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999 QUESTIONS AND ANSWERS

A GUIDE TO SUCCESS WITH POULTRY,
WRITTEN AND ARRANGED IN THE
FORM MOST HELPFUL TO THE
FANCIER AND THE MARKET POULTRY-
MAN, THE AMATEUR AND THE EXPERT

BY FRANK HECK

PRICE ONE DOLLAR

PUBLISHED AND COPYRIGHTED BY THE
AUTHOR : : : : : : : CHICAGO, 1903

UNIVERSITY OF CALIFORNIA.

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No.

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Preface.

In offering the contents of this volume to those who are interested in poultry culture, it has been the object of the author to make clear the fundamental principles of successful poultry raising and to impart such general information as will in a measure meet the demands of the poultryman who is sufficiently interested in the work to seek a detailed knowledge of the numerous conditions with which he is confronted. The experienced breeder will, of course, find much that is not new to him, but it is hoped that to all who are not close students of the vocation, there will be presented a few ideas worthy of consideration, and that the book will possess merit as being convenient for ready reference and for refreshing the memory to advantage occasionally. Its greatest value, perhaps, will be to the amateur or beginner who feels the need of information of a purely rudimentary character, as well as a knowledge of the more intricate problems, the correct solution of which has so great a bearing upon success. An effort has been made to cover both branches of the business usually designated as fancy and utility, and to aid both the fancier who breeds fowls for pleasure and exhibition and the market-poultryman who is interested only in the number of eggs and pounds of flesh that his fowls produce. Theories and undemonstrable deductions have been eliminated, or designated as such, and the positive conclusions arrived at are supported by the experience of acknowledged authorities and conspicuously successful breeders, as well as the experience of the author as a breeder, exhibitor, judge and editor, in which positions the numerous phases of the business have been presented and dealt with. The great variety of topics and the nature of their arrangement precludes the possibility of a detailed classified index, and, in the absence of it, the reader will find it convenient to designate by marginal notes those questions which may be of greatest interest and to which it is desirable to refer often. The form adopted for presenting the information—namely, that of questions and answers—has been chosen for the reason that it responds to a universal and unmistakable demand for knowledge in few words and to the point, devoid of all unnecessary and uninteresting preliminary introductions and supplementary comments of a general character. The fondest hope of the author is that the book may prove of real value to those into whose hands it may fall.

THE AUTHOR.

Sept. 1, 1903.

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Special Questions for the Fancier.

QUESTION—What is the single mating plan of producing Barred Rocks?

ANSWER—By single mating is meant the selection of a Standard colored male mated to Standard colored females with a view to producing both males and females of Standard color from the one mating. A mating of this kind usually produces males that are too light in color and females that are too dark.

QUESTION—What is the double mating plan of producing Barred Rocks?

ANSWER—It is the system of using birds of different shades of color to produce Standard colored birds. In order to produce Standard colored exhibition males, a male bird of Standard color is mated to females a few shades darker than Standard. The males from this mating will be good in color and the females very much too dark. To produce Standard colored exhibition females a male a few shades lighter than the Standard is mated to females that are Standard. The females from this mating will be of the proper color, but the males will be much too light.

QUESTION—Is double mating practiced with other breeds than the Barred Rocks?

ANSWER—Yes, nearly all parti-colored breeds have some friends who believe in double mating.

QUESTION—What is meant by “culls”?

ANSWER—The term “cull” is given to fowls that are from the best breeding, but are lacking in strong development of one or more features which must be present to make them good exhibition specimens.

QUESTION—How is the score of a pen of birds in the show room determined?

ANSWER—An exhibition pen consists of four females and one male. The scores of the four best females are added and this total divided by four. To the amount thus obtained is added the score of the male, and this total is score of the pen,

QUESTION—What causes brassy color in white fowls?

ANSWER—It is inherited from ancestors the same as any other color or characteristic, but it is often intensified and first brought out by exposure to the hot summer sun.

QUESTION—When can a breeder claim to have strain?

ANSWER—A strain is a family of any variety of fowls bred in line by descent, by one fancier or a successor, during a number of years, that has acquired individual characteristics which distinguish it more or less from other strains or specimens of the same variety.

QUESTION—Does continued confinement in the show room for three or four weeks injure birds as breeders?

ANSWER—Yes, in most cases. The best of feed and care and favorable conditions generally are necessary to offset the effects of the confinement.

QUESTION—What causes crooked breast bones?

ANSWER—Roosting too early or roosting on perches that are too narrow.

QUESTION—Does the feeding of yellow corn have a tendency to increase or maintain the brassy and cream color in white fowls?

ANSWER—There is a more or less common belief that it does, but no one has ever yet satisfactorily proven it.

QUESTION—What causes wry tail, and is it hereditary?

ANSWER—It may be a constitutional defect, in which case it would to some extent be transmitted to the offspring. It may also result from an injury or forced carriage of the tail, in which case it is not hereditary, and may be overcome in the specimen affected.

QUESTION—Is it possible for adult fowls to naturally develop off color in one or more feathers?

ANSWER—Yes. In exceptional cases serious debilitating illness may cause it or an injury to plumage, such as a broken feather while it is growing. Such feathers should be pulled, and they will generally grow in again true to color.

QUESTION—Will bantams and the large breeds interbreed if allowed to run together?

ANSWER—A certain amount of crossing will take place and some of the eggs from these matings will prove fertile.

QUESTION—Do buff fowls become lighter with each succeeding molt?

ANSWER—Yes. There is a shade or two difference in the color and a little white may appear, especially in females.

QUESTION—Is the rose comb on the Wyandotte as easy to breed as the single comb on the Plymouth Rock?

ANSWER—There is about the same percentage of good combs found in each breed, but in say 50 birds of equal quality of each breed selected at random the single combs as a lot would approach nearer perfection than the rose combs.

QUESTION—Will a mating of high grade Wyandottes ever produce chicks with single combs?

ANSWER—Occasionally a single comb chick will appear, but it should be discarded.

QUESTION—When was the Standard last revised?

ANSWER—1903.

QUESTION—Which is the most objectionable in buff fowls, black or white?

ANSWER—Some breeders claim that they are equally objectionable, but the majority would rather see black than white.

QUESTION—Is it reasonable to expect cockerels and pullets to reach Standard weight at nine months of age?

ANSWER—Only a portion of any flock will do it and generally not more than 25 per cent.

QUESTION—Does one parent have more influence on the size of the progeny than the other?

ANSWER—It is believed by many experienced breeders that the female influences size and the male, color.

QUESTION—What is meant by “frosting” in the plumage of a fowl?

ANSWER—A marginal edging or tracing of color on feathers of laced, spangled and penciled varieties.

QUESTION—What are the hackle feathers?

ANSWER—The long, narrow feathers growing on the neck of a fowl and out of the saddle of male birds.

QUESTION—What size is best or usual for exhibition coops?

ANSWER—28 inches deep, 30 inches high and any length desired; 18 inches will answer for single birds of medium size.

QUESTION—When introducing new blood into a flock is it better to do it through a male than a female?

ANSWER—Using a male is much quicker and is usually best, but in a long established line-bred flock it is better to use a female.

QUESTION—In breeding for fancy purposes is it advisable to put birds in the breeding pen that score less than 90 points?

ANSWER—No, unless some of the defects are the result of accidents or are such that may be overcome.

QUESTION—Is there any way to remove white from the ear lobes of Plymouth Rocks?

ANSWER—No, except by burning with acids, in which case the lobes are scarred and badly disfigured.

QUESTION—What are the disqualifying weights of Langshans?

ANSWER—Cocks not weighing nine pounds, hens not weighing six pounds, cockerels not weighing seven pounds and pullets not weighing five pounds.

QUESTION—What are the color disqualifications of Black Langshans?

ANSWER—Yellow skin or bottom of the feet yellow in any part. One-half inch of white in any part of the plumage except the foot and toe feathering.

QUESTION—What are the disqualifying weights of Buff Cochins?

ANSWER—Cocks not weighing nine pounds, hens not weighing seven pounds, cockerels not weighing seven pounds and pullets not weighing five pounds.

QUESTION—How much do judges cut for extra points or lack of points on the comb?

ANSWER—One-half point each.

QUESTION—If a fowl has lost an eye what will the defect be cut in the show room?

ANSWER—One point.

QUESTION—Can side sprigs be removed from combs without leaving a scar?

ANSWER—No; the texture of the comb will be smooth and if the sprig is removed while the bird is quite young it will grow out again to some extent.

QUESTION—How long before a bird is to be exhibited can a sickle or other large feather be pulled and have the new one grow in?

ANSWER—From four to six weeks.

QUESTION—Is scaly leg hereditary?

ANSWER—No.

QUESTION—What do judges cut for side sprigs on comb?

ANSWER—One point each.

QUESTION—Does confinement in a warm show room cause the combs of fowls to grow larger and lop over?

ANSWER—Yes, sometimes.

QUESTION—What are some of the principal shows in the different sections of the country where an exhibitor meets the strongest competition and receives the highest honors if he wins?

ANSWER—Lewiston, Me.; Boston, Mass.; Hartford, Conn.; New York City, N. Y.; Trenton, N. J.; Hagerstown, Md.; Pittsburgh, Pa.; Cleveland, Ohio; Louisville, Ky.; Dallas, Texas; Indianapolis, Ind.; Chicago, Ill.; Detroit, Mich.; Milwaukee, Wis.; Minneapolis, Minn.; St. Louis, Mo.; Cedar Rapids, Iowa; Topeka, Kas.; Lincoln, Neb.; Denver, Colo.; Mitchell, So. Dak.; Oakland, Cal.; Spokane, Wash.; Salem, Ore.; Toronto, Canada.

QUESTION—If eyes are not alike in color, how much are they cut?

ANSWER—One point.

QUESTION—Is there any way to straighten combs that have lopped on account of confinement in the show room?

ANSWER—Sometimes the comb will assume its natural position in time. There is no medicinal remedy.

QUESTION—What is used by exhibitors in the show room to brighten the combs and wattles of the birds

ANSWER—A mixture of two parts alcohol and one part glycerine is frequently rubbed on the parts,

QUESTION—Does absence of main tail feathers disqualify a bird in the show room?

ANSWER—Yes.

QUESTION—Does white in the face of Leghorn cockerels and pullets disqualify

ANSWER—Yes, except in Buff Leghorns.

QUESTION—How much lopped must a comb be to disqualify a bird?

ANSWER—It must fall over from an upright position to such an extent that some portion of the top is on or below the level of a horizontal line extending from the top of the head at the base of the comb.

QUESTION—If the wings of a bird are clipped, how would it be discounted in the show room?

ANSWER—If one wing is clipped the cut would be two points and if both wings were clipped the bird would be disqualified.

QUESTION—What do judges charge for visiting breeders' yards and scoring fowls?

ANSWER—Prices differ. Some judges will do it cheaper than others. Write to one near you.

QUESTION—What are the objects of the so-called specialty clubs devoted to various breeds?

ANSWER—They are organized to make the breed they represent more popular and encourage large exhibits at the poultry shows.

QUESTION—What is the highest score a chicken can receive by a competent judge?

ANSWER—We have known them to reach 97 points in a few isolated cases.

QUESTION—What is considered a high score?

ANSWER—Barred Rocks and some other parti-colored varieties seldom go above 93½. A good white bird may reach 95. The birds that can honestly reach these scores are very scarce. There is a tendency among judges to score birds too high.

QUESTION—Is purple barring a serious defect in black fowls?

ANSWER—It should be cut from one-half to two points in each section where it is found.

QUESTION—What is the score card system of judging?

ANSWER—The Standard of Perfection fixes a scale of 100 points for a perfect bird. Each section of the bird is allotted a specified number of points, as for instance comb 10 points, back 10 points, etc., the total of all sections being 100 points. (The number allotted to any given section is not the same in all breeds, but the total is 100.) The judge has a card called the score card, upon which is printed the name of each section of the bird and a column of spaces for registering the amount of the defects. The bird to be scored is critically examined in all sections and the value of each section is determined by deducting from the number of points allotted to it, the number which represents the degree of defect found. For instance, if 10 points are allotted to comb and the comb of the bird being scored possesses three-fourths the features of a perfect comb, the remaining one-fourth, which represents the defects, is deducted from the full value of 10 points, which is $2\frac{1}{2}$ points, and this amount is registered in the proper place on the card. These discounts are termed cuts and after all cuts in the various sections are registered, the total is deducted from 100, which is the score of a perfect bird, and the amount remaining is the score of the bird being considered.

QUESTION—What are the rules under which poultry associations accept birds for exhibition?

ANSWER—They are numerous and differ greatly with individual associations. Intending exhibitors should write to the secretary of the association at which he wishes to exhibit and ask for a premium list, which will be mailed free of charge.

QUESTION—What would be the score of a pen of birds in the show room if each bird in the pen was perfect?

ANSWER—200 points.

QUESTION—What is the comparison system of judging fowls?

ANSWER—It is that method by which the merit of the birds is determined, with the merits of others in the same class as a basis of value. The usual manner of procedure is to casually examine all the birds in a class and note those that are clearly of a higher quality than the remainder. These best birds are then examined critically and the one that is better than all the others is awarded first prize. The next best is awarded second, and this rule is followed as far as it is desired to award prizes.

QUESTION—Can parti-colored fowls be improved for exhibition by washing them in the same manner as is practiced with white ones?

ANSWER—Yes,

QUESTION—The Leghorns have no Standard weight. How are they cut in the show room for being too small?

ANSWER—The Standard provides a section denoted "size," which is valued at 10 points, and the judge cuts them for size.

QUESTION—Will birds with crooked toes transmit the defect to their offspring?

ANSWER—If the defect is caused by an injury, no. Sometimes this defect is a natural one, in which case a portion of the progeny will show it.

QUESTION—Does punching the web of the foot of a fowl count against it in the show room?

ANSWER—No.

QUESTION—Will continued confinement on bare runs have a tendency to bleach the legs of yellow-legged fowls?

ANSWER—Yes.

QUESTION—Would a fancier do best with a popular breed or are there too many people breeding the favorites for one to do a good business with them?

ANSWER—There is plenty of room for all varieties. The beginner would do best to start with a popular breed.

QUESTION—When is the best time in the year to buy young stock for exhibition?

ANSWER—Breeders sell cheaper from September to November.

QUESTION—What are "thumb marks" on combs?

ANSWER—A disfiguring depression sometimes found on the side of a comb near the front.

QUESTION—What do judges cut for thumb marks in combs?

ANSWER—From one to two points.

QUESTION—What is the cut when the rear of a single comb turns around?

ANSWER—One-half to one point.

QUESTION—What should a fowl be discounted for brassiness in plumage?

ANSWER—One-half to one and one-half points in each section.

QUESTION—Is slate under color in Buff varieties objectionable?

ANSWER—Yes. The cut is one-half to one point.

QUESTION—What is the cut for absence of spike in rose comb varieties?

ANSWER—This defect is a disqualification.

QUESTION—What is meant by the term Symmetry?

ANSWER—Perfection of proportion, the harmony of all the parts or sections of a fowl, viewed as a whole with regard to the Standard type of the variety it represents.

QUESTION—What is “frosting”?

ANSWER—A marginal edging or tracing of color on feathers of laced, spangled and pencilled varieties.

QUESTION—When is the plumage of a fowl said to be “mossy”?

ANSWER—When irregular dark pencilling appears in the centers of laced feathers, destroying the desirable contrast of color.

QUESTION—What are the wattles?

ANSWER—The red pendant growths at the sides of and base of beak.

QUESTION—What is the shaft of the feather?

ANSWER—The stem or quill portion.

QUESTION—What is meant by the term “condition” in the show room?

ANSWER—The state of a fowl as regards health, cleanliness and order of plumage.

QUESTION—What is the crest?

ANSWER—A crown or tuft of feathers on the top of the head of a fowl sometimes improperly called topknot.

QUESTION—What portion of the fowl is the cushion?

ANSWER—The mass of feathers over the rear-back of a fowl partly covering the tail. It is particularly noticeable in Cochin females.

QUESTION—What are the ear lobes?

ANSWER—The folds of bare skin just below the ears, sometimes called “deaf-ears.” They vary in color and size in different breeds.

QUESTION—What is meant by “faking” in the show room?

ANSWER—Removing or attempting to remove off-color in the face or ear-lobes; removing one or more side sprigs or trimming combs in any manner except the dubbing of games; artificial coloring of any feather; splicing feathers; plugging up holes in smooth-leg varieties where stubs or feathers have been removed; removing stubs or feathers from smooth-leg varieties; staining the legs, and, in fact, any attempt to deceive the judge and thereby obtain an unfair advantage in competition.

QUESTION—What are the flight feathers?

ANSWER—The primary feathers of the wing used in flying, but folded up out of sight or nearly so when the fowl is at rest.

QUESTION—What is the fluff?

ANSWER—The soft feathers about the thighs and posterior part of the fowl; also the soft downy under portion of a feather.

QUESTION—What part of the comb is the blade?

ANSWER—The rear part of a single comb, back of the last well-defined conical point and usually extending beyond the crown of the head.

QUESTION—What is the cape?

ANSWER—The first short feathers on the back, underneath the hackle, shaped like a cape.

QUESTION—What is a good tonic to feed the fowls on exhibition in order to keep up their appetite and counteract the evil effects of continued confinement?

ANSWER—One ounce each of carbonate of iron, pulverized gentian root, black antimony, mandrake, ginger, flour of sulphur and powdered charcoal, four ounces of bicarbonate of soda. Mix thoroughly and place one teaspoonful in each quart of soft food. This is an excellent condition powder and superior to those advertised under various names.

QUESTION—Can fancy eggs for hatching be packed in any way that will secure safe transportation by mail?

ANSWER—They might reach their destination unbroken, but they would be handled too roughly en route to insure a good hatch.

QUESTION—What amount of space do poultry journals call an inch?

ANSWER—A space one inch deep across one column.

QUESTION—When a judge visits a breeder's yards and scores his fowls, are the score cards given as great consideration by the public as are those obtained in competition in the show room?

ANSWER—The cards in most cases are just as accurate as show room cards, but the practice of private scoring has been more or less abused and breeders do not have the confidence in score cards given in private that they do in those given in the show room.

QUESTION—What are some of the first points of excellence a breeder should consider when mating his breeding birds?

ANSWER—First of all, they should be healthy, vigorous and of fair size. Pay particular attention to shape of back, tail and breast, and color of wings and tail.

QUESTION—Are the best birds in the show room always the best for breeders?

ANSWER—No.

QUESTION—Why is not a high scoring prize winning bird as good for a breeder as its condition indicates?

ANSWER—It may be a chance good specimen from poor parents, in which case it could not be depended upon to reproduce its equal.

QUESTION—How is butter-color used in coloring the legs of fowls for exhibition?

ANSWER—Place three drops of the butter-color in a teaspoonful of sweet oil and apply it to the legs with a flannel cloth.

QUESTION—What does it cost to join the American Poultry Association?

ANSWER—The payment of a fee of ten dollars makes one a member for life without the payment of any further sum at any time. This is termed the life membership plan. One may also become a member upon the annual membership plan, which provides that the applicant pay a membership fee of two dollars when making the application and one dollar annual dues each year thereafter. For full information write to T. E. Orr, Secy.-Treas., Beaver, Pa.

QUESTION—What does it cost to advertise in the poultry journals?

ANSWER—The price of advertising space is based upon the amount of circulation and this varies greatly. In some poultry journals space can be bought for 75 cents per inch for each insertion and others charge as high as \$3.50 per inch.

QUESTION—What clubs are devoted to Light Brahmas?

ANSWER—New England Light Brahma Club, G. W. Cromack, Secretary, Stoneham, Mass.; American Light Brahma Club, John Rumbold, Secretary-Treasurer, Baltimore, Md.; Western Light Brahma Club, W. S. Gregory, Secretary-Treasurer, Keota, Ia.

QUESTION—What club is devoted to Houdans?

ANSWER—American Houdan Club, Thos. F. Rigg, Secretary-Treasurer, Iowa Falls, Ia.

QUESTION—What club is devoted to Indian Games?

ANSWER—American Indian Game Club, C. F. Whiting, Secretary-Treasurer, Darien, N. Y.

QUESTION—What clubs are devoted to Orpingtons?

ANSWER—American Orpington Club, W. P. Willett, Secretary, East Orange, N. J.; Union Orpington Club, Mrs. W. N. Marshall, Secretary, Lisbon, Mo.

QUESTION—What club is devoted to Blue Andalusians?

ANSWER—Blue Andalusian Club of America, Robt. W. Lovett, Secretary, 234 Marlborough St., Boston, Mass.

QUESTION—What clubs are devoted to Exhibition Games and Game Bantams?

ANSWER—National Exhibition Game and Game Bantam Club, E. J. W. Dietz, Secretary, Downer's Grove, Ill.; American Exhibition Game and Game Bantam Club, Chas. T. Cornman, Secretary, Carlisle, Pa.

QUESTION—What club is devoted to Polish?

ANSWER—American Polish Club, M. V. Caldwell, Secretary-Treasurer, Leetonia, O.

QUESTION—What club is devoted to Dorkings?

ANSWER—American Dorking Club, Watson Westfall, Secretary, Sayre, Pa.

QUESTION—What clubs are devoted to Bantams?

ANSWER—American Bantam Club, Dr. Wm. Y. Fox, Secretary, Taunton, Mass.; National Bantam Association, Chas. Jehl, Secretary, Elberton, N. J.; International Bantam Breeders' Association, E. J. W. Dietz, Secretary, Downer's Grove, Ill.

QUESTION—What club is devoted to White Holland Turkeys?

ANSWER—National White Holland Turkey Club, W. D. Stryker, Secretary-Treasurer, Plainfield, Ill.

QUESTION—What club is devoted to Waterfowl?

ANSWER—Waterfowl Club of America, Theo. F. Jager, Secretary, Lebanon, Pa.

QUESTION—What club is devoted to Hamburgs?

ANSWER—Hamburg Fanciers' Club, E. P. Saltenstall, Secretary, Chestnut Hill, Mass.

QUESTION—What club is devoted to Toulouse Geese?

ANSWER—National Toulouse Goose Club, Mrs. B. F. Hislop, Secretary-Treasurer, Milford, Ill.

QUESTION—What club is devoted to White Minorcas?

ANSWER—American White Minorca Club, Wm. Sapper, Secretary-Treasurer, Erie, Pa.

QUESTION—What club is devoted to Dark Brahmas?

ANSWER—American Dark Brahma Club, Clark E. Adams, Secretary, Racine, Wis.

QUESTION—What club is devoted to Cochins?

ANSWER—American Cochin Club, Arthur R. Sharp, Secretary, Taunton, Mass.

QUESTION—What club is devoted to Langshans?

ANSWER—American Langshan Club, A. S. Asche, Secretary-Treasurer, Princeton, Ill.

QUESTION—What club is devoted to Leghorns?

ANSWER—American Leghorn Club, Geo. H. Burgott, Secretary, Lawton's, N. Y.

QUESTION—What club is devoted to S. C. Brown Leghorns?

ANSWER—American S. C. Brown Leghorn Club, H. L. Nelson, Secretary-Treasurer, 39 Potomac Ave., Chicago, Ill.

QUESTION—What club is devoted to R. C. Brown Leghorns?

ANSWER—American Rose Comb Brown Leghorn Club, C. R. Milhous, Secretary-Treasurer, Indianapolis, Ind.

QUESTION—What club is devoted to Buff Leghorns?

ANSWER—American Buff Leghorn Club, Geo. S. Barnes, Secretary, Battle Creek, Mich.

QUESTION—What club is devoted to R. C. White Leghorns?

ANSWER—American Rose Comb White Leghorn Club, Mrs. Jennie E. Warren, Secretary, Cottonwood Falls, Kan.

QUESTION—What club is devoted to White Plymouth Rocks?

ANSWER—American White Plymouth Rock Club, J. F. Crangle, Secretary-Treasurer, Simsbury, Conn.

QUESTION—What club is devoted to Buff Plymouth Rocks?

ANSWER—The American Buff Plymouth Rock Club, W. C. Denny, Secretary-Treasurer, Rochester, N. Y.

QUESTION—What clubs are devoted to all varieties of Wyandottes?

ANSWER—National Wyandotte Club, C. S. Mattison, Secretary-Treasurer, South Shaftsbury, Vt.; Western Wyandotte Club, Joe C. Russell, Secretary, Breckinridge, Mo.

QUESTION—What clubs are devoted to White Wyandottes?

ANSWER—American White Wyandotte Club, M. F. Delano, Secretary-Treasurer, Millville, N. J.; National White Wyandotte Club, George G. Brown, Secretary-Treasurer, Cleveland, O.; New England White Wyandotte Club, H. P. J. Earnshaw, Secretary-Treasurer, 110 Pemberton Bldg., Boston, Mass.; Eastern White Wyandotte Club, C. A. Briggs, Secretary, Taunton, Mass.

QUESTION—What club is devoted to Buff Wyandottes?

ANSWER—American Buff Wyandotte Club, W. R. Wooden, Secretary-Treasurer, Battle Creek, Mich.

QUESTION—What club is devoted to Partridge Wyandottes?

ANSWER—Partridge Wyandotte Club of America, Theo. Haight, Jr., Secretary-Treasurer, Astoria, L. I., N. Y.

QUESTION—What clubs are devoted to Golden Wyandottes?

ANSWER—National Golden Wyandotte Club, Ira C. Keller, Secretary-Treasurer, Prospect, Ohio; American Golden Wyandotte Club, A. L. Ringo, Secretary, 333 Rookery Bldg., Chicago.

QUESTION—What club is devoted to Silver Wyandottes?

ANSWER—Silver Wyandotte Club of America, Waldo H. Dunn, Secretary, Monroe, Ohio.

QUESTION—What club is devoted to S. C. Black Minorcas?

ANSWER—American Black Minorca Club, John J. Yelton, Secretary-Treasurer, East Orange, N. J.

QUESTION—What club is devoted to Rose Comb Black Minorcas?

ANSWER—The American Rose Comb Black, Minorca Club, S. T. Campbell, Secretary-Treasurer, Mansfield, Ohio.

QUESTION—What specialty clubs are there for breeders of Barred Rocks and who are the secretaries?

ANSWER—The American Plymouth Rock Club, H. P. Schwab, Secretary-Treasurer, Rochester, N. Y.; New England Plymouth Rock Club, W. B. Atherton, Secretary, Randolph, Mass.

QUESTION—What clubs are devoted to Bronze Turkeys?

ANSWER—National Bronze Turkey Club, Mrs. B. F. Hislop, Secretary-Treasurer, Milford, Ill.; Western Turkey Club, Mrs. F. A. Hargrave, Secretary-Treasurer, Richmond, Kas.

QUESTION—Why do poultry journals want subscribers to say, when answering advertisements, that the ad was seen in the journal?

ANSWER—Advertisers will not patronize a paper if it does not bring them good returns, and the papers, therefore, want the advertiser to know how much business they bring him. A buyer confers a favor upon the advertiser also, when he tells where he saw the ad.

QUESTION—If one is defrauded, or not treated fairly in purchasing stock or eggs, is there any way to have the matter adjusted?

ANSWER—If the seller is an advertiser, any of the poultry journals in which he advertises will investigate the matter if there is evidence of downright fraud. Most Specialty Clubs are also willing to take up complaints against members made by other members.

QUESTION—Would you advise poultrymen who are breeding for the fancy, to join a specialty club devoted to their breed?

ANSWER—Yes.

QUESTION—In yellow legged fowls, is there a tendency toward the color fading with age?

ANSWER—Yes.

QUESTION—What is the mode of procedure in forming a poultry association?

