

DORKING BREEDERS GROUP AUSTRALASIA



The idea of forming a Dorking breed club has been around for many years. A request was posted on Back Yard Poultry for interested people to contact us via email and get the process started. Thanks to the initial response we have had pledges of support from a great number of breeders Australia wide.

At this stage we do not have sufficient numbers for a club and will instead form a breeders group until we do have the numbers and interest. This is to keep the momentum going.

Our first priority is to put together a breeders list and see what Dorking's are out there still. Start talking to each Dorking breeder swapping ideas and bloodlines.

A web site is being developed containing: contact details, information on Dorking's and with a for sale or market area. Many thanks to Anna Hollingsworth for all her work on the web site. A breeders list will be compiled and contact details will be posted Hopefully we can appoint state reps to handle inquiries at a state level.

We hope to have standards posted on the site and Dorking colours in Australia. With history and features of this great breed. There will be a photo area and a blog site on our web page later on. We will utilise BYP as well to contact and encourage people to keep breed and improve the Dorking.

A quarterly magazine will be published for members and it is our intention to have a Dorking Breed Handbook. A Dorking info pack will be available later on to the public and Poultry clubs.

Thanks to the efforts of Bert Tolley we will be able to have a feature breed spot at the 2011 Canberra Poultry show on the June Queens Birthday weekend. Hope to have more than 50 Dorkings on Display and in a number of colours. As well as bantam Dorkings. WE hope to have a meeting of breeders at Canberra and discuss the future of the Dorking Group. Extra Dorkings for sale or swap will be brought to Canberra to help with the spread of new bloodlines and genetics.

We would welcome interested people to contact us for further details and become members of the group. To preserve and promote one of the oldest and best utility poultry breeds The Dorking Fowl.

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Our web site is www.australiandorkings.webnode.com/

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Canberra 2011

Dorkings will be the feature breed at the Canberra Poultry show in June this year. We hope that as many people will attend and show Dorkings if possible. Entry forms will be in the next newsletter.

Dorking Profile by Anna Hollingsworth

History

The Dorking is arguably one of our oldest breeds of domestic chicken. Columella, a Roman historian writing at Caesar's time, describes a heavy-bodied five toed fowl seen in Britain.

Dorkings were certainly well known as an old breed when Victorian gentlemen started to write of poultry in the 1800's, with many writers noting their utility qualities for both eggs and meat. Along with the Sussex, they were central to the trade in fattened capons supplied to the London market in the late 1800's to early 1900's, and were renowned for their fine white flesh and excellent eating qualities.

Dorkings were one of the original utility fowl taken with settlers to America, becoming one of the most common farm birds in the 1800's. They were also exported to Australia and became known as an excellent table bird in the colony. Their qualities have been utilised in the development many other breeds, including the Lincolnshire buff, the Houdan, and the Faverolles.

With the advent of faster growing crossbred strains of laying and meat birds in the 50's and 60's, the Dorking fell into decline. It has been maintained by a few dedicated breeders, but is regarded as a critically endangered breed.

Some of the standard colours have been lost in Australia, and one of the challenges facing breeders today is to redevelop these colours without losing sight of the original dual purpose utility characteristics of the breed.

General characteristics

The illustrations of Weir and Harrison from over 100 years ago are good examples of what these fowls should look like.





Dorkings are a heavy breed utility fowl, and their characteristics reflect this purpose. The character is quiet and stately, Dorkings should not be flighty or prone to panic and aggression. They should be large, with a long, deep body, looking rather rectangular when viewed from the side. Breast should be full and carried well forwards. The white legs are short and strong, with five toes, the fifth separate from and above the normal hind toe, pointing upwards.

The Australian Standard calls for mature hens to weigh 3.6-4.55 kg, while roosters should weigh 4.55-6.35kg. Lack of size is one of the issues faced by Dorking breeders in Australia today, with very few fowls reaching the standard weights.

Dorkings are quite hardy birds, and enjoy free range foraging. They lay a moderate number of medium to large sized white to tinted eggs.

Dorkings breed well, generally fertility is good and, as long as their nutritional needs are met, egg hatch rates are high. Hens make good broodies and are natural mothers. Silver Grey, Red and Dark chicks can easily be sexed by around 2-3 weeks as their juvenile feathers come through, with the males showing a black breast and females showing salmon/chestnut breast feathering.

They are one of the slower growing breeds; while pullets may come into lay as early as five months, they may not attain their full adult size until 18 months to two years old.

Bantams follow the same type and colour definitions as the Large birds, but their adult weights for hens and roosters are 1.020-1.255kg and 1.190-1.415kg respectively

Colours

Silver Grey

The Silver Grey is the colour most often seen in Australia. Males are striking birds with a rich black chest and body with clear silvery white hackles, shoulders and wing triangle. The black tail and flight feathers carry a deep green gloss. Females are predominantly a beautiful ash grey, the feathers delicately pencilled with a darker grey. The hackles are silver with a black central stripe, the breast a salmon to chestnut red. The Silver Grey carries a moderately large single comb.



Silver Grey Dorking Hen Australia 2010



Silver Grey Dorking Cock Australia 2010

Red

The Red Dorking is rarely seen in Australia, but persists in a few small flocks. The male again has a black chest, belly and tail, but has bright glossy red hackles and saddle, and deep red shoulders and wing triangle. Females are a rich mahogany red, their hackles gold striped with black. The Red is single combed.



Above Red Dorking Cock Australia 2010
Below Red Dorking Hens Australia 2010

Dark (known as Coloured in USA)



Photo courtesy of Tony Jones

The Dark Dorking has not been seen in Australia for some years. The male's hackles are white to straw coloured, the back white with black, grey or red markings. Underparts are again black.

The female has white or straw coloured hackles, a red breast, and dark brown body feathers.

The Dark can carry either a rose or single comb.

This variety is known as the Coloured in the USA.

White

The White Dorking, being redeveloped in Australia, is a clean snow white all over the body, any straw tinge is considered a fault. The White has a rose comb.



Cuckoo



Photo thanks to Chris d'Orgeix and FeatherSite

The Cuckoo is also being redeveloped. It has dark grey or blue bands on the feathers over the entire body, and a rose comb.

There is also historical evidence for many other colours, such as Wheaten, Speckled (known as Spangled in the US), Black and Clay. These colours and others are sometimes seen in the UK and USA.



Speckled pullets, photo courtesy of Lydia Cassilly and the USA Dorking Breeders Group



Crele Rosecomb, photo thanks again to Chris d'Orgeix and Feathersite.

Common Faults

The most common fault in Australia is a lack of size and type. Many breeds have been proposed to outcross to try to regain some substance, these birds must be chosen with caution to avoid any further deterioration in Australian Dorking genetics. Rigorous selection within the breed will yield results over time.

Red flecking and shading in the wing and shoulder of the Silver Grey is often seen, this is a result of autosomal red required to deepen the salmon breast of the hen. The breeder must select pairs carefully to attain a balance between clear shoulders/wings of the male and the richness of the salmon breast feathering of the female.

Black striping in the hackle of the Silver Grey male is a common fault and should be selected against

The fifth toe should be separate from the others and pointing upwards. Again, selection is the key. Complete absence of the toe is a serious fault.

White earlobes are a fault, although some judges will tolerate some degree of white colouration.

Some strains have been known to be aggressive and highly strung. These birds should never be bred from.

In summary

The Dorking is a magnificent bird and a pleasure to keep. Breeding these fowls is a real challenge, but can be very rewarding. They truly are a heritage breed worthy of the efforts to maintain them.

A breeders' network has recently been formed to promote the breed and bring interested people together. Already we have members in all states of Australia, and we hope in time the group will grow and evolve into a club with strong support.

Please visit <http://australiandorkings.webnode.com/>

References and links

Feathersite [http://www.feathersite.com/Poultry/CGD/ ... Dorks.html](http://www.feathersite.com/Poultry/CGD/...Dorks.html)

USA Dorking Breeders' Club <http://dorkingbreedersclub.webs.com/>

Dorking Breeders' Group of Australasia <http://australiandorkings.webnode.com/>

"Dorking Poultry, Fowls and Chickens" by Jan Irving <http://erinrac.com/poultry/dorkingbook.htm>

Tony Jones on Flickr <http://www.flickr.com/photos/flambard/>

Dorking Breeders' Group of Australasia <http://australiandorkings.webnode.com/>

Traditional Breeding Programs for the Home Flock

By Craig Russell

In the modern era, an age of large commercial hatcheries and mass production of poultry, traditional poultry breeding has become somewhat of a lost art. Yet for preservationists or anyone serious about maintaining a quality self-perpetuating flock, the traditional methods of breeding are still the best.

By establishing a small flock of a rare and historic breed, small flock owners can help restore rare breeds. Many find it rewarding to rescue these valuable breeds, with their individual contributions in egg and meat production and unique appearance. Increasing the number of small flocks of each rare breed also protects the breed from being devastated by a single disaster.

"Success" may mean different things to different operations. Success can include excellence in utilitarian qualities such as meat and egg production as well as the aesthetics of the fancy and preservation of rare breeds. Poultry is often divided along a line that separates utility from fancy. Ideally, these qualities should be combined. By referring to the Standard of Perfection and selecting for production qualities, both goals can bless your barnyard.

Beginners may want to concentrate on utilitarian qualities. They are a good base on which to build. Quality can be measured by the dozen and the pound, but is subject to the same genetic laws as style and type.

Traditional breeding methods are generally the most effective for long-term small flock keeping. These include rolling matings, grading, clan matings, and breeding out-and-out.

Rolling Matings

Rolling matings are a good general-purpose system. With this system, the breeder can maintain a viable population while honing breeding skills and refining artistic judgments.

Don't be afraid of starting with imperfect stock. Get the best you can, but selective breeding is what any type of livestock preservation is about.

Small flock owners will be most successful with breeds they enjoy. The pleasure of surveying a handsome, uniform flock that has grown from a successful breeding program is hard to beat.

Rolling matings require at least two pens for each breed or variety but a minimum of record keeping.

Rolling matings select the best cockerels and pullets from each season and breed them back to the best breeders of the previous season. Cockerels are bred to hens, cocks are bred to pullets.

Rolling matings can improve the stock and maintain genetic diversity with a small flock, but larger flocks provide more opportunities to select the desired characteristics.

Long-time breeding expert Bruce Lentz, a well-known stringman and breeder from the 1930s through the 1970s, felt that a breeding program should be founded on at least two trios, preferably two cocks and eight to 10 hens. This gives you a deeper genetic base. With that caution in mind, a single trio can be the foundation of a small flock.

After each season, the old birds are combined and culled to the best cocks and hens. The best cockerels and best pullets are selected from the young birds. Putting the cocks with the pullets and the cockerels with the hens keeps the system rolling.

Manage the ratio of the sexes in the pens. For best levels of fertility, one male to 10 females is about right. For light breeds, 12 females may not be too many, while very heavy and feather footed breeds often do better with only eight females per male. Vigorous males may be hard on their mates if too few females are kept. This usually isn't a problem on free range and can be controlled in confinement by moving males from pen to pen or by only allowing them with the females every other day.

Bruce often maintained side matings with the intention of establishing highly desirable characteristics. Such birds or unrelated stock can be worked into the breedings on either the pullet or cockerel side. The operational word is best. That may mean the utility characteristics of egg and/or meat production, type, color, feather quality or comb, or some combination.

Rolling matings, like all breeding systems, depend on the ability to select breeders. This is a traditional small farm method that has also been employed by fanciers and show folks.

Grading

Grading is the process by which a population can be modified by breeding repeatedly to another strain, variety or breed. With patience, an existing flock may be improved or changed completely. This is an old system long used by professionals in cattle, horses, swine, sheep, goats, dogs and other farm stock.

This table shows the progression to breed purity in fractions, decimals and percentages over breeding cycles.

For all practical purposes, eight cycles yield pure stock. Most large stock breeders with open registries grant Pure status after six generations. In cases where one variety is being graded to another or one strain of a variety or breed is being upgraded by addition of another strain, far fewer cycles are usually required before all of the offspring can be returned to the regular mating system.

Grading is sometimes criticized as changing the character of a breed. If done properly and carried to at least the sixth generation, the breed's purity is preserved.

A combination of rolling matings and grading can also be used to develop new breeds or varieties by mating half- or three-quarter-blood brother to sister and selecting once birds start to show the desired traits. A combination of these techniques can fix the desirable traits and build up the population.

Clan Matings

Clan matings are another traditional breeding method for small flocks. Dick Demansky, a prominent SPPA breeder of Old English Games since 1966, has maintained a vigorous flock with virtually no unrelated stock.

The clan system separates a flock into distinct families. The clans are then maintained as separate stock and bred along either the hens' or the cocks' lines.

Mr. