a still more perfect report on Cochin shape and color, as well as other matters of interest to the Cochin fancy. We invite criticism from you and your readers, and should any desire to become members of our Club I shall be glad to receive their names.

Yours truly, ARTHUR R. SHARP,
Taunton, Mass., May 14, '96. Sec'y Am. Cochin Club.

[We invite criticism of that part of the report published in this issue.—ED.]

I may say I have had satisfactory results from the adv. and think that your journal will be used further.

Port Elgin, May 15, 1896. J. E. WISMER,
Pt. Elgin Nursery.

[The REVIEW ads. sell other things beside poultry. ED.]

Please find enclosed \$2.50, \$1 for arrears and \$1.50 for renewal and new subscriber to REVIEW, both subscriptions to start with May issue. New subscriber's address is Walter Lawson. He ought to be a good addition. He has lots of cash and the chicken fever good and has bought eggs and fowls from some of the best breeders in America. Wishing you success.

Georgetown, May 3, 1896.

[We can't have too many poultry breeders. ED.]

Enclosed find \$1.50 to pay for my subscription and the subscription of Rev. Mr. Scott of this town. I leave Ridgetown for Clinton where I will reside in future. It is my intention to take all my Games to that town, where I will build a first class poultry house suitable for the different kind of Games I keep. So far I have had good success with chicks hatched, and will send them to the country to be raised this summer, then have them shipped to Clinton in the fall. I have been well repaid for the money the two advertisements in March and April REVIEW cost and will advertise my young birds this fall.

Yours truly,
A. J. GRIGG.

Ridgetown, May 1, '96.

Reports from nearly all fanciers I have seen are that eggs are hatching out very poorly, even as badly as last year.

Yours truly,
E. B. CALE.

Stratford, May 1, 1896.

Poultry doing well, sell all surplus eggs at home, have some fine chicks out. Just received a setting of S S Hamburgs eggs. Water fowls doing well. REVIEW a bright, good paper.

J. H. HOUSER,
Canboro, April 29, 1896. Tp. Councillor.

I received to-night from England three settings (40 eggs) black Spanish eggs, 18 of them arrived sound and 22 were broken, express charges \$3.04. Eggs were well packed. I think express companies should be more careful in handling eggs for hatching.

I am yours, etc.,
Cornwall, May 21, 1896. J. H. WARRINGTON.

It always gives me pleasure to receive your account and enclosed you will find \$8 payment in full. I would not be without the REVIEW for twice the amount and I would like to see all breeders as loyal to the REVIEW as the REVIEW is to the breeders. Wishing your journal the best of success.

Yours truly,
London, May 18, 1896. WM. MCNEIL.
[Mr. McNeil is one of the oldest patrons of REVIEW many of whom have read it continuously for from fifteen to eighteen years. ED].

Egg trade very fair. We are shipping four settings to F. Woodhull *Manitoba Poultry Monthly*.

Very truly yours, H. K. STOCKWELL.
Danville, Que., May 6, 1896.

PROFITABLE POULTRY KEEPING.

BY T. A. WILLITS, TORONTO, ONT.

(Continued.)