ANSWER—Write to Frank Heck, 325 Dearborn Street, Chicago, Ill., for a free copy of a booklet containing a model constitution and by-laws, also complete rules and regulations for the forming of an association and the government of an up-to-date poultry show.

QUESTION—When speaking of fine fowls, which is proper, thoroughbred, pure bred or Standard bred?

ANSWER—The birds are bred to conform to the requirements of the American Standard of Perfection, and they are, therefore, properly termed Standard bred.

QUESTION—What is the difference in shape between Plymouth Rocks and Wyandottes?

ANSWER—The Plymouth Rock is larger in all sections, including neck and legs. The Wyandotte is very round and short and blocky.

QUESTION—How much weight can be put on a show bird that is matured?

ANSWER—From a pound to a pound and a half.

QUESTION—How long before the show should one begin to feed for extra weight?

ANSWER—Four to six weeks.

QUESTION—Should birds being fed for extra weight be kept in small pens or coops?

ANSWER—Yes.

QUESTION—Is it customary for women to enter fowls for competition at a poultry show?

ANSWER—Yes.

QUESTION—What kind of food should be given to show birds for adding a pound or two of weight quickly?

ANSWER—Boiled rice, boiled potatoes mixed with cornmeal, sunflower seed, corn, beef tallow, plenty of hard grit and sweetened water to drink.

QUESTION—What is the principal drawback about taking up new breeds?

ANSWER—They are always so hard to breed true.

QUESTION—What is the highest price ever paid for a fowl?

ANSWER—The highest on record is \$300 for a Buff Rock male that won first at Boston in January, 1903.

QUESTION—Why are poultry shows always held in the winter?

ANSWER—Because it is the time when all fowls are in the best condition to show, and especially as regards completeness and beauty of plumage.

QUESTION—Why is it that all poultrymen do not get equally good prices for fancy stock?

ANSWER—Some of them do not advertise properly.

QUESTION—Why do Barred Rocks sell for so much higher prices than some other birds?

ANSWER—Because it is so hard to breed good Barred Rocks.

QUESTION—Can rose combs be too large?

ANSWER—Yes. They should be medium size.

QUESTION—Do good rose combs have a small hollow place in the front on top?

ANSWER—No. This is a very common defect.

QUESTION—What would be the cut in the show room for a hollow place in the front of a rose comb?

ANSWER—One-half to two points.

QUESTION—Are judges supposed to answer questions in the show room?

ANSWER—Only as a matter of courtesy if the questions are asked by visitors. Questions asked by exhibitors are supposed to be answered fully if they pertain to the judges' awards, but a judge is not compelled to answer a lot of miscellaneous questions upon poultry in general. Judges as a rule are very pleasant and accommodating and will cheerfully do many things they are not required to do.

QUESTION—Are Barred Rock males inclined to grow lighter in color with each succeeding moult?

ANSWER—Yes.

QUESTION—In advertising exhibition stock and eggs, is it better to use a small space in, say, a half dozen journals, or use the combined amount in one journal of equal circulation of the six?

ANSWER—In most cases it will pay better to have a large card in the larger journal.

QUESTION—How can a fowl be made to stand erect and show to best advantage in the exhibition coops at shows?

ANSWER—They should be trained for some weeks before the show by placing them in small coops similar to the exhibition coops. Feed them in these coops and hold the food high so that they will be compelled to reach for it.

QUESTION—Is the new advertiser at a disadvantage as compared with the old one, and if so, why?

ANSWER—Yes. An advertiser must establish a reputation, and it takes time to do it.

QUESTION—If the quills of the feathers on chicks of the white breeds are yellow, will they get white when the chicks mature?

ANSWER—Sometimes they will, but not always.

QUESTION—Is there any advantage in practicing double mating with the white varieties of fowls?

ANSWER—No.

QUESTION—Which is the most important point in selecting breeding birds, shape or color?

ANSWER—Shape. If you have not the shape, you have not the breed.

QUESTION—Can any kind of stain be used on the legs of yellow-legged fowls to intensify the color?

ANSWER—Light applications of iodine will have the desired effect.

QUESTION—Is there anything that will add luster to the plumage of dark colored fowls when preparing them for exhibition?

ANSWER—Some very successful breeders and exhibitors have claimed that they can produce this effect by placing in the mash three times a week a teaspoonful of red carbonate of iron for each twelve fowls.

QUESTION—Which is the best grain for fowls confined in the show room?

ANSWER—Wheat.

✓ QUESTION—Is it wrong to remove off colored feathers from a fowl when preparing it for exhibition if the feathers would disqualify the bird?

ANSWER—We believe that it is. It is taking an unfair advantage of a competitor whose birds show a natural absence of such feathers. There are some honorable breeders, however, who advocate removing these feathers to a reasonable limit.

QUESTION—How can the legs of fowls be highly polished for show purposes?

ANSWER—Use alcohol into which a little paraffin wax has been dissolved.

QUESTION—How can the legs of fowls be cleaned to best advantage without the use of drugs or chemicals?

ANSWER—Wash them thoroughly with soap and warm water. Remove the dirt from beneath the scales with a wooden toothpick and rub long and briskly with a piece of chamois skin,

QUESTION—Is it not possible to get as good eggs from some breeders for \$3 per setting as can be gotten from others for \$5?

ANSWER—Yes, but not as a general rule.

QUESTION—How do fanciers wash the plumage of fowls intended for exhibition?

ANSWER—Have three tubs of water, one quite warm, another lukewarm and another with the chill taken off it. Place the bird in the tub of warm water and have an assistant to hold it on its sides. Open the fluff and other parts of the plumage consisting of short, soft feathers, and gently work the water into the plumage thoroughly. Press the long, stiff feathers in wings and tail between the hands under the water until they are well soaked through. After the entire plumage is well soaked, apply Ivory soap or other good white soap and rub it well into the feathers, rubbing only one way, and that the way the web of the feather runs. The soft feathers can be handled more carelessly without injury. The plumage will stand much more rubbing than one would imagine. After the fowl has been well washed in the first tub, remove it and rinse well in the second tub of lukewarm water, pressing as much of the soapy water out of the feathers as possible. If the soap is not thoroughly removed the feathers will split and cling together when dry. After the soap has been rinsed out into the second tub of water, immerse the fowl in the third tub, in which there should be dissolved beforehand a small quantity of wash blue sufficient to blue the water as required for clothes. After working the blue water well into the plumage, hold the fowls above the tub and press as much water as possible out of the feathers, then allow it to stand on a clean table or other convenient place and dry with a towel, rubbing the right way of the feathers. The bird should then be placed in a coop deeply littered with clean straw and placed in front of a fire, but not so close as to blister the comb or plumage. After the feathers are fairly dry on the outside and commence to assume their natural position, remove the bird from in front of the fire and confine it in a clean coop, where it can plume itself and properly arrange the feathers as they dry. The operation is comparatively easy and one becomes very skillful after a few attempts.

QUESTION—What should be the cut for irregular, indistinct, crescentic or too heavy lacing in all laced varieties?

ANSWER—One-half to one and one-half points in each section where found.

QUESTION—What should be the cut for crooked keel or breast-bone?

ANSWER—One-half to two points,

QUESTION—Are the advantages to be gained by washing fowls worth the trouble required to do the work?

ANSWER—Yes, if the fowls are of the white varieties and have been kept on a town lot.

QUESTION—Are dark colored fowls any better for the city fancier than the white varieties?

ANSWER—No, except that fowls kept on city lots usually get very dirty and a dark colored fowl does not show the dirt as much as a white one.

QUESTION—Will washing, if properly done, add to the appearance of any fowl?

ANSWER—Yes.

QUESTION—Does the specialty breeder, as a rule, get better prices for his stock and eggs than does the breeder of several varieties?

ANSWER—Yes.

QUESTION—Is the color of wings and tail of any special importance more than other sections?

ANSWER—Yes. The deepest color is found in these sections, and they should receive the greatest consideration when selecting the breeding birds.

QUESTION—Why does the specialty breeder gain greater success, usually, than the breeder of many varieties?

ANSWER—He devotes all his time and talent to the one variety, and he breeds better stock.

QUESTION—What is the best and cheapest way for one to learn just how good his stock is?

ANSWER—Buy a copy of the Standard of Perfection, and compare the fowls with the description in the book. Send them to some near-by poultry show and enter them for competition.

QUESTION—Are exceedingly large combs desirable on Leghorns?

ANSWER—No. There is a tendency toward too large combs on this breed. The Standard calls for a medium-sized comb.

QUESTION—Should the back of a Leghorn comb follow the shape of the neck, or extend out straight?

ANSWER—It should have no tendency to follow the shape of the neck,

QUESTION—What is a specialty breeder?

ANSWER—The term is applied to a breeder who handles only one variety of fowls.

QUESTION—Should the shanks of Brown Leghorns be yellow?

ANSWER—The shanks should be bright yellow, but the Standard allows dusky yellow for toes.

QUESTION—Should all varieties of Leghorns be the same size and shape?

ANSWER—Yes.

QUESTION—Are Partridge Wyandottes the same in color as Partridge Cochins?

ANSWER—Yes.

QUESTION—Is it advisable to risk setting a pullet on high-priced eggs?

ANSWER—No. They generally forsake the nest before the eggs hatch.

QUESTION—What is meant by latent defects?

ANSWER—Defects which do not appear in a bird, but which have been inherited from ancestors, and will manifest themselves in the progeny.

QUESTION—Should the rear of the comb and the spike curve to conform to the shape of the head, in Wyandottes?

ANSWER—Yes.

QUESTION—Is the head of a Wyandotte shorter and broader than that of a Plymouth Rock?

ANSWER—Yes.

QUESTION—Are well-spread legs on Plymouth Rocks and Wyandottes more desirable than those only fairly spread?

ANSWER—Yes.

QUESTION—In Standard Barred Rocks, is a little dark striping permissible in the beaks of females?

ANSWER—Yes.

QUESTION—Is it not possible for a fowl to show white in the ear lobes temporarily?

ANSWER—Yes. There is a difference, however, in the white resulting from sickness or poor condition and the enamel white which, in some breeds, disqualifies,

QUESTION—What is the difference in color of Silver Wyandottes and Golden Wyandottes?

ANSWER—The lacing is the same in form. The silvery white centers in the Silver Wyandotte are a golden bay in the Golden Wyandotte.

QUESTION—Should Black Wyandottes and Black Minorcas have yellow legs?

ANSWER—No. They are black or dark slate.

QUESTION—What is a Pea Comb?

ANSWER—A triple comb, resembling three straight single combs placed parallel with one another, and joined at base and rear, each having distinctly divided pea-like knobs, the knobs of the two outer rows being lower and smaller than those of the middle row, and those of each row being larger and somewhat thicker midway of the comb than at front and rear.

QUESTION—Is a dark stripe permissible in the upper mandible of the beak of the Light Brahma?

ANSWER—Yes.

QUESTION—Does the Standard call for the same weights in Light and Dark Brahmas?

ANSWER—No. The weights of Dark Brahmas are: Cock, 11 pounds; hen, 8½ pounds; cockerel, 9 pounds, and pullet, 7 pounds. Light Brahmas are a pound heavier.

QUESTION—What are the Standard weights of Buff Cochins?

ANSWER—Cock, 11 pounds; hen, 8½ pounds; cockerel, 9 pounds; pullet, 7 pounds.

QUESTION—What are the Standard weights of Black and White Minorcas?

ANSWER—Cock, 8 pounds; hen, 6½ pounds; cockerel, 6½ pounds; pullet, 5½ pounds.

QUESTION—How many points should the Minorca have on its comb?

ANSWER—Six.

QUESTION—Is not an even shade of buff in all sections of a bird more to be desired, even though it be a trifle light, or dark, than different shades in the same specimen in which the proper shade predominates?

ANSWER—Yes.

QUESTION—What should be the cut for coarse texture of wattles?

ANSWER—One-half to one point.

QUESTION—What should be the cut for each missing feather in primaries or secondaries where foreign color disqualifies?

ANSWER—One and one-half points.

QUESTION—What should be the cut where a feather is broken, but not detached, in primaries or secondaries, where foreign color disqualifies?

ANSWER—One-half point.

QUESTION—What should be the cut for each broken or missing feather, in primaries or secondaries, of all buff or parti-colored varieties, where foreign color does not disqualify?

ANSWER—One-half point.

QUESTION—What should be the cut for absence of sickles where foreign color disqualifies?

ANSWER—One and one-half points for each sickle.

QUESTION—What should be the cut for absence of sickles, where foreign color does not disqualify?

ANSWER—One point for each sickle.

QUESTION—What should be the cut for creaminess of plumage or quill of all white varieties, except Ducks?

ANSWER—One-half to one and one-half points in each section where found.

QUESTION—Are not the wing-bows on Buff Rock and Buff Wyandotte males inclined toward red?

ANSWER—Yes. It is exceedingly difficult to get a buff wing-bow on males.

QUESTION—What is the proper shade of buff as demanded by the Standard for buff fowls?

ANSWER—It is impossible to describe in words just what this buff should be. The Standard calls for a rich golden buff, and that means a medium between a lemon buff and a light cinnamon buff.

QUESTION—Is there any danger of fowls dying in the tub while being washed?

ANSWER—Yes. They should not be immersed too suddenly. The shock affects the heart and may result fatally, especially if the bird is overfat.

QUESTION—What should be the cut for frosty edging in any laced section of all laced or spangled varieties?

ANSWER—One-half to one and one-half points in each section where found.

QUESTION—What should be the cut for irregular barring in Barred Rocks?

ANSWER—One-half to one and one-half points in each section where found.

QUESTION—What should be the cut for light colored shafting in all buff varieties?

ANSWER—One-half to one and one-half points in each section where found.

QUESTION—Do gray specks in a white fowl come under the head of black, which disqualifies?

ANSWER—No. A judge should cut for them from 1 to 2 points in each section where found.

QUESTION—What should be the cut for mealiness in plumage of Buff varieties?

ANSWER—One-half to one and one-half points in each section where found.

QUESTION—What should be the cut for mossy centered feathers in laced varieties?

ANSWER—One-half to two and one-half points in each section where found.

QUESTION—What per cent of the winter poultry shows are judged by the score card system?

ANSWER—About 95 per cent.

QUESTION—What should be the cut for irregular or deficient penciling in penciled varieties?

ANSWER—One-half to one and one-half points in each section where found.

QUESTION—What should be the cut for black or white in buff varieties?

ANSWER—One-half to one and one-half points in each section where found.

QUESTION—What should be the cut for pinched or gamey tails in Leghorn females?

ANSWER—One to two points.

QUESTION—What should be the cut if the tail feathers in any variety show not to exceed three-fourths development?

ANSWER—One point.

QUESTION—What should be the cut if the tail feathers in any variety show not to exceed one-half development?

ANSWER—Two points.

QUESTION—What should be the cut if the tail in any variety shows not to exceed one-fourth development?

ANSWER—Three points.

QUESTION—What should be the cut for each crooked toe?

ANSWER—One-half to one point.

QUESTION—Are poultry judges licensed or authorized by any governing body?

ANSWER—No.

QUESTION—How can a fancier know the right price to charge for his eggs for hatching?

ANSWER—Be governed by the price other breeders ask for eggs from the same quality of stock.

QUESTION—Does the Standard demand the same shade of color in all sections of a Barred Rock?

ANSWER—Yes.

QUESTION—Are buff fowls harder to breed true to color than white ones?

ANSWER—Yes.

QUESTION—What are the different varieties of combs found on fowls?

ANSWER—Single, Rose, Pea, Leaf, Strawberry and V comb.

QUESTION—When judging by comparison, does the judge consider all disqualification clauses of the Standard?

ANSWER—Yes.

QUESTION—What should the cut be for twisted feathers in wing or tail?

ANSWER—One point for each feather.

QUESTION—What causes twisted feathers in the wings and tails?

ANSWER—It is a freak of nature.

QUESTION—In comparison judging, does the color of a bird largely influence the decision?

ANSWER—Sometimes it does, but in such cases the judge does not apply the Standard properly.

QUESTION—Are there not judges who are incompetent to do the work?

ANSWER—Yes.

QUESTION—Why are incompetent judges permitted to place the awards at shows?

ANSWER—Because they can find a few associations that are willing to employ them.

QUESTION—Are all the Standard-bred fowls of to-day the descendants of one common ancestor?

ANSWER—Yes.

QUESTION—Who were the poultrymen appointed to constitute the Standard Revision Committee in 1903?

ANSWER—F. L. Kimmey, Grant M. Curtis, J. H. Drevensedt, T. E. Orr, W. S. Russell, F. B. Zimmer, F. D. Kendall, Theo. Hewes, Newton Adams, W. C. Pierce, F. L. Sewell, T. F. McGrew, Chas. McClave, J. F. Crangle and Frank Heck. Messrs. Russell, Zimmer, Kendall, Crangle and Adams were not able to be present at any of the sessions of the committee, and the work was done by the other members and Geo. H. Burgott.

QUESTION—Where did the 1903 Revision Committee meet, and how long were they in session?

ANSWER—At Buffalo, N. Y. Two weeks, May 11th to 24th.

QUESTION—When will the Standard again be revised?

ANSWER—Not before 1908, and not then unless conditions demand it.

QUESTION—Where can one obtain colored pictures of the popular varieties of fowls?

ANSWER—Write to American Poultry Journal Pub. Co., 325 Dearborn St., Chicago, Ill.; Reliable Poultry Journal Pub. Co., Quincy, Ill.; Fanciers' Gazette Co., Indianapolis, Ind., and The Feather, Washington, D. C.

QUESTION—Does it injure the legs of fowls to allow leg bands to remain upon them constantly?

ANSWER—Not if the bands are of the proper size.

QUESTION—Are there Standards for the different breeds that can be purchased separately?

ANSWER—No. There is only one book and it covers all breeds and varieties.

QUESTION—How did the Barred Plymouth Rocks originate?

ANSWER—By various crosses, chief of which was the Black Java and American Dominique, mingled with Dark Brahma, Black Spanish, the old-time Light Brahma and the White Birmingham.

QUESTION—How did the White Plymouth Rocks originate?

ANSWER—They are sports from the Barred variety. Occasionally a pure white chick will be found in the progeny of Barred Rocks, but they are much scarcer now than during the early days of the Barred Rock.

QUESTION—How much profit can be made from fancy poultry the first year, with an investment of \$100?

ANSWER—A man who knows how to manage it rightly ought to clear \$500.

QUESTION—If a breeder thoroughly understands mating and breeding, how long can he pursue a system of line breeding without introducing new blood?

ANSWER—Ten to fifteen years.

QUESTION—How were the Partridge Wyandottes originated?

ANSWER—By crossing Golden Laced Wyandottes, Golden Penciled Hamburgs and Partridge Cochins.

QUESTION—How were Silver Penciled Wyandottes originated?

ANSWER—By crossing Silver Laced Wyandottes, Silver Penciled Hamburgs and Dark Brahmas.

QUESTION—How was the Golden Wyandotte originated?

ANSWER—By crosses of Silver Wyandotte and an old fowl called the Winnebago fowl, after which was introduced the blood of the Partridge Cochin, Golden Hamburg and Brown Leghorn.

QUESTION—What is the most convenient manner of holding a fowl for the purpose of examining the plumage, etc.?

ANSWER—Grasp it with the left hand against the keel bone, with right leg between the first and middle fingers, and the left leg between the middle and third fingers. The bird will then rest on the forearm, with the head toward you. It can then be handled with the right hand.

QUESTION—Are prizes won at fall fairs considered as valuable as those won at winter shows, as regards the quality of the stock?

ANSWER—No. Fowls are not in very good condition at fall fairs, and competition is never so strong.

QUESTION—How did the Buff Plymouth Rocks originate?

ANSWER—They resulted from crosses of Buff Cochins, Light Brahmas and Rhode Island Reds.

QUESTION—How were the Silver Wyandottes originated?

ANSWER—By crosses of the Silver Spangled Hamburg, Dark Brahma and Buff Cochin.

QUESTION—How did the White Wyandotte originate?

ANSWER—By crosses of Silver Wyandottes, White Leghorns and White Plymouth Rocks.

QUESTION—Is there any school where the judging of poultry is taught?

ANSWER—No.

QUESTION—Will constant exposure to the hot summer sun deaden the color and gloss of plumage?

ANSWER—Yes.

QUESTION—Does a breeder have to be a member of a poultry association to exhibit at it?

ANSWER—No.

QUESTION—What is the usual time when fanciers break up their breeding pens for the season?

ANSWER—June 1st.

QUESTION—Is over-weight desirable in Standard-bred fowls?

ANSWER—No. With much over-weight comes defects in shape, reduced egg production and decreased fertility.

QUESTION—Is it customary, when weighing birds in the show room, to give them the advantage of one-fourth or one-half pound?

ANSWER—It is sometimes done, but it is an injustice to the exhibitors who have their birds up to weight, and the practice is against the rules of the American Poultry Association.

QUESTION—How were the Buff Wyandottes originated?

ANSWER—By inter-crossing of White Wyandottes, Golden Wyandottes, Buff Cochins and Rhode Island Reds.

QUESTION—Is there any one who makes a specialty of preparing and writing circulars and catalogues for poultrymen?

ANSWER—Write to Frank Heck, 325 Dearborn St., Chicago, Ill.

QUESTION—Will feeding cayenne pepper to buff fowls aid in getting a rich, deep color to the plumage?

ANSWER—No. A species of cayenne is fed to canary birds to deepen the color, but the scheme is not practicable with fowls.

QUESTION—In order to get the best color on exhibition fowls, is it necessary to keep them from the hot sun during moulting?

ANSWER—Yes.

Eggs.

QUESTION—How can eggs for hatching be safely packed for shipment?

ANSWER—Use common splint baskets such as can be purchased from the grocer at about 35 cents per dozen. Line the bottom and sides with excelsior about an inch thick. Take a small quantity and shape it about like a bird's nest and place an egg in it, after which close the opening well over the egg, making it round like a ball. Prepare each egg in this manner, pack them in the basket, place a thick layer of excelsior on top, and cover with a piece of muslin, sewing the edges down through the sides of the basket with a heavy darning needle and twine. There are other methods, but this one insures absolute safety if properly done. Egg boxes and patent carriers are less trouble, but are much less protection to the eggs and are responsible for many poor hatches.

QUESTION—How long can eggs be kept by the water glass method?

ANSWER—From nine to twelve months.

QUESTION—What is the best method of preserving eggs?

ANSWER—Careful tests have been made with various compounds, and Water Glass has in each case proven most satisfactory. It is also called Soluble Glass. The chemical name is silicate of sodium or silicate of potassium. It can be purchased at any drug store, and costs about 50 cents per gallon, which is sufficient to preserve 50 dozen eggs. To one quart of Water Glass add ten quarts of water. It is best to use water that has been boiled and is perfectly clean. The eggs should be wiped clean, but should not be washed. Earthenware jars are best for storing the eggs, which should be entirely submerged in the liquid. If wooden barrels or kegs are used, see that they are first thoroughly scalded with boiling water.

QUESTION—What is a fair price for eggs from the highest grade of stock?

ANSWER—Three dollars to five dollars per setting. The latter price prevails among most breeders of national reputation.

QUESTION—Will eggs with mottled shells hatch?

ANSWER—Very seldom.

QUESTION—What number of eggs is considered a setting when buying them for hatching?

ANSWER—Some breeders give 13 and some 15. Probably a fair adjustment of the matter would be 13 if the price is less than \$3 per setting, and 15 if the price is \$3 or more per setting.

QUESTION—How long after the male bird is separated from the female will the eggs be fertile?

ANSWER—A definite time cannot be fixed. At least five or six eggs in the process of formation, if the hen has that many in her, are apt to be fertilized, and the time therefore depends upon how soon she lays the eggs.

QUESTION—If a sitting hen befouls her nest and the eggs are covered with filth, will it injure them to wash them, or will they hatch as well as though they were not cleaned?

ANSWER—Anything that fills the pores of the shell stops the ingress of pure air, and consequently is detrimental. Eggs may be washed lightly with clear, pure water only. The water should be quite warm and the egg washed quickly and gently and immediately returned to the nest.

QUESTION—Why are eggs not as fertile in winter as in spring and summer?

ANSWER—Winter is not the natural breeding season and conditions are not as favorable for fertile eggs. If summer conditions as regards temperature, green food, etc., can be supplied, eggs will be reasonably fertile.

QUESTION—How can fertile eggs be prevented from hatching?

ANSWER—Dip them in boiling water for a couple of seconds. Prick the small end deeply with a fine needle. Sometimes shaking them vigorously a half dozen times will answer.

QUESTION—Does it injure eggs for hatching to wash them before they are set?

ANSWER—Not if the water is lukewarm and the eggs allowed to dry without being exposed to extreme cold.

QUESTION—Of what value are nest eggs?

ANSWER—They are of doubtful value. If nest eggs are used at all they should be the ordinary china eggs. Real eggs remaining in the nest may be the means of starting the egg-eating habit; they may get broken and soil the nest, which is objectionable for other reasons than filth and they may, after becoming old, be taken from the nest as fresh eggs and find their way to the cook or the table.

QUESTION—What is the difference between incubator eggs and other eggs?

ANSWER—The term "incubator eggs" is applied to eggs from a medium grade of standard bred birds. Large breeders of high grade stock usually have a number of breeding birds that are not fine exhibition birds but still are standard bred stock, the progeny of the best birds and just as suitable for those who do not care particularly for a high standard of exhibition excellence. These eggs are sold cheaper, usually from \$5 to \$10 per 100, and are called incubator eggs.

QUESTION—What causes duck eggs to be green shelled occasionally and are they good to eat and hatch?

ANSWER—It is an unaccountable freak of nature. They will hatch when fertile and there is no noticeable difference in the eating qualities of them.

QUESTION—Is there any way to tell whether an egg is fertile without incubating it?

ANSWER—No, not and preserve it. It can be broken and the information obtained.

QUESTION—What are the principal requirements of the market as regards eggs?

ANSWER—They should be perfectly clean, strictly fresh, and as near the same size and color as possible. The latter feature is more easily obtainable if the breeder has only one breed.

QUESTION—How soon after mating the breeding birds will the eggs prove fertile?

ANSWER—No definite time can be given. Usually the third or fourth egg laid will be fertile, but if none is laid for several days, the first one laid may be fertile.

QUESTION—Will abnormally large or ill shapen or double yolked eggs hatch?

ANSWER—No.

QUESTION—Is it true that the unusually slender eggs will produce male birds?

ANSWER—No.

QUESTION—Why are the yolks of some eggs light yellow and others dark yellow?

ANSWER—It is caused largely by the food. An ample supply of green food, particularly grass, gives the yolk a richer color.

QUESTION—Is it an indication of impurity of breeding, for brown-egg breeds to lay eggs of a lighter color?

ANSWER—Not always. Heavy and continuous laying oftentimes results in light-colored eggs and it is very common for old hens to produce eggs almost or quite white.

QUESTION—What causes red spots resembling blood clots, in eggs?

ANSWER—Oftentimes a hen for various reasons will be forced to lay under a strain sufficient to burst one or more of the minute blood vessels in the egg organs or passages and the blood thus liberated comes in contact with and adheres to the egg and the shell is then formed over it. Eggs containing blood clots are generally from over-fat hens.

QUESTION—How long may eggs be kept for hatching?

ANSWER—Set them as soon after being laid as possible. They may be kept from four to six weeks, and even longer, but from two to three weeks should be the limit. They should be turned daily.

QUESTION—At what temperature should eggs for hatching be kept?

ANSWER—Within certain limits a specific temperature is not so important as a uniform one. Anywhere from 50 to 70 degrees is suitable.

QUESTION—Will thunder injuriously affect eggs in process of incubation?

ANSWER—No. This is a more or less popular fallacy, having no foundation in fact.

QUESTION—How far may eggs be shipped without injuring them for hatching?

ANSWER—With proper handling, the distance does not affect the hatching quality of eggs aside from the time they may be on the road. Under ordinary conditions they may be shipped three thousand miles in safety. Rough handling may injure them as will also exposure to zero weather, by express companies, or storing them close to stoves or steam pipes in overheated express cars.

QUESTION—Is it necessary to allow shipped eggs to stand twenty-four hours before setting them?

ANSWER—No. This plan is sometimes advocated on the ground that the eggs should remain quiet for that length of time in order for the germ to assume its normal position. It will do this almost instantly.

QUESTION—What percentage of eggs should prove fertile in October?

ANSWER—It all depends upon the feed and the condition of the breeding stock. Under favorable conditions 75 to 90 per cent of the eggs will be fertile.

QUESTION—How soon after molting will eggs be fertile?

ANSWER—Molting in itself has nothing to do with the fertility of the eggs. Eggs laid at any time will be fertile if the females are mated and both sexes are in good health and vigorous.

QUESTION—How often should eggs be turned, that are being kept for hatching?

ANSWER—It is best to turn them daily.

QUESTION—What causes eggs to have a thick ridge in the middle?

ANSWER—Some derangement of the egg organs, generally the result of the fowl being too fat.

QUESTION—Will eggs from pullets hatch as well as those from hens?

ANSWER—They will if the pullets are well matured and have been laying a short time. The first twelve or fifteen eggs from a pullet will, in most cases, prove a disappointment when incubated.

QUESTION—Which varieties of fowls lay white eggs and which brown eggs?

ANSWER—White eggs are laid by all varieties of Leghorns, Minorcas, Hamburgs, Houdans, Andalusians, Anconas, Polish and White Faced Black Spanish. Brown eggs are laid by all varieties of Plymouth Rocks, Wyandottes, Cochins, Langshans, Orpingtons and Indian Games.

QUESTION—Which breed lays the largest egg and which the smallest?

ANSWER—The eggs of Brahmas and Minorcas are the largest and are practically the same size. The Leghorns and Andalusians lay the smallest eggs.

QUESTION—What is the difference in eating qualities between the brown egg and the white egg?

ANSWER—There is no difference whatever. It is sometimes claimed by the uninformed that the brown egg has a richer flavor, but this is an error. The Boston market demands a brown egg, the New York market a white egg and the Chicago is as good for one as the other. The special demand for either is simply a fad.

QUESTION—Will it injure eggs that are being kept for hatching if packed in bran or some such substance, with the small end of the egg up?

ANSWER—Yes. The large end contains the air cell, and the egg should rest on the small end or the side.

QUESTION—What causes soft-shelled eggs?

ANSWER—They may be the result of diseased organs of reproduction and especially of the oviduct. Excessively fat hens are liable to lay soft-shelled eggs when the layers of fat are so abundant as to force the egg out before it can receive a sufficient coating of shell. Heavy laying birds are also thus afflicted, by reason of the egg passages being weakened by continual strain and not being able to retain an egg after the shell begins to harden. In exceptional cases it may be the lack of shell forming elements in the food.

QUESTION—Will eggs hatch that have had grease or coal oil on them?

ANSWER—Very seldom.

QUESTION—How often should eggs be gathered in the coldest weather?

ANSWER—Three times per day.

QUESTION—Is there any way to ascertain the age of eggs?

ANSWER—Germans have a process by which they claim to be able to determine the age of an egg to the day. The egg is dropped in a solution of salt containing eight ounces to the pint. If the egg is only one day old it sinks immediately to the bottom; if three days old it sinks just below the surface only, and from five days upward it floats. It is well known that the air cavity at the blunt end of an egg enlarges as the age of the egg increases. When the egg is placed in the salt solution it will have a tendency to float with the long axis vertical. A scale of angles is placed at the back of the vessel, and from the inclination of the egg to the horizontal, it is said, the age can be gauged almost to the day. A new laid egg lies horizontally on the bottom of the vessel. When three to five days old it raises itself so that its long axis makes an angle of about 20 degrees with the horizontal. At eight days the angle increases to about 45 degrees; at 14 days it is 60 degrees; at about three weeks it is about 75 degrees, while after four weeks it stands upright on the pointed end.

QUESTION—What is the cause of thin, watery eggs?

ANSWER—Poor food that is deficient in the elements composing the egg.

QUESTION—What is the highest price that breeders ever ask for eggs for hatching?

ANSWER—Ten dollars per setting; sometimes one dollar per egg.

QUESTION—Is there any convenient cabinet or holder on the market for keeping eggs?

ANSWER—Yes. Write to the Woods Egg Holder Co., St. Louis, Mo.

QUESTION—Will it injure eggs to keep them in a cellar if it is damp?

ANSWER—Yes.

QUESTION—Can eggs that are old be distinguished from strictly fresh eggs by the smooth, glossy shell?

ANSWER—Yes.

QUESTION—How much ought it cost the average farmer to produce eggs?

ANSWER—About 6 cents per dozen.

QUESTION—Are brown shelled eggs any better for preserving than the white shelled ones?

ANSWER—No.

QUESTION—How many eggs equal in nutrient value a pound of beef?

ANSWER—About six.

QUESTION—Do certain foods affect the flavor of eggs?

ANSWER—The egg is affected by food in much the same way as is milk from the cow. With the egg, the difference cannot be detected except in special cases, but only clean, wholesome food should be given to the hen. It has been demonstrated that wild onions and other strong vegetables will affect the flavor of the egg.

Feeding.

QUESTION—Should the water for fowls be warmed in winter?

ANSWER—It need not be warmed, but if convenient the breeder should manage to supply water with the chill off.

QUESTION—Do meat meal and beef scraps deteriorate with age?

ANSWER—Yes. They should not be more than three months old.

QUESTION—Is alfalfa as good for fowls as clover?

ANSWER—Yes.

QUESTION—Are meat cracklings from the butcher good for fowls?

ANSWER—They are of very little value and pork cracklings are not worth feeding.

QUESTION—If fowls have skim milk constantly before them will it take the place of water?

ANSWER—No. Water should always be within reach.

QUESTION—At what age can whole corn be fed to chicks with safety?

ANSWER—No specific time can be stated. Give it to them as soon as they are able to swallow it.

QUESTION—Can too much green food be fed to chicks?

ANSWER—No, if they have access to a variety of other food.

QUESTION—Are onions valuable as a food for fowls?

ANSWER—They are if not fed in too large quantities. A liberal feed or two will cure mild colds.

QUESTION—Is sulphur good for fowls?

ANSWER—Powdered sulphur may be fed in the soft food twice a week for about two weeks as a blood purifier. If fed in damp weather it has a tendency to encourage rheumatism.

QUESTION—Of what value are egg shells as a food for fowls?

ANSWER—It is a mistaken idea that they are of any value at all. Feeding them often teaches the egg-eating habit.

QUESTION—Are hard-boiled eggs good for newly hatched chicks?

ANSWER—In small quantities only.

QUESTION—Can too much raw meat be fed to fowls?

ANSWER—Yes. Severe indigestion and worms are two of the evils attributed to overfeeding of meat.

QUESTION—Is millet seed an especially good feed for fowls?

ANSWER—An exclusive diet of it is very injurious, and especially in the case of chicks. Its value is largely as a grain to scatter in the litter to encourage exercise by scratching.

QUESTION—Will blood meal answer the purpose of all other forms of animal food?

ANSWER—No. Ordinary blood meal is of little value, and in most cases fowls must be forced to eat it.

QUESTION—What is the “cramming” system of fattening?

ANSWER—This method of fattening is not practiced very extensively in this country. It is chiefly employed in France and England. The fowl is confined in a coop just large enough for it to stand comfortably, and at regular intervals a quantity of semi-liquid food is forced into the crop through a tube inserted in the throat and extending from a drum-like receptacle mounted on three legs. The machine is operated by foot power and the food consists of ground grains mixed with milk, water, etc., to the consistency of thin mush.

QUESTION—When is the best time to give the mash food?

ANSWER—Give it as the first meal in the morning. It is quickly digested and the fowl, after remaining upon the perch for 12 hours or more, needs something to satisfy the hunger quickly. It is claimed by a few successful breeders that the mash should be given in the evening for the reason that if given in the morning the fowls will have their hunger satisfied and will not then take needed exercise in hunting for grain or other food. This argument is based upon the assumption that the fowls are overfed with the mash in the morning. This should be avoided. Give only enough to partially satisfy the hunger and sharpen the appetite for additional food. If the mash be given at night it will be so quickly digested that the fowl will not have the desired nourishment till morning.

QUESTION—What is the effect of overfeeding of green cut bone?

ANSWER—A serious derangement of the digestive organs which may lead to other diseases.

QUESTION—What is the best way to feed clover hay?

ANSWER—It should be cut into at least half inch lengths and mixed with the mash. Place it in a vessel at night and cover it with boiling water. Cover the vessel tightly to retain all the steam and moisture. Let it stand till morning and use both the clover and the liquid in making the mash.

QUESTION—Is clover meal better or in more desirable form than clover hay?

ANSWER—Clover meal is the best form in which to feed clover, but there is excellent chance for adulteration in preparing it, and the purchaser should buy it where he is reasonably sure of getting the genuine article.

QUESTION—Should whole grain be fed in the feed troughs or upon the ground?

ANSWER—Grain should always be fed in straw or some sort of litter where the fowls will be compelled to do more or less scratching to obtain it. This serves to keep them busy and is nearer the natural method of obtaining food on the range.

QUESTION—How should the mash food be fed?

ANSWER—Mash and all other soft and wet foods should be fed in troughs or other vessels. Never throw it on the ground, as much of it will be wasted, and what is eaten will contain more or less dirt and filth, and very probably germs of numerous diseases.

QUESTION—In what quantity and how often should green bone be fed to fowls?

ANSWER—Much depends upon the quantity of other meat or animal food given. If the animal food consists of green bone exclusively, give about an ounce each day to each fowl. Feed it alone or mixed with the mash.

QUESTION—Are table scraps good for fowls?

ANSWER—As a general rule they are too highly seasoned and too concentrated to be fed in large quantities. They affect fowls as a continued diet of very rich food affects people. The result is indigestion and liver disease. Table scraps should be fed sparingly and mixed with ground grain.

QUESTION—What food is best to grow fowls to extra large size?

ANSWER—There is no special food that will produce unusual size in fowls. Feed them a variety of good, wholesome food and this with proper care will bring best results.

QUESTION—What is the value of wheat screenings?

ANSWER—Wheat screenings are almost worthless. There is of course a wide difference in them, but even the best are of little value. The proportion of good sound grain in them is very small, and a much greater bulk must be consumed by the fowl in order to secure the same result. This excess of worthless matter is not only injurious to the fowl but makes the cost of feeding greater, because much more is required to sustain the fowl.

QUESTION—How should vegetables be fed, raw or cooked?

ANSWER—Principally raw, but potatoes and turnips are better cooked and fed with the mash. Raw onions should also be fed in that manner.

QUESTION—Is pop corn of any value as a food for fowls?

ANSWER—Very little. If it can be procured very cheaply it may be fed in small quantities.

QUESTION—Of what value is ground charcoal as a food for fowls?

ANSWER—It should not be fed regularly. It is chiefly valuable as an absorbent of gases and a corrective of mild bowel disorders. It is especially serviceable in cases of sour crop, as it stops fermentation and sweetens the contents.

QUESTION—In what quantities should green cut bone be fed to chicks?

ANSWER—Feed it to chicks about every three days, giving them what they will eat up clean.

QUESTION—How much grain will the average chicken eat at one time?

ANSWER—No fixed amount can be stated. The amount of other food given influences the matter. Ordinarily a half pint is sufficient.

QUESTION—What advantage is there in feeding linseed meal, oil meal, oil cake and other like foods?

ANSWER—They are of an oily composition and are supposed to aid in growing feathers, thus being especially valuable before and during the molting period. They are also valuable as a mild laxative.

QUESTION—Is it necessary to feed cut clover to chickens if they have a range on green rye or other growing green food?

ANSWER—No.

QUESTION—What are clipped oats that are so often recommended as preferable to ordinary oats?

ANSWER—They are the ordinary oats with the pointed ends clipped off. They are very desirable, but cannot be procured in some localities.

QUESTION—Is there any danger of crop bound or injury to the crop in feeding large quantities of oats?

ANSWER—Only in exceptional cases does any injury result. Oats are valuable as a food for fowls and should be fed in some form. There are hulled, clipped and ground oats, either of which are good.

QUESTION—How can oats be fed so as to eliminate all chance of the sharp points penetrating the crop?

ANSWER—Pour scalding water over them, which will soften them. Allow them to cool and then feed them in troughs or other receptacles.

QUESTION—Can fowls be successfully raised without any animal or meat food at all?

ANSWER—No.

QUESTION—Does cooking increase the digestibility of vegetables and green food?

ANSWER—Yes.

QUESTION—Should salt be regularly given to fowls in their food?

ANSWER—No. Salt, pepper and other like seasoning is not necessary, and is generally harmful.

QUESTION—What is a good chick food similar to the grain mixtures on the market for young chicks?

ANSWER—Cracked wheat 25 parts, pinhead oatmeal 15 parts, millet seed 10 parts, cracked corn 10 parts, granulated charcoal 5 parts, chick size grit 10 parts, buckwheat 5 parts, rape seed 5 parts, broken rice 5 parts, cracked peas 5 parts, and ground beef scraps or other meat meal 5 parts. Some of these are not easily obtainable in all sections and the mixture should be made with the ingredients at hand and considering cost.

QUESTION—What is meant by “mash”?

ANSWER—The term is applied to food in a mealy or powdered form, usually ground grains, to which is added liquids and thoroughly mixed to a wet, crumbly consistency.

QUESTION—What is a suitable mixture to use in a cramming machine for fattening fowls?

ANSWER—Corn meal two parts, ground buckwheat 2 parts, ground oats one part, mixed with skim milk to the consistency of gruel.

QUESTION—Will fowls fatten quicker and better if confined in small coops than if allowed to run in a large pen?

ANSWER—Yes.

QUESTION—Is it profitable to feed condition powder to fowls regularly?

ANSWER—No. The less fed the better.

QUESTION—What are the principal foods that are suitable, and of value, for fowls?

ANSWER—The various grains, including wheat, oats, corn, buckwheat, millet, barley, rye, etc., the two latter being not so desirable as the first mentioned four. Millet is principally of value in feeding young chicks. The numerous ground by-products of the various grains are useful and are used in the form of "mash." Green food is essential and may consist of any of the ordinary vegetables in the form of roots, plants and vines. Green or growing vegetation of most any kind is valuable, and especially clover alfalfa, rye, rape, cow peas, soy beans, etc. Animal food is also necessary in the form of worms, bugs, insects and such animal life as the fowl obtains when on range. When kept in confinement, animal food should be supplied in the form of fresh meat scraps or ground green bone. Milk in its various forms is particularly valuable and should be used chiefly in wetting the mash. Table scraps may be fed sparingly, mixed in the mash.

QUESTION—Of what value is oyster shell in feeding fowls?

ANSWER—Oyster shell is not so valuable as is generally supposed. Its chemical constituents are similar to those of the egg shell as regards lime compounds particularly, and the feeding of oyster shell is supposed to aid in producing material in the hen for forming the shell of the egg. Oyster or other similar shell is not necessary when proper food is given. It is supposed to prevent the laying of soft shelled eggs, but the laying of such eggs is generally controlled by conditions over which the feeding of oyster shell has no influence.

QUESTION—When is the best time to sow alfalfa for green food?

ANSWER—August 15th to September 15th.

QUESTION—What is meant by “balanced ration”?

ANSWER—In this sense the word balanced means properly proportioned as regards the value of the food in question, for specific purposes, and ration means a supply of food. A balanced ration is an allowance of food which is so mixed and proportioned as to produce the maximum of food value and a minimum amount of waste.

QUESTION—What is the object in feeding a balanced ration?

ANSWER—A surplus of any food stuff, fed to a fowl over and above the amount which is digestible and convertible to its needs is a waste of food and injury to the fowl. A balanced ration is best from the standpoint of financial economy and for the purpose of getting the best results as regards the quantity and quality of the product of the fowl.

QUESTION—What is best for grit and what are its uses?

ANSWER—Good grit should consist of a hard, flinty substance in irregular shaped particles with sharp edges or corners. For adult fowls the particles should be about the size of a pea or small bean. Round or smooth objects are worthless. Crushed stone, gravel or broken chinaware is serviceable. Broken glass is sometimes used, but is not suitable, chiefly on account of possible injury from cutting the fowl internally. Mica Crystal grit, usually obtainable from any supply dealer, is a most excellent article. A plentiful supply of good grit should always be within reach of fowls. It is necessary in aiding the action of the gizzard in grinding the food preparatory to digestion, and the lack of it is the foundation of many fatal ailments.

QUESTION—Which foods are the greatest fat producers?

ANSWER—Corn and its by-products are the chief fattening foods in the grain list. Buckwheat may be included. Ground or broken rice is fattening and potatoes and other starchy vegetables are useful for the purpose. Milk is more or less fattening, and especially when sweetened.

QUESTION—How should sunflower seed be fed?

ANSWER—About a pint each day to 15 fowls. It is chiefly of use during the molting period. It is oily in composition and aids in the dropping of the old plumage and the introduction of the new.

QUESTION—Are infertile eggs tested out of the incubator a good food for chicks?

ANSWER—Eggs fed to chicks should be hard boiled and those mentioned are as good as any. They should not be given as an exclusive diet.

QUESTION—Should fowls be fed every time they fly around the keeper, giving unmistakable evidence that they want food?

ANSWER—No. Fowls soon learn to do this and many people keep their flocks constantly overfed on this account. Feed at regular intervals and don't feed more than you know is proper. A bird should be hungry enough to eat a little at all times.

QUESTION—When is the proper time to cut clover hay for curing for poultry food?

ANSWER—When about two-thirds of the heads have turned brown.

QUESTION—What is a good ration for laying hens and in what quantities should it be fed?

ANSWER—Use a mash mixture made as follows: Oats, 15 pounds; corn meal, 5 pounds; bran, 5 pounds; shorts or wheat middlings, 5 pounds; clover meal, 10 pounds; meat meal or cut green bone, 10 pounds, making 50 pounds of a dry mixture. For a flock of 25 hens give four pounds of this mixture each morning, made into a crumbling mash by wetting with water or skim milk if obtainable. At noon give one quart of wheat and at night one quart of corn. The noon and night feeds should be given in deep litter and the grains can be alternated, giving corn and wheat one day and wheat and oats the next, or corn and oats. The idea is to give a change. This ration is for fowls that do not have access to a range but are confined in houses and runs practically free from vegetation. If free range can be given at a season of the year when animal and green food can be obtained by the fowls, omit the noon meal and do not use the clover meal and meat meal or green cut bone in the mash.

QUESTION—What is the recipe for Johnny cake, so often recommended for feeding young chicks?

ANSWER—One part ground oats, one part wheat bran, one part corn meal. Mix with skim milk, sour milk or butter milk and bake it. A little ground charcoal may be added and it may also be slightly seasoned with salt.

QUESTION—What is the difference between green bone and raw ground bone?

ANSWER—By green bone is meant bone fresh from the butcher's which contains all the natural juices and has more or less fresh meat adhering to it. Raw ground bone is made from these same bones after they have become thoroughly dried out and have lost a large portion if not practically all the valuable properties of fresh cut bone.

QUESTION—Is stale baker's bread a good food for poultry?

ANSWER—Yes, if not moldy. It should be soaked in water, pressed comparatively dry and then used as a part of the mash.

QUESTION—Will it pay to save lawn clippings till winter for winter green food?

ANSWER—No.

QUESTION—Is broom corn seed a good food for fowls?

ANSWER—It is fairly good if thoroughly ripened. It is of about the same value as sorghum seed.

QUESTION—Will mash food prove injurious to fowls if fed after it has become sour?

ANSWER—Yes.

QUESTION—Will heavy feeding of new corn have a bad effect on fowls?

ANSWER—Yes. Feed it sparingly, or mix it with old grain.

QUESTION—Of what advantage is beef tallow fed to exhibition birds?

ANSWER—It is supposed to assist in putting a gloss on the plumage.

QUESTION—Is it profitable to feed liberally of wheat if it costs 75 cents per bushel?

ANSWER—Yes.

QUESTION—Is blood from the butcher shop a good food for fowls? If so how should it be prepared?

ANSWER—Yes. Place it in a sack and boil it.

QUESTION—Are the prepared chick foods on the market, in the shape of a mixture of various grains, worth the price asked for them?

ANSWER—Most of them are.

QUESTION—Is raw corn meal made into a mash good for young chicks?

ANSWER—In small quantities only. It is very easy to feed too much of it, in which case serious bowel trouble is the result. It is better left out of the bill of fare entirely.

QUESTION—Will cinders from coal ashes answer for grit?

ANSWER—No, they are too soft.

QUESTION—Is the dry feed method as good as the plan of giving mash occasionally?

ANSWER—One method is as good as the other, and neither one can be said to be better than the other. It all depends upon how the fowls are fed.

QUESTION—Is charred corn of any special value as a food?

ANSWER—An occasional feed, say once a week, is very beneficial. Take shelled corn and burn it till well charred on the outside.

QUESTION—If any one grain can be said to be a better egg producing food than all the others, what is it?

ANSWER—Wheat.

QUESTION—What is the objection to too much wet or sloppy foods such as mash?

ANSWER—It is nature's plan for the fowl to grind the food with grit in the gizzard and this activity is necessary for good health. Too much mash food produces sluggishness of this organ and disease results.

QUESTION—What is the limit of age of sour milk for feeding?

ANSWER—Do not feed it if it is more than three days old.

QUESTION—Do a majority of the successful egg farmers feed mash?

ANSWER—Yes, nearly all of them feed it once a day.

QUESTION—Where can cramming machines for fattening poultry be purchased?

ANSWER—W. H. Allen, Jr., Arlington, Mass.

QUESTION—Is oatmeal a good food for bantams?

ANSWER—It is one of the best foods that can be given.

QUESTION—Are sweet potatoes a good food for fowls?

ANSWER—Yes.

QUESTION—Will linseed meal or cottonseed meal take the place of meat?

ANSWER—No.

QUESTION—Is it advisable to feed green cut bone in winter, even though the fowls have free range?

ANSWER—Yes.

QUESTION—How long should the mash food be left before the fowls?

ANSWER—If they do not empty the troughs in fifteen minutes take the balance of the food from them.

QUESTION—Will green cut bone answer for grit?

ANSWER—No.

QUESTION—Are potato parings good for fowls?

ANSWER—They do fairly well if boiled and chopped fine or mixed in the mash.

QUESTION—When fowls have access to grapevines and eat the green grapes will it retard laying?

ANSWER—No.

QUESTION—Should meat foods be fed to chicks from the start?

ANSWER—It is better to wait till they are about two weeks old.

QUESTION—What effect does the feeding of sour or moldy food have?

ANSWER—It causes serious bowel disorders.

QUESTION—How soon in the morning should fowls receive their first meal?

ANSWER—As soon as they leave the perches.

QUESTION—What arrangement would you suggest for feeding fowls the first feed of the day, if it is not possible for the keeper to see them till very late every morning?

ANSWER—Scatter the proper quantity of grain in the litter at night after the fowls have gone to roost. They will find it in the morning when they leave the perches.

QUESTION—What would you advise sowing in the yards for green food in early spring?

ANSWER—Oats and rape.

QUESTION—Will fowls fatten as well on an all dry food ration as they will by feeding mash foods?

ANSWER—No.

QUESTION—Is it a good idea to bury the grain in spaded earth and compel the fowls to scratch for it?

ANSWER—No. Feed it in clean straw or other litter. Much of it is lost when buried in the earth.

QUESTION—Does it pay to invest in a feed cooker if one has as many as 500 fowls?

ANSWER—Yes.

QUESTION—Will fowls do best if regular hours are observed for feeding?

ANSWER—Yes.

QUESTION—How can a small and cheap silo be erected for keeping green food for fowls?

ANSWER—Sink a vinegar or other tight barrel in the ground.

QUESTION—How long after rape seed is sown will it be ready for the fowls to pasture upon it?

ANSWER—Six to eight weeks.

QUESTION—How many crops of rape can be raised from one seeding?

ANSWER—Three.

QUESTION—Which is the best of the green foods?

ANSWER—Clover.

QUESTION—Is it best to feed the mash warmed in winter?

ANSWER—Yes.

QUESTION—Do old hens require as much food as pullets?

ANSWER—No. Generally what will be right for a growing pullet will make an old hen too fat.

QUESTION—What is a good method of feeding cabbage to the fowls?

ANSWER—Tie a string to the stalk and suspend it from the ceiling of the house, letting it come to within twelve to eighteen inches of the floor. The idea is to compel the fowls to jump a little for each piece they get, thereby giving them exercise.

QUESTION—How can beets, turnips and other like vegetables be fed raw with the least waste and to best advantage?

ANSWER—Take a piece of board, preferably one inch thick, five inches wide, and of any convenient length, three feet being a good size. Drive wire spikes into it six inches long, and have them about six inches apart. Place the vegetables upon these spikes, forcing them down till they rest on the board. Set the board in a convenient place and allow the fowls to eat at will. To prevent the spikes from falling out, another board of the same size may be nailed over the first one, covering the heads of the spikes.

Chicks.

QUESTION—When killing lice on chicks, with grease, is there any danger of injuring the chick?

ANSWER—Yes. Too much should not be used, and especially on the bod

QUESTION—How soon can the chicks be taken from the mother hen?

ANSWER—It is best to leave them with her till she neglects them.

QUESTION—Are the advertised liquid lice killers too strong for use in nest boxes and coops for very young chicks?

ANSWER—Yes. The fumes are fatal in most cases.

QUESTION—Is there any great disadvantage in allowing chicks of different ages to run together?

ANSWER—Yes. The larger and stronger ones will invariably annoy and fight the weaker ones and prevent them from getting as much food as they need.

QUESTION—Will February and March hatched chicks molt in the late summer and fall?

ANSWER—Yes, in most cases.

QUESTION—At what age is a chick a broiler?

ANSWER—From six to twelve weeks. The weight should be 1½ to 3 pounds.

QUESTION—Is it necessary to train the chicks to roost on the perches?

ANSWER—No. Have the perches low so that the chicks can reach them, and they may be depended upon to take to the roost at the proper time.

QUESTION—How can young chicks be protected from hawks?

ANSWER—The only sure way is a good gun, and someone who can shoot it. A scare crow is more or less effective, and in localities where martins are found it will pay to put up boxes for them on tall poles, as they are a great help in keeping hawks away.

QUESTION—Are chicks when first hatched the same color as the adult fowls?

ANSWER—No. Some varieties are very different. Most chicks of black breeds will show a yellow or creamy color in some places, and chicks of the white breeds may be smutty or have dark patches in the down. The parti-colored breeds produce chicks irregular in color. The true color begins to appear when the first feathers begin to show and after the first downy covering of the chick has disappeared.

QUESTION—Are chicks properly incubated and in good condition when they hatch on the 20th day?

ANSWER—Yes; 21 days is the time which is accepted as the correct period of incubation, but strongly fertilized eggs from healthy, vigorous stock will begin to hatch on the 20th day, and some of the eggs in any particular lot may begin to pip on the 19th day.

QUESTION—Is there any way to determine the sex of the chick during the period of incubation or before the egg is set?

ANSWER—No.

QUESTION—How often should chicks be fed during the first ten days?

ANSWER—Do not feed them at all till they are 48 hours old. Then feed them five times per day till they are ten days old.

