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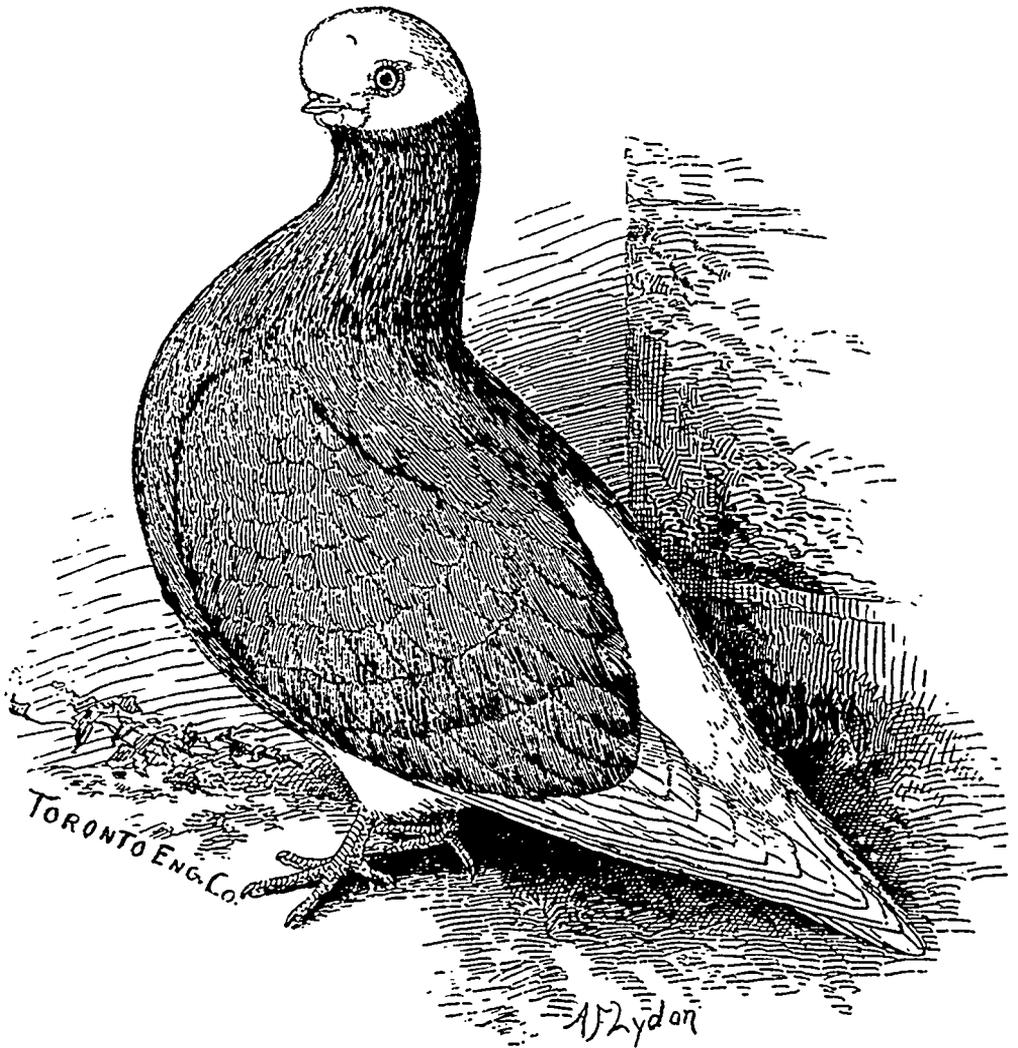
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Our English Portrait.

[CANADIAN POULTRY REVIEW.]
SHORT FACE, BALDHEAD TUMBLER.
FIRST AT CRYSTAL PALACE, &c.

From the Feathered World

THE CANADIAN POULTRY REVIEW

DEVOTED TO A PRACTICAL KNOWLEDGE OF POULTRY, IN ALL ITS BRANCHES.

PUBLISHED BY H. B. DONOVAN.

VOL. XVI.

118 VICTORIA STREET, TORONTO, JULY, 1893.

No. 7.

NOTES AND COMMENTS

DOMINION EXPERIMENTAL FARM REPORTS.

We give in this issue the first instalment of Mr. A. G. Gilbert's valuable annual report. It seems a pity that such reports cannot be got up a little more elaborately, with well designed engravings and a separate pamphlet made up from the original matter and distributed broadcast amongst the farmers and breeders. In its present form it must of necessity reach but a limited number although the REVIEW has by printing extra copies of the issues containing this report done its little share to make the report more generally known. We commend some such plan for 1894 to Professor Saunders and the Dominion Government. Mr. Gilbert, we are sure, would be but too glad to co-operate in making his next report still more elaborate and instructing.

THE REPORT OF THE CHEMIST.

In looking through the blue book we were struck with the amount of sound knowledge conveyed in the following few sentences from the it of the chemist, Mr. Frank T. Shutt, M.A., F.I.C., F.C.S. It will repay careful study especially in winter feeding and the rationing of growing chicks:

Albuminoids.—A collective name applied to the nitrogenous organic substances. They are the most valuable of all fodder constituents. They are essential to the formation of muscle, cartilage and the tissues generally, and of the animal fluids, blood and milk. Though their principal office is repairing waste and making new tissue, they also serve to develop heat and energy when fat and the carbohydrates are lacking or in insufficient quantities. Whether animals are laying on flesh, producing wool or milk, or working, a supply of albuminoids is necessary, and experience has shown that economic feeding chiefly consists in obtaining them at a minimum cost and feeding them in sufficient quantities.

Fat.—This ingredient has a high nutritive value, and in this respect ranks next to the albuminoids. By its combustion it generates the greater part of the heat of the body. Further, it is readily transformed into fatty tissue in the animal.

Carbohydrates.—Consist of sugars, starch, gums and allied substances, and form a large percentage of the organic matter of plants. They are readily assimilated and oxidized in the animal system, producing much heat and energy.

Fibre.—Compared with the constituents already discussed, fibre has a low nutritive value. It forms the woody parts of the stems and leaves of plants and of the hull or husk of seeds. As a rule the fibre becomes harder and less digestible as the plant approaches maturity.

Ash or Mineral Matter.—This contributes to the formation of bone and supplies the tissues throughout the body with the minute quantity of mineral matter they require. It also replaces those saline substances daily excreted.

The question of economic feeding is intimately related to that of maintaining and increasing the fertility of the soil. This becomes evident when we remember that the greater portion of the fertilizing elements (chiefly nitrogen, potash and phosphoric acid) of a food, are returned in the manure. It is for this reason that a ration with a high percentage of albuminoids gives a manure rich in nitrogen and *vice versa*. Unless manure or artificial fertilizers are bought, a large percentage of the produce should be fed on the farm. The soil may then be expected to yield lucrative crops and at the same time not deteriorate.

Again, economic and efficient feeding can only result from the application of a knowledge of the composition and feeding value of our principal fodders and a due consideration of their market prices, which latter it may be added is not always in accord with nutritive value. It is to afford this knowledge that during the past year some of the principal fodders, both "coarse" and "concentrated," have been examined in our laboratories.

CONCENTRATED FODDERS.

Acting on the following values from the same report, will lead to an intelligent interpretation and practical working out of the foregoing paragraphs:

No. 1 OATS.

The percentage of hull, which in the case of the oat is consumed by the animal with the kernel, is usually from 30 to 35. Some difference in composition exists between the varieties of oats, chiefly due to the fact that the amount of the hull is dependent largely upon the variety. The less hull, the higher the albuminoids. Compared with the other

cereals we notice (1) that in albuminoids (the most important and valuable of all the constituents) oats stand higher than barley and lower than wheat, and (2) that oats are richer in fat than either of the last mentioned cereals. Experiments have shown them to have a very uniform digestibility, and experience has proved them to be the best food, in conjunction with a proper amount of bulky fodder, for working horses. These excellent qualities are no doubt largely due to the loose, mealy character of the ground grain, which allows the digestive fluids to act freely.