WE will first of all consider the best way of housing our one hundred Plymouth Rocks, but before going into details I wish to make it plain to the reader that we are not considering how to house and yard a lot of fowls kept for fun, but for practical business, these fowls are the means of getting their owner's daily bread, therefore they must be kept under the most advantageous conditions, and no stone must be left unturned that would be a gain in thrift or economy. The great desideratum in poultry breeding is the highest possible condition of health in the stock birds and their progeny, and economy of labor in their management; secure this and the rest is easy. Both these conditions can be secured in the same way, viz., by giving the stock birds ample range. To properly yard one hundred Plymouth Rocks one acre of land will be needed, an acre is 209 feet. x 209 feet to simplify matters we will discard the fractions and call our piece of land 200 ft. square, this we will divide into eight yards each 100 x 50 ft. and to make the matter still clearer we will sub divide our eight yards, or rather what we purpose making into yards, into two lots each 200 x 100 ft. Before erecting the fences we will erect the houses, of these there will be two, one on each half-acre lot, each house should be 40 x 12 ft. divided into four rooms each 10 x 12 ft. the house should be built in the centre of the lot, thus the front of the house would be 94 ft. from the front end of the lot and the back would be the same distance from the back end of the lot and the two ends of the house will be exactly thirty feet from the sides of the half acre lot, thus it will be seen that two of the yards are in the rear of the building and two in the front, each breeding flock has a room 12 x 10 ft. and a yard 200 feet long by 40 feet wide, and each flock of breeding fowls should consist of twelve hens and a rooster, or exactly 104 birds to the acre. By dividing the land into yards as suggested each pen or flock of fowls is kept by itself each has ample range, but no more than experience has shown the writer to be necessary in order to attain the best results, the yards are sufficiently wide to permit of being ploughed, not that I should think of ploughing all of it but a piece of each yard say twelve or fifteen feet on each side of the fences should be ploughed the entire length of the yards and planted with corn or sun-

flowers, to provide shade during the heat of summer, and the grain produced would certainly pay in cost of growing it, the balance of the yards should be in permanent pasture, and their size is such that there will be no danger of the fowls destroying the grass as they certainly will do when confined in small yards.

The houses must be warmly and substantially built, and at the same time economy must be exercised lest the expenditure be greater than is warranted by the prospective income. I should make the walls of the houses six feet high back and front with a double roof, the frame should be 2 x 4 scantling which I would cover both inside and out with tarred paper of a strong tough quality, I would have the outside boards running perpendicularly, and I should want them planed on the outside so as to be properly painted and battened, on the inside I would have the boards running horizontally and should not want them planed as whitewash will adhere better to the rough boards.

(To be Continued.)

REPORT OF THE POULTRY MANAGER OF THE DOMINION EXPERIMENTAL FARM, OTTAWA.

MR. A. G. GILBERT GIVES HIS ANNUAL PEN AND INK TALK.

THE operations of the year have been successful beyond the average. There has been a marked and gratifying increase in the number of farmers who are giving their poultry proper care and management, so as to make them revenue producers. In proof of this, I give the following extract from a letter lately written by Mr. David Moir, a farmer near Almonte, Ont., and a director of the North Lanark Agricultural Association. He says: "The addresses given last winter in Carleton Place and later in Pakenham have awakened a lively interest in their poultry by the farmers. There has been more money spent in lumber and tar paper, wherewith to build poultry houses, since last spring, than in five years. The hen to-day is where the cow was fifteen years ago and that should not be. We (farmers) should be able to put our poultry and eggs on the English market in the same condition as the cheese,"

Among the subjects treated in this report are:

The different markets for eggs.

The cause of so many bad eggs being placed on the summer market.

How to prevent bad eggs from being placed on the market.

The result of different rations in egg production.

The chickens hatched ; their care and progress.

Characteristics of different crosses.

And other matter which it is hoped will be found interesting and instructive to the farmers and the poultrymen of the country.

The laying stock during their moult were carefully looked after. No attempt was made to stimulate egg production during that period. The hens, however, were fed a generous diet, in order, to induce the growth of new feathers and they had the run of a grass and clover field in rear of the main poultry building. As soon as they were completely over their moult they received a liberal allowance of cut bone, and winter laying had fairly commenced by the end of November.

As in previous years cut green bone was found a valuable incentive to egg production and also beneficial, in smaller quantities, during the moulting period. During the month of December 943 eggs were laid. Particulars will be found in proper place.

During the year a number of meetings in different parts of the country was attended. At these meetings addresses on the management, care and proper housing of poultry were delivered.

A. G. GILBERT, *Manager Poultry Department.*

RATIONS.