QUESTION—In punching the webs of the feet of chicks, when is the best time to do it?

ANSWER—It may be done any time, and it is best to do it when the chicks are taken from the nest or the incubator.

QUESTION—How can very small chicks best be resuscitated, that have been caught out of the brooder in a heavy rain and are wet and chilled to the point where they are apparently dead?

ANSWER—Heat the brooder or incubator to 103 degrees and place the chicks in it for an hour or two, after they have first been revived by applications of water to their bodies which has been heated to about 103 to 105 degrees. The better plan is to saturate a flannel cloth with the warmed water and wrap the chick in it for a moment, after which place it in the incubator or brooder.

QUESTION—How can the sex of very young chicks be ascertained?

ANSWER—The male is a little larger and coarser, his comb is also larger and the tail feathers more developed.

QUESTION—Can chicks be hatched profitably every month in the year?

ANSWER—No, unless they are produced as broilers from October to February, and incubators and brooders are employed with special brooder houses.

QUESTION—Is it wise to attempt to raise late hatched chickens?

ANSWER—Chicks may be hatched in June and July if one is prepared to give the extra care needed to keep them growing by extra attention to feeding and watering and protection from the hot sun.

QUESTION—What causes leg weakness in chicks?

ANSWER—Board floors will cause it by creating a stiffness in the legs and feet. Exposure to cold and wet will cause it by bringing on an attack of rheumatism. Overfeeding induces it by adding weight to the body before the legs can gain equal strength.

QUESTION—What can be done with chicks when the long feathers of the wings attain such enormous length as to extend past the tail and seemingly have a depressing effect on the chick?

ANSWER—Stop the growth by clipping the feathers close to the base.

QUESTION—Will incubator chicks be absolutely free from lice if the machine is not infested, and if they are not allowed to come in contact with hens or other fowls or buildings where lice are?

ANSWER—Yes. That is one of the valuable features of the incubator.

QUESTION—Will chicks thrive better on an earth floor than on a board one?

ANSWER—Yes.

QUESTION—Why is it necessary to keep the young chicks in the brooder in the morning till the dew is off the grass?

ANSWER—It is not necessary. It is often advocated but a good healthy strong chick will thrive better not shut up.

QUESTION—Is it generally profitable to buy chicks that have just been taken from the incubator?

ANSWER—There is some trade in this branch of the business, but in most cases it is unsatisfactory. Chicks need constant brooder care and ample food for the first few weeks and they usually get a setback when shipped.

QUESTION—Will all cats eat young chicks?

ANSWER—It is not safe to trust any of them where young chicks are.

QUESTION—Are brooder raised chicks as strong and healthy as those raised by hens?

ANSWER—There is no difference if they are properly brooded.

QUESTION—What is a fair number of chicks to expect from a setting of shipped eggs?

ANSWER—Ten chicks from fifteen eggs.

QUESTION—If not more than eight chicks hatch from a setting of fifteen eggs, ought the seller duplicate the order at half price?

ANSWER—Yes.

QUESTION—How many chicks should be allowed in a coop together after weaning from the mother hen?

ANSWER—Twenty-five.

QUESTION—What could cause bowel trouble in chicks that are from one to two weeks old, when they are free from lice and are properly fed and brooded?

ANSWER—There is large mortality among young chicks resulting from inherited weakness or abnormal development of some of the organs of digestion, or the same effect may be produced by improper incubation. The chicks may seem all right in every way till bowel trouble sets in and results in death. The only method of discovering the trouble is a post-mortem examination. Just before the chick breaks the shell, it takes into the proper cavity the balance of the yolk of the egg. This yolk is gradually fed into the intestine, until at the end of four or five days it should be entirely absorbed. If on account of weakness or abnormal development, as mentioned above, this yolk is not normally digested and absorbed, it finally decomposes and poisons the chick and fatal bowel trouble is the result. There is of course no cure for it.

QUESTION—If young chicks are allowed to roost too soon on very narrow perches, will it cause them to have crooked breast bones?

ANSWER—Yes.

QUESTION—How long should a baby fowl be called a chick?

ANSWER—Chick is a term applied to the newly hatched fowl till the sex can be distinguished, and the term to be used then is cockerel or pullet,

QUESTION—What causes the crops of very young chicks to become distended and very hard, causing death?

ANSWER—Chicks sometimes get crop bound the same as do old fowls. It may be caused by taking something into the crop too large to pass through, or continued overfeeding may cause it by repeated distensions of the crop till the muscles are paralyzed and the organ refuses to act.

QUESTION—Can very young chicks drink enough cold water to give them bowel trouble?

ANSWER—Yes.

QUESTION—Is lettuce good for young chicks?

ANSWER—Yes.

QUESTION—Will lice affect chicks in the same way as gapes, as regards the movement of the head?

ANSWER—Yes. Oftentimes chicks die from the ravages of lice and the owner attributes the trouble to gapes.

QUESTION—Will coarse, sharp sand do for grit for very young chicks?

ANSWER—Yes.

QUESTIONS—If chicks are allowed to run with a hen that has scaly legs, will they, too, become affected?

ANSWER—Yes.

QUESTION—How large should a closed run be made to accommodate a hen and her newly hatched brood?

ANSWER—About 4 feet wide, 8 feet long, and 2 feet high, sides, ends and top covered with 1-inch mesh wire.

QUESTION—Will a wild mother hen make the chicks wild?

ANSWER—Yes.

Houses.

QUESTION—Is paint better than whitewash for the inside of a poultry house?

ANSWER—No. Not as good.

QUESTION—Is there any objection to a brick poultry house?

ANSWER—Fowls will not thrive well in one.

QUESTION—Is it necessary to have an outside run with scratching shed houses?

ANSWER—Yes.

QUESTION—How can rats be kept out of the poultry house?

ANSWER—Tack two feet wide wire netting all around the sills of the house, letting it extend straight into the ground for 18 inches and then turn it outward 6 inches. It should be one-inch mesh.

QUESTION—How high should the base-board be in the fences between the runs, and are they really necessary at all?

ANSWER—They should extend from the ground up two feet. They prevent fowls from fighting through the fence and serve as a windbreak. They are very desirable.

QUESTION—How high should fences be to prevent fowls from flying over them?

ANSWER—Some fowls are easily confined, and others not. Make the fences six feet high, using a single wire at the top to stretch it, instead of tacking it to a board. If necessary, stretch a single wire across the top of the entire fence six inches above the top. The fowls, in attempting to fly over, will strike this wire and fall back.

QUESTION—In covering the sides and ends of the poultry house with tarred paper, should it be placed upon the inside or outside?

ANSWER—It will be most advantageous to cover the inside walls. By so doing the paper will be protected from the weather, will last longer and will aid in keeping the house free from vermin.

QUESTION—What is the objection to board floors?

ANSWER—They get full of cracks, thereby causing the loss of much grain, and they form a harbor for rats under the house,

QUESTION—What should be the dimensions of the pens in the poultry house for best results?

ANSWER—10x12 feet or 12x12 feet make very desirable pens. It is better to divide a large house into this size pens rather than attempt to keep large numbers of hens together in one pen.

QUESTION—Can a poultry house be maintained in a perfectly sanitary condition and free from any disagreeable odor?

ANSWER—There is no more necessity for filthy and ill-smelling poultry houses than is the case in any other branch of live stock breeding. All that is required is to use ordinary diligence in keeping the house clean.

QUESTION—What is the best location for the poultry house?

ANSWER—An ideal location would be on the edge of an orchard, with the house facing toward the south or southeast. The land should slope away from the house to prevent water draining toward it and causing dampness.

QUESTION—What is the best floor for a poultry house?

ANSWER—Much depends upon the location. The most common are board, cement, brick and earth. Earth is best if it can be kept dry.

QUESTION—What are the objections to cement or brick floors?

ANSWER—They are too hard and are unyielding to the scratching of the fowls. They cause diseases of the foot, and particularly bumble foot, which is similar to stone bruise.

QUESTION—How high from the ground should the perches be?

ANSWER—Two feet is about right.

QUESTION—How high should the perch be from the dropping board?

ANSWER—About 10 inches for medium-sized breeds and 12 inches for Asiatics.

QUESTION—What kind of a perch is best?

ANSWER—The surface upon which the fowl rests should be two inches wide, with the edges slightly rounded.

QUESTION—When there are two or more perches together, is it better to have each succeeding one higher than the other, or should they be upon a level?

ANSWER—It is best to have them upon a level, and then there will be no fighting for the higher places,

QUESTION—What is the best size for nest boxes?

ANSWER—12X15 inches, and 8 inches deep.

QUESTION—What is the best location for the nests?

ANSWER—Under the dropping board, with the entrance toward the wall, making the entire back into a hinged door to drop down and afford easy access for removing eggs.

QUESTION—Are two-story houses a success when the idea is to keep fowls on the second floor?

ANSWER—No.

QUESTION—How can dampness be kept 'out' of the ordinary cheap single-wall poultry house?

ANSWER—Put in cross pieces from side to side at the eaves and fill the space above with hay or straw. It will absorb the moisture.

QUESTION—How wide should the dropping boards be?

ANSWER—20 inches for each perch.

QUESTION—What location in the poultry house is best for the perches?

ANSWER—In the darkest and most secluded portion and away from the windows or other means of draughts.

QUESTION—Is it a good plan to provide artificial heat for poultry houses?

ANSWER—No. The fowls will thrive better without it. All that is needed is as tight a house as good lumber can make, but double walls are advisable in very cold climates.

QUESTION—Is it a good idea to dig out about two feet of ground for the poultry house and have the floor that much below the outside earth in order to keep the fowls warmer?

ANSWER—No. Such a house would nearly always be too damp. The floor of the poultry house should be higher than the surrounding earth outside.

QUESTION—What is the best nesting material?

ANSWER—Hay or straw.

QUESTION—Should the dropping boards be set on a level or slanting somewhat in order to make them easy to clean?

ANSWER—They should be on a level, so that birds falling on them from the perches will be able to stand upon them and not slide down in the droppings, thereby soiling the plumage.

QUESTION—What is the best method of ventilation?

ANSWER—The doors and windows. Specially made ventilators in the roof, etc., are not satisfactory.

QUESTION—What disadvantages are there, if any, in having a large number of windows in the poultry house?

ANSWER—It makes the house too cold at night during the winter.

QUESTION—Is it advisable to have glass skylights in the poultry house?

ANSWER—No. Good ones would be too expensive and ordinary sash lights cannot be prevented from leaking in rainy weather.

QUESTION—Is the scratching shed plan of house the best?

ANSWER—Yes.

QUESTION—How much room on the perches should be allowed for each bird?

ANSWER—In constructing perches allow 10 inches for the smaller breeds and 12 inches for the larger ones.

QUESTION—How much window space should be provided in a house 12 x 12?

ANSWER—Two windows three feet square or the equivalent.

QUESTION—Is it necessary to have a nest for each hen?

ANSWER—No.

QUESTION—How many square feet of floor space in the poultry house should be given each hen?

ANSWER—The old rule of ten square feet is about right.

QUESTION—How much yard room is required for fowls?

ANSWER—Provide 100 square feet for each fowl and give as much more as possible.

QUESTION—What is the scratching shed plan of poultry house?

ANSWER—Each enclosed room or pen in the house connects with a shed, usually single walled and with the front entirely open. Its purpose is to counteract the effects of confinement in a closed house and at the same time provide protection from the weather.

QUESTION—Which is the better for the interior of the poultry house, tarred paper or common building paper?

ANSWER—Tarred paper.

QUESTION—How long will tarred paper last on the roof of a poultry house?

ANSWER—Three years if it is painted or tarred each season and properly cared for.

QUESTION—Is a tin roof a good one for the poultry house?

ANSWER—No. It makes the house too hot in summer.

QUESTION—What sort of a cheap arrangement could be made to temporarily protect fowls on the perches at night in a freezing temperature?

ANSWER—Make a curtain of burlap or sacking suspended from the ceiling of the house, and lower it around the perches at night.

QUESTION—How cold can the poultry house be in winter without injury to the fowls?

ANSWER—Thirty degrees above zero is not too low.

QUESTION—How far apart should colony houses be located?

ANSWER—About ten rods.

QUESTION—What size should the colony houses be?

ANSWER—Large enough to hold about 25 old fowls or 50 chicks.

QUESTION—How large should a poultry house be for 50 adult fowls?

ANSWER—A good size would be 16x40 feet, divided into four pens.

QUESTION—Is it best to have a hall or passageway in the poultry house?

ANSWER—Yes, except in colony houses.

QUESTION—Are double wall poultry houses necessary in the average climate?

ANSWER—No.

QUESTION—Where can one purchase a book giving plans and description of all kinds of poultry houses?

ANSWER—American Poultry Journal Publishing Co., 325 Dearborn St., Chicago, Ill. The price of the book is 50 cents.

QUESTION—Do common store or dry goods boxes make suitable houses for bantams?

ANSWER—Yes.

QUESTION—Is it advisable to cover the box houses for bantams with tar paper or building paper?

ANSWER—Yes.

QUESTION—When is the best time to build the poultry house?

ANSWER—In the spring or fall.

QUESTION—What is the average cost of constructing scratching shed houses?

ANSWER—About \$2 per running foot of house.

QUESTION—What size scratching shed house would answer for 12 fowls?

ANSWER—Roosting room 7 x 6 feet and scratching shed 10 x 7 feet.

QUESTION—How are movable poultry houses built?

ANSWER—Just like any other, except that the sills are heavy and act as runners. A horse is hitched to the house and it can be moved any reasonable distance without injury.

QUESTION—How large should the holes in the poultry house be for allowing the fowls to pass in and out from the pens to the runs?

ANSWER—Twelve inches wide and 14 inches high.

QUESTION—In building the poultry house, where posts must be sunk in the ground for sills to rest upon, what kind of posts are best and will last longest?

ANSWER—Cedar.

QUESTION—What is the best way to ventilate the poultry house?

ANSWER—By leaving the doors and windows open the required length of time during the day.

QUESTION—Is it best to have the nests, perches, dropping boards, etc., made of planed lumber?

ANSWER—Yes. It does not afford so much of a hiding place for lice?

QUESTION—What should be the pitch to a single roof?

ANSWER—Nine inches to the foot.

QUESTION—What should be the pitch to a tar and gravel roof?

ANSWER—One-half inch to the foot.

QUESTION—How can a dust box be provided at the least expense?

ANSWER—Procure two pieces of board, three feet long and twelve inches wide. Select the most convenient corner of the house inside and nail one of the boards to the side of the house three feet from the corner, allowing it to extend straight out into the pen. Nail the other in the same manner to the end wall three feet from the corner, allowing it to extend straight out and meet the first one. Then nail the two ends, and the box is formed. It requires no bottom if the pen has an earth floor.

QUESTION—Is a long, narrow run preferable to a square one, if they both contain the same number of square feet?

ANSWER—Yes.

Diseases.

QUESTION—Will colds ever disappear without treatment?

ANSWER—Sometimes slight ones will.

QUESTION—What is the condition of a fowl's excrement when in perfect health?

ANSWER—It is voided in cylindrical masses and is dark green in color tipped with white.

QUESTION—What causes chicks to droop and stand around with their heads drawn in and eyes shut? They finally die.

ANSWER—Most chicks thus affected are infested with lice, which are principally found on the head and throat. It is difficult to revive very young chicks after they reach the stage described. One of the very best remedies for lice on young chicks is to grease the head and throat lightly with ordinary lard or vaseline.

QUESTION—How can medicine in powdered form be best administered to fowls?

ANSWER—Put it in capsules or mix it with water, make it into pellets and force the fowl to swallow it.

QUESTION—Do fowls ever have tumors?

ANSWER—Yes. They are readily distinguishable by their appearance. Treatment requires too much time, and not one time in a hundred is successful. The birds should be killed and buried.

QUESTION—What is Douglas Mixture?

ANSWER—It is a very strong medicine supposed to be efficacious in cholera and similar diseases. It is made of sulphuric acid one-half ounce and copperas one-half pound in a half gallon of water. It is administered by placing a tablespoonful in the water for a dozen hens daily.

QUESTION—What causes the plumage of the head and neck to disappear and the parts assume a scab-like condition?

ANSWER—It is caused by a parasite called the depluming mite. Anoint the parts with lard and flowers of sulphur, two tablespoonfuls of the former to a teaspoonful of the latter. Carbolated vaseline is also good.

QUESTION—What is the trouble with a fowl when its comb turns very dark for a day or two and then assumes its normal color again?

ANSWER—Indigestion or other ailment which causes a sluggish movement of the blood.

QUESTION—Does it pay to doctor sick fowls?

ANSWER—Not unless the bird is an extremely valuable one and the keeper has the time and inclination to treat it.

QUESTION—What causes the skin of chicks to puff up in places and fill with air, and how should the trouble be treated?

ANSWER—The exact cause has never been discovered, or at least a satisfactory explanation has never been given. Air accumulates under the skin and at times will produce a "wind tumor" the size of a small walnut. The remedy is to prick the skin with a pin and allow the air to escape. If it again accumulates, cut out a small diamond-shaped piece of the skin with a pair of sharp scissors and anoint it with vaseline.

QUESTION—What causes diarrhœa in young chicks? The discharge is thin and white, the down on the posterior portion of the body becomes matted and the vent clogged. The chick stands drawn in and will occasionally waver and start convulsively in an effort to evacuate the bowels. The efforts are apparently painful and are sometimes accompanied by a cry. They refuse to eat and they die in a short time.

ANSWER—A fatal diarrhœa such as described may be caused by different things. Lice are responsible for perhaps a majority of cases. Some of the other causes are the feeding of pepper and condiments, condition powders and other improper food, wet, raw and sloppy food and mash, feeding too soon, a lack of grit, confinement in close quarters where the air is foul and vitiated, eating food which has been thrown down in their own filth, a chill resulting from exposure to cold or a too low temperature in the brooder, and in improper incubation before they are hatched. The remedy is to first find the cause and remove it if possible. Place the chicks in a good warm brooder and feed them properly. Some good remedies for checking diarrhœa are as follows: Boiled rice upon which has been sprinkled a little cinnamon, lime water to drink, boiled milk, and dry bran. Medicinal remedies are a half teaspoonful of tannic acid in a tablespoonful of powdered charcoal and mixed with sufficient soft food for about 30 chicks, dried cracker or bread crumbs upon which has been sprinkled a little powdered chalk, a teaspoonful of tincture of iron in a quart of drinking water, one-eighth grain of powdered opium and two grains of subnitrate of bismuth every four hours in the most severe cases.

QUESTION—What is pip and the cure for it?

ANSWER—Pip is a dry, hardened condition of the tip end of the tongue and is caused by the fowl being compelled to breathe continuously through the mouth by reason of the colds, roup or other disease which closes the nostrils. The remedy is to remove the cause by curing the diseased condition of the nostrils. The hard crust upon the end of the tongue should never be removed, as it is a part of the tongue. Apply vaseline lightly to it.

QUESTION—What are the symptoms of worms and what is the treatment for them?

ANSWER—The fowl becomes dejected and emaciated. It walks with difficulty and may have convulsions. The appetite is abnormal and great quantities of food will be eaten with no benefit to the fowl. Feed the bird sparingly for a day or two and then give it corn, wheat or other grain which has been soaked for from twelve to twenty-four hours in turpentine. Give no other feed for a day and administer a liberal dose of Epsom salts or castor oil. If the fowl refuses to eat the grain, force a small quantity of sugar down the throat upon which has been placed two or three drops of turpentine. A piece of asafœtida the size of a grain of corn is also beneficial.

QUESTION—What are the symptoms of diphtheria and the cure for it?

ANSWER—The exterior symptoms are generally a weakened and prostrated condition. The fowl stands drawn into a ball-like shape and the plumage is more or less ruffled. The mouth and throat are affected with false membranes of a yellow or whitish-yellow color. The eyes and nasal passages may also be affected. Sometimes there is loss of voice, and the air passages in the throat may become entirely obstructed, causing death. These accumulations should be removed even to the extent of causing bleeding, after which follow the treatment suggested for roup on another page.

QUESTION—What is chicken pox?

ANSWER—Chicken pox, sometimes called "sore head," becomes manifest in the form of scabby excrescences on the comb, lobes, face and the unfeathered portions of the head. The sores are wart-like in appearance and may become so numerous and serious as to result in death. The disease is contagious and afflicted birds should be immediately separated from the flock and treated. The trouble generally makes its appearance in wet weather during the summer. Damp, filthy poultry houses increase the tendency toward the disease, and in any event is favorable to its development. The prime cause of it is often mosquito or flea bites upon a fowl whose system is not able to throw off the poison.

QUESTION—What is a good remedy for chicken pox?

ANSWER—Anoint the affected parts frequently with carbolated vaseline, removing the crusts as they soften and yield to gentle rubbing.

QUESTION—Do fowls have epileptic fits?

ANSWER—Yes, occasionally. The effects and symptoms are the same as in people. They may be caused by tumors on the brain and in some cases intestinal worms. Treatment is unsatisfactory, but in mild cases 3 grains of bromide of potash given twice a day is sometimes beneficial.

QUESTION—What causes a hen to “bag down behind” and what is the cure?

ANSWER—Sometimes hens become so fat that the posterior portion of the body almost drags the ground, which condition is commonly termed “bagging down behind.” The flesh becomes diseased and is red and inflamed. In chronic cases the roots of the feathers are affected and the plumage drops off, leaving the bird in a most unsightly condition. When the trouble has not reached the incurable stage the remedy is to feed sparingly, giving mostly green food and compelling the bird to scratch for all the grain given it. In addition to this apply vaseline daily to the exposed portion of the body.

QUESTION—What is the cause of little chicks becoming clogged up behind?

ANSWER—It is caused by bowel trouble, which may be the result of errors in feeding or lice or improper brooding, in which case it is generally lack of sufficient heat. Examine them for lice and feed them boiled rice with a little lime water to drink.

QUESTION—What is the best cure for a frostbitten comb?

ANSWER—There is no remedy which will restore the comb to its normal condition if treatment is delayed till the comb turns black. The best that can be done is to anoint it frequently with carbolated vaseline or other like ointment.

QUESTION—What causes swollen eyes in fowls, and what will cure them?

ANSWER—Roup in some of its stages is generally the cause. A slight cold may at times settle in the eye and cause it to swell. This is especially true if a fowl roosts near a crack in the wall of the roosting quarters where the wind blowing through will strike the head and eye. Bathe the eye with equal parts of warm water and vinegar and anoint it with carbolated vaseline. See question relative to roup.

QUESTION—What is Scaly Leg?

ANSWER—Scaly Leg is that roughened condition of the legs caused by a minute parasite burrowing beneath the scales, forcing them out from the leg by an accumulation of a white, crusty substance beneath them. The color of the leg is destroyed and in cases of long standing the legs and scales are entirely covered with the growth.

QUESTION—What is the cause of grain passing through fowls whole?

ANSWER—A weakness of the digestive organs usually superinduced by a lack of grit.

QUESTION—What is a good remedy for Scaly Leg?

ANSWER—A mixture of equal parts of lard and common kerosene or coal oil should be applied to the legs daily until all the accumulated crusty formation has been removed. Then apply carbolated vaseline once every two or three days till the new scales begin to grow.

QUESTION—What is roup and the cure for it?

ANSWER—Roup is one of the most contagious and destructive diseases among fowls. It is a germ disease, and while contagion is generally the medium by which it is spread, it oftentimes develops from aggravated colds which have been allowed to reach the stage where they are properly termed contagious catarrh. The symptoms of roup in its early stages are very similar to those of catarrh. There is a watery discharge from the nostrils and breathing is difficult. Later the discharge becomes thicker, the nostrils are almost or entirely obstructed and the breathing is almost wholly through the mouth. There is frequent sneezing and shaking of the head in attempting to clear the nostrils. The plumage is roughened, the comb turns very dark, there is much fever and loss of appetite. The fowl stands around listlessly, with head drawn in or carried hidden under the front portion of the wing. After the disease is thoroughly developed there is a very offensive odor present, and this a never-failing distinguishing feature of roup. The watery secretion previously referred to becomes thick, yellowish and profuse. It not only obstructs the nasal passages but accumulates in the throat and in the space or cavity in the head surrounding the eyes. It thus causes great swelling and the eyes are sometimes swollen entirely shut, forcing the eyeball out of the socket and destroying the sight. The fowl becomes emaciated, weak and exhausted, and finally dies unconscious. Roup in the most advanced stages is difficult to cure. Unless the bird is very valuable and the attendant has ample time to work with it, the best course is to kill and bury it. The disease should be prevented

by good strengthening food, plenty of exercise and clean, well-ventilated houses, free from draughts. The afflicted birds should be given an internal remedy of a stimulating and tonic nature. A good one is as follows: Carbonate of Iron 2 drams, Gentian Root 4 drams, Cayenne Pepper 1 dram, Flour of Sulphur 2 drams, Hyposulphite of Sodium 1 dram, Salicylate of Sodium 1 dram. These should be well pulverized and thoroughly mixed. Four grains should be given for a dose once a day. Wet it and make into pellets or place it in capsules and force the fowl to swallow them. It may be mixed with the mash if the fowl will eat. The mouth and nostrils should be washed once or twice a day with a solution of Boric acid, 15 grains to an ounce of water. If the eyes are closed or to clear them of the sticky fluid generally present bathe them with salt water, a half teaspoonful of salt in a pint of water. Sometimes it becomes necessary to open the swellings on the head and remove the pus which has accumulated. This should be done with a very sharp instrument, and the wounds kept filled and treated with antiseptic powder such as iodoform. The throat, nostrils and cleft in the roof of the mouth connecting with the nostrils should be treated two or three times daily by injecting antiseptic solutions into them. Many remedies have been found efficacious and cures have been effected with common coal oil or kerosene, but it is better to dilute it with half sweet oil. Peroxide of Hydrogen is perhaps the best. It is cheap and of undoubted merit. Whatever is used should be forced well to the affected parts with a syringe, medicine dropper, or even a small oil can such as used on ordinary sewing machines. Some bad cases have been cured with Mexican Mustang liniment applied in this way.

QUESTION—What are the symptoms of cholera and a cure for it?

ANSWER—Genuine fowl cholera is not often found. It is often confounded with some forms of indigestion that produce somewhat the same symptoms, and are generally fatal. Cholera proves fatal in about 3 or 4 days and treatment is useless. As good a remedy as any, or one that will be as apt to produce results, is one dram of hydrochloric acid in a quart of water. Give a teaspoonful twice a day. One of the symptoms is loss of appetite, but in exceptional cases it has been observed that the fowl will eat nearly to the time it dies. One of the first symptoms noted is the yellow coloration of that part of the excrement voided by the kidneys, which in a healthy fowl is white, but this is present in other diseases, and in itself is not an infallible indication of cholera. The droppings are constant and are thin and watery, changing from yellow to green. The bird droops and falls into a drowsy condition, from which it is with difficulty aroused. The crop is sometimes distended and has the appearance of being paralyzed. There is great weakness and loss of flesh, and the bird falls over at the slightest touch. The diarrhoea

is severe from the start, and the comb turns pale and seemingly bloodless. In some cases the bird dies in convulsions. A postmortem examination shows the gall bladder distended and the liver greatly enlarged and dark green in color. Cholera is a germ disease and is generally communicated by afflicted birds contaminating the ground with their droppings and those coming in contact with food or grit taken by other birds. The wisest course to pursue in case of cholera is to isolate all afflicted birds, kill and bury them and thoroughly clean and disinfect the houses and runs. As a disinfectant use one pound of carbolic acid in 10 quarts of warm water. Use a sprinkling can such as is used in sprinkling flowers and apply liberal quantities of the solution once a day for at least a week.

QUESTION—What are the symptoms, the cause and the cure for Bumble Foot?

ANSWER—Bumble Foot is a form of stone bruise. It is generally caused by constant confinement upon hard floors or runs, or may be caused by the fowl jumping on a hard surface from the perch or other high place; extremely narrow perches will also cause it. In mild cases the bottom of the foot is swollen and is inflamed and noticeably painful. The foot should be held in warm water for fifteen or twenty minutes, keeping the water as warm as the hand can bear, after which apply boric acid ointment, which is made by adding one part boric acid to five parts vaseline. Repeat this once each day for three days and keep the bird confined on soft earth or in a coop with some sort of soft bedding. In aggravated cases, abscesses form and the swelling must be opened. Soak the foot in warm water as above described, then with a very sharp knife make an X-shaped incision and clean the wound thoroughly with lukewarm water. Dust it with iodoform and apply the boric acid ointment. Bandage the foot with cotton and dress it daily as above, keeping the fowl confined till the wound has healed.

QUESTION—What causes white crusts to form on the comb and what is the cure?

ANSWER—This condition of the comb is known as white comb, and if not checked will cause the comb to crack and fall to one side, destroying a portion of it in the same manner as a cancer. It may also spread to the skin of the head and other parts of the fowl. The growth is of a fungus nature and may be communicated by contact. As much of the crust as can be scraped off without causing bleeding should be removed. Apply tincture of iodine daily, also an ointment made of 1 part of red oxide of mercury to 8 parts of vaseline. If the case is too severe to yield to this treatment apply an ointment made of 3 grains of nitrate of silver thoroughly mixed with a half ounce of vaseline.

QUESTION—What causes leg weakness in young birds? ✓

ANSWER—Improper heating of the brooder and too much bottom heat will cause it. Birds that grow too fast are often temporarily afflicted. Heavy feeding for forced growth will also produce it.

QUESTION—What is the cure for leg weakness?

ANSWER—The main point is to remove the cause. Feed plenty of green food and such grains as rice and barley. Avoid condiments and stimulating food. Give 10 grains of baking soda in a pint of water.

QUESTION—What is the trouble with fowls when they become lame from no apparent cause?

ANSWER—The trouble is generally of a rheumatic nature. Fowls are very susceptible to rheumatism when exposed to cold and dampness, and especially when these conditions prevail in addition to filthy houses and poor ventilation. Give 25 grains of Epsom salts and place 35 grains of baking soda in each quart of drinking water. Give 2 grains of salicylic acid twice a day and apply carbolated vaseline or some good liniment to the affected joints.

QUESTION—What is the cause, prevention and cure of gapes?

ANSWER—The best thing to do is to adopt preventive measures, by confining all the affected chicks where they cannot mingle with the remainder of the flock. This disease is scattered by the fowls coming in contact with the worms that have been coughed up by the afflicted chicks and that have found lodgment in feeding and drinking vessels or on the ground itself. The primary cause is often the eating of angle worms, although in some localities these worms do not affect the chicks. The runs and houses in which the chicks have been confined should be well cleaned and disinfected with a 5 per cent solution of carbolic acid. For treatment of the afflicted birds take a feather strip off the web to within an inch of the end, and moisten it well with oil of turpentine. Hold the chick firmly in the hand, force the mouth open and when the wind-pipe is open for breathing insert the feather, giving it a quick turn and removing it promptly. Two or three applications of this will bring the chicks around all right. A good internal treatment is two or three feeds of garlic mixed with soft feed in a proportion of one good-sized bulb of garlic to about ten chicks. Camphor in the form of pills is also a good remedy, a dose being one-half to one grain twice a day.

QUESTION—How can a lopped comb be straightened?

ANSWER—There is no remedy for it, ..

QUESTION—What is the matter with a bird having the following symptoms: There is an appearance of giddiness and the head is thrown up and back or the neck may be thrown to one side. The walk is unsteady and the bird may go backward or sideways or in a circle. In some cases it falls to the ground fluttering and makes convulsive movements?

ANSWER—The trouble is congestion of the brain. It may be caused by overfat condition or as the result of fright or indigestion. Sometimes worms in the intestines will cause it. Male birds during the breeding season are especially subject to attack. It may be the result of blows upon the head, or a complication of infectious diseases or exposure to the hot rays of the sun. The treatment for the trouble is to apply cold water to the head till it is thoroughly cool. Confine the bird in a cool, shady place, and if a breeding male, take it out of the breeding pen for a week. Give a dose of two teaspoonfuls of castor oil and let the food consist principally of green foods. Give three grains of Bromide of Potassium three times a day, dissolved in a tablespoonful of water.

QUESTION—What is wrong with a fowl when it shakes or jerks the head violently and is seemingly unable to swallow any food at all?

ANSWER—In rare cases a grain of corn or other such article may become fastened in the upper part of the digestive tract and if the above symptoms are the only ones noticeable that is probably the trouble. Raise the tongue and if the obstruction is found remove it.

QUESTION—What are the symptoms of vent gleet and the cure?

ANSWER—There is a frequent passage of droppings in small quantities and the parts are dry and swollen with fever. The discharge is at first watery, but soon becomes white and very offensive. It collects upon the feathers and irritates the skin and destroys the plumage. The inflamed skin around the vent may become ulcerous. For treatment procure a sufficient quantity of quite warm water to immerse the lower part of the body and dissolve a tablespoonful of bicarbonate of soda in each quart of water. Hold the bird in this water for a half hour each day, and after removing it dry the parts and inject a tablespoonful of the following mixture—glycerine two ounces, boric acid one and one-half drams, morphia sulphate one grain and water a half pint. A small piece of cotton may be saturated with the remedy and inserted into the vent twice a day, allowing it to remain there till the bird expels it. If sores or ulcers form upon the skin outside keep them dusted well with iodoform. The disease is contagious and an afflicted bird should be at once isolated from the remainder of the flock.

QUESTION—What could cause apparently healthy birds to die suddenly without any ascertainable cause?

ANSWER—It is usually apoplexy. It is the result of a rupture of one of the blood vessels of the brain, and may be caused by over-feeding, or too stimulating food, or injuries. It may also result from violent exertion or straining in laying eggs. Hens are often found dead in the nest or under the perches from this cause. There is no remedy, as the bird dies before the trouble is discovered.

QUESTION—What disease is indicated by the following symptoms,—rapid and extreme emaciation till the bird is almost a living skeleton. The comb and wattles are so pale that they are almost white. The appetite is generally voracious, and in the latter stages the bird is quite dull and sleepy?

ANSWER—The disease is termed “going light” and is really consumption. There is no cure for it. It is sometimes contagious, and as soon as a bird is discovered in this condition it should be killed and buried.

QUESTION—What are the symptoms of “egg bound” and the remedy for it?

ANSWER—The fowl makes repeated unsuccessful attempts to pass the egg and becomes listless with roughened plumage. A hard lump may be felt in the posterior portion of the body. Inject a small quantity of sweet oil and endeavor to remove the egg by pressure. Sometimes it can only be removed by pricking the shell and allowing the contents to escape, after which remove the shell with the fingers. In aggravated cases the egg may break through the weakened tissue and escape into the abdominal cavity, in which case the bird should be killed.

QUESTION—Can a hen be seriously sick and continue to lay?

ANSWER—Yes, for a while.

QUESTION—What causes a bird to throw the head and neck forward and upward. The action seems to be an unsuccessful effort to swallow something.

ANSWER—If no other symptoms of disease are apparent, it is very probable that something too large for the bird to swallow has become lodged in the throat. This sometimes happens and the remedy is to remove the obstruction by gentle pressure and rubbing, forcing it either out of the mouth or into the crop, the latter if there is reason to believe that the object is in the nature of food that can be properly taken care of by the crop, and the former if the obstruction appears to be bones or other hard and indigestible matter of extraordinary size.

QUESTION—What is the cause, the symptoms, and the cure for bronchitis?

ANSWER—The primary cause is generally a cold, but it may be the result of inhaling irritating vapors or dust. In severe cases there is loss of appetite and the bird presents a generally dull appearance. The breathing is somewhat faster than normal and there is whistling, wheezing sound, which develops into a rattling or gurgling noise by reason of the air passing through the mucous. Treatment is not very successful. Give three drops of syrup of ipecac twice a day and force the bird to inhale the steam from boiling water in which has been placed a teaspoonful of carbolic acid to a gallon of water.

QUESTION—What is the cause, the cure and symptoms of catarrh of the crop?

ANSWER—There are several causes, among which are the taking into the crop of irritating, indigestible substances, overloading the crop. eating decomposed meat or other putrid articles and the presence of parasitic worms in the crop, especially maggots. The organ becomes practically paralyzed and much distended. The contents decompose and ferment and an offensive liquid and gas accumulates as will be indicated by feeling the crop and the belching of the bird. The crop should be emptied by holding the bird by the legs head downward and gently kneading the organ, thereby forcing the contents out through the mouth. Keep the bird without food for twelve to eighteen hours and then feed lightly of easily digested foods. As soon as the crop is emptied give one grain of bicarbonate of soda and one and one-half grains of subnitrate of bismuth in a dessert-spoonful of water and repeat the dose once a day for three days.

QUESTION—Are fowls subject to diseases of the liver; if so what are the symptoms and cure?

ANSWER—There are several forms of liver disease. They originate principally from lack of exercise, incorrect methods of feeding and a continued diet of grain, especially corn and other fat forming foods. The disease can seldom be detected till too late to cure it. Treatment is not profitable. The usual symptoms are loss of appetite, sluggishness and a yellowish color in the face.

QUESTION—Do fowls have Dropsy?

ANSWER—Yes, the symptoms are very pale comb, a generally enfeebled condition and diminished appetite. The most prominent indication is the enlargement of the abdomen, which is distended till it nearly reaches the ground and is soft and yielding to the touch as though it were a fleshy bag filled with liquid. There is no remedy for the disease. Birds affected should be killed as soon as the nature of the disease is suspected,

QUESTION—What is the proper treatment for "Crop Bound?"

ANSWER—Mild cases can be cured by giving a tablespoonful of sweet oil and one or two tablespoonfuls of quite warm water, after which knead the crop gently and force the contents out of the mouth, holding the bird head downward. If the crop is hard and much distended and the above treatment fails to give relief, an operation is necessary to remove the obstruction. Make an incision in the outer skin with a very sharp knife. It should be near the top and should be up and down, not more than two inches in length. Force the crop to one side before making an incision in it, so that when the wounds are sewed up the one in the crop proper will not be opposite the one in the outer skin, but will be entirely covered by the skin. After making the second incision remove the contents of the crop, after which cleanse it thoroughly with warm water in which has been placed a small quantity of any good antiseptic solution, four drops of carbolic acid to an ounce of water will answer the purpose. Stitch the cuts with silk thread, being particular not to fasten the crop to the outer skin. The wounds should heal in five or six days. Give no food at all for about twelve hours, and then begin feeding by giving milk for a day in small quantities at a time, then allowing soft foods, principally mash, and in four or five days whole grain and the regular diet may be given.

QUESTION—What is a good remedy to apply to frozen combs or other parts of the fowl where the object is to reduce inflammation?

ANSWER—Listerine.

QUESTION—What is Black Head in turkeys?

ANSWER—Black Head is a disease of the digestive organs and the liver in which one of the most prominent symptoms is a deep discoloration of the head. Treatment is unsuccessful except in the early stages of the disease. Give the following three times a day: Hyposulphite of sodium, 3 grains; sulphate of iron, 1 grain; sulphur, 10 grains, and sulphate of quinine, 1 grain. Among the symptoms are loss of appetite, weakness, emaciation and severe diarrhoea. The disease is caused by a micro-parasite and is contagious through the droppings coming in contact with food or water. Sick birds should be immediately isolated and the yards and houses be disinfected with a five per cent solution of carbolic acid.

QUESTION—What is the cause and cure of Limber Neck?

ANSWER—It is caused by the action of maggots in the crop. They are usually taken into the crop by eating the decaying carcass of animals or birds. Give drinking water into which has been placed a teaspoonful of Hyposulphite of Soda to a quart of water. Give also a piece of Asafoetida the size of a pea.

QUESTION—Can a frozen comb be saved if it is affected so bad that it is very black?

ANSWER—Only in exceptional cases. Treatment should be given, however, to relieve soreness of the live parts.

QUESTION—What is Prolapsus of the Oviduct?

ANSWER—This trouble is found principally in old hens. It may be the result of overfeeding, too stimulating food, the excessive feeding of egg foods and condition powder, inflammation of the oviduct, constipation or straining to expel large eggs. A large red colored mass protrudes from the vent, becomes inflamed and gangrene may result. Treatment should commence in the early stages of the disease. An examination should be made with a view to ascertaining if an egg has become fastened in the passage, in which case treat as recommended on another page for Egg Bound. Give 4 drops of fluid extract of ergot. Apply lard or vaseline to the parts and return them by gentle pressure.

QUESTION—How can excessive fat cause the death of a fowl?

ANSWER—The fat extends to the liver and destroys the cells therein. The organ is much weakened and unable to confine the blood in it and perform its natural functions. The result is the bursting of it and the release of a large amount of blood and the fowl which might be apparently in perfect health dies in a few moments, usually with a few convulsive movements.

QUESTION—Is the condition of the comb a reliable indication of the health of a fowl?

ANSWER—Yes. If the comb is not its natural color, there is something wrong with the bird.

QUESTION—What is a good remedy for constipation in fowls?

ANSWER—Ten drops of sulphate of magnesia in a pint of drinking water.

QUESTION—Will the various drugs and medicines affect fowls in the same manner as human beings?

ANSWER—Yes. The dose should be smaller.

QUESTION—Will pools of stagnant water around the poultry yard spread disease?

ANSWER—Yes.

QUESTION—In what quantities should quinine be given to fowls for colds?

ANSWER—A one-grain capsule each day.

QUESTION—Are diseases of various kinds common in the poultry yard even when good care is taken of the fowls?

ANSWER—No. Disease is practically unknown except where there is neglect, improper feeding and filth.

QUESTION—What causes the edges of the comb and wattles to turn purplish red?

ANSWER—Indigestion.

QUESTION—What causes young chicks to go around with their wings drooping and seemingly exhausted?

ANSWER—Heat and lice.

QUESTION—What is the best plan to detect colds and roup in the very earliest stages?

ANSWER—Go into the poultry house at night after the fowls have all gone to roost, and listen for wheezing and sniffing sounds. All birds thus noted should be removed from the flock and immediately treated.

Incubators and Brooders.

NATURAL AND ARTIFICIAL INCUBATION AND BROODING.

QUESTION—Is it advisable to buy an incubator when one is breeding on a small scale?

ANSWER—An incubator is a desirable addition to the poultryman's plant, whether he has many or few fowls. Machines of small capacity may be purchased cheaply and they are always ready for service. With them, eggs may be hatched at any season of the year; one does not have to depend upon sitting hens, and eggs hatched in an incubator do not produce chicks covered with lice as is the case when hatched by hens.

QUESTION—Which is the best—hot air or hot water incubators?

ANSWER—It is very generally acknowledged that hot air machines are the best, and while both kinds have produced good results, nearly all high-grade machines are heated by hot air and the preponderance of evidence is in their favor.

QUESTION—What is the effect of too high and too low temperature for long periods?

ANSWER—If it runs most of the time below 103 the hatch will be delayed and the chicks will come out about the 22d day. If it runs too high the chicks will come out sooner than they should. Chicks hatched under these conditions are handicapped greatly and require much special care and special attention to mature them properly.

QUESTION—Is it not necessary to provide moisture in incubators in exceptionally dry climates, even though the machine is supposed to be a no-moisture one; and if so, what is the best method of applying it?

ANSWER—There are times when moisture is beneficial, no matter what machine is used. It may be supplied by placing a wet sponge in the machine, or the eggs may be liberally sprinkled with water. In either case the water should be warm.

QUESTION—Which is the best incubator on the market?

ANSWER—No one incubator can be said to be better in all respects than any other. Any of the high-grade machines on the market will do the work claimed for them and will give satisfaction. There is no more a best incubator than there is a best breed.

QUESTION—Is it really necessary to remove the unfertile eggs from the incubator, or may they be allowed to remain during the hatch?

ANSWER—Unfertile eggs and those containing dead germs should be tested out frequently. A fertile egg generates heat; an unfertile egg does not generate heat and absorbs the heat from the fertile eggs surrounding it. These latter do not, therefore, get as much heat as do the fertile eggs surrounded by fertile eggs, and while the thermometer may show the right temperature, some of the eggs may be warmer than others.

QUESTION—Can the incubator be started with, say, half its capacity of eggs and the others added later?

ANSWER—It can be done, but very poor results will be obtained.

QUESTION—What is the time during incubation when the germ in the egg is more susceptible to injury and death by exposure to cold or too much heat?

ANSWER—From the eighth to the twelfth days, inclusive.

QUESTION—Does it injure the germ in the egg under setting hens to dust the hen with insect powder?

ANSWER—No.

QUESTION—Does it do any good to help hatching chicks out of the shell?

ANSWER—Not in one case out of a hundred. Chicks that must be helped out of the shell are too weak in constitution to ever develop properly. There are of course exceptional cases, but in the end nothing is gained by the method.

QUESTION—How can a broody hen be prevented from sitting?

ANSWER—Confine her in a small pen or coop with a vigorous male bird for a day or two. Place her in a coop with a slatted bottom and raised off the ground, feeding largely green food and giving an ample supply of cool fresh water to drink. If the coop can be arranged to swing back and forth a few minutes occasionally, it would be better.

QUESTION—Is it better to allow a broody hen to sit than to try to break her up?

ANSWER—Yes. It is nature's plan to give the fowl a rest, and she will have better health, will be better as a breeder and will lay more eggs and begin to lay sooner. Harsh means, such as ducking in water, etc., should never be used.

QUESTION—How soon will a healthy chick emerge from the shell after it is pipped?

ANSWER—In six to ten hours.

QUESTION—Can a sitting hen be moved to another location without causing her to forsake the nest?

ANSWER—Yes, if she is really broody and has been sitting a few days.

QUESTION—How long should the hen be left on the nest with her newly hatched chicks?

ANSWER—About 48 hours if the hen is to raise them. It is best to have the nest close to the ground or floor of the house and allow her to take them out when she chooses. If they are to be raised in a brooder, remove them from the nest as soon as they are thoroughly dry.

QUESTION—What is the best month for hatching?

ANSWER—March and April for the Asiatic breeds, April and May for American breeds, and May and June for the Mediterranean breeds.

QUESTION—Will moth balls placed under sitting hens to kill the lice, injure the eggs also?

ANSWER—Yes; any strong fumes are injurious to eggs during incubation. Pure air is a necessity.

QUESTION—How can hens be induced to become broody?

ANSWER—Very little, if anything, can be done to influence them. Keep them away from the male and feed them well with fattening foods.

QUESTION—What is considered a good hatch from an incubator?

ANSWER—Eighty per cent of the fertile eggs.

QUESTION—Can duck eggs and hen eggs both be put in the incubator at the same time?

ANSWER—Not for best results.

QUESTION—Does it make a difference whether the eggs are evenly distributed over the egg trays, or may they be left as they are after the unfertile eggs are tested out?

ANSWER—They should be spread out over the trays in about the same relative position to each other in order to facilitate the maintenance of an even temperature for all.

QUESTION—Can an incubator be made to maintain a temperature for days at a time that will not vary more than one-half degree either way from the desired amount?

ANSWER—Yes. A perfect regulator on a good machine in the hands of an expert operator can be made to keep the temperature at any given point during the entire hatch, but cases of this kind are exceedingly rare.

QUESTION—Could an incubator be considered a good one if the temperature could be controlled within a range of $1\frac{1}{2}$ degrees during the hatch?

ANSWER—Yes.

QUESTION—Can the temperature in the incubator go as low as 101 and as high as 105 and a good hatch still secured?

ANSWER—Yes, if the extremes are not held too long at a time, say more than 24 hours.

QUESTION—Are the very small incubators as reliable as those of larger capacity?

ANSWER—Yes.

QUESTION—At what temperature should the incubator room or cellar be kept?

ANSWER—The object should be to maintain as even a temperature as possible somewhere within a maximum of 70 degrees and a minimum of 60 degrees, which are the safest limits.

QUESTION—What is the greatest heat the egg can stand in the incubator without the germ being killed?

ANSWER—A fixed degree that will apply in all cases cannot be stated; 109 degrees before the eleventh day and 112 degrees after that period.

QUESTION—How often should the eggs be turned in the incubator?

ANSWER—Up to the 19th day turn them at least once a day. Twice a day will generally be advantageous.

QUESTION—How large should the air cell in the end of the egg be on the 5th, the 10th and 15th days of incubation?

ANSWER—In the average-sized egg, about the size of a 25-cent piece on the fifth, nearly as large as a half dollar on the tenth and a trifle larger than a half dollar on the fifteenth, or about seven-eighths of an inch, one and one-eighth inches and one and one-quarter inches.

QUESTION—If a fertile egg be broken before having been incubated at all, is there any way to distinguish it from a fertile one?

ANSWER—Yes. The germ in the form of a mucous-like spot may be seen attached to the yolk.

QUESTION—How soon after an egg has been placed in the incubator or under the hen can the development of the germ be noticed?

ANSWER—In a clear white shelled egg a spider-like formation may be noticed on the third day.

QUESTION—What are the best days to test eggs during incubation?

ANSWER—At the end of the 5th, 10th and 15th days.

QUESTION—How often and for how long at a time may a setting hen leave the nest without injuring the eggs?

ANSWER—It all depends upon the location of the nest as affected by the weather. In moderately cool weather ten to twenty minutes each day is sufficient for both hen and eggs. In real warm weather a half hour occasionally will do no harm.

QUESTION—What time is required to hatch duck eggs?

ANSWER—Four weeks, except the eggs of Muscovy ducks, which require five weeks. The duckling pips the shell from 24 to 36 hours before they emerge from it.

QUESTION—What change takes place in an unfertile egg after having been incubated five days?

ANSWER—The air cell is a trifle larger than in a fresh egg.

QUESTION—If the air cell in the eggs grows too rapidly, how may it be checked, and if too slowly may it be increased?

ANSWER—If too rapidly, decrease the supply of air to the egg chamber or increase the supply of moisture. If the growth is too slow, increase the supply of air or decrease the moisture.

QUESTION—Can identically the same rules in all particulars be applied to the operating of incubators of all makes?

ANSWER—No. Follow explicitly the directions furnished by the maker of the machine in question.

QUESTION—What size incubator is best to buy if the business is to be conducted on a large scale?

ANSWER—Two hundred eggs. Better buy this size and get more of them than to buy the very large machines.

QUESTION—Can incubators be run with gas for heat instead of oil?

ANSWER—Yes. Gas furnishes a more steady, even heat and is preferable. Most any machine can be easily changed to allow heating by gas.

QUESTION—If the temperature in the incubator is just right before the eggs are placed in the machine, will it drop after the eggs are put in?

ANSWER—Yes. If the machine is in good running order the temperature will rise again in due time without any additional regulating.

QUESTION—What causes chicks to die in the shell just at the time they are ready to come out?

ANSWER—Oftentimes it is because the chick comes from weak and debilitated parent stock, or from a weakly fertilized egg and it has not sufficient strength to break the shell and survive the effort. The trouble may also be the result of too much heat in the incubator during the last few days of the hatch, or too little moisture at the time of hatching. Either of these conditions may cause the skin of the shell to dry too quickly and harden on the chick, which binds it too strongly for it to escape.

QUESTION—At what temperature will the germ in an egg commence to develop?

ANSWER—Slight changes will take place at a temperature of 80 degrees.

QUESTION—If an unhatched egg is decayed after incubation, is it an indication of unquestioned fertility?

ANSWER—Yes. An unfertile egg will remain clear, and, while somewhat stale, it may be used as food.

QUESTION—Is there any reason why eggs of different breeds should not be placed together under the hen or in the incubator?

ANSWER—It may be done more or less satisfactorily if there is no way to avoid it, but better results will be obtained if some attention is paid to the selection of eggs having shells of about the same thickness. For instance, the eggs of all the American breeds are about the same, but in the Mediterranean and Asiatic breeds there is a wide difference in the thickness of the shells. The shell of the Leghorn egg is thinner than that of the Brahma egg, and there will be a difference of several hours usually in the period of incubation of the eggs from these two breeds. The best results will be secured by selecting eggs of one breed and of uniform size,

QUESTION—Should the incubator be heated to the proper temperature before putting in the eggs?

ANSWER—Yes.

QUESTION—When fertile eggs die in the incubator, will they injure the others if not taken out?

ANSWER—Yes. One of the absolutely essential requirements for success in artificial incubation is a constant circulation of pure air in the incubator. The foul gases arising from decayed eggs destroy this condition to a greater or less extent and consequently lessen the chances of a good hatch.

QUESTION—Are brooders preferable to hens in raising chicks?

ANSWER—Yes.

QUESTION—Are home-made brooders successful?

ANSWER—They are if they are properly constructed. One who is handy with tools and understands the principles of brooder construction can succeed in making a reliable brooder.

QUESTION—Ought a good outdoor brooder maintain a temperature of 90 degrees during several days of zero weather?

ANSWER—Yes.

QUESTION—At what temperature should the brooder be kept during the first week that the chicks are in it?

ANSWER—90 degrees will be right for the first week. The brooder should, of course, have a nursery or runway much cooler than this where the chicks can scratch and exercise when they desire to do so. They will not need a temperature of 90 degrees continuously, but should have it to go to when wanted.

QUESTION—Which is the better method of heating the brooder, top heat or bottom heat?

ANSWER—Top heat is the only successful plan. Bottom heat is unnatural and has long been abandoned by practical poultrymen who depend upon brooders to raise their chicks.

QUESTION—What is the most suitable bedding for the brooder?

ANSWER—A couple of inches of dry sand, and upon this may be scattered enough clover chaff or scrapings from the hay loft to well cover it.

QUESTION—What is the largest number of chicks that should be kept in one brooder?

ANSWER—Never more than 100; 50 is better.

QUESTION—How much brooder room is required for 100 chicks until they are six weeks old?

ANSWER—A brooder about 3x4 feet placed in a run about 4x10 feet. These measurements are the lowest limits.

QUESTION—What is the matter with a brooder in which the temperature rises 5 to 10 degrees when the chicks hover in it at night?

ANSWER—Such an increase will occur in any brooder. It is caused by the heat from the bodies of the chicks and is the natural result of crowding.

QUESTION—If the temperature of the brooder is 90 degrees at the start, what should it be at the end of each succeeding week?

ANSWER—The heat should be reduced about 5 degrees every seven days till it reaches about 70 degrees. This temperature should be maintained as long as the chicks are in the brooder.

QUESTION—Is it not a fact that most brooders are overrated as to capacity?

ANSWER—Yes. Manufacturers almost without exception claim a capacity for twice as many chicks as their brooders will accommodate.

QUESTION—Is air slacked lime suitable for the floor of the brooder?

ANSWER—No.

QUESTION—Can fertile eggs during incubation be distinguished by a rattling sound when shaken close to the ear?

ANSWER—No, such handling will injure a fertile egg and may kill the germ.

QUESTION—Should a hen be set that has scaly legs?

ANSWER—No.

QUESTION—Is it better to set a hen so that she has her liberty to wander around at her pleasure, or should she be closely confined?

ANSWER—It is better to set her in a comparatively roomy place where she has access to food and will not be annoyed by other hens.

QUESTION—In turning eggs in the incubator should they be turned end over end or rolled over sideways?

ANSWER—Either method will do. It is more convenient to roll them over,

QUESTION—If eggs do not hatch at the end of the 21st day is it worth while to keep them longer?