NO. 2 BARLEY.

The more plump and better colored grades of barley must be considered too expensive for feeding, since they command a high price for malting purposes. It often happens, however, that unpropitious weather during harvesting, and other circumstances, cause a more or less shrivelled and badly colored grain. It may be found more economical to feed such grain than to sell it. The percentage of albuminoids in such barley is higher than in that of the best malting grades, and hence it is more valuable as a food. Speaking of barleys as a class, their albuminoids and fat are lower than in the other cereals. Barley does not contain as much hull as oats, hence its amount of fibre is much less, though still greater than that in wheat. Owing to this lack of hull principally, the practice of grinding barley and mixing it with cut clover is widely adopted. This gives greater bulk to the fodder and thus furnishes an increased surface of the concentrated portion of the feed to the solvent action of the digestive secretions.

NO. 3 RED FIFE WHEAT.

This represents the average composition of Red Fife wheat from Manitoba, classed No. 1 hard. The high percentage of albuminoids and the small quantity of water point emphatically to the high feeding value of this grain. The unrivalled reputation which this wheat bears for flour production, naturally makes it too valuable to use as a cattle food.

NOS. 4 and 5. FROZEN RED FIFE WHEAT.

It sometimes happens that early autumnal frosts in Manitoba and the North-West Territories deteriorate large quantities of wheat. This has hitherto been sold by the farmers at a great sacrifice, as the millers value it at an exceedingly low figure for their purposes. From experiments tried at the Central Experimental Farm, Ottawa, by Mr. Jas. W. Robertson, Agriculturist, it has been proved that frozen wheat may be used profitably for the fattening of swine, (See Bulletin 16). The analyses here given were made on the same wheats as used in those experiments, and are therefore of particular interest.

First, it will be noticed that frozen wheat contains more water than wheat properly and favorably matured. This is as might be expected, since the development of the frozen grain is arrested while it is yet more or less in the doughy state. The albuminoids, though somewhat lower, have not suffered materially. They still exceed the percentage found in soft fall wheats. Other and noticeable features are that the carbohydrates are 5 per cent. to 6 per cent. lower and that the fibres are somewhat higher in the frozen wheat, than in the No. 1 hard. Considered from the standpoint of composition, I think we may conclude that frozen wheat as a cattle food does not rank as much inferior to well ripened and mature grain.

NO. 6. PEASE.

Pease are characterized by a very high percentage of albuminoids, approaching one quarter of their weight. They are remarkably poor in fat, and possess less carbohydrates than the cereals. For these rea-

sons, it becomes necessary to supplement them with some more bulky and less nitrogenous fodder, in order that a proper ratio of the various constituents may be maintained, the digestive fluids allowed to act freely, and the health of the animal not impaired.

NOS. 7, 8 AND 9. INDIAN CORN.

These are the analyses of the grain of well known varieties. The merits of corn meal as a feeding stuff are widely recognized. It produces much animal heat and possesses special value as a fatterer. In the United States it is very extensively used for all classes of animals; over certain large areas it forms almost exclusively the "concentrated" fodder employed.

With the exception of malting barleys, corn ranks lower in albuminoids than the cereals, and possesses, according to our analyses, a larger percentage of water. In fat, however, it is richer.

Like other foods of a similar concentrated character, it should be fed in a ground condition, and be supplemented with more bulky food. It may here be noted that experiments have demonstrated that a greater proportion of a concentrated fodder is digested when the same is fed in a ground condition and mixed with cut hay or similar fodder, than when given whole and alone; and further, that the health of the animal is also the better maintained thereby.

NO. 10. WHEAT BRAN.

According to the method of milling used, the composition of bran will vary within slight limits. The present analysis, however, may be considered an average one. It supports the general belief that bran has a high nutritive value. The percentage of albuminoids in bran exceeds that in the whole grain, owing to the gluten granules lying more particularly in the outer coat of the kernel. In fat also, it is richer than the whole wheat. It possesses a larger amount of fibre, as might be expected. Careful experiments have shown that in digestibility bran is equal to the grains; its use, therefore, rather than that of these more costly foods, must be considered economical. It has *special merits as a milk producer*, and is consequently fed with advantage to milking cows.

NO. 11. CORN BRAN.

This is a bye-product formed in the milling of Indian corn. Compared with wheat bran it is seen to be richer in fat, but considerably poorer in albuminoids. It is about equal to it as regards soluble carbohydrates, but possesses somewhat more fibre.

NO. 12. RICE MEAL.

This sample was sent by a correspondent in Salt Spring Island, B.C., who says that the rice comes direct from China, and is ground at Victoria. He further adds that it is extensively used as a food for hogs and cattle in his neighborhood, owing to the very high price of oats, pease and other grains.

The whole grain—hull and kernel—is evidently ground, since the meal is of a yellowish color, and contains pieces of the husk. It is in a very satisfactory degree of fineness.

From the analysis, I should judge it to be a valuable food. Though it does not quite equal wheat bran in albuminoids, it is seen to contain a higher percentage of fat.

MANURES.

Very plainly worked out tables show the component parts and values of the various barnyard manures, but amongst them that from the hen house finds no part. If Mr. Shutt in his next report could see his way clear to analyze and value this product he would be conferring a benefit on

many who from its strength are fearful of using this fertilizer and are unaware on what crop it is best applied and how.

WORLD'S FAIR SHOW.

Mr. Bogue, the Superintendent for the poultry exhibit from Ontario, has sent intending exhibitors from that Province a further reminder in the shape of the circular below accompanied by suitable entry forms. Entry fees will be paid by the government so that the rule referring to these on the entry form will not apply to exhibitors from the Dominion. Following is the circular, send your entries in early: "I send you herewith entry form which kindly fill up and return to be at your very earliest convenience, but on no account later than Saturday, July 8th, as these entries require to me in the hands of the department not later than the 15th sure. I do not want any hitch in the Ontario poultry exhibit on account of lateness of entry. Do not be backward in making entries of chicks by reason of their present condition remember that the exhibition being held late in October will be a great advantage to the young birds. Should you desire further information on this subject will be pleased to answer enquiries. ALLAN BOGUE, Supt."

INTERNATIONAL DECIMAL SCORE CARD ASSOCIATION.

Mr. Felch kindly sends us the roll of membership of this Association, full particulars of which will be found elsewhere, but is too lengthy for us to use in its entirety. The members in Canada, so far, are Messrs. A. Geddes, Geo. Hagerman, E. A. Cornell, S. Spent, Ottawa; Haycock & Kent, Kingston; H. A. Chadwick, St. James, Man. As we before announced, Montreal will use the decimal score card at their next show, under Mr. Felch's interpretation.

INDUSTRIAL EXHIBITION, TORONTO.

The prize lists are now ready and can be had on application to the Manager, Mr. H. J. Hill. As Toronto will be one of the points of selection for the World's Fair a very large entry may be looked for. The list is much more liberal than ever before.

MR. RICHARD OKE,

informs us that he has sent several sittings of Pheasant eggs of different varieties to Milwaukee, Wis. There should be a growing demand for these handsome birds.

"THE TURKEY."

A copy of the second edition of that very neat little work

"The Turkey," by Mr. W. Willis-Harris, Vice-President of the Turkey Club has been sent us by the author. The book is now a standard one and has been in great part re-written, and a chapter dealing with the varieties and standard for judging added. The chapter on diseases has been made much more useful and fuller in detail. The price is one shilling and the book may be had from the author at Fern Lodge, Pulboro, Sussex, England.

EXPORTATION OF TURKEYS.