A great part of my report of last year was devoted to the consideration of different kinds of rations, within easy reach of the farmers and calculated to make their hens lay in winter. In reports of previous years the production of eggs at that season, has been urged from a money making basis. In a bulletin on "Poultry and Eggs," issued from the Department of Agriculture in 1894 the subject is laid before the farmers as follows:—"The (winter) market is comparatively undeveloped, because few farmers realize the value of their poultry as money makers. In order to make the most money out of their poultry the aim of the farmers should be to dispose of their eggs when they are highest in price, viz: the winter season. He would be considered a poor business man who would hold his stock until it was of least value and then begin to sell it. Yet it is something similar our farmers are doing with their poultry. During winter their laying stock have remained non-productive, very likely at actual loss. With the advent of warm spring weather everybody's hens begin to lay and prices go down to their lowest. It is at this time the hens of the great majority of farmers begin production."

THE DIFFERENT MARKETS.

The quotation still applies with force to the greater portions of the Dominion, but that our farmers are beginning to realize the value of their poultry as money makers, is evidenced by the increasing demand for information as to the proper care and management of their birds, as well as by the increasing number of new laid eggs placed on the winter market, there will soon be enough to supply that market. Granted, that there has been a greater supply of new laid eggs in recent winters, there is also the fact that prices were never higher—in Ottawa and Montreal at any rate—than they were last winter, which goes to show that if there has been greater production there has also been a correspondingly increased demand. And both surely go to prove that there is a better market, offering better opportunities to our farmers to make more money out of their poultry than heretofore.

A SUMMER MARKET.

Observation and experience of the markets in recent years lead to the conclusion that the winter market is not the only paying one, but that there is a great and growing demand, in the summer months, for new laid eggs of unimpaired flavour.

As for the English market it is practically unlimited. A bulletin issued from the Finance Department in October, 1892, states in effect that an unlimited, steady and profitable trade can be done with England in Canadian poultry and eggs.

COULD WINTER PRICES NOT BE LOWER, AND YET REMUNERATIVE?

In proof of the high prices of winter, it may be stated that the writer attended an agricultural meeting in Montreal during January of 1895, when he was informed by several farmers present that they had sold new-laid eggs the week previous at 60 cents per dozen to choice customers. It is but right to say, at the same time new laid eggs were selling at 35 cents per dozen retail in Toronto, and 25 cents per dozen in London, Ont.; in the North-west prices ranged from 35 to 50 cents per dozen, according to locality. Mr. Sutherland, Assistant Secretary of the Montreal Poultry Association, wrote later on that he had sold his new laid eggs during that winter at first named price. Eggs at 60 cents per dozen meant that they were a luxury which only the rich could indulge in. If eggs were put on the Montreal market during winter in such numbers that lower prices would follow, it is only reasonable to suppose that more people would purchase them. There is no reason why the great masses should not be supplied with new-laid eggs in winter,

rather than the ill-flavoured, artificially preserved article, at a price within the reach of all, and there yet remain a paying margin of the profit to the farmer. What then are remunerative prices?

WHAT ARE REMUNERATIVE PRICES?

In order to find out what are remunerative figures, the summer market prices, at about their lowest points, viz, 12 to 15 cents per dozen, are taken. The following calculation is made, based on the experience of several practical breeders:—

| | |
|---|--------|
| 100 eggs from hen for one year, at one cent each . . . | \$1 00 |
| 10 chickens hatched by her, at ten cents each | 1 00 |
| Body of hen to sell or eat | 25 |
| | — |
| | 2 25 |
| Deduct cost of hen for year | 1 25 |
| | — |
| | 1 00 |

We have, according to the foregoing, a margin of \$1 per hen profit per annum, taking eggs at 12 cents per dozen. No figure is placed upon the manure, which is valuable when made into a compost. It may be said that the cost of producing the egg is greater in winter. But this statement may be met by the other, that the cost of production is little in summer, for at that period the farmer's hens, in most cases, are allowed to forage for their living. So that the cost of \$1 25 per hen per annum is very fair—if anything, it is on the high side. It will be seen that eggs, at the summer price of 12 cents per dozen, afford a paying margin. Surely then, with the modern and cheaper rations, prices during the winter season could be much lower, and yet afford a fair margin of profit.