ANSWER—No.

QUESTION—Will a very slightly cracked egg hatch?

ANSWER—Sometimes they will.

QUESTION—What causes the temperature in the incubator to fall one to two degrees when the chicks are hatching, and should the lamp be turned up at that time to increase the heat?

ANSWER—This condition is usually found in machines where the wet chicks come in contact with the bulb of the thermometer and the natural result is a difference in the register. It is desirable to maintain 103 degrees in the machine at this time and there really is that amount of heat. Under the circumstances, the lamp should not be changed.

QUESTION—Is there any one incubator better than another for a beginner to start with?

ANSWER—No incubator possesses that distinctive feature. If it could be better for the novice it would also be better for the expert.

QUESTION—Does it do any good to pip the shell for the chick and thereby help it to break through?

ANSWER—No. If the chick is not strong enough to pip the shell it should never come out.

QUESTION—If an incubator is being run in a cellar which on account of heavy rains becomes filled with water nearly to the bottom of the lamp, is it worth while to continue the hatch? Will not so much dampness injure the hatch?

ANSWER—Good hatches have been brought off under these conditions and in such cases the machine should not be neglected.

QUESTION—What are addled eggs?

ANSWER—Those in which the germ has died during incubation before the embryo is well formed.

QUESTION—Do incubator chicks have to be taught to eat?

ANSWER—Only by placing the food before them at the proper time.

QUESTION—Is there any danger from fire in running an incubator in the dwelling?

ANSWER—No more than there would be in having an ordinary house lamp burning and in most cases not as much.

QUESTION—Does it pay to buy second-hand incubators?

ANSWER—No. By all means get a new one.

QUESTION—When cooling eggs in the incubator what should the limit of the temperature be?

ANSWER—Do not let them go lower than 80 degrees.

QUESTION—Why is it so necessary to keep the door of the incubator closed while the chicks are hatching?

ANSWER—The drafts of air coming in upon the chicks at that time will seriously affect them.

QUESTION—About how much weight will a properly incubated egg lose during incubation?

ANSWER—About one-eighth of its original weight.

QUESTION—When cooling incubator eggs, is it best to leave them in the machine and open the door, or should they be taken out and the door kept closed?

ANSWER—Take them out of the machine and keep it closed.

QUESTION—How often should the wick of the incubator lamp be trimmed?

ANSWER—Once a day.

QUESTION—Is there any method by which the liability of the incubator lamp to smoke may be reduced?

ANSWER—It is claimed that wicks soaked in vinegar and dried before putting in the lamp will prevent smoking to some extent.

QUESTION—How many eggs can a medium-sized hen properly cover?

ANSWER—Thirteen in early spring and fifteen in summer.

QUESTION—In keeping eggs for hatching, does it make any difference whether they are kept in the dark or not?

ANSWER—A test made at the Maine State Agricultural Experimental Station showed that the chances were slightly in favor of eggs kept in a dark place.

QUESTION—Will smoking in the incubator room (pipe or cigar) injure the germ in the egg?

ANSWER—Yes, if persisted in.

QUESTION—Can an incubator with single walls be relied upon?

ANSWER—No.

QUESTION—Can the heat in the brooder be kept near enough to the right point without a thermometer?

ANSWER—No. Guess-work will give poor results.

QUESTION—What system of heating is best for a large brooder house?

ANSWER—The hot-water pipe system.

QUESTION—Can a brooder house be heated with stoves and kept at the right temperature?

ANSWER—Yes. The stoves need constant attention, and good indoor brooders should be used also.

QUESTION—Where can one purchase a hot-water heating plant for a brooder house?

ANSWER—Write to the Cyphers Incubator Co., Buffalo, N. Y.

QUESTION—Is there any reason why a kitchen is not a suitable place for an incubator?

ANSWER—Yes. In most kitchens there is much moving around and incubators should be placed where they are subject to as little jar as possible. The heat in the kitchen is not sufficiently uniform and the fumes from the various foods cooking will injure the eggs, which should at all times have a constantly changing supply of pure, fresh air.

QUESTION—Will the same instructions in all details apply to all machines?

ANSWER—No. In some things it is best to follow explicitly the instructions of the maker.

QUESTION—How can the incubator operator always know that his thermometer is reliable and is registering correctly?

ANSWER—Procure a reliable physician's thermometer to test with. Place both in water warmed to 103 degrees and keep the water agitated.

QUESTION—How often should the lamp burner on the incubator be cleaned?

ANSWER—Clean it thoroughly after each hatch. Boil it in borax water.

QUESTION—What is the largest number of eggs that should be set under a hen in summer?

ANSWER—Fifteen. Sometimes a larger number are set, with good results, but a hen cannot properly cover more than fifteen.

QUESTION—What is the rule for testing the moisture in incubator eggs by placing them in water?

ANSWER—After the egg has been in the machine for two weeks, place in it warm water. If it floats, there is not sufficient moisture. If it sinks, there is too much moisture, and if it floats with a space above the water that can be covered by a twenty-five cent piece, the moisture is about right.

QUESTION—Are hygrometers or moisture gauges of any value in the incubator?

ANSWER—No.

QUESTION—Will it injure the eggs in the incubator to remove the trays for convenience when testing the eggs?

ANSWER—No.

QUESTION—Should the eggs be turned in the incubator after they commence to pip?

ANSWER—No.

QUESTION—Do the Asiatic breeds make good mothers?

ANSWER—Not as a rule. They are clumsy and trample the chicks in the nest.

QUESTION—Can a very large poultry plant be operated profitably without the use of incubators?

ANSWER—No.

QUESTION—Should chicks of different ages ever be put into the brooder together?

ANSWER—No.

Turkeys, Ducks and Geese.

QUESTION—Which is the largest breed of turkeys?

ANSWER—The Bronze. The standard weight for cocks is 36 lbs. and for hens 20 lbs.

QUESTION—Can geese be kept in confinement?

ANSWER—No. They need a large grassy range.

QUESTION—How can the sexes in geese be distinguished?

ANSWER—The voice of the female is coarse and the male has a thicker neck and a generally masculine appearance.

QUESTION—Is it necessary to have a pond or stream of water for geese?

ANSWER—They will do much better if it is provided.

QUESTION—How old should geese be before they will produce eggs that will hatch strong, healthy goslings?

ANSWER—Two years old.

QUESTION—How can the sexes be distinguished in ducks?

ANSWER—The first noticeable feature in young birds is the drake's longer bill, neck and body and a more upright carriage. When about two months old the duck can be distinguished by her coarse voice. The drake has a finer voice, and with age the curled feathers appear in the tail.

QUESTION—How many eggs ought a pekin duck lay in a year?

ANSWER—About 125.

QUESTION—At what age do ducks cease to be profitable as layers and breeders?

ANSWER—From three to four years.

QUESTION—To be successful with ducks, is it necessary to have a pond for them to swim in?

ANSWER—No. A plentiful supply of clean water in deep drinking vessels so that they can immerse their head frequently is all that is needed,

QUESTION—How many geese should be mated to a gander?

ANSWER—One gander will sometimes do for two or three geese, but geese generally mate in pairs, and better results will be obtained in that way.

QUESTION—How many ducks should be mated to one drake?

ANSWER—About five.

QUESTION—What is the average weight of Toulouse goslings at the age of one month?

ANSWER—About $4\frac{1}{2}$ lbs.

QUESTION—Do turkeys have worms?

ANSWER—Yes.

QUESTION—Is it necessary to keep the turkey tom with the turkey hens during the entire breeding season?

ANSWER—No. It would be a good idea to allow the male to run with the females at least two or three weeks. One union of the sexes is sufficient to fertilize all the eggs the hen will lay in two or three months. Turkeys differ from chickens in this respect.

QUESTION—What is a poult?

ANSWER—A newly hatched turkey.

QUESTION—Which breed of ducks is the best layer?

ANSWER—The Indian Runner.

QUESTION—How soon will ducks begin to lay?

ANSWER—At about eight months.

QUESTION—Can geese be kept successfully in confinement?

ANSWER—No.

QUESTION—What are the two principal varieties of geese?

ANSWER—The Toulouse and the Embden.

QUESTION—Which is the heaviest breed of geese?

ANSWER—The Toulouse and the Embden both weigh the same, except the young goose, which the standard fixes at one pound heavier in the Embden variety. Adult ganders weigh 20 pounds and adult geese 18 pounds.

QUESTION—Do geese make good mothers?

ANSWER—No.

QUESTION—How long does it require for goose eggs to hatch?

ANSWER—Thirty days.

QUESTION—How many goose eggs can be safely entrusted to a hen for hatching?

ANSWER—Five or six. Small hens should not be used.

QUESTION—What is the best green stuff to raise in the pond for geese?

ANSWER—Water grass and wild rice.

QUESTION—How can one tell when the feathers on geese are ripe for picking?

ANSWER—When they can be pulled out clean without a bloody liquid adhering to the quill.

QUESTION—Will a very rough shed answer for roosting quarters for turkeys in coldest winter weather?

ANSWER—Yes; all they require is protection from driving snow, sleet, and rain. They will do better roosting out in the open air most of the time.

QUESTION—How long can geese be kept profitably as breeders?

ANSWER—From five to eight years.

QUESTION—What are green ducks?

ANSWER—Green ducks is a term applied to young ducks of from 8 to 12 weeks of age.

QUESTION—How many eggs will the Bronze turkey lay in a year?

ANSWER—From twenty to forty.

QUESTION—What are the small fleshy protuberances on the head of a turkey called?

ANSWER—Caruncles.

QUESTION—What is the bean of a duck?

ANSWER—It is the hard bean-shaped protuberance growing at the tip of the upper mandible of the bill.

QUESTION—Will very young ducklings be injured by being out in a hard rain?

ANSWER—Yes. They may drown. It is a mistaken idea that ducks must be in a pond all the time and that they cannot get too much water.

QUESTION—Is it advisable to try to raise late hatched geese?

ANSWER—No.

QUESTION—Is it very easy to overfeed geese with grain?

ANSWER—Yes.

QUESTION—How many goslings does one generally raise from one goose?

ANSWER—An average of twelve is good.

QUESTION—How high a fence is required to confine geese?

ANSWER—Three feet will usually answer.

QUESTION—Can unfeathered goslings stand much rain?

ANSWER—No.

QUESTION—Are ducks subject to the ravages of lice to the same extent that chickens are?

ANSWER—No. The plumage of a duck seems to be too thick and close for lice.

QUESTION—What does it cost to keep a duck a year?

ANSWER—About \$2, under favorable conditions.

QUESTION—What should be the income from the sale of feathers during the year, from a pair of geese.

ANSWER—Two dollars.

QUESTION—When does the season for duck laying close?

ANSWER—About Aug. 1st.

QUESTION—At what age may young turkeys be said to have passed the danger point of turkey ills?

ANSWER—Eight weeks.

Miscellaneous.

QUESTION—Are cross bred birds better in any way than the pure bred ones?

ANSWER—No.

QUESTION—Are the Standard bred fowls as hardy and healthy as the ordinary mongrels?

ANSWER—Yes, all things considered, they are more so.

QUESTION—What will it cost to feed a broiler till it reaches a pound in weight?

ANSWER—About five cents.

QUESTION—If a hen has been forced for heavy laying all winter will it affect her as a breeder in spring?

ANSWER—Yes. She will not lay quite as many eggs and there will be a tendency toward a lower vitality in much of the off-spring.

QUESTION—Is there any danger in breeding from a bird that has had roup?

ANSWER—Genuine roup is similar to consumption in people, and is considered hereditary. It is classed as a blood disease, and even though a bird has seemingly been cured it is very liable to prove a disappointment as a breeder, and the chances are that the progeny will fall an easy prey to disease and be especially susceptible to roup. It is not advisable to use such fowls in the breeding pen.

QUESTION—When reference is made to the utility value of a breed what is the idea conveyed?

ANSWER—By utility is usually meant that the fowl has been developed along the line of greatest value from a market standpoint, which is based upon the number of eggs it will lay and the quality and quantity of meat it will produce.

QUESTION—What is "fancy" fowls or exhibition stock?

ANSWER—The term "fancy" as applied to standard bred poultry means fowls that are bred with a view to developing the perfection of certain external characteristics embodied in various shapes of the different sections and colors of the plumage.

QUESTION—Can utility and fancy points be bred in the same bird?

ANSWER—An ideal fowl should have combined in its make-up both fancy and utility points. This can be accomplished, although there may be found supposedly well-informed breeders who emphatically declare that it cannot. There is no law of nature which makes fine plumage and shape antagonistic to heavy egg production or the development of table fowls. The most pleasure and profit lies in the production of standard bred fowls in which there is a combination of both fancy and utility points.

QUESTION—Why are there not more guineas raised?

ANSWER—They lay a very small egg, the flesh is very dark and not relished by many people, and their incessant unearthly noise makes them a nuisance.

QUESTION—Is it possible to have fowls so tame that the keeper can go among them without them fleeing from him?

ANSWER—Yes. If fowls are properly cared for they will eat from the hand of their keeper.

QUESTION—When is the best time to hatch bantams?

ANSWER—July and August.

QUESTION—How can the age of fowls be told?

ANSWER—There is no absolutely sure way after they are more than one year old.

QUESTION—Which is the heaviest breed of chickens?

ANSWER—Light Brahmas. The cocks weigh 12 lbs., hens 9½ lbs., cockerels 10 lbs. and pullets 8 lbs.

QUESTION—Can fowls be kept in confinement as well as on free range?

ANSWER—Yes. Some of the finest exhibition birds are raised on city lots.

QUESTION—In treating fowls for lice by putting coal oil on the plumage, is there any danger in injuring the fowls?

ANSWER—Too much oil applied to the plumage will make a bird ill, and if it is not in good condition may kill it.

QUESTION—Is the yellow-skinned fowl a better one for table purposes than the white-skinned one?

ANSWER—It is no better, but more people prefer it, and it can be sold much easier and generally at a better price.

QUESTION—Are white fowls as hardy as the colored ones?

ANSWER—Yes.

QUESTION—At what age do hens commence to decrease in egg production?

ANSWER—When entering the third laying season.

QUESTION—How often is it necessary to remove the droppings from the dropping boards?

ANSWER—It should be done daily. Twice a week might answer, and never under any circumstances should they be neglected longer than a week.

QUESTION—What is a slip as applied to caponizing?

ANSWER—It is a bird upon which the operation has not been properly performed, the testicles not having been entirely removed. Such birds are of no value as capons, and they cannot be used as breeders.

QUESTION—How long should the incision be in the side of the bird when caponizing?

ANSWER—About an inch.

QUESTION—Will the hens in a flock lay more eggs if there is a male bird with them?

ANSWER—No. The presence of the male cannot influence the number of eggs laid.

QUESTION—What special preparation, if any, is necessary with the bird before caponizing?

ANSWER—None beyond the details of the operation, except that food should be withheld for 24 hours.

QUESTION—What are the noticeable effects of caponizing?

ANSWER—The bird is of an extremely quiet disposition. It never craves a fight and the comb practically ceases to grow. It responds quickly to heavy feeding and takes on flesh rapidly.

QUESTION—What is a capon?

ANSWER—A capon is a male bird with the organs of reproduction removed.

QUESTION—Does caponizing require any special skill in the operator?

ANSWER—None that the average person cannot acquire with a little practice. A steady hand is the main requirement.

QUESTION—What is the object in caponizing?

ANSWER—The birds grow larger, the flesh is remarkably tender and wonderfully improved in flavor.

QUESTION—What age is best for caponizing?

ANSWER—About three months.

QUESTION—What are the best breeds for caponizing?

ANSWER—The medium-sized ones, such as Plymouth Rocks and Wyandottes.

QUESTION—What is the percentage of loss by death when caponizing when the operator is an expert?

ANSWER—Not more than five per cent.

QUESTION—What does a good set of caponizing instruments cost?

ANSWER—About \$2.50.

QUESTION—At what age are capons ready for market?

ANSWER—From 10 to 12 months.

QUESTION—What causes hens to lay their eggs while on the perches at night?

ANSWER—It may happen naturally occasionally, but it is generally an indication of weak egg organs.

QUESTION—How many cockerels should be kept with 200 hens on free range?

ANSWER—About ten male birds would be right under the conditions mentioned.

QUESTION—What kind of drinking fountains are best?

ANSWER—Earthenware. They should be thoroughly cleaned and scalded often.

QUESTION—Is it advisable for a beginner to commence with common stock?

ANSWER—It is not best for one to begin with scrub or mongrel fowls, although it is not necessary to have the very highest grade of standard bred stock. Culls from some good flock will answer the purpose.

QUESTION—What is the best method of preventing lice?

ANSWER—Keep the house and all interior fixtures such as roosts, nests, etc., scrupulously clean, and use a good lice powder on the fowls regularly.

QUESTION—What is the best breed for a city lot?

ANSWER—No one breed can be said to be unquestionably better than another, but the Asiatic or American breeds are generally preferable to the Mediterranean breeds, for the reason that the latter are usually high fliers and more or less restless when confined.

QUESTION—How many fowls can be kept on an acre of ground?

ANSWER—About 250 ordinarily.

QUESTION—Is it advisable to breed more than one variety of fowls?

ANSWER—Most people will succeed better with one variety only, although an experienced breeder with ample room may get good results from two or more varieties.

QUESTION—Do Wyandottes forage as much as Plymouth Rocks?

ANSWER—There is practically no difference.

QUESTION—Which is the best breed?

ANSWER—This question is perhaps asked oftener than any other. It is generally among the very first inquiries from beginners. The truth is that no breed can be said to be better than all the others. Pages and volumes have been written in argument of the matter, and it is still unsettled to the satisfaction of all. One person will succeed with a breed with which another has failed. Much depends upon the particular strain of any breed. For instance a strain of Leghorns which have been systematically selected and line bred, for heavy egg production will lay more eggs than will Leghorns not so bred. Consequently there is a wide difference in families of the same variety or breed as well as in different varieties and breeds. The poultryman should select the breed which suits him best in color and shape, for the reason that he will be more interested in it and will give it better attention, which means greater success. The fowls that are the best general or all-purpose ones are the several varieties of Plymouth Rocks and Wyandottes. The varieties which are most popular and most extensively bred for fancy, for market purposes and egg production, are Barred Plymouth Rocks, White Plymouth Rocks and White Wyandottes.

QUESTION—What is line breeding?

ANSWER—By line breeding is meant the system of producing fowls through the mating of birds related to each other and descended from common ancestors, confining breeding operations to the members of one family, but avoiding injurious inbreeding. To

practice line breeding profitably and without dire results requires skill and a somewhat thorough knowledge of the laws of mating.

QUESTION—What is inbreeding?

ANSWER—Inbreeding as usually referred to is an exaggerated form of line breeding. Breeding from birds that are closely related is inbreeding, and it should not be practiced to the extent of mating sisters and brothers, or following too closely the line of descent from a sire to his daughters or a dam to her sons.

QUESTION—What kind of land is best adapted to poultry raising?

ANSWER—Poultry will thrive in any location where vegetation of any kind will grow. A sandy or loamy soil is preferable, as it absorbs offal easily, is quickly drained after heavy rains and is generally dry. Land sloping slightly with the houses at the highest point is most desirable.

QUESTION—What is the result of close inbreeding?

ANSWER—A generally weakened constitution, reduced size, increased susceptibility to disease, development of defects, both noticeable and latent, decreased egg production, loss of procreative power and the production of delicate, short-lived progeny.

QUESTION—How can the heavy laying fowls in the flock be distinguished from the poorer ones?

ANSWER—The only absolutely sure way is to ascertain the number of eggs layed by each individual hen, and perhaps the only method which combines certainty and practicability is a reliable trap nest. There is a theory somewhat commonly accepted that the best layers of any breed possess a body described as slightly wedge-shaped, by which is meant that the body when viewed from the side widens from breast to tail. They are also generally active and alert, with a certain expression of the eye which can be best discerned by one who has had experience with fowls of this character. This, however, is to a great extent theory only.

QUESTION—What will it cost to rear a fowl from the time it is hatched till a year old?

ANSWER—To the average breeder the cost will be about one dollar.

QUESTION—How many eggs will a good layer produce in a year?

ANSWER—One hundred and fifty eggs per year is a good record under favorable conditions.

QUESTION—Is there any way to prevent fowls from molting?

ANSWER—Molting is a natural process which cannot be avoided, even though it were desirable to prevent it. The examination of the plumage of a fowl after it has been worn for a year will reveal the desirability, and in fact necessity, for new feathering.

QUESTION—What does it cost to keep a hen a year?

ANSWER—No fixed price can be stated. If one is on a farm or small plot of ground where a part of the grain and green food can be raised the cost will of course be less than if all food must be purchased. On the average farm the cost per hen should not be more than 60 to 75 cents per year. If all food is bought the cost would be a dollar to a dollar and a quarter.

QUESTION—What variety of clover is best to sow to be used as food for fowls?

ANSWER—The ordinary crimson variety. Use the second crop which will be freer of long, tough stems and will be more tender and succulent.

QUESTION—What amount of profit should a poultryman make on each hen?

ANSWER—It depends entirely upon the feed, care and general management of the flock. A poultryman who manages rightly can make each fowl pay him a profit of at least \$2 per year.

QUESTION—What month in the year is the best for starting in the poultry business?

ANSWER—If on a small scale as a fancier, one month is as good as another, except that if the start be made with eggs they should be purchased and set in March, April or May. Stock can be purchased any time. A market poultry plant should be stocked in the Spring or Fall.

QUESTION—What is the greatest egg yield that can be expected from a single hen?

ANSWER—There have been individual birds that have laid a few more than 200 eggs in a year, but they are exceptional cases, and are far above the average that may be expected.

QUESTION—What is the best litter for the scratching pen or shed?

ANSWER—Clean dry straw is perhaps the best. Dry leaves are also excellent. Shavings and sawdust are sometimes used, but are very undesirable. Among the disadvantages of the two latter is the tendency to produce crop bound.

QUESTION—How soon should pullets begin to lay?

ANSWER—It depends to some extent upon the breed, and very largely upon the care and feeding from hatching time till maturity. Under the most favorable conditions pullets should begin to lay at about 8 months of age.

QUESTION—Will oyster shells serve the purpose of grit?

ANSWER—It is a very poor substitute. The hard, flinty shell sometimes found does fairly well, but the average shell is too soft.

QUESTION—What is the best tree to plant in the poultry yard?

ANSWER—Plum trees are considered the best. They are of quick growth, and conditions in the poultry yard seem to be favorable to them.

QUESTION—How deep should the litter be in the scratching quarters?

ANSWER—About 6 inches when first put in.

QUESTION—Are ashes suitable for the dust box for fowls?

ANSWER—Clean, loamy road dust is the best. Coal ashes are not good and wood ashes are positively harmful. They become damp and form a sort of lye.

QUESTION—How can the egg-eating habit in hens be cured?

ANSWER—Fowls that have contracted this habit should be removed from the remainder of the flock. There are numerous so-called cures, but only one that is reasonably sure. Catch the guilty bird and pare the end of the upper beak with a sharp knife till it shows signs of bleeding. Release it and place one or more china eggs where it can be within constant reach of them. The beak will be very tender, and striking at the eggs will cause great pain. Generally the habit is broken before the beak grows out again. If not pare it the second time. Feed grain and mash food from a trough while the beak is tender.

QUESTION—Which is the most profitable—supplying eggs for market or raising chickens for market?

ANSWER—In choosing one or the other branch most people would do well to supply the egg trade, but both branches should be combined with the greatest attention given to egg farming. Even on an exclusive egg farm there are always surplus cockerels for sale, as broilers, and a certain proportion of the laying hens are replaced each season by the pullets. The amount of stock necessary to be disposed of may be increased considerably with little extra effort, and will add greatly to the profit.

QUESTION—When starting in the poultry business is it better to purchase fowls, or should one buy eggs?

ANSWER—Buy fowls if your capital will permit of it. By so doing a year's time will be saved. In purchasing eggs one is compelled to wait an entire season for the young stock to mature and serve as breeding birds for a foundation. In purchasing stock one can commence breeding operations at once and can know just what kind of birds are producing the eggs and what the young stock will probably be. This cannot be told in the case of purchased eggs. Buying eggs is the cheaper method and is all right if the beginner cannot afford the outlay for stock and is willing to wait a little longer for his start.

QUESTION—How many standard breeds and varieties of fowls are there?

ANSWER—Twenty-eight breeds of chickens (not including bantams), divided into seventy-one varieties. Nine breeds of bantams divided into twenty-five varieties. Six breeds of turkeys divided into six varieties. Nine breeds of ducks divided into eleven varieties. Six breeds of geese divided into seven varieties, making a total of fifty-eight breeds, embodying one hundred and twenty distinct species.

QUESTION—What are the standard varieties of fowls?

ANSWER—Mottled Ancona, Blue Andalusian, Light and Dark Brahmas; Buff, Partridge, Black and White Cochins; Crevecoeurs; Dominiques; Colored, Silver Gray and White Dorkings; Frizzles; Birchen, Black, Black Breasted Red, Brown Red, Golden Duckwing, Red Pyle, Silver Ducking and White, Games; Black, White, Golden Penciled, Silver Penciled, Golden Spangled and Silver Spangled Hamburgs; Hondans; Cornish and White, Indian Games; Black and Mottled Javas; La Fleche; Black and White Langshans; Single Comb Brown, Rose Comb Brown, Single Comb White, Rose Comb White, Buff, Black and Silver Duckwing, Leghorns; Black Breasted Red Malays; Black and White Minorcas; Buff Orpingtons; Barred, Buff and White Plymouth Rocks; White Crested Black, White, Silver, Golden, Buff Laced, Bearded White, Bearded Silver and Bearded Golden Polish; Redcaps; Rumpless; Silkies; White Faced Black Spanish; Sultans; Black Sumatra; White, Buff, Silver, Golden, Partridge, Silver Penciled and Black Wyandottes. The Bantams are Booted White; Buff, Partridge, Black and White Cochins; Light and Dark Brahmas; Golden Sebright, Silver Sebright; Black Tailed Japanese; Black Japanese; White Japanese; Rose Comb Black; Rose Comb White; Buff Laced Polish; White Crested White Polish; Black Breasted Red Malay. The Game Bantams are Black Breasted Red, Brown Red, Golden Duck-

wing, Silver Duckwing, Red Pyle, White, Black and Birchen. The turkeys are the Black, Bronze, Buff, Narragansett, Slate and White Holland. The geese are African, Brown Chinese, White Chinese, Egyptian, Embden, Toulouse and Wild or Canada. The ducks are Aylesbury, Black East Indian, Gray Call, White Call, Colored Muscovy, White Muscovy, Cayuga, Crested White, Pekin, Rouen and Indian Runner.

QUESTION—What varieties of fowls worthy of mention are not in the Standard?

ANSWER—Black and White Orpingtons, Rhode Island Reds, Rose Comb Black Minorcas.

QUESTION—What is the meaning of “breed” as applied to fowls?

ANSWER—A breed of fowls is a race or family of fowls that retain distinctive shape characteristics and sometimes color markings as well. For instance, the Blue Andalusian possesses both shape and color markings which make it distinctively different from other breeds or races. Most breeds, however, are chiefly distinguishable in shape, and the varieties of the breed are distinguished by their color.

QUESTION—What is the difference between a variety of fowls and a breed of fowls?

ANSWER—A variety is a subdivision of a breed, as, for instance, the Plymouth Rock is a breed and is made up of the Barred, White and Buff varieties. The varieties of any breed differ from each other only in color or shape of comb or both, as in the case of the Leghorns, which are a breed, but which are divided into several varieties, among which are Single Comb Brown, Single Comb White, Rose Comb Brown, Rose Comb White, etc.