Mr. W. J. Bell, Banda, shipped to Messrs. Abbott Bros., the well known breeders of Norfolk, England, on May 25th, a Bronze Turkey tom weighing 45 lbs. and scoring 97½ points by Mr. Jarvis, at the late Ontario Show. He had as coop mate a 30 lb. hen which went half a point better at the same show. We shall be glad to hear from Messrs. Abbott Bros. in what condition the birds arrive and how they compare with the Turkeys already in their yards.

MR. C. J. DANIELS, TORONTO,

owing to the expiration of his lease is obliged to dispose of his entire stock of fowls, houses, coops, etc. These birds have won very many prizes and should find ready purchasers. The entire list will be found in another column and further particulars may be had on application to Mr. Daniels.

IMPORTATIONS.

Both Messrs. Barber & Co. and C. Bonnick, of Toronto, are importing pens of Game Bantams from England. Getting ready they say, for a friendly tussle at the World's Fair.

Fowls,

our English weekly contemporary does us the honor of reprinting Mr. H. S. Babcock's recent article on "Hatching Bantams," of course giving due acknowledgment.

FAT STOCK SHOW.

A meeting of the Provincial Fat Stock Show Association was held on June 15th, in the Royal Hotel, Guelph. to complete arrangements for the provincial fat stock show to be held here. The Association is composed of delegates from the Agriculture and Arts Association, represented by Messrs. H. Wade, Toronto; A. Rawlings, Forest; J. C. Snell, Edmonton; J. Sissons, Crown Hill; Joshua Legge, Gananoque, and J. Rowen, M.P., President. The Guelph Fat Stock Club is represented by Messrs. Millar, President, J. McCorkindale, Secretary, and

William Hearn, A. A. Armstrong and H. G. Wright. The Sheep Breeders' Association by Messrs. R. Gibson, Abingdon, and F. W. Hodson, London *Farmers' Advocate*. Swine Breeders' Association by Messrs. Coxworth, Clement; J. E. Brethour, Burford. The Sheep Breeders and Swine Breeders decided to give \$1,000 towards the show, and the Agriculture and Arts Association \$1,500, the Guelph Fat Stock Club to furnish the accommodation. The date of the show was fixed for the 6th and 7th December. Mr. George Murton was appointed to judge the poultry.

POULTRY IN ONTARIO.

From the Farm Statistics of 1892 compiled and sent out by the Bureau of Industries in connection with the Ontario Department of Agriculture we learn that the farmers of the Province owned in the past year 628,504 Turkeys, 445,154 Geese and 6,005,315 other fowls, a total in all of 7,078,973. The Department values this immense number at \$2,091,450 taking the Turkeys at an average valuation of 66c., Geese 57c. and other fowls 24c., an extremely low estimate. In addition to this the farmers during the year sold or used 1,966,409 head of poultry valued at \$778,308, or an average of 40c. each.

AN IMMENSE PRODUCT.

Take the above statistics from *farmers* fowls only and no doubt incomplete, add the value of those owned by fanciers, householders, breeders in a small way, and you will find yourself lost in a maze of figures almost too stupendous to imagine.

THE EGG PRODUCT.

Mark you! another point, the above gives no idea of the egg product of these fowls nor is any estimate of the value included.

INCREASE IN VALUE.

This branch of farm industry is also, we are glad to learn, steadily increasing in importance, for we find that the value of such stock increased since 1891 by no smaller sum than about \$73,000 (seventy-three thousand dollars) in itself no small item.

MR. C. MASSIE, PORT HOPE,

was in the city on the 21st June, looking well and feeling almost quite recovered from his recent severe illness. From what he said we gather that fancy matters are in a very flourishing state in the "hilly" town, and the breeders quite

enthusiastic over the prospects of their next local show. The arrangements last winter were so satisfactory that a greatly increased entry has been already promised them.

POULTRY

POPULARITY OF THE LIGHT BRAHMA.

BY H. S. BABCOCK.

THE perennial popularity of the light Brahma is a cause of astonishment to many poultrymen. They do not understand it. They see a large fowl, less graceful than many breeds, with an attractive though not remarkably beautiful plumage, slow to get its full growth, maturing late, not a phenomenal layer, as a rule quite a persistent sitter, and they ask why is it that this fowl is so very popular. I've asked this question of myself many times and have at last arrived at something in the nature of an answer. My answer may not be a complete one, but I think it is true so far as it goes, and it may prove helpful to others.

I think the size of the light Brahma is one and perhaps the strongest element in its popularity. It is the largest fowl we have. Others may approach it, but none seems to quite equal it. I have myself some chickens bred from a cock that was said to weigh seventeen pounds and hens that were said to weigh from eleven to thirteen pounds. I know that the weight of these fowls attracted me, and if me why not others. I have seen a cock of this variety that weighed fourteen pounds and fifteen ounces just one ounce short of fifteen pounds. And this cock, on exhibition at a certain poultry show, was "the observed of all observers." Men seem to admire extremes, the very large and the very small among fowls, the Brahma and the Bantam exercise a powerful fascination upon their minds. Give me a fowl, in all other respects exactly like the light Brahma, and let it weigh but eight or nine pounds and I think I could name a number of varieties that would "shut out" the fowl in the race for popularity. I think, therefore, that I am safe in attributing much of the popularity of the light Brahma to its great size.

Another, and it seems to me important, element in its popularity is the hardiness of the fowl. I know of nothing that is more trying to a poultryman than to hatch out a large number of chickens only to have the greater part of them

die in their early youth. I have kept a number of exceedingly beautiful breeds of fowls, so much more beautiful to me, and I think to the majority of mankind than the Brahma, that in comparison, it is positively plain, but have failed to derive from them a proportionate degree of pleasure, because of the great delicacy of the chickens. It seemed almost impossible to rear fifty per cent of those hatched, even with the best care that could be given, and because of this delicacy, though in other respects the fowls were admirable, I felt constrained to give them up for hardier breeds and varieties. I know that to me, and I am, I suppose, very much like other men, hardiness is an important quality. And I have always found the light Brahma hardy. Some will die, of course, especially among over-fattened adult fowls, but I know of no hardier breed than the light Brahma. A man who cannot, under favorable circumstances, rear a fair percentage of the light Brahma chickens he hatches, would better go out of the poultry business. He evidently is not adapted to it. So it seems to me the hardiness of the fowl is properly reckoned as an element in its popularity.

The light Brahma, when hatched early, makes an excellent winter layer. Its abundant clothing keeps it warm and its pea-comb—the most serviceable and at the same time handsome comb we know of—is not liable to get frost-bitten. And when other, *i.e.*, some other—breeds are not laying at all, the light Brahma continues the work of production. As winter eggs sell for thirty-five to fifty cents per dozen, the light Brahma does not need to produce so many eggs to produce an equal money value. And then, too, the eggs are very large. No breed I think, lays a larger. The good old black Spanish used to have the reputation of laying the largest egg of any fowl, but I really think the egg of the Brahma is quite as large, and as Brahmas and Spanish average in these days I think the Brahma egg is the larger of the two. A fowl that lays a very large egg, perhaps the largest that is laid, and lays these eggs freely in the coldest months of the year, possesses one element of great popularity.

Other elements occur to me, such as the value of the heavy carcass when killing, the color of the legs and skin, the color of the fine feathers and the like, but these three, the great size, the hardiness and the winter laying of large eggs seem to me to account in a large measure for the great popularity of the light Brahma. And, indeed, these are elements of real worth, the first alone perhaps excepted. I cannot see that great size is of so much practical importance as the other elements, though I have given it first place in the making of popularity, but of the other two elements there can be no doubt of their great practical importance. And

so, to a considerable extent at least, the perennial popularity of the light Brahma depends upon its practical and useful qualities, it is after all a question of merit.

BLACK AND WHITE POULTRY.

BY REGINALD S. S. WOODGATE, IN THE *Stock-Keeper*, ENGLAND.

Concluded.

TO my mind, however, there is as much honour in breeding such white Cochin hens as were shown in the early seventies of this nineteenth century, or such Spanish as Messrs. Howard and Nicholls (the late) used to exhibit, or white Dorkings, 9 lb. or 10 lb. in weight each—as is now frequently done—as ever there is in producing a buff Cochin cockerel, gorgeous undoubtedly in his perfectly-coloured buff plumage, but who probably has to leave his black tail at home—or, anyhow, a part of it—or a light Brahma pullet, which to obtain the now fashionable fan-shaped foot feathering, has to wear, or to be deprived of a pair of hocks which sweep the very flooring of the pen.

In some black varieties, such as Minorcas, Langshans and Orpingtons, I am, of course, fully aware that there is a present boom, and that under some judges great classes are obtained in these breeds as far as numbers of entries are concerned, but I maintain that even for them—in this their heyday of popularity—only ordinary prices are given, save for a few birds in very isolated instances, and that they fail to obtain the money which some fanciers of the older varieties pay without a murmur for their specimens, yet Minorcas and Langshans cannot, I suppose, be bred to perfection without an immensity of labour, skill and experience.

Returning, then, to the difficulties of breeding black and white poultry, which I consider to be great ones, and beginning at the varieties, now, perhaps, in the zenith of their power, I will commence with Minorcas. Do the breeders of birds of pencillings and lacings and spangles believe that every Minorca which is hatched is fit for exhibition because it is black or white? How about squirrel tails, white faces, loose combs, pale legs, and birds failing in lustre? Surely these points require skill and labour to produce, and I wonder how many scores of Minorcas are bred before perfection is arrived at. Why, then, should not an ideal Minorca be of the same value as an ideal partridge Cochin or dark Brahma? Again, in Langshans: Is the perfect bloom and iridescent colour so easily obtainable, the exact amount of leg and toe feathering, the color of the legs and feet, the

shape, the head, the carriage? If so, why is it that in the gigantic classes which have lately, at many shows, come before the judges, after some half dozen are picked out, the remainder frequently err in some feature or other. If Langshans can be bred to pattern, because they are black, as readily as are sparrows, why is it not daily done? Take, next, white Wyandottes—a comparatively fresh variety—and see what will have to be done to eradicate the pale-coloured legs and the straw-coloured hackles which are now to be found in many strains. In white Leghorns, again, are one-tenth of the chickens which come to maturity white in lobes and deep orange in legs? I dare to say that out of 100 white Leghorn chickens of six months old, it would be more difficult to find half a score of perfect ones than it would be to discover double the number of coloured Dorkings out of the same quantity (100) of birds. White Cochins, once more! How about sandy breasts, black-tipped hackles, which only show up vividly when wetted—but play such disastrous havoc in the breeding pens—and green-coloured legs? Are not, alas! those blemishes to be found sometimes, and generally, moreover, in the otherwise best-looking specimens? So I might continue to go on through many, or all the varieties, but enough has been said.

I can, however, only return to my starting-point, and remark that amateurs and others starting white poultry or black will find them just as interesting to breed as ever they will birds of feather, and to require their skill, intelligence, and patience as much as ever do Brahmans or Hamburgs, or Game. I really, hope, therefore, to see these varieties more taken up—especially the most neglected ones—for they are every whit as useful for the table, or for supplying the egg basket, as are any of the varieties, and in the blacks, particularly, probably more so. No one can say, moreover, that while birds of raven colouring are pre-eminently suitable for towns, small enclosures, and even back yards, that groups of white poultry in a park, or home paddock, or on a lawn, have not a most pleasing appearance. That eminent fancier, the late Mr. Edward Hewitt, of Sparkbrook, near Birmingham, once went so far as to tell me that a group of white Cochin pullets, just commencing to lay, was his *beau ideal* of a poultry picture.

In conclusion, should these lines, as I hope, stimulate anyone to give either a black or a white variety a trial, may I venture to impress the absolute necessity of breeding from really sound-coloured birds, and those of unblemished pedigrees? The black chickens, such as I have described in the earlier portion of this letter, as coming so readily of that colour, would be found, on investigation, probably to

have some brassy hackles, or to be tipped in the wing and breast feathers, while the whites would be dark in underfluff, creamy breasted, or tinted in legs, and it would take years to remedy or to breed out these blemishes. It is, I feel, in consequence of such troubles that several who have taken up black and white poultry—more especially the latter—have speedily put them down again. Such have, probably, been supplied by unscrupulous people who have bred their birds recklessly and at random. Birds of a dead white, and of the most lustrous green black, must alone be used to breed from, and the specimens must in addition, of course, have all the requisite points for breeding up to the required standard.

I would add, that however good a bird may be in exhibition characteristics, I should condemn it for the breeding pen if the colour was in any way faulty whatever, for only from pure whole colours in blacks and whites can pure whole-coloured specimens be expected. To produce such, and to keep the white perfect in plumage and untanned by the weather, and the black as iridescent as a tropical beetle, will absorb plenty of time, and give as much zest to the most intelligent fancier as ever it will to produce a well-laced golden-spangled Poland or a dark *Emilia* cockerel with a jet-black breast.

THE TORONTO POULTRY, PIGEON AND PET STOCK ASSOCIATION.

REGULAR monthly meeting of the above Association was held in Temperance Hall, on Thursday evening, May 11th.

The President unavoidably being absent, Mr. William Barber presided. Mr. Robert Durston, in the absence of Mr. Duff, acted as Secretary.

The minutes of the previous meeting were read and confirmed.

Mr. F. Coulter, proposed Mr. James Gore, and Mr. W. Barber proposed Mr. John Nunn as members. Both gentlemen were accepted.

Mr. Nunn addressed the meeting at considerable length relative to the action of the custom officials in charging a duty of five cents per dozen upon eggs imported from England. Mr. Nunn held that it was never the intention of the government to charge this duty upon eggs for breeding purposes coming from the mother country.

Mr. Brown moved that this Association use what influence it may have with the proper parties in an endeavor to have the objectionable charge removed. Carried.

A nice lot of birds were shown and prizes awarded as fol-

lows:—S. & R. C. brown Leghorns, cock or cockerel, 1st J. Cardwell, 2nd, T. Wood, hen or pullet, 1st & 2nd, T. Wood, 3rd, J. Cardwell. Black, white (S. & R. C.) and buff Leghorns, cock or cockerel, 1st J. Brown, 2nd F. & C. Coulter, hen or pullet, 1st J. Brown, 2nd F. & C. Coulter. Pekin and booted Bants, cock or cockerel, 1st D. G. Davies, 2nd F. & C. Coulter, hen or pullet, 1st F. & C. Coulter, 2nd D. G. Davies, G & S. spangled Hamburgs, cock or cockerel, 1st D. G. Davies; hen or pullet, 1st D. G. Davies. A. O. V. Rabbits, buck, 1st W. Fox; doe, 1st W. Fox. Guinea Pigs, boar, 1st W. Fox; sow, 1st W. Fox.

After the members present exchanged reports of the season's hatching the meeting adjourned to meet again in September prior to Industrial Exhibition. Receipts \$4.30.

THOMAS A. DUFF, Secretary.

THE INTERNATIONAL DECIMAL SCORE-CARD ASSOCIATION.

PREAMBLE.

BELIEVING that a large contingency of the poultry breeders and exhibitors of fowls feel the necessity of a score-card that is in strict conformity with the written text in the Standard of Perfection, and for one in which no section appears not described by said Standard for the breeds—one securing the greatest despatch by its use in the primary use of score cards, to wit, their exhibition use; yet its use to become a record of the inherent merit of the specimen judged, and thus a help to the amateur, beginner and would be buyer of fine specimens. Believing this, we, the charter members of this association, band ourselves together under a constitution and by-laws, to be formulated from out of and in spirit with the following resolutions.