SUMMER PRICES MISLEADING.

But the summer price of 12 cents per dozen is a misleading one, for in reality it should be placed at twice the figure. Twenty-four cents per dozen for eggs in midsummer? Yes, and in this way: It is a well known fact that during the midsummer months it is hardly possible to buy from farmer or storekeeper a dozen or two eggs that will all be found good; that in the majority of cases half of the eggs will likely be unfit for eating purposes. In the case of a dozen eggs, making the six actually worth twelve cents, or twenty-four cents per dozen, and probably the flavour of the remaining six will not be such as new-laid eggs ought to have.

There is not the slightest doubt that the great majority of purchasers would rather pay twenty-four cents per dozen, in the first place, for a reliable article than half the amount for

inferior goods. There is no intention to say that our farmers bring into the markets, or sell to the dealers, or that the latter dispose of, bad or ill flavoured eggs, knowing them to be such. On the contrary the farmers, as a rule, unfortunately give as little attention to the age, or condition of the eggs they are taking to market, as they give to the tows which laid them. The questions may be asked, how can we tell what the inside of an egg is like? How can we distinguish the bad eggs from the good ones?

PRECAUTIONS THAT SHOULD BE TAKEN.

The answer to the above queries is that while the farmer is not supposed to be in the van of poultry lore as to the means of discovering partially hatched, or ill-flavoured eggs from the new laid ones, yet there are simple precautions which he may take, in order to secure the new article and which he is in duty bound, in the interests of his customers, to take. By observing the following, eggs of fine flavour may be sold during the entire summer season:—

1. Keep no male bird with the laying stack.
2. Collect the eggs once or twice every day.
3. Take no eggs to market gathered from under barns, nests in the fields or from stolen nests.
4. Prevent, if possible, the laying hens eating decayed vegetable, or animal substances.
5. Keep the eggs after gathering them in a cool, sweet atmosphere. If in a cellar let it be dry.
6. Keep the nests the layers use clean, comfortable and free from vermin.
7. Have a sufficient number of nests for the layers. Offer every inducement to the hens to lay in these nests and not shun them.
8. Allow no brooding hen to sit on the new laid eggs, be it for ever so short a period.
9. Take the eggs to market clean and inviting in appearance.
10. Make it a rule to take no eggs to market that you are not sure are fresh, or that you are doubtful about the flavour being good.

There is not one of the above suggestions so difficult as to prevent its being put into immediate practice.

WHERE DO ALL THE BAD EGGS COME FROM?

The question is frequently asked and much speculation indulged in as to where all the bad eggs come from, particularly in summer time? And that leads to the question: What is a bad egg?

In the past eight years large numbers of eggs have been handled in our poultry house. Many eggs have been put under hens, or in incubators, and close observation has been

made of these eggs during incubation, and afterwards of the eggs which failed to produce chickens. The eggs, in course of incubation, were also tested at the end of six or seven days and note taken of the varied appearances presented. No small amount of experience was gained, and it leads to the classification of the different sorts of eggs met with, and the cause therefor, as follows :

1. The fertile egg in which the germ is in a well advanced stage, with the promise of making a strong vigorous chicken.

2. The addled egg, or one in which the germ has started, but from some cause its progress has been arrested, when decay sets in and you have a very ill flavored article.

3. The clear or unfertile, which contains no germ and presents the appearance of a new laid one.

4. The egg containing a broken or ruptured yoke and which presents a similar appearance to No. 2.

The state of Nos. 1 and 2 can only result from fertilization.

No. 2 is the egg most frequently met with, and is probably the result of taking eggs from nests under barns, or stolen nests, or nests on which the hen has been sitting some days.

No. 3, the clear, or unfertilized egg, can be used for cooking purposes with every confidence after examination by tester on the seventh day. The unfertilized eggs are frequently removed after the fertilized eggs have hatched out into chickens (on the 21st day) and boiled hard and fed to the chicks.

PRESERVE THE FLAVOUR OF THE EGG.

Having secured the non-fertilized new laid eggs, care should be taken to preserve the flavour intact. The shells of the eggs are porous, and contaminating surroundings will doubtless affect the egg. The unfertilized egg may be kept in a cellar, with pure atmosphere, for many weeks, and yet retain its flavour. In course of time it may shrink and partially dry up from evaporation, but there is no germ to start on its mission of bringing about change as soon as the conditions are favorable, or partly so.

Mr. C. A. Cyphers, of Boston, the author of "Incubation and its Natural Laws," admitted to be one of the best works on the subject ever published, in a letter to the writer says : "An unfertilized egg will keep longer than the other, and an egg from a hen fed on corn will keep its flavour better. The eggs should be kept in a sweet atmosphere."

A GOOD FLAVOUR ALL IMPORTANT.

It must be borne in mind that it is the flavour of the egg that is all important to keep intact. And on this point a

farmer in the neighborhood of New York City who sends thousands of eggs per week to that city, writes to the *Rural New Yorker*, "that if a brooding hen is allowed to sit on a new laid fertilized egg for twelve hours the flavour of that egg is ruined." The same authority, who uses a large number of incubators, says that he tests his incubator eggs on the fifth day, and all the clear or unfertile eggs he removes, marks them as such, and ships them to New York City, where they are sold for cooking or baking purposes.

In our poultry department eggs have been tested on the sixth and seventh day and the unfertile eggs have frequently been boiled hard wherewith to feed the chicks. On some occasions, at the end of the hatching period of twenty-one days, the clear, or unfertile eggs have been removed from the nest and boiled hard to mix up with chicken food. All poultry men know that it is impossible to boil a rotten egg hard.

It must not be inferred from the foregoing that unfertilized eggs should be kept a long time before being taken to market. Eggs, as advised in a previous page, should be sold as soon after being laid as possible. There are cases where the farmer is some distance from the purchaser, or cannot come to market as frequently as one nearer to the city. In such a case the eggs for sale may have to be kept some time, and it is all the more important that they should be unfertilized and kept in a cool, sweet atmosphere.

A BETTER PRICE FOR UNFERTILIZED EGGS.

In the opinion of the writer it is only a matter of time and education, when eggs for sale in summer will have to be guaranteed as unfertilized by the seller before a purchase will be made. Indeed the subject is already receiving practical attention. The following letter shows that unfertilized eggs shipped from the town of Pakenham, Ont., to a city customer during the past summer brought better prices :

Dear Sir,— Our dealing with Messrs. Bate & Co., during the past summer, has been very satisfactory. They gave us more than the market price. Mr. Bate said he was well satisfied with the quality of the eggs we sent.

W. M. McARTHUR.

The eggs were unfertilized, as I was assured by Mr. McArthur ; were clean and inviting in appearance ; of good size ; carefully packed and as a result received what they deserved from a shrewd business firm, a better price than the market figure. Is there not a moral in the transaction, by giving heed to which our farmers might profit ? Other instances might be given, but the above will suffice.

A PROSPECTIVE QUESTION ANSWERED.

While on this subject, a prospective question likely to be asked, in connection with its discussion, may as well be answered, viz. : If we are to allow no male bird with the laying stock how are we to breed our chickens? Easy enough, by picking out in early spring time, or better still, if circumstances will permit by keeping apart all winter and not stimulating them to lay—nine or eleven of your best layers and best shaped birds. Mate them with an unrelated, healthy, well-shaped two year-old cock, if the birds are pullets or yearling hens and a cockerel if they are two years old. When eggs enough have been saved to hatch out what chickens you wish, close up, kill, or dispose of the male bird and after keeping the hens he has been mated with, inclosed for a week longer let them run with the other laying hens, with which there is, of course, no male. And having saved eggs for hatching from birds selected for good qualities, superior progeny are likely to follow. The chickens from eggs saved from such mating, will certainly be better, in every way, than those bred in the usual haphazard manner. As to keeping the male bird with the laying stock, the following is again quoted from Experimental Farm Poultry Department report of 1889, viz. :—"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."

CONCLUSIONS FROM THE FOREGOING.

In noting, in the foregoing, the features of the different markets, the demand and supply peculiar to them and the requirements of the various seasons, the following conclusions may be arrived at, viz. :—

1. That our home winter market offers the inducement of high prices for new laid eggs.
2. That notwithstanding greater production in this district—prices were never better than they were last winter.
3. That there is no reason why new laid eggs should not be produced, in winter, in such quantity as to take the place (in a very great measure) of packed, or preserved eggs.
4. That with the modern and cheaper rations in vogue, winter prices could be much lower than they are and yet afford a profitable margin.
5. That eggs in the summer months which can be relied on as being new laid and of good flavour, will bring better prices than the ordinary article.
6. That so many summer eggs are bad, or ill-flavored because (a) they are not unfertilized; (b) not collected imme-

diately after being laid; (c) not brought to market soon after being laid.

RATIONS FED LAST WINTER (1894-95).—THE DIFFERENT BREEDS AND HOW THEY LAID.

The time is not far distant when the points touched upon in the foregoing pages will be patent to and practised by the majority of farmers. The aim of the farmer should be to lessen as much as possible the cost of production, so as to have the greater margin of profit. And it is with the object of aiding him so to do that the experimental winter work of some years past has been carried on, particular attention having been given to egg producing rations.

The rations during the winter of 1894-95, beginning with date of report, viz., the first day of January, were as follows :

Morning Ration—Warm mash composed of ground wheat, ground oats, ground barley or ground rye and bran. A little of all sometimes and again only three of the ground grains. Enough of this was fed to satisfy but not to gorge the hens.

Noon—A little grain of some kind, to keep the hens busy scratching.

Afternoon—A liberal ration of wheat or buckwheat, mostly the former.

Occasionally cut bone was given in lieu of the morning or afternoon ration, but it was frequently given, at one time or the other, and with excellent results. The value of cut green bone as an incentive to egg production cannot be overestimated.

Green Food—Green stuff in the shape of cabbages, turnips or mangels was liberally fed and much relished. Occasionally clover hay was steamed and mixed in the mash.

Grit—Broken oyster shells and mica and limestone grit were supplied in Nos. 1 and 2 houses and in pails or shallow dishes in No. 3. The fountains proved the better way, except in very cold weather, when their contents froze and were rather difficult to thaw out.

All grain fed was given in such a way as to make the hens work in order to get it. The straw on the floor of some pens was superior to the earth on some of the other floors, as a means of making the hens search for the grain.

ARRANGEMENT OF THE DIFFERENT BREEDS.

The fowls in the three poultry houses were arranged as follows at the beginning of the month of January, 1895 :—

| | Hens. | Pullets. |
|--------------------------------------|-------|----------|
| Barred Plymouth Rocks | 8 | 11 |
| White Plymouth Rocks | 11 | .. |
| Silver Laced Wyandottes | 4 | 7 |
| White Wyandottes | 6 | .. |

| | | |
|-----------------------------------|-----|----|
| Langshans | 6 | 11 |
| Light Brahmas | 11 | 4 |
| White Leghorns..... | 11 | 16 |
| Black Minorcas..... | 11 | 18 |
| Andalusians..... | 11 | .. |
| White Minorcas..... | .. | 11 |
| Colored Dorkings | .. | 11 |
| Golden Polands..... | 9 | .. |
| Houdans | 6 | .. |
| White Javas..... | .. | 4 |
| Langshan—Black Minorca cross..... | 8 | .. |
| White Leghorn—Brahma cross | 6 | .. |
| Other crosses..... | 24 | .. |
| | 132 | 93 |

Of the above number the following were purchased in the latter part of November, 1894, with the object of obtaining new breeds for trial, younger stock and new blood, viz. :— Eleven white Leghorn pullets; eleven colored Dorking pullets; eleven white Minorca pullets; seven barred Plymouth Rock pullets; seven Langshan pullets; four silver laced Wyandotte pullets; four white Java pullets.

The new breeds were the colored Dorkings and white Minorcas. Eleven pullets of different breeds were put in each of the 10 pens in No. 1 house. Pullets were taken from our own stock to make up the number of layers to eleven, in cases where necessary to do so. As there were not enough pullets of the breeds named to fill the ten pens, in two cases yearling hens were used, and in one case three-year-old Brahmas. As arranged the stock in No. 1 house, stood as follows :—

BREEDS IN NO. 1 HOUSE—NORTH WING.

- Pen No. 1— 8 Silver Laced Wyandotte pullets, 4 hens.
do 2—11 Barred Plymouth Rock do
do 3—11 White do yearling hens.
do 4—11 Langshan pullets.
do 5—11 Light Brahma hens, 3 years old.

SOUTH WING.

- Pen No. 1—11 Leghorn pullets.
do 2—11 Black Minorca yearling hens.
do 3—11 white Minorca pullets.
do 4— 7 Andalusian hens, 4 pullets.
do 5—11 coloured Dorking pullets.

The object aimed at was, by placing the different breeds side by side, to give them opportunity to show what they could do in egg production. But as some of the pullets

were later hatched than others, they did not begin to lay as soon as the older ones and results were not as satisfactory as anticipated. The coldness of the house had also an apparent effect in retarding the development of the late hatched pullets and egg laying in the older ones. The result in eggs for the six months beginning from the first of January, 1895, was as follows :

Seven pullets, 4 hens, S. L. Wyandottes, Jan. 89, Feb. 71, March 96, April 104, May 69, June 45 ; total, 474.

Eleven pullets, barred P. Rocks, Jan. 80, Feb. 88, March 77, April 142, May 115, June 105 ; total, 607.

Eleven hens (1 year), white P Rocks, Jan. 80, Feb. 61, March 83, April 106, May 88, June 12 ; total, 430.

Eleven pullets, Langshans, Jan. 83, Feb. 112, March 105, April 112, May 94, June 57 ; total, 563.

Eleven hens, light Brahmas, Jan. 5, Feb. 23, March 54, April 72, May 38, June 27 ; total, 219.

Fifteen pullets, white Leghorns, Jan. 81, Feb. 96, March 137, April 154, May 141, June 98 ; total, 707.

Eleven hens (1 and 2 years), black Minorcas, Jan. 75 Feb. 51, March 44, April 82, May 94, June 65 ; total, 411.

Eleven pullets, white Minorcas, Jan. 7, Feb. 35, March 56, April 45, May 81, June 72 ; total, 296.

Seven pullets, 4 hens, Andalusians, Jan. 43, Feb. 37, March 64, April 92, May 117, June 109 ; total, 462.

Eleven pullets, coloured Dorkings, Jan. 0, Feb. 25, March 73, April 68, May 73, June 19 ; total, 258.

It should be stated that it was only for six weeks that the white Leghorn pullets numbered 15. For the most part of the time their number was the same as the others. The greatest egg production actually came from the barred P. Rocks, closely followed by the Langshans. The latter were, perhaps, the later hatched of the two. The white Minorcas did not show much vigour during the early part of the winter, and several of them died during the early part of the month of March. The coloured Dorkings were, apparently, late chickens, and were slow in maturing. The Brahma hens did not do well as they were three years of age and were likely fat.

NO. 2 HOUSE.

In this house 7 or 9 hens of the following breeds were, placed in different pens to be used as breeding stock, viz. - Barred P. Rocks, Langshans, Light Brahmas (4), Houdans and golden Polands. In this house were also the male birds to be used as breeders in spring.

(To be Continued.)

VERMIN.

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