QUESTION—Does forcing hens for heavy egg production affect the eggs for hatching purposes?

ANSWER—Yes. After continuous and heavy laying for five or six months the germ in the egg will not possess as strong vitality and the chicks hatched from such eggs will not come out so strong nor grow so rapidly and develop so fully.

QUESTION—What is the Standard of Perfection?

ANSWER—It is a book published and copyrighted by the American Poultry Association, and it contains the description of all Standard varieties of fowls. It is the recognized guide to proper breeding and is the acknowledged authority of judges and breeders. The price of it is one dollar, and it can be procured from any poultry journal.

QUESTION—Does lack of exercise affect fowls injuriously?

ANSWER—Yes. They learn feather pulling, egg-eating and other bad habits in addition to the physical ailments resulting from inaction.

QUESTION—How can fowls be prevented from fighting through a wire netting fence when there is no baseboard?

ANSWER—Stretch a wire the length of the fence on both sides about eight inches from the fence and about six inches above the ground. It can be fastened to stakes driven in the ground.

QUESTION—Is there more money in breeding fancy poultry than in producing eggs and meat for market?

ANSWER—There is if the business is rightly managed and properly advertised. Market eggs sell for 15 cents to 50 cents per dozen and table fowls for 25 cents to one dollar each. Eggs from high grade exhibition birds sell for \$2 to \$5 per setting, and the birds themselves for \$3 to \$100 each.

QUESTION—What is meant by “dubbing” fowls?

ANSWER—Cutting off the combs or both comb and wattles. It is seldom practiced except with game fowls.

QUESTION—If hens of one breed are crossed with a male of another will the two always thereafter be contaminated and unfit for producing pure birds of their respective breed if mated to their kind?

ANSWER—No. The male is not affected at all for any length of time. To be absolutely sure, the female should lay from ten to twenty eggs after removal from the male.

QUESTION—When the male bird in the breeding pen seems to allow the hens to eat more than their share of the food, should he be fed separately?

ANSWER—Yes. Male birds quite frequently allow the hens to eat all the food, and whether it is noticed or not, the breeder will do well to give the male bird at least an occasional meal by himself, in order to be assured of getting well fertilized and hatchable eggs.

QUESTION—How would you rid a poultry house of mites?

ANSWER—Remove from the house all movable fixtures such as nests, roosts, etc., saturate them with kerosene and set fire to them, extinguishing it before they are injured; after which return them to the house and give everything inside and outside a liberal coat of whitewash.

QUESTION—Can good results be obtained from mating cockerels and pullets?

ANSWER—Yes, if they are not too young. Birds between 10 and 12 months of age will reproduce with good results.

QUESTION—What is the most desirable mating?

ANSWER—A yearling cockerel to one-year-old and two-year-old hens or a two-year-old cock to yearling hens.

QUESTION—Is it necessary to starve bantams and stunt them in that way to get the small standard weight birds?

ANSWER—No. Breeders who practice such methods work against themselves, as the birds, when placed in the breeding pen, will prove a disappointment. The eggs will not be so fertile and the chicks that hatch will not be so healthy or mature properly. The secret is to feed well and select the smallest birds as breeders, and especially the females.

QUESTION—Will scalding water thrown all over the inside of the poultry house, destroy the mites?

ANSWER—No.

QUESTION—Are any of the standard breeds naturally weaker in constitution and harder to breed than others?

ANSWER—No.

QUESTION—Does it injure the male bird as a breeder to cut off his spurs?

ANSWER—No.

QUESTION—How many acres of ground should one have in order to establish a poultry plant with a view to making a living from it?

ANSWER—Not less than ten acres.

QUESTION—In starting a poultry plant for market eggs and meat is it better to have one breed for eggs and another for meat?

ANSWER—No. Take one of the general purpose breeds suitable for both.

QUESTION—In clipping the wings of fowls to prevent flying, how can it be done so as to not detract from the looks of the bird?

ANSWER—Clip only the flight or primary feathers of one wing. By so doing the bird is not evenly balanced when it attempts to fly and it falls sideways. When the wings are closed the clipped portion of the wing cannot be seen.

QUESTION—Does a fowl moult each year?

ANSWER—Yes.

QUESTION—Will clipping the wings of a fowl injure it as a breeder or layer?

ANSWER—No; not in the least.

QUESTION—When buying stock to establish a strain, is it better to buy from one breeder or to mix various strains?

ANSWER—Get all the birds from one breeder. They will breed more uniformly.

QUESTION—What is the best method of preserving the droppings for fertilizer?

ANSWER—Mix them with land plaster or dry earth. Never use lime on them.

QUESTION—Can one man do all the work on a plant where 1,000 fowls are kept and everything as conveniently arranged as possible?

ANSWER—Yes, but he would have his time fully occupied.

QUESTION—At what age is a male bird considered in his prime as a breeder?

ANSWER—Two years old.

QUESTION—At what age does a male bird become valueless as a breeder?

ANSWER—It all depends upon the individual specimen. Some birds are of no value at three years of age and others are all right at five.

QUESTION—What could cause severe bleeding sores on the backs of hens in the breeding pen?

ANSWER—Oftentimes the continued attention of the male bird with sharp claws will cause this trouble. The hens should be removed from the pen till the wounds heal.

QUESTION—Do different species of lice require different exterminators?

ANSWER—No. What will kill one variety will kill another.

QUESTION—Can lice infest fowls to such an extent as to injure the plumage?

ANSWER—Yes; especially on the head and neck, which sometimes are made bare.

QUESTION—Is it advisable to assist fowls in molting by pulling the plumage?

ANSWER—No. Let the birds drop the plumage naturally.

QUESTION—When shipping fowls is it necessary to arrange for water in the coop if the journey is not more than 24 hours?

ANSWER—No.

QUESTION—What is the recipe for the whitewash used by the U. S. government for lighthouses, etc.?

ANSWER—Slake in boiling water one-half bushel of lime. Strain so as to remove all sediment. Add two pounds of sulphate of zinc, one pound of common salt and one-half pound whiting, thoroughly dissolved. Mix to proper consistency with skim milk, if possible, and if not use hot water. Stir in thoroughly a half pint of liquid glue and apply the wash while hot. It may be colored if desired; by using yellow ochre, ultramarine blue, lamp black, etc. It will compare favorably both in appearance and durability with a good quality of paint.

QUESTION—Will the ordinary yellow dalmation insect powder for sale at drug stores kill lice on fowls?

ANSWER—Not unless it is very fresh.

QUESTION—Should the comb and wattles of capons be cut off?

ANSWER—No.

QUESTION—How many fowls can be kept on an acre of ground?

ANSWER—About 250.

QUESTION—Is tarred paper in the poultry house any advantage in keeping down lice?

ANSWER—It is some protection against the red mite until the odor is practically gone.

QUESTION—How can fowls be forced to moult early and quickly?

ANSWER—Feed them one meal a day for two weeks. Then pen them and feed them heavily of a variety of food, and especially of a fattening nature.

QUESTION—Are breeding birds influenced by environment, as, for instance, if Brown Leghorn females are kept in a breeding pen of Barred Rocks will their presence have any effect upon the offspring of the Barred Rocks as far as influencing color is concerned?

ANSWER—It will have no effect whatever.

QUESTION—Is there any crossbred bird that will make a better broiler than the Plymouth Rock or Wyandotte?

ANSWER—No.

QUESTION—Are there any better birds than Leghorns for an exclusive egg farm?

ANSWER—No.

QUESTION—If one has enough females for two or more males can they all be allowed to run together with good results?

ANSWER—It will be better to divide the females and confine each lot with a male unless the entire flock has very wide range.

QUESTION—What are the effects of inbreeding?

ANSWER—Unfertilized eggs, weak germs, chicks dead in the shell at hatching time, weakly chicks, chicks susceptible to all sorts of disease without apparent cause and small, stunted specimens of slow growth are some of the results. They are not always an indication of inbreeding, as they might be present from other causes, but inbreeding will have those effects.

QUESTION—How many hen eggs can a bantam cover and hatch?

ANSWER—Five or six, sometimes seven small ones in warm weather.

QUESTION—Why do some Barred Plymouth Rocks lay more eggs than others?

ANSWER—This is true with all the breeds and varieties. It may be the result of right methods of feeding for egg production, or it may be that the birds have been bred from heavy layers, and by selection of the best layers for breeding each season a strain has been established with good laying as one of its characteristics.

QUESTION—Does it really pay a busy poultryman to take the time required to keep an egg record?

ANSWER—A poultryman who is in the business for profit cannot afford to do otherwise. It enables him to weed out the non-layers.

QUESTION—Is there one time in the year when birds can be bought cheaper than another?

ANSWER—Breeders of exhibition stock usually make a special price in June and July on breeding birds that they do not care to carry over another season, and often stock can be purchased under these conditions at less than its real value.

QUESTION—Is there any liquid lice killer that fowls may be dipped in to kill the lice?

ANSWER—No.

QUESTION—Is it customary for prospective buyers to enclose stamp for reply when writing to breeders relative to the purchase of stock or eggs?

ANSWER—Some breeders ask it. It is not customary.

QUESTION—What can be done with a male bird that is constantly picking at most of the females in the breeding pen?

ANSWER—Sometimes a male bird of a particularly pugnacious disposition will fight the females and it is necessary to remove him from the pen. Occasionally he may be conquered by placing in the pen another bird that can keep him in subjection. A fight or two in which he gets the worst of it will generally answer.

QUESTION—What are the two most important items in successful poultry raising?

ANSWER—Cleanliness and proper feeding.

QUESTION—Is there anything that can be placed in the drinking water that will give continued immunity from disease as long as it is used?

ANSWER—No. The practice of putting medicines in the drinking water for well fowls has injured the health of many a flock.

QUESTION—Are there any books devoted to the different breeds of fowls?

ANSWER—The Reliable Poultry Journal Pub. Co., Quincy, Ill., publishes books upon each of the following breeds: Plymouth Rocks, Wyandottes, Leghorns, Turkeys, Ducks and Geese, and Bantams. The Inland Poultry Journal. Indianapolis, Ind., publishes one on the Hamburgs. The price of the books is 50 cents each.

QUESTION—What is the most complete book upon poultry diseases?

ANSWER—"The Diseases of Poultry," by Dr. D. E. Salmon. The price is 50 cents. It is published by Geo. E. Howard & Co., Washington, D. C.

QUESTION—Are moth balls in the nest a preventive of lice on the hens?

ANSWER—They will help, if the hens are on the nest often enough, but other remedies and precautionary measures are necessary.

QUESTION—Are the Cornish Indian Games a fighting fowl?

ANSWER—No. This is a good layer and a good table fowl of a peaceful and quiet disposition that is handicapped by the name game.

QUESTION—Where can feathers from fowls, ducks and geese be sold?

ANSWER—One of the largest buyers in the United States is Chas. Emmerich & Co., 194-196-198 Fifth Ave., Chicago, Ill.

QUESTION—Will clipping some of the fluff from the breeding birds sometimes aid in getting fertile eggs?

ANSWER—Oftentimes the fluff is so abundant on Asiatic varieties that the male bird cannot fertilize all the eggs and in cases of this kind it is an advantage to clip a small amount of fluff around the vent.

QUESTION—If a poultryman subscribes for one good poultry journal, is it not sufficient for him to become well informed upon poultry topics?

ANSWER—He will do well with one but a half dozen would be better. No one publication covers the entire field each month.

QUESTION—How can the dropping boards be kept dry and be most easily cleaned?

ANSWER—After each cleaning, sprinkle them with sand, fine earth or air slacked lime.

QUESTION—What are the standard weights of Plymouth Rocks?

ANSWER—Cock, $9\frac{1}{2}$ pounds; hen, $7\frac{1}{2}$ pounds; cockerel, 8 pounds; pullet, $6\frac{1}{2}$ pounds.

QUESTION—Are all varieties of Plymouth Rocks the same in size, shape and all other characteristics except color?

ANSWER—Yes.

QUESTION—What are the Standard weights of Wyandottes?

ANSWER—Cock, $8\frac{1}{2}$ pounds; hen, $6\frac{1}{2}$ pounds; cockerel, $7\frac{1}{2}$ pounds; pullet, $5\frac{1}{2}$ pounds.

QUESTION—Where can the best prices be obtained for dressed poultry and eggs?

ANSWER—Write for price lists and shipping instructions to Sprague Commission Co., Chicago; Chas. Zinn & Co., New York City, and Adams, Chapman & Co., Boston, Mass.

QUESTION—Is early laying an indication that a pullet will prove a heavy layer through life?

ANSWER—No, not always.

QUESTION—As a general rule are feathered legged fowls healthier than others?

ANSWER—No.

QUESTION—What is a parti-colored fowl?

ANSWER—All varieties having two or more colors of plumage are termed parti-colored.

QUESTION—When the poultry runs have been used for a long time and the earth becomes saturated with droppings and disease germs, how can it be disinfected and purified.

ANSWER—Saturate it with a five per cent solution of carbolic acid and apply a liberal coating of lime. After a few days plow or spade it up and then level it.

QUESTION—Are dusty earth floors injurious to fowls when the dust almost constantly fills the air?

ANSWER—Yes, the inhalation of irritating dust containing impurities oftentimes causes bronchitis.

QUESTION—Is it profitable to conduct a broiler plant and depend upon buying eggs for hatching?

ANSWER—No; the laying stock should be kept on the place.

QUESTION—Is it injurious to fowls to feed them medicinal foods for the purpose of increasing the fertility of eggs?

ANSWER—Yes.

QUESTION—If the male bird in a pen of eight females is taken out every other day, will the eggs be as fertile as though he was in the pen constantly?

ANSWER—Yes.

QUESTION—What are the Standard weights for Leghorns?

ANSWER—There are no Standard weights for Leghorns, but females should weigh four to five pounds and males five and one-half to six and one-half pounds.

QUESTION—Is there any school where persons can go to learn the poultry business?

ANSWER—A short course of instruction is given by the Rhode Island Agricultural College, Kingston, R. I.

QUESTION—Is there any kind of poison that can be placed around the poultry house for rats that will not kill the fowls too?

ANSWER—No.

QUESTION—Can a hen be set twice in succession, that is, as soon as she has hatched a brood of chicks, take them from her and put more eggs under her?

ANSWER—It can be done successfully, but it is cruelty to animals and should not be practiced.

QUESTION—Are fowls subject in any way to climatic changes, as, for instance, when shipped from one climate to another much different one?

ANSWER—Yes, in many cases. Sometimes they are affected favorably and sometimes unfavorably, but they soon become accustomed to the change.

QUESTION—What causes the hens to pick the combs of the male birds till they bleed and in some cases severely disfigure them? How can it be stopped?

ANSWER—It is usually started by the comb becoming injured in a way to cause bleeding. The only remedy is to keep the bird away from the flock till the comb has healed and in the meantime feed them plentifully of raw meat.

QUESTION—What causes a deep red color sometimes, down the sides of the legs of the yellow-legged fowls, and what does it signify?

ANSWER—It is one of nature's unexplainable acts. By some it is considered an indication of unusual vitality and evidence that the fowl is especially prepotent in the production of progeny with yellow legs. Neither of these theories is never failing.

QUESTION—If the weather is such that the large comb of a male bird is apt to freeze at night, is there any preventive measures that can be adopted?

ANSWER—Aside from providing warmer quarters, a liberal application of vaseline to the comb and wattles will be a slight protection.

QUESTION—Is there any way to build up a flock of pure bred fowls with mongrel females and a pure bred male?

ANSWER—Mate the male to the females and save for use next season the pullets of the progeny which most nearly resemble the breed to which the pure bred male belongs. Procure a new male bird each year and follow the same plan of selecting the females. In five or six years you will have a fairly good flock.

QUESTION—Will lice that are found on poultry live and thrive on human beings?

ANSWER—No.

QUESTION—When purchasing hens for layers is it safe to always depend upon those with bright red combs as laying or about to lay?

ANSWER—No.

QUESTION—Is there any way to mate the breeding birds so as to produce more pullets than cockerels?

ANSWER—There is no rule that can be absolutely depended upon. There is a theory sometimes advanced that the mating of young male birds to old hens will produce the desired result, but in practice it will not always do it.

QUESTION—What is the best breed of dogs for the poultryman for the purpose of keeping down rats?

ANSWER—The fox terrier.

QUESTION—Is it advisable to combine pigeon raising with poultry?

ANSWER—No.

QUESTION—When is the best time to cull the flock?

ANSWER—The culling process is always timely. Culls should be disposed of as fast as they develop. Begin culling when the chicks are four weeks old.

QUESTION—Are guineas any protection to the chickens from hawks?

ANSWER—A little. If the hawk is seen approaching a guinea will oftentimes frighten it away by its shrill noise.

QUESTION—Why is it that excessive fat in hens prevents them from laying fertile eggs?

ANSWER—The germ can seldom reach the egg at the proper stage of development.

QUESTION—Who is supposed to be responsible for loss or damage when stock or eggs are shipped, the buyer or the seller?

ANSWER—The seller is supposed to properly crate and pack stock and eggs and take all due precaution that the shipment reaches the customer in perfect condition. The buyer is then supposed to stand any loss or damage, but if any is sustained through carelessness of the express company the buyer has recourse on them.

QUESTION—Is it customary for the purchaser to pay the express charges on stock and eggs?

ANSWER—Yes.

QUESTION—What is meant by a top cross of White Rock on White Leghorns?

ANSWER—The using of a White Rock male and White Leghorn females.

QUESTION—Does overcrowding reduce egg production?

ANSWER—Yes.

QUESTION—Does the United States issue any pamphlets or bulletins for free distribution giving information in regard to poultry?

ANSWER—Yes. Write to the U. S. Dept. of Agriculture, Chief of the Division of Publications, Washington, D. C., for a list, which will be sent free.

QUESTION—Will a frozen comb injure a male bird as a breeder?

ANSWER—It will to some extent by impairing the vitality. The bird will be just as valuable as before, when he has recovered.

QUESTION—Is there any breed of poultry that has naturally five toes on each foot?

ANSWER—Yes. The Dorkings and Houdans have five toes.

QUESTION—Is there any public record of prize-winning fowls where the pedigree of each bird is given?

ANSWER—There is no system of registration with poultry as with some other kinds of live stock. Sometimes breeders refer to their birds as pedigreed, but in all such cases the pedigree and record is a private one and is entirely under the supervision of the breeder.

QUESTION—Is it an injury to pullets to mate them before they begin to lay?

ANSWER—Not if they are near maturity.

QUESTION—Do Leghorns ever sit and hatch a brood of chicks?

ANSWER—Sometimes they do, but they cannot be relied upon at all.

QUESTION—Is there always a demand for fancy stock and eggs at good prices?

ANSWER—Yes, if one advertises properly.

QUESTION—What does it cost to have half-tone cuts made of fowls?

ANSWER—The usual rate is 17 cents per square inch with a minimum charge of \$1.50. Photographs must be furnished the engravers.

QUESTION—Where can half-tone cuts be procured?

ANSWER—Write to the J. Manz Engraving Co., Chicago, or to Barnes-Crosby Co., Chicago.

QUESTION—What is the address of some printing firm that makes a specialty of printing for poultrymen?

ANSWER—The Recorder Publishing Co., 334 Dearborn St., Chicago.

QUESTION—When will hens begin to lay, that moult in December?

ANSWER—Generally not till early spring.

QUESTION—When fumigating a poultry house with sulphur, how much and in what manner should it be used?

ANSWER—Burn about a pound of sulphur for every 100 square feet of floor space there is in the house. Place the sulphur in an iron pan or kettle, or some sort of a metal vessel, and set it in sand or earth to prevent setting fire to the house. Start a fire with small pieces of wood saturated with kerosene and sprinkle the sulphur upon it. Close the house very tightly and allow it to remain closed for four or five hours.

QUESTION—Where can one get good plans for a trap nest?

ANSWER—Write to Dr. S. A. McWilliams, 3456 Michigan Ave., Chicago, or F. O. Wellcome, Yarmouth, Me.

QUESTION—When is it proper to use the words beak and bill with reference to fowls?

ANSWER—Beak is used when referring to chickens and bill when referring to water fowl. They are the projecting mouth parts consisting of the upper and lower mandibles.

QUESTION—Which is proper, "crop" or "craw"?

ANSWER—Crop is correct. It is the receptacle in which a fowl's food is received before passing into the gizzard.

QUESTION—Do fowls take on fat more rapidly as they grow old?

ANSWER—Yes.

QUESTION—What is the meaning of the terms Cock, Hen, Cockerel and Pullet?

ANSWER—A Cock is a male fowl one year old or more. A Hen is a female fowl one year old or more. A Cockerel is a male fowl less than one year old, and a Pullet is a female fowl less than one year old.

QUESTION—How large should shipping coops be?

ANSWER—20 inches deep and 24 inches high. Have them 14 inches long for single birds, 18 inches for pairs, 20 inches for trios, and 24 to 30 inches for pens.

QUESTION—If one is raising poultry and eggs for market, is it best to be near a very large city in order to get best prices for the product.

ANSWER—One may be three hundred miles from the market if necessary. Express rates are not high and a twelve-hour trip is not too great.

QUESTION—Is there always a demand in the larger cities for poultry and eggs at fair prices?

ANSWER—Yes.

QUESTION—What is a fair price for laying pullets from a good laying strain of fowls?

ANSWER—Two dollars each and more if they are high-grade Standard bred stock.

QUESTION—What is the recipe for kerosene emulsion for spraying the interior of the poultry-house for mites and lice?

ANSWER—Shave a half pound of strong soap into enough boiling water to dissolve it and while the mixture is hot, add two gallons of kerosene slowly. Do this away from the fire. The mixture should then be violently churned until it is of the consistency of cream, after which add ten gallons of water.

QUESTION—What is the most popular breed of fowls?

ANSWER—There are probably more Barred Plymouth Rocks bred than any other variety.

QUESTION—Are the smaller breeds of fowls as good winter layers as the American breeds?

ANSWER—No. Not as a rule.

QUESTION—Do women, as a rule, make a success with poultry?

ANSWER—Yes.

QUESTION—How does poultry raising on the farm compare with other farm work as regards profit derived from it?

ANSWER—Under equally favorable conditions, poultry can be made the most profitable branch of live stock on the farm.

QUESTION—Does the Standard of Perfection describe the characteristics of the various breeds in addition to the shape and color?

ANSWER—No.

QUESTION—Does it cost any more, in any way, to keep Standard bred fowls than common stock?

ANSWER—No.

QUESTION—Is the Standard of Perfection worth the price or is it necessary for a breeder to have one?

ANSWER—One cannot breed fowls intelligently unless he is familiar with Standard requirements. No breeder who pretends to have good stock should be without a copy of the book.

QUESTION—Are the numerous published egg records thoroughly reliable in judging of the laying ability of the breeds?

ANSWER—No. They are of no value except as considered in connection with birds that made them.

QUESTION—Is it not a fact that the popularity of some breeds is in the nature of a fad?

ANSWER—Yes.

QUESTION—Why are there so many Barred Plymouth Rocks bred?

ANSWER—The Barred Rocks have for several years been the most popular breed of fowls and at the time of their introduction they were the best general purpose fowl. There are not so many of them bred as conditions seem to indicate. The power to transmit color is so strong in Barred Rocks that if a good male bird be mated to mongrel stock of all colors a large majority of the chicks will be barred and have the appearance of low grade Barred Rocks when in fact they are little better than scrub stock. On this account, the observer comes to the conclusion that there are more Barred Rocks bred than there really is.

QUESTION—Where can one obtain correct pictures of the various breeds of fowls?

ANSWER—Profile views of perfect birds can be found in the Standard of Perfection.

QUESTION—What ought poultry manure be worth for fertilizer?

ANSWER—From four to six dollars per ton.

QUESTION—Should the fowls be confined to the house when the ground is covered with snow?

ANSWER—There should be a small exit open every day in the year regardless of the condition of the weather. The fowls can be trusted to decide whether or not it is best for them to venture out.

QUESTION—What is the advantage in sending fowls to a poultry show?

ANSWER—To find out how good your stock is, to win some of the prizes if your stock is good enough, and to place you in touch with people who wish to buy eggs and stock.

QUESTION—Which is the best breed for beginners to start with?

ANSWER—The one which best suits their fancy.

QUESTION—Can poultry be raised successfully in the South?

ANSWER—Yes, as much so as anywhere else and better than some other places.

QUESTION—Will fowls deteriorate after a few years of artificial incubating and brooding?

ANSWER—No. The conditions existing on all large plants disprove this theory.

QUESTION—Has the East any advantage over the West in successful and profitable poultry raising?

ANSWER—No.

QUESTION—How can the beginner best acquire a knowledge of the appearance of the various breeds?

ANSWER—Visit a large poultry show.

QUESTION—Is there more, both fancy and market plants, in the East than in the West?

ANSWER—Yes.

QUESTION—If one has a natural fondness for pets and is interested in fowls from that standpoint, is he apt to have greater success than someone not so inclined?

ANSWER—Yes.

QUESTION—Why is there more poultry raised in the East than in the West?

ANSWER—Thoroughbred fowls were first introduced in the East and the business naturally has the best start there.

QUESTION—Is September a good month in which to hatch bantams?

ANSWER—It is a trifle late, but they will do all right with proper care and protection from cold weather.
than the supply.

QUESTION—Where can caponizing instruments be purchased?

ANSWER—Geo. P. Pilling & Son, Philadelphia, Pa.

QUESTION—Do the red mites live on the fowls during the day?

ANSWER—No. They are always found on the underside of the perch or in the cracks of the house or dropping boards.

QUESTION—What is the recipe for a good liquid lice killer?

ANSWER—Put one pound of Naphthaline flakes into a gallon of kerosene. See that the flakes are thoroughly dissolved before using.

QUESTION—Are bantam fowls as hardy as the larger breeds?

ANSWER—Yes.

QUESTION—Are Buff Cochins bantams just the same in every respect, except size, as the large cochins?

ANSWER—Yes.

QUESTION—Is it necessary to supply artificial heat for bantams?

ANSWER—No.

QUESTION—How large a house would be required for a pen of ten bantams?

ANSWER—House and yard can be made to occupy a place 10 feet square.

QUESTION—Are bantam eggs as good for table purposes as those from large fowls?

ANSWER—Yes.

QUESTION—Do the same general methods apply to the feeding of bantams as to large fowls?

ANSWER—Yes.

QUESTION—Will bantams hatch their own eggs?

ANSWER—Yes. They get broody and sit like other fowls.

QUESTION—If pullets are too fat, will they be longer in starting to lay?

ANSWER—Yes.

QUESTION—Will bantams succumb to lice quicker than will larger fowls?

ANSWER—Yes.

QUESTION—Do bantams become so tame as to allow children to handle them and make pets of them?

ANSWER—Yes.

QUESTION—Can children raise and care for bantams without aid from the older folks?

ANSWER—Yes.

QUESTION—Is there any special way to get extreme small size in bantams?

ANSWER—Only by selecting the smallest to breed from.

QUESTION—What does the term “Booted” signify when applied to bantams?

ANSWER—Booted bantams have profuse feathering on their legs and feet like a cochin.

QUESTION—Are bantams subject to the same diseases as the larger fowls?

ANSWER—Yes.

QUESTION—How do yearling hens compare with pullets as regards laying?

ANSWER—They lay better.

QUESTION—What is the average cost of keeping growing stock on the farm?

ANSWER—Five cents per head per month.

QUESTION—Is it worth while to buy a root cutter for cutting turnips, potatoes, apples, etc., if one has 100 fowls?

ANSWER—Yes.

QUESTION—What is a good make of wire fence for a poultry farm?

ANSWER—The Page woven wire fence.

QUESTION—Are Houdans good layers?

ANSWER—Yes.

QUESTION—Can the poultryman depend upon getting good prices for fancy stock of any of the popular breeds if he raises the best and advertises it?

ANSWER—Yes. The demand for good birds is always greater

QUESTION—Should hens that finish the moult in September begin to lay as early as November?

ANSWER—Yes.

QUESTION—How large is the largest poultry farm in the country?

ANSWER—The largest we know of is one at Southern, N. H., containing 800 acres and stocked with 6,500 hens the year round.

QUESTION—When is the best time to dispose of capons?

ANSWER—January, February and March.

QUESTION—What months are the highest prices secured for broilers?

ANSWER—From December to June.

QUESTION—Can broilers be dressed easier than by dry picking?

ANSWER—Yes. Slit the skin along the back and both skin and feathers can be removed in a moment.

QUESTION—Is there any book published giving special information in regard to breeding for egg production?

ANSWER—Edgar Warren, Wolfboro, N. H., publishes a very good book upon the subject entitled "200 eggs a year per hen." The price is 50 cents.

QUESTION—Are white fowls that show a brassy tinge on the plumage any hardier or healthier than those that are pure white?

ANSWER—No.

QUESTION—Can broody hens be broken up by confining them for two or three days without food or water?

ANSWER—No. This is one of the most cruel practices and it should never be done.

QUESTION—Is 15 eggs per month a good record for fowls in winter?

ANSWER—Yes.

QUESTION—From how far west are eggs shipped that in the New York market reports are termed "Western Eggs"?

ANSWER—As far west as Iowa.

QUESTION—What wages can be secured on poultry plants by experienced managers?

ANSWER—From \$40 to \$100 per month. It depends upon the man, his ability and the size of the plant.

QUESTION—Do fowls ever get the roup if they have dry houses free from drafts?

ANSWER—Very seldom, except by contagion.

QUESTION—Why does not the average farmer make a reasonable profit from poultry?

ANSWER—Because he does not provide suitable quarters for the fowls and feed regularly and in sufficient quantity.

QUESTION—Is it necessary for best results to give fresh water daily in summer?

ANSWER—Yes.

QUESTION—In order to save money in starting a poultry plant for eggs, would it not be advisable to buy hens from commission houses and hucksters who obtain them from farmers?

ANSWER—No. The hens they procure have been discarded by farmers because they were too old to lay or for other reasons have outlived their period of usefulness.

QUESTION—Is it necessary to have litter in the scratching shed in summer as well as in winter?

ANSWER—Yes.

QUESTION—Will young stock grow faster and do better if the cockerels are separated from the pullets at about four months of age?

ANSWER—Yes.

QUESTION—Is the meat of fowls having free range as tender as that of fowls that are confined?

ANSWER—No. The constant activity and exertion on free range hardens the flesh and toughens the muscles.

QUESTION—Are not the rose comb varieties much better for cold climates, for the reason that the comb will not freeze?

ANSWER—No. If a poultry house is so cold that single combs will freeze, it is too cold for the comfort of rose comb fowls.

QUESTION—Why is it that some people can be successful with a few fowls, but fail when they greatly increase the number?

ANSWER—It is because they cease giving proper attention to the small details, and they usually overcrowd the birds.

QUESTION—Will a radical immediate change of the bill of fare have a tendency to temporarily check egg production?

ANSWER—Yes.

QUESTION—Can chickens and ducks be kept together successfully in the same houses and runs?

ANSWER—No.

QUESTION—Is carrying fowls with the head downward liable to result in injury?

ANSWER—Yes.

QUESTION—Is it advisable to keep the old hens and the pullets in separate pens?

ANSWER—Yes.

QUESTION—Is it easy to learn the poultry business, if one takes the proper interest in it?

ANSWER—Yes.

QUESTION—Is there a demand for competent managers of poultry plants?

ANSWER—Yes.

QUESTION—Will darkened nests sometimes break up the egg-eating habit?

ANSWER—Yes.

QUESTION—Can as large a percentage of fertile eggs be expected in January and February as in April and May, if the very best care and feed are given?

ANSWER—No.

QUESTION—Can the age of a male be told by the length of the spur?

ANSWER—Not after they are a year old.

QUESTION—Are there any two varieties of fowls that can be allowed to run together without their interbreeding or crossing?

ANSWER—No.

QUESTION—What are the objections to allowing the droppings to accumulate under the perches?

ANSWER—They encourage the breeding of lice and the odor arising from them is breathed by the fowls all night, and the poisoned gases cause disease and death.

QUESTION—Is pounded glass suitable grit for poultry?

ANSWER—No. It is sometimes mentioned in poultry journals as being good, but it should never be fed at all. It is often the cause of mysterious (?) deaths.

QUESTION—Will overfeeding of soft food or mash cause roup?

ANSWER—No. That is a mistaken idea.

QUESTION—What is red albumen and will it make hens lay?

ANSWER—Red albumen is a fraud. The name was at one time given to numerous different compounds the feeding of which was supposed to phenomenally increase the egg yield.

QUESTION—Will confinement in hot, close houses in summer check egg production the same as cold houses in winter?

ANSWER—Yes.

QUESTION—If one has read a large number of books and poultry journals and studied them well, can he not start poultry raising on a large scale and make a success from the start, without actual experience?

ANSWER—No.

QUESTION—Can poultry raising and market gardening be combined profitably?

ANSWER—Yes.

QUESTION—Is there more profit in poultry raising than in dairying, for the same amount of money invested?

ANSWER—Yes.

QUESTION—Is it best to keep the old hens penned separately from the pullets?

ANSWER—Yes, unless the breeder has ample range for his fowls.

QUESTION—Are sunflowers suitable for planting in the poultry yard, for shade?

ANSWER—Yes. They will have to be protected from the fowls till they are about three feet high, if there is not ample green food of other kinds growing in the yard.

QUESTION—Will soiled straw from the horse or cow stables do for scratching litter for the hens?

ANSWER—No. Chickens need clean surroundings as much as other live stock, and if the litter or bedding is too dirty for the horses or cows, it is too dirty for chickens.

QUESTION—If one wishes to have 100 good laying pullets in the fall, how many eggs ought he incubate to get that number?

ANSWER—About 500 eggs. This would allow for male birds and cull pullets, leaving about 100 good ones.

QUESTION—What is a stag?

ANSWER—Stag is a term used for a young male, but is used only by fanciers of game fowls.

QUESTION—What would be good weight for Plymouth Rock or Wyandotte eggs?

ANSWER—Two pounds to the dozen.

QUESTION—How much weight can be put upon the ordinary farm chicken, when specially fattened for market?

ANSWER—An average gain of $2\frac{1}{2}$ pounds.

QUESTION—What ought it cost to fatten chickens for market?

ANSWER—Five cents per pound.

QUESTION—Is there any way to prevent male birds from crowing?

ANSWER—No. People who are annoyed by the crowing of male birds should not keep chickens.

QUESTION—Is constant crowing an indication of unusual vigor and vitality in a male bird?

ANSWER—Yes.

QUESTION—Why are the American breeds of fowls considered the best for table poultry?

ANSWER—Because of the full breast and general plumpness of the carcass in connection with desirable size and weight.

QUESTION—Why are the Leghorns, as a rule, better layers than the larger breeds?

ANSWER—They are not inclined to broodiness, and are susceptible to being forced for heavier egg production.

QUESTION—Is line breeding profitable or necessary with market poultry as well as fancy fowls?

ANSWER—Yes. The best layers are obtained by breeding from the best layers and this is line breeding.

QUESTION—Which is the largest fowl of the non-sitting varieties?

ANSWER—Minorcas.

QUESTION—Why do fowls that have free range produce a larger per cent of fertile eggs than those kept in confinement.

ANSWER—Because the average fowl in confinement is not fed properly. The difference is all in the feeding.

QUESTION—How can ordinary stoneware milk crocks be used for drinking fountains and the fowls prevented from getting into them?

ANSWER—Procure a circular piece of board about one inch greater in diameter than the top of the milk crock. Nail pieces of lath 12 inches long all around the edge, 2 inches apart. Set this frame over the crock, placing a weight on top of it if necessary.

QUESTION—What is the mode of killing fowls on the large market plants where they are dressed and sent to market without removing the head?

ANSWER—A sharp-pointed knife is used and the point is thrust into the roof of the mouth, thence upward into the brain, which produces unconsciousness and enables the killer to pluck the feathers easily and quickly.

QUESTION—Why is so much stress laid upon exercise and compelling fowls to scratch for most of their food?

ANSWER—Exercise creates a healthy appetite, develops bone and muscle, is invigorating, stimulates a healthy circulation, promotes digestion, keeps the mind and body occupied and prevents the forming of bad habits, such as feather pulling, egg eating, comb picking, etc.; keeps the body warm and in healthy action in winter, saves food, prevents gorging and the resultant evils, such as crop-bound, indigestion and diarrhea; prevents birds from becoming over-fat, makes eggs more fertile and productive of stronger chicks and tends to prevent rheumatism and cramps in old fowls and leg weakness in chicks.

QUESTION—Which breeds stand confinement best?

ANSWER—Cochins and Brahmas.

QUESTION—Do laying hens need more food than those that are not laying?

ANSWER—Yes.

QUESTION—What can be fed to rats that will kill them, without chance of injury to fowls?

ANSWER—Mix equal parts of corn meal and plaster of paris and place it in the rat holes. The plaster of paris hardens in the stomach of the rat and is sure death.

QUESTION—What weight capon sells best?

ANSWER—Birds weighing about 7 pounds.

QUESTION—Which is the most popular variety of the Wyandotte family?

ANSWER—The Whites.

QUESTION—Are the early molting hens more to be desired than the late ones?

ANSWER—Yes.

QUESTION—Why do women usually have better success with young chicks than men do?

ANSWER—They are naturally more attentive to the wants of the chick, and they give it better care.

QUESTION—What percentage of males and females can be depended upon as the result of incubating any given number of eggs?

ANSWER—Half and half is as near as it can be estimated.

QUESTION—Will oil meal take the place of animal food in the bill of fare?

ANSWER—No.

QUESTION—What are some of the main causes of infertile eggs?

ANSWER—Weak and debilitated breeding stock, lack of exercise, improper feeding and lack of animal and green food and too many females in the pen?

QUESTION—Will the moving of laying hens from one pen to another affect their laying?

ANSWER—It may for a few days. In some cases it does not.

QUESTION—Are lice as troublesome and plentiful in winter as in summer?

ANSWER—No.

QUESTION—Will fright and rough treatment of hens check the egg production?

ANSWER—Yes.

QUESTION—What are the main objects of litter in the houses and scratching sheds?

ANSWER—Cleanliness and exercise.

Special Announcement

The attention of the reader is respectfully directed to the advertisements appearing upon the following pages.

They are as valuable a part of the book as any of the information contained in the preceeding pages. They are not published here for the sole reason of revenue, but more as a guide for the reader who wishes to purchase stock, eggs or appliances and who is not sufficiently familiar with conditions to intelligently decide where to place his order.

The writer wishes to give these advertisers his full and and unqualified endorsement and to emphasize the fact that they are among the leaders in their respective lines. They are honorable, reliable business men and are financially responsible. We would not hesitate to send them any amount of money and we know from personal experience and and observation that what they have to offer is as good as can be purchased. When writing to any of them, it will be to the interest of the reader to state that the "ad" was seen in this book.

FRANK HECK

The Famous Root's Strain

First Prize Pen at PAN-AMERICAN.

White Plymouth Rocks

Beauty and Utility Combined

Winning at **CINCINNATI** every First and Special.
PAN-AMERICAN, 15 entries, 10 prizes, including the great prize of First Pen. More prizes than any other exhibitor in my class.

CLEVELAND A. P. A. SHOW, every first, every special, including the A. P. A. and **WHITE ROCK CLUB CUPS**.

They win for me and for my customers all over our country and they will for you. No better winter layers than my **WHITE ROCKS**.

Catalogue showing the largest and most modern **WHITE ROCK PLANT** and telling how to feed and fit your birds for the show room is free for the asking. A world of youngsters waiting to win the ribbons for you.

MAY R. POULTRY PLANT,

Connersville, Ind.

D. T. ROOTS, Prop.

HOUDANS

WYANDOTTES

Rigg's Houdans, the acknowledged standard of Houdan excellence in America, has stood the most severe of all tests, the show room and the breeding pen

For twenty-nine years this carefully bred strain has supplied leading breeders with their winners, and the blood of this strain has been eagerly sought by the best breeders in America and England

None others can approach these Houdans in size, style and finish

THOS. F. RIGG

Secretary American Houdan Club

Iowa Falls, Iowa

First Prize Cock at New York, 1903.

den, N. Y. My prices for stock and eggs are right. Write for circular.

Rose Comb

White Leghorns

The handsomest variety of the Leghorn family and acknowledged to be the most prolific layers of all breeds. My birds are bred for beauty and utility and are sure to please you. They have won the best prizes in the strongest competition in America, including Madison Square Gar-

W. W. BABCOCK, Campbell, N. Y.

University of Wisconsin
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MADISON, WIS.

STEINMESCH & Co.,
St. Louis, Mo.

GENTLEMEN:—The analysis of the sample of your "Quick Meal" Chick Feed has been completed and the feed was found to contain 9.67 per cent moisture, 12.50 per cent protein and 3.10 per cent fat.

Very truly yours,
F. W. WOLL,
In charge of Feed Inspection

"QUICK MEAL"
INCUBATORS AND BROODERS
Will Hatch and Brood Your Chicks, BUT
STEINMESCH
EXTRA QUALITY "QUICK MEAL"
CHICK FEED
Is needed to raise them all—make 'em grow and thrive like a Green Bay Tree. **STEINMESCH** chick feed is a mixture of cracked grains, small seeds—Beef Bone and Grit. Twenty different kinds, especially prepared for the rearing of chicks, from the time they are hatched until ten weeks old. Feed dry, always handy and ready for use. No waste, always the same. **The Best**, and no higher in price than other feeds.
Price, 100-lb. Sack, \$2.50
Will feed 40 chicks 10 weeks.
SEND ORDERS TO
STEINMESCH & CO.
ST. LOUIS, MO.
Agents for Cypfers Incubators and Brooders and all kinds of Poultry Supplies.
Free Circular for the asking.

BEST BY TEST

"Something New" Try it & if you like it Buy it. Sample free.

100 LBS.
EARLY BREAKFAST MASH
POULTRY FEED.
PUT UP BY
STEINMESCH & CO.
ST. LOUIS, MO.

STEINMESCH'S EARLY BREAKFAST Mash

Every authority on poultry recommends a morning mash for poultry, especially during the fall and winter months. Our Mash is made up of the very choicest, Winter Wheat Bran, and Middlings, Oiled Oats, Linseed Meal, Bone and Beef Meal, Clover Meal, Charcoal, etc. Nothing better for growing and adult fowls; will push the young chick to quick maturity, will help adults through the moult, insuring health and vigor for both. The greatest egg producer ever offered.

Price \$.50 for 50 lbs., \$2.50 for 100 lbs.,
and we pay the freight on 100 lbs. or more to any part of the United States east of the Rocky Mountains. Write for catalogue. Circulars free.

A Great Big Sack Full 100 FEEDS FOR 10 HENS.

STEINMESCH & CO.
MANUFACTURERS.

Dealers in Fancy Poultry & Poultry Supplies of every Description
No. 5 North Main St. ----- St. Louis, Mo.

We are exclusive manufacturers of
STEINMESCH'S EXTRA QUALITY "QUICK MEAL CHICK FEED"
\$2.25 for 100 lbs. \$1.12 for 50 lbs.
Samples free.

IDEAL ALUMINUM LEG BAND.

Absolutely the cheapest and best, firmest and most secure lock, quickly put on and guarantee to stay on. Price postpaid, 12 for 15c; 25 for 30c; 50 for 50c; 100 for 75c. All supply dealers sell them.

FRANK MYERS

MANUFACTURER

Box 100,

Freeport, Ill.

Three samples mailed for 5c.

DORR BUFF WYANDOTTE FARM

ACKLEY & PAGE, PROPRIETORS

1ST COCKEREL, INDIANAPOLIS
4TH COCKEREL, CHICAGO

1903

1ST PULLET, INDIANAPOLIS
2ND PULLET, CHICAGO

Largest breeders of Buff Wyandottes in America. Forty acres devoted to them exclusively. Handsome birds and great layers. Stock for sale and eggs for hatching.

WOODSTOCK,

ILLINOIS

IT IS A FACT

THAT

BRIGHT'S BARRED PLYMOUTH ROCKS

1ST PRIZE COCKEREL, NEW YORK, 1902

size, the shape, the undercolor, the heads, the bay eyes and yellow legs,

**HAVE WON MORE PRIZES
AT BIG SHOWS THAN
ANY OTHERS.**

For Five Years they have won more First Prizes at Americas Greatest Show, Boston, than all others combined.

FIRST PRIZE

on Cockerels at Pan-American, 1901; New York, Boston and Philadelphia, 1902; is the greatest record ever made in one show season. Besides winning many other prizes at the above shows they have captured the lion's share at Washington, Toronto, Providence, New Haven, Hartford, Worcester and Clinton.

This strain of Rocks is an all around winning strain. It has the plumage, the strong wings and tail, the nice refined

Our Single Comb Brown Leghorns

are just as good as our Barred Rocks. They will win in any competition.

GROVE HILL POULTRY YARDS

BOX 563

Waltham, Massachusetts

WM. ELLERY BRIGHT,
Proprietor

IN IT. A Grove Hill First Prize Winner

Arnold's

Buff Leghorns

are the oldest and best bred strain in America, and represented in all civilized countries on the globe, and are winners wherever exhibited. They are becoming more popular each year. **Eggs in Season.**
Stock for Sale at all times

Address

Aug. D. Arnold, Dillsburg, Pa.

Black Minorcas

Lay the largest and most eggs of all known breeds of hens, as has been proven in many contests in United States, Canada, Australia and throughout the different countries of Europe. Minorcas are the largest of the non-sitting breeds and unsurpassed for table use

GEO. H. NORTHUP

RACEVILLE, N. Y., is the largest breeder of Black Minorcas in the world. Send stamp for his large 28 page, fully illustrated catalogue.

Wyckoff's

Single Comb White Leghorns

Partridge Wyandottes

Silver Penciled Wyandottes

Prize Winners at Best Shows

The following is my record for 1902 show season on Single Comb White and Buff Leghorns, and Partridge and Silver Penciled Wyandottes at three of America's leading shows where competition was open to the world. My birds won 35 firsts and 33 seconds—*more* firsts and seconds than all competitors combined. This, with the entire stock of line bred birds of the late Ezra Cornell, which holds an unparalleled record at Pan-American, Boston (1900) and New York for the past ten years, places my stock at the head. Forty matings of the above that are bound to produce winners for the coming season. Eggs for hatching: Leghorns, \$3.00 per 15; Silver Penciled Wyandottes, \$5.00 per 15; Partridge Wyandottes, \$3.00 per 15.

(My prize winning birds are hatched in Cornell Incubators and reared in Peep O'Day Brooders.)

E. G. WYCKOFF

Valley View Poultry Yards

Box Z ITHACA, N. Y.

Minorcas

**Rose Comb
Black**

EXCLUSIVELY

The winter layers of the 20th Century, having records of 247 eggs per hen in one year. Also prize winners having won every first at Chicago, 1903.

Sec.-Treas. American Rose Comb Black Minorcas Club.

S. T. CAMPBELL, - Mansfield, Ohio

Jerome's

White Minorcas

have made an unbroken record in the best show rooms of the country for twelve years. There is no handsomer fowl than the White Minorca, and we have them as good as they can grow. They are good layers of large white eggs and are money makers. We do not sell eggs for hatching, but have for sale at all times the choicest exhibition and breeding stock at reasonable prices.

Chas. W. Jerome & Co.,

Box H.

FABIUS, N. Y.

Conkey's Roup Cure

GUARANTEED!

Conkey's Roup Cure, the only remedy positively known to cure Roup in all its forms, as long as the fowl can see to drink. **For Canker**, especially in pigeons, this cure excels all others. One 50 cent package makes 25 gallons of medicine. Directions with every package. If it fails to cure we refund the money. Postpaid, small size, 50 cts.; large size \$1.00.

for we are running the largest Poultry

R. D. No. 7, Auburn, Cayuga Co., N. Y., Feb. 20, 1903.
G. E. CONKEY & Co., Cleveland, Ohio.

Gentlemen:—Enclosed find 50 cts for which please send one small sized box of your Roup Cure. Over a year ago I sent for a box of some. I then had 160 Leghorn hens with the Roup. I only used about half of the box and cured them all. Have not had any Roup in my coops since until now when on visiting my hens I find them all with colds and Roup from exposure to draughts due to carelessness of man hired to care for them. Do not know what I should do if I did not know about your Roup Cure; as my hens are still fine, fat, laying hens and I have worked hard with them all winter to keep them laying and healthy. The man tells me that several have already died and the rest have nearly stopped laying. So please send the Roup Cure as soon as possible, and oblige,
Yours, etc., MRS. METTIE BEDELL.

Lyons, N. Y., March 10, 1902.

G. E. CONKEY & Co., Cleveland, Ohio.

Gentlemen:—Some weeks ago my hens were taken with Canker and were dying rapidly in spite of all I could do. I saw your ad and purchased one box of your Roup Cure and not lost a single hen since I used the medicine. It is worth ten times its cost. Yours very truly,

WM. COLEMAN, (Breeder of S. C. B. Leghorns).

Pilot Mound, Manitoba, Canada, March 9, 1902.

MESSES G. E. CONKEY & Co., Cleveland, Ohio.

Dear Sirs:—Please find enclosed \$1.00 for which send me as soon as possible one large package of your Roup Cure. I must say that it will do all you can claim. It is the only thing that will cure Roup that I have ever tried. I recommend it highly to all breeders.

Yours truly,
R. B. PRESTON

Coerte Farms Poultry Yards.

Irondequoit, N. Y., March 6, 1902.

G. E. CONKEY & Co., Cleveland, Ohio.

Gentlemen:—Enclosed please find \$1.00 for another box of your well known Roup Cure. We consider it worth its weight in gold where you are fighting Roup and we ought to know plant in Western New York. Yours very truly,

SHERMAN & BOORS, per J. SHERMAN, JR.

(Breeder of White and Buff Wyandottes and B. P. Rocks.)

Box 133, McKeesport, Pa., Dec. 30, 1901.

Messrs. G. E. CONKEY & Co., Cleveland, Ohio.

Gentlemen:—Enclosed please find \$1.00 for which send me another box of your Roup Cure. I find it all right and am well pleased with it. I heat my coop with gas and that cold snap we had froze up our gas pipes as there was water in them and I had no heat in the coops for three days and every one of my fowls got to sniffling and running at the nostrils and I sent Roup Cure as per directions "For colds half strength" and I got every one right again. I used the cure one week and every one came out all right so I want to have a box on hand in case I need it again.

Yours respectfully

THOS. WEISSENBERGER.

R. F. D. No. 5, Geneva, N. Y., Feb. 20, 1902.

G. E. CONKEY & Co., Cleveland, Ohio.

Gentlemen:—Enclosed find \$1.00 for which please send a large package of Conkey's Roup Cure. I have given the Cure a thorough trial and find it to be fully up to your guarantee. Last fall my flock had the Roup in its worst form and two large packages of your medicine entirely cured them.

Your truly, FREDERICK KUNES.

AGENTS WANTED.

Manufactured by G. E. CONKEY & CO., Cleveland, O.

FOR SALE BY ALL POULTRY SUPPLY HOUSES AND DRUGGISTS.

Buff Orpingtons

*at the National Show in Chicago
We have won more first prizes, than all competitors combined for 3 years in succession.*

In 1903

*we won 5 firsts, competing against
WM. COOK & SONS
of England and the best breeders in the United States*

MICHIGAN STATE SHOW

We have won every first prize for 3 years

J. M. WILLIAMS & CO.

Circular Free

North Adams, Mich.

2d prize Hen at Chicago, 1903
2d prize Hen at Illinois State Fair, 1903

White Wyandottes AND Pekin Ducks

We raise hundreds of the very choicest birds and can furnish customers the best to be obtained anywhere. Our birds are bred for great egg production as well as to win in the show room and they do both. Stock for sale at all times, and eggs in season.

Write for free circular and price list, we will more than please you.

CLEMENT & FIKE

Box F

Prairie View, Ill.

Not Alone "How Many,"

But Also "How Good."

A Poultry Fact of highest importance is set forth in those Words. In buying and operating an incubator, it is not merely a question of "How Many Chicks" can be hatched; an equally important point is "How Well-hatched Will They Be," in order that they may live and grow properly. The Patent Diaphragm, Non-moisture, Self-Ventilating and Self-Regulating

CYPHERS INCUBATORS

will hatch not only the largest percentages of fertile eggs, but positively and invariably will produce larger, stronger and better chicks and ducklings than any other style or make of incubator in the world—this we guarantee.

THE PROOF

of this is furnished in our new main catalogue, which fully describes Cyphers Incubators, Brooders and Poultry Appliances, and in which appear a few samples of the

Thousands of Testimonials

We have received from prominent Fanciers and leading successful Practical Market Poultrymen.

All Over The World

Send **TEN CENTS** for our large illustrated catalogue, full of valuable and interesting information for poultrymen. Ask for Book H.

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BRANCH HOUSES:

CHICAGO, ILL.,
310 Fifth Avenue

NEW YORK, N. Y.,
23 Barclay Street

BOSTON, MASS.,
34 Merchants Row

Overbaugh's

Buff Rocks

Are the Greatest Prize Winning
Strain in the World.

THAT is why we raise and sell annually more prize winners than any other breeder of this variety. I have recently purchased the entire flock, business and good will of Dr. O. P. Bennett, and his birds combined with my own give me without doubt the greatest and grandest collection of show birds and breeders that can be found in America. The breeding of Buff Plymouth Rocks is my sole business, receiving my close personal attention, and I am always deeply interested in the success of my customers, as their words of praise of the stock shipped them have contributed largely to my success and made my strain the acknowledged leader with a world wide reputation. I do not exhibit but make a specialty of furnishing birds for customers to show. I therefore sell some of the very choicest birds that can be raised, and I am in a position to furnish stock that will win in any competition. Do not fail to write me. I positively guarantee satisfaction in every instance.

W. H. OVERBAUGH

HANOVER, PA.

BOX H

Mitchell's Partridge Cochins

First prize cock at New York, 1902.

From life by Sewell.

are in the front rank because their record places them there. The rich color and distinct pencilling which makes the Partridge Cochins the most beautiful of all fowls are line bred characteristics of the Mitchell strain. They are just as strong in shape and their superiority is freely accorded them by judges and breeders everywhere. Their record at the great New York show 1902 is one of their latest grand sweeping victories. They were awarded 1st and 2nd cock, 1st and 2nd cockerel, 1st and 2nd hen, 1st and 2nd pullet and 1st pen, winning all the firsts offered and all the seconds except one making the greatest record ever obtained by a breeder of this variety. The first prize cockerel was awarded the special prize for the best Cochins of any variety in the entire show competing against the Buffs, Partridges, Whites and Blacks. They have for years won the leading prizes and have competed at the largest shows in America including Boston, New York, Buffalo, Indianapolis, Charleston, etc.

STOCK FOR SALE AT ALL TIMES. ALL ORDERS AND CORRESPONDENCE GIVEN THE CLOSEST PERSONAL ATTENTION.

GEO. W. MITCHELL, . . . BRISTOL, CONN.

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WILL BE ASSESSED FOR FAILURE TO RETURN
THIS BOOK ON THE DATE DUE. THE PENALTY
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