1st. *Resolved*, That this association shall be known as "The International Decimal Score-Card Association."

Its aim being to promote by every legitimate means harmony among its members and the fraternity, and united action among its lodges and exhibitions in the protection of all thoroughbred fowls; by the dissemination of all useful and special information, knowledge and compilation of facts pertaining thereunto, even to the creation of an organ for said purposes.

2nd. *Resolved*, That no score card of merit shall be issued by our judges to specimens not having secured the indorsement of this society, or that of the American Poultry Association, as breeds completely bred. That harmony of action and mutual support of the industry may be observed by both, conceding all right to the sole and full control of

the Standard to the A. P. A.; but asking of them their official consent to use the decimal score card in applying the Standard, that we may be a co-worker in the field with them.

3rd. *Resolved*, That our judges shall not, nor our members permit specimens to be judged, without considering the weight, or judging them at a fictitious weight, under the penalty of public expulsion from the association.

4th. *Resolved*, That absolute justice can only be secured by the application of all standards through a single medium for each and all breeds. And believing the best medium yet formulated to be the decimal score card, it being the only one dealing with shape and color, pure and simple, settling all defects in each specific section by the written law of the Standard, having no section but which is definitely described by the same, and holding up the principle of perfection of equal importance in the section, as in the whole.

5th. *Resolved*, As the use of all standards are to discount the specimen for defects, whose influence on the same is determined by the per cent. thereof, makes it absolutely necessary that each section have an equal and fixed value in points, which is best served by a scale of points fixed in a score card of ten sections of ten points each, thus securing the numeral value of the cut for the same per cent., the same in each and all breeds.

6th. *Resolved*, That it is our special work to protect to the uttermost all complete bred breeds from the evils of mongrel breeding and huckster rule at our fairs and exhibitions, thus holding up to respect the term "thoroughbred" as applied to fowls.

7th. *Resolved*, That all new aspirants for thoroughbred classification shall have been publicly bred five years, and present ability to produce 60 per cent. of their progeny in the shapes and colors consistent with the claims for the breed, before the same shall be acknowledged completely bred. And until such time it may and shall be only received on exhibition in Class L, under rules and provisions found in said class (see classification). That they shall only be received under new and typical names; as no new creation will be accepted under the names or parts of names now existing in the Standard list.

8th. *Resolved*, That the best results and influence to be derived from poultry exhibitions will be secured when all exhibitions shall be held under one set of rules—one classification—and standard applied by one score card; therefore we recommend that the country be divided into five grand divisions—the New England, Middle, Southern, Western and Northern, the latter to consist of the provinces of Canada, Manitoba and British Columbia. The grand divisions to be governed by a board of control consisting of a delegate from each lodge or society in said division.

Their duties to secure no clashing of dates in their exhibitions, and such other legislation as will secure harmony between the lodges and promote the well being of the association. It is well known that a radius of three hundred miles covers in most cases the extent exhibitors will send exhibits, therefore if no clashing of dates in divisions are secured no harm can come from this source and unity of action.

9th. *Resolved*, That experience has taught that a certain number of individual memberships in all national poultry organizations is necessary to cement solidly together and secure the continuance and effectiveness of the same. Therefore the use of these charter members who will, with the vice-president of their respective states, receive all available matter, and with these vice presidents be held responsible for the association's interests in their state, the constituting of the lodges or societies, for the improvement, protection and exhibition of the products of poultry culture under the auspices and rules of this association in their midst.

10th. *Resolved*, That to secure the best results, that all legislation by this international association will be effected by a vote secured to its entire membership, and said voting to be by mail, thus eliminating everything of a political nature from the organization, its aim being to secure equal rights to all and best good of the greatest number of the entire fraternity.

11th. *Resolved*, That the list of officers for the national organization shall be

A president.

A secretary and treasurer.

A vice-president from each state, who shall be elected by the members of his state, he becoming one of the executive committee with the president and secretary, *ex officio*, of the national organization. And his further duties—to receive all available matter from the head secretary; securing such votes from the lodges and membership of his state as are necessary, and forward the same with his certificate to the secretary of the national association.

A standing committee of five, seven or nine as the association shall elect, whose duties it shall be to receive all propositions of proposed law for a standard, or of the association, and formulate the same into bills susceptible of disposal by a yea or nay vote; which shall by the secretary be forwarded to the vice-president for the votes of the state, and all other matter in keeping with such service.

12th. *Resolved*, That after the organization of this association, all memberships must be through the state organization by application, indorsed by two or more of the mem-

bers of the state in which the applicant shall live (unless said state has no membership, when his application must come to the national society), thus holding each state responsible for the morals and integrity of its members.

13th. *Resolved*, That the relations between secretary and president should be those which secures at all times to both a thorough knowledge of the society's business, thus making it undesirable for both offices to be vacated at one or the same time. Therefore, while elections will be for two years, at the first election the secretary will be for one year, that all subsequent elections to these offices may come in alternate years. And that the retiring president become the president of the judges committee, to be constituted as shall be elected by the association.

14th. *Resolved*, That when deemed desirable this association may assemble in meeting with its state lodges, and with them make exhibitions. But all legislation at such meetings shall be subject to a vote of the entire association to ratify the same before it shall become law or have effect.

15th. *Resolved*, That the expenses of the international association shall be at a minimum consistent with perfect service and effectiveness of the organization; therefore it shall be the first duty of the president to appoint a finance committee to canvass this question and report at an early date.

Also that a committee be appointed to draft constitution and by-laws to permanently govern the association, which shall be in spirit and intent with the resolutions, classifications and rules herein presented.

CLASSIFICATION.

All Open Classes.—All premiums cash. Shall be offered in our open classes and constitute 1st, 2nd and 3rd prizes. Five entries or more and nine or more specimens demanded; when any breed has a less number of entries one-half the cash offered will be withheld.

Auxiliary Classes.—In all auxiliary classes the premiums will be complimentary, to wit, ribbons, cards, medals, etc., unless any one breed or more has five or more entries and not less than nine specimens, when it will be transferred to such open class as it legitimately belongs, and then receive the benefits of said open class.

PREMIUMS.

The premiums offered are 1st, 2nd and 3rd; but all specimens scoring 93 or more and having failed to win either of the foregoing prizes, such specimens shall receive "highly commended" cards of merit.

POINTS TO BE SECURED TO WIN.

All special premiums shall rank as and with

1st prize must score 92 or better to win.

2nd prize must score 90 or better to win.

3rd prize must score 88 or better to win.

No prize, whatever its rank, will be given under this association to specimens scoring less than 88 points.

All specimens scoring but 86 and less are to be disqualified for want of merit and cards withheld, thus condemning all such to kitchen use.

THE CLASSIFICATION RECOMMENDED.

Open Class A.—Barred and White Plymouth Rocks, White, Golden and Silver Laced Wyandottes, and Black Javas.

Auxiliary Class A.—White and Mottled Javas, American Dominiques, Jersey Blues, Pea-Comb Plymouth Rocks, Russians, Red Caps and Sumatras.

Open Class B.—Light and Dark Brahmas, Buff, Partridge, Black and White Cochins.

Open Class C.—Black Minorcas, Black Spanish, White and Brown Leghorns.

Auxiliary Class C.—White Minorcas, Black and Dominique Leghorns, and Andalusians.

Open Class D.—White Crested, Black, Bearded, Golden and Silver Polish.

Auxiliary Class D.—Plain, Golden, Silver, Buff and White Polish.

Open Class E.—Black, Golden and Silver Spangled and Penciled Hamburgs.

Open Class F.—Silver Gray and White Dorkings and Houdans.

Auxiliary Class F.—Crevecœurs, La Fieche, Colored Dorkings.

Open Class G.—Black red, Brown-red, Golden and Silver Duckwings, Red Piles and Indian Games.

Auxiliary Class G.—Black and White Indian Games, and Pit Games in the following colors (color to be secondary, but to be considered)—Black-Reds (Brown and Ginger Reds together), Blue-Reds (all Duckwings together) and Pile Games.

Any one breed having five or more entries and nine or more specimens to share the benefits of an open class, at such cash offering as exhibitors shall determine. But all auxiliary prizes have their effect in adjudicating for collection.

Open Class H.—All Standard Game Bantams.

Open Class I.—All Standard Bantams other than Games.

Auxiliary Class I.—All non standard and new creations in Bantams. Prizes subject to societies and discretion of judge.

Auxiliary Class K.—Sultans, Silkies, Rumpless, all oddities and monstrosities. Awards at discretion of judge.

Auxiliary Class L.—All new creations not accepted as complete breeds by this association or the A.P.A.; breeds in their transition state; barring all offered under names of old and complete bred varieties. New breeds must be offered with new names not now existing in the Standard. Cross-breeds will not be accepted as breeds.

Auxiliary Class M.—In this class all crosses for specific purposes—for poultry meat, egg products, records for breeding, and rearing to accomplish same. For which premiums will be offered at discretion of the local societies and judges.

Sale Class N.—In this class all specimens for sale only, at such entry fee as societies shall determine.

When scored to effect a sale, the entry fee shall be that received in the open classes.

This class will receive all specimens for exhibition only. If exhibitors wish such specimen to occupy space in the open class, full open class entry fee will be charged.

DEFINITION OF COLLECTIONS.

A collection for a single breed shall consist of not less than a cock, hen, cockerel and pullet, and a pen of one male and four females, nine specimens or more.

A collection of breeds, or a grand collection, shall be not less than three full single breed collections of twenty-seven or more specimens—nine or more of each breed.

[NOTE.—The foregoing classification and rules will enable our lodges, making exhibitions, to pay liberal cash premiums in their open classes which will secure creditable entries and protect them against the spoiling grasp of the huckster, who roams the country with sinners' pairs of mediocrity and secures the same cash prizes that await the winners in heavy competition. It also enables any legitimate breeder to make a respectable entry in any breed and secure the advantages of open, money classes and creditable awards, yet furnishing space for entries to be exhibited and get recognition, and secure all collection prizes to worthy collections.]

LEGISLATION TO BE ASKED FOR BY THE INTERNATIONAL DECIMAL SCORE-CARD ASSOCIATION OF THE AMERICAN POULTRY ASSOCIATION.

1st. That the A. P. A., grant their official sanction for the use of the decimal score card to apply the Standard of Perfection. That the granting thereof may remove all semblance of any antagonism between the two associations.

2nd. That they institute as a disqualification "all specimens scoring 86 or less be disqualified for want of merit," and such score cards withheld.

[NOTE.—We ask this for the protection of the novice, beginner and would be buyer, who has looked upon the possession of a score-card as proof of excellence. For the associations would demand first-class score as records of excellence and protection, thus condemning all inferiors to kitchen use.]

3rd. We ask that all color disqualifications shall be repealed, or made to effect all breeds of same characteristics.

alike, to wit.: If Brown Leghorns are to suffer the present injustice, that Partridge Cochins, Golden Wyandottes Golden Spangled and Penciled Hamburgs, Black and Brown Red Games shall also be disqualified for white. If white is to be retained as a disqualification, that this color disqualification shall read, to wit: "Positive black in the plumage of any solid white breed, absolute white in the plumage of all black breeds—Partridge Cochins, Golden Wyandottes, Golden Spangled and Penciled Hamburgs, Black and Brown Red Games, except the sickles of Brown Leghorns, Black Red, and Partridge Cochin males." And that discrimination be given the judges to cut as defects, the isolated minute black flecks in whites, and those faded minute points in flights of all dark-wing fowls, consistent with the rules of giving the specimen the benefit of the doubt in all perplexing questions. Justice and equity, not technicality, to be the spirit of dispensing the law of the Standard.

[NOTE.—It is safe to say, that in the past, more injustice has been meted out under color disqualifications than all others combined. Who has not seen magnificent Brown Leghorn and Partridge Cochin males disqualified for flecks of white no larger than a pea?]

4th. We will ask further, that vulture hocks shall disqualify all feather legged breeds; that feathers on shanks or feet shall disqualify all smooth legged breeds. Crooked backs and tails decidedly wry for all breeds. Combs twisted or lopped in males of all single combed breeds, falling to either side; clubbed, or absence of spike, or so large as to obstruct the sight, in all rose-comb breeds. That all disqualifications for combs in females be repealed, except combs other than single, in single comb varieties; and clubbed and absence of spike in rose-comb varieties.

[NOTE.—It is a conceded fact that females with large comb development are our best layers, more vigorous, and their eggs hatch best; that this comb development is seriously effected by the vigor accompanying egg production. That in consideration of the practical worth and money earning power of the females out of show seasons, demands this much protection, for the cuts received for these as defects are equal to the handicap of disqualification for the male.

5th. We ask that all specimens being dubbed, that such in being judged by the score card be cut one point. None will deny that there is fully one point saved in defect on an average by this process. This reduces such specimen to an equal competition in points with other undubbed breeds; this is justice. Such a course would do away with handicaps in collection prizes.

6th. That the A.P.A., define the term tail spread laterally to mean—spread at base like, and at the same angle as the standard capital letter A; when either less or more to be a defect.

The above subject to modification by standing committee.

The foregoing we, the charter members of the International Decimal Score-Card Association, subscribe to and recommend for adoption and action.

I. K. FELCH.

Sec'y pro-tem.

A VISIT TO THE CENTRAL EXPERIMENTAL FARM.

WHILE in Ottawa last week, I paid a visit to the Central Experimental Farm, which is beautifully situated on rising ground, about a mile from the city. The farm is in a fine state of cultivation and there are a number of fine buildings for various purposes on it. As might be expected, I gave most of the time at my disposal to a visit to the Poultry Department. Here I found Mr. A. G. Gilbert, the manager, busily engaged in caring for his pets. He at once took me in charge and showed me through the poultry buildings, which were scrupulously clean and fitted up with the latest appliances. The pens are large 10 x 16, I should think, and contained one male and seven or eight females. Only two or three pens were still confined, to secure eggs for hatching, Mr. Gilbert being desirous of filling a few orders that he had for eggs. The demand for both eggs and cockerels in the past has been so great that he has not been able to fill all orders.

Early hatches have been poor at the farm as elsewhere, this year, but there are a good number of May and early June chicks, consisting of barred and white Plymouth Rocks, light Brahmas, white Leghorns, golden Polands, Houdans, Langshans, silver-laced Wyandottes, Andalusians, black Minorcas, &c. Hens are used for hatching, and the chicks have nice large grass runs, with plenty of shade. Mr. Gilbert seems to thoroughly understand his business, and appears anxious to give all information possible to visitors. Eggs and stock have been sent to the other experimental farms under the direction of the Dominion Government, at Nappan N.S., Brandon, Man., Indian Head, N.W.T., and Agassiz, B.C. Experiments are being made in crossing fowls, there being some fine specimens of white Leghorn—light Brahma crosses, in fowls and chicks. Mr. Gilbert says they make good general purpose fowls, but believes thorough bred stock is better, if not too much inbred. I have to thank Mr. John Craig, the horticulturalist, and Mr. Jas Fletcher, the entomologist and botanist, for attentions shown me during my visit, as also Mr. Gilbert. I would advise any of your readers who may visit the Capital of our Dominion, to be sure and visit the Farm, if they are interested in agriculture, horticulture, dairying or poultry raising.

Wingham, June 24th, 1892.

R. ELLIOTT.

NOTES.

FROM THE ENGLISH *Stock-Keeper*.

WE learn that Mr. R. E. Williamson has shipped Mr. Geo. G. McCormick a black Cochin cock. It will be recollected we recently mentioned that Mr. McCormick had taken up this breed, and had purchased all Mr. McNeil's stock of this handsome variety.

INCUBATORS AT THE INDUSTRIAL...

The incubator contest at the Industrial exhibition, Toronto, seems to be exciting some interest, though we feared at first the affair would be quite tame. Mr. John Chambers, Commissioner of Public Parks of Toronto, has kindly consented to take charge of the machines which will be locked into the building, devoted during exhibition, to pigeons and the key placed in Mr. Chambers charge. The eggs are to be placed in the machines in time to hatch out during the Monday of the second week of the exhibition, the day on which the exhibits in the poultry section go in. Any intending exhibitors should apply at once to Mr. Hill, the manager, for further information.

DOMINION EXPERIMENTAL FARM OTTAWA.

REPORT OF THE POULTRY MANAGER, A. G. GILBERT.

To WILLIAM SAUNDERS, Esq.,
Director Dominion Experimental Farms, Ottawa.

SIR,—I have the honour to submit to you the fifth annual report of the Poultry Department for the year ending 15th January, 1893. In my last report, which extended to 29th February, attention was given to the effect of a morning warm ration on a certain number of fowls. The ration was composed of:—

	Lbs.	Oz.
Bran.....	2	8
Shorts.....	2	8
Ground meat.....	1	8

with clover hay and a small quantity of coarse sand and fine ground oyster shells mixed, with the object of preventing eggs being laid with soft shells, or no shells at all.

It had been noticed in previous years the laying stock were most addicted to the vicious habits named during the month of March. Consequently, careful attention was paid to the layers during that period, and it was found that the vices were not indulged in to the same extent as formerly. This may have been owing to the mixing of the oyster shells and coarse sand in the soft feed, but no definite con-

clusions could be arrived at from one observation. The same ground is being gone over this season with certain additions to the rations of last winter, which are noted elsewhere.

SOME OBSERVATIONS AND THERE RESULTS.

It was observed, however, that the fowls in the pens containing the lesser number were freer from vice than the more crowded ones, thus showing the benefit of room and comparative range. The importance of farmers giving their laying stock as much room as possible was impressed upon them in my last report in the following words:—"The layers do better when they can enjoy as much freedom as possible. Many farmers have their poultry house so arranged that with very little trouble or expense they can allow their fowls access to a barn, stable, or inclosed shed, where gravel, sand, coal ashes, or other substances may be found for the hens to scratch in. Fowls so situated are not likely to give way to egg or feather eating, or lay eggs with soft shells or no shells at all." The experience of the past season confirms this. The observations of the past few seasons also lead to the conclusion that in constructing winter habitations for fowls it would be a good plan to have half the floor of the pen covered with straw litter and the other half with coarse sand and gravel, or half wooden flooring and the other half dry earth. Placing the earth on the board floor would be more likely to keep it dry, which is absolutely necessary. Experience with earth, on board floors, has shown it would not be necessary to remove the earth for three or four months, provided it was occasionally raked over and a small quantity added at the same time.

A TEST OF DIFFERENT BREEDS.

A good opportunity was afforded of trying different breeds in enforced confinement when the breeding house was completed at the end of February last, but the construction of the outside runs was unavoidably postponed for some months later. The house contained 12 pens 8 x 5 feet each, and they were calculated to hold five or six females and one male. The following were placed in the building:—

- Pen 1.—White Leghorns : 7 pullets, 1 cockerel.
- " 2.—Black Minorcas : 5 hens, 1 cockerel.
- " 3.—Andalusians : 5 pullets, 1 cockerel.
- " 4.—Plymouth Rocks : 7 pullets, 1 cockerel.
- " 5.—Wyandottes : 5 pullets, 1 cockerel.
- " 6.—Houdans : 5 hens, 1 cockerel.
- " 7.—Black Hamburgs : 6 hens, 1 cockerel.
- " 8.—Langshans : 4 hens, 1 cockerel.
- " 9.—Buff Cochins : 5 hens, 1 cockerel.
- " 10.—Red caps : 3 pullets, 2 hens, 1 cockerel.
- " 11.—Coloured Dorking : 4 pullets, 1 hen, 1 cockerel.
- " 12.—Golden Polands : 3 hens, 1 cockerel.

The results desired to be gained by observation of the breeds named in close confinement were:—

1. The breed to first develop vice.
2. What that vice might be.
3. What breeds stood the close confinement best.
4. To find a remedy, if possible, for any vice developed.

When the fowls were placed in the house the floor of the pens was covered with straw litter, but some of the heavier breeds became so palpably out of condition that a change of some kind became necessary. The straw litter was removed and coarse sand and fine gravel substituted. This had a beneficial effect, as the condition of the stock quickly improved. Vegetables, grit, &c., &c., had been supplied to the different pens.

RESULTS OBSERVED.

The first to develop any vice were the black Minorcas, which after laying well for two months began feather eating.

They were followed soon after by the Andalusians which displayed the same vice. This breed did not lay, meanwhile, as many eggs as the former.

The black Hamburgs, Wyandottes and Red Caps followed and it became evident that change of treatment was at once necessary, or all would go the same way. The Red Caps, Dorkings, buff Cochins and Houdans were removed to a larger pen, with outside run, and the black Minorcas were allowed out to run at large, but, as it was the breeding season only one pen of fowls could be allowed out at a time. The worst cases were let out oftener than the others. As soon as the fowls got out they ceased the vicious habit. It was noticed that while the Minorcas picked feathers vigorously they did not eat eggs, but this may have been owing to a nest box of improved pattern and which kept the eggs more secluded than those formerly in use. Or, it may have been owing to the gravel and grit always on the floor.

THE REMEDY.

The only effective remedy found was to let the fowls outside. It was plainly evident that the long winter confinement in the one house protracted in the more limited space of the second was the cause of the feather picking. This experience goes to show that while meat, grit vegetables, &c., are absolutely necessary at all times, and are no doubt deterrents up to a certain date, that close confinement will eventually end disastrously,—another strong argument in favour of as much freedom as possible, under all circumstances, to both laying and breeding stock. It may be noticed that no bone food of any sort was used, although ground meat was given at stated intervals. Some time ago a mill for cutting green bones was procured and the bones so cut (not ground) are being fed at regular intervals. It will be inter-

esting to note the effect, as much has been claimed for a "green bone ration," one of the claims being the prevention of feather and egg eating.

SOME OBSERVATIONS.

Briefly stated, the observations noted were:—

1. Six black Minorca hens after laying well for some months were the first of 15 breeds to develop feather picking.
2. The replacing of the straw litter on the floor of the pens by earth, had a good effect.
3. The earth on the board floor, occasionally raked over and renewed kept remarkably clean for 5 months.
4. The most of the droppings were deposited during the night on the platforms under the roosts. These platforms were cleaned every morning and folded up against the partitions, so allowing more scratching room.
5. Keeping the pens scrupulously clean seemed to teach the fowls cleanly habits.
6. The earth when removed was a valuable manure.
7. That close confinement may be borne for a longer or shorter period, according as the essentials are supplied, but eventually ends disastrously.
8. The only remedy found was allowing the fowls outside range.
9. When it is impossible to allow the fowls, in winter, to shed, barn or other scratching ground, put fewer in a pen.

A CONTRAST.

In the pen next to the black Minorcas were six white Leghorn pullets (yearling hens in May). Under the same condition they laid well, six eggs per diem being occasionally gathered from them. They developed no vice and kept in excellent condition although evidently anxious to get out. This result was as surprising as it was unexpected for belonging to the nervous, high flying, Spanish class, it was not anticipated that they would stand the strain as well as the heavier Asiatic breeds. Perhaps this one case should not be taken as a criterion.

BREEDING PENS MADE UP.

The different breeding pens were made up as follows:—

Breeds.	Number in Pen	When Mated
Langshan.....	4 hens, 1 cockerel.....	March 5.
Andalusian.....	5 pullets, 1 cock.....	do 8.
Golden Poland.....	3 hens, 1 do.....	do 9.
Plymouth Rock.....	7 pullets, 1 cockerel.....	do 17.
Brahma.....	7 hens 1 do.....	do 17.
White Leghorns.....	7 pullets, 1 do.....	do 25.
<i>Crosses.</i>		
4 Plymouth Rock hens.. } 3 Brahma hens..... }	White Leghorn, cock.....	April 8.

Other breeding pens were made up as stated in another page describing the behaviour of certain breeds in close con-

finement. The buff Cochins are omitted from the list, as the pen was broken up, owing to the death of two hens and the cock. The Plymouth Rock cockerel also died but another fine bird was purchased and placed in the pen. Such was the demand for eggs during the hatching season that extra pens had to be made up of white Leghorns and Plymouth Rocks; and still all the orders could not be supplied. The following birds were purchased in order to infuse new blood:—1 Brahma, cockerel; 1 Langshan, cockerel; 1 white Leghorn, cock; 1 Plymouth Rock, cock. The new breeds added to the stock were Red Caps, coloured Dorkings and golden Polands.

insurances may be mentioned, 26 Minorca egg from Guelph, and 13 Andalusian eggs from Toronto, the former giving 23 chicks, and the latter 12. In another case, but latter in the season, 15 of the farm eggs resulted in 14 chicks. On the other hand, 13 buff Cochin eggs from the United States yielded only 4 chicks. As a rule, eggs which come from, or go to a long distance, do not give satisfactory results.

THE SITTERS—A FEW POINTS.

Full instructions as to the proper management of the sitting hens will be found on page 209 of 1890 report, copies of which can be had on application. A short summary may be useful to those who have not read previous reports.

1. For an early setter select a medium sized hen.
2. In the early part of the season give 11 eggs. More are apt to be chilled, unless the nest is in a very warm place.
3. If possible set two hens, about the same time. On the fifth or sixth day test the eggs, remove the unfertile ones and give the remainder to one hen, resetting the other.
4. The nest should be made of cut straw, and placed in a quiet spot away from the laying stock. It should be well dusted with carbolic disinfecting powder.
5. China eggs should be placed in the nest, and the sitter allowed to remain on them for two days, before the valuable eggs are given to her.
6. Meanwhile the carbolic disinfecting powder has probably rid the body of any vermin.
7. During the hatching period, the nest and hen should be occasionally dusted with disinfecting powder.
8. The sitters and eggs should be examined every morning, to see if all is right.
9. Should an egg be broken in the nest, the others ought to be at once taken out, gently washed in luke warm water and replaced under the sitter. If soiled, the nest straw should be replaced by clean stuff.
10. Machines for testing eggs can be procured at a cheap price from an incubator maker, or a drawing of one may be had from a poultry paper and a local tinsmith can easily do the rest.

(To be Continued.)

Send us the names of your friends on a postal card who may be interested in poultry, so that we may send them free sample copies.

We are always glad to get brief notes of experiences in breeding, mating, hatching, etc., in fact any little item that you think would interest or be of any use to others. The Review has room for all.

EGGS SET AND CHICKENS HATCHED.

When Eggs were Set.	Description of Eggs.	No. of Chicks hatched	When Hatched.	Remarks.
March 25...	11 Red Cap.....	7	April 15....	
do 28...	7 Coloured Dorkings.....	5	do 18....	
April 19...	12 Plymouth Rock.....	10	May 10....	
do 23...	13 Andalusian.....	12	do 12....	From Toronto.
do 30...	13 Crosses White Leghorn and Brahma.....	5	do 20....	Imported.
do 30...	13 Buff Cochins.....	4	do 20....	
May 12...	9 Crosses, 4 White Leghorn.....	9	June 2....	
do 16...	13 Black Minorca.....	11	do 6....	From Guelph
do 16...	do.....	8	do 6....	do
do 22...	do.....	7	do 11....	
do 23...	13 Plymouth Rock.....	9	do 13....	
do 24...	13 White Leghorn.....	5	do 14....	
do 27...	13 Crosses White Leghorn and Brahma.....	8	do 17....	
do 27...	6 Brahma, 7 Langshan.....	7	do 17....	
do 31...	6 White Leghorn, 7 Langshans.....	13	do 21....	
June 4...	13 Langshan.....	9	do 25....	
do 9...	7 White Leghorn, 6 Wyandotte.....	8	do 30....	
do 13...	6 White Leghorns, 5 G. Polands, 2 Wyandotte.....	10	July 4....	
do 14...	7 Black Minorcas, 6 Brahma.....	8	do 5....	
do 18...	7 Wyandottes, 6 Plymouth Rock.....	2	do 9....	
do 18...	5 h. Minorcas, 5 Brahma, 3 G. Poland.....	11	do 9....	
do 22...	7 Wyandottes, 6 Brahma.....	4	do 13....	
do 29...	7 Langshans, 6 Golden Polands.....	9	do 20....	

It will be seen from the above that some of the eggs procured from a distance hatched remarkably well. As



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Poultry.

Sharp Butterfield, SANDWICH, ONT. All varieties.

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Mr. J. H. Cayford, Box 1,188, Montreal is our Agent and Correspondent for the Province of Quebec. Any correspondence relating to subscriptions or advertising may be addressed to him.

"The Dog in Health and Disease," by Prof. Wesley Mills, Montreal, \$2.25, free by mail from GAZETTE Office.

The Canadian Poultry Review

- - Is Published at - -

TORONTO, ONTARIO, CANADA.

BY H. B. DONOVAN

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WHITE WYANDOTTES.

Geo. G. McCormick, London, Ont.* 193
Robt. Bloye, Todmorden, Ont. 394
Wm. Langdon, Port Hope, Ont. 594

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Jacob Dorst, 565 Logan Ave., Toronto. 593
M. B. Hague, Inglewood, Ont. 1093
J. L. Margach, Port Hope, Ont.

GOLDEN WYANDOTTES.

Wm. H. Ulley, 58 Victoria Sq., Montreal, Que. 394

BLACK JAVAS.

J. D. Robertson, Box 164, Guelph, Ont. 293

WHITE P. ROCKS.

L. G. Pequegnat, New Hamburg. 293
Wm. P. Leggett, Salt Point, N.Y., U.S.A. 293

BARRED P. ROCKS.

Jas. McLaren, Stephen St., Owen Sound. 393
R. Downs, Garrison Commons, Toronto. 393
J. Bennet, 189 Bathurst St., Toronto. 593
W. H. Locke, Campbellford, Ont. 194
L. G. Pequegnat, New Hamburg, Ont. 294
Wm. P. Leggett, Salt Point, N.Y., U.S.A. 294

S. C. B. LEGHORNS.

R. Elliott, Wingham, Ont. 394
J. L. Margach, Port Hope, Ont. 394

DARK BRAHMAS

Jas. McLaren, Stephen St., Owen Sound. 393
Fred. S. McGillis, Brighton, Ont. 494

LIGHT BRAHMAS.

Wm. P. Leggett, Salt Point, N.Y., U.S.A. 294
Fred. S. McGillis, Brighton, Ont. 494

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RULES—1. All purchases must be sent on approval, buyer to pay charges each way unless otherwise arranged.

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This Coupon is good for one advertisement of 30 words in the "For Sale and Exchange" or "Stock Transfers" columns.

Canadian Poultry Review, Toronto, Ont.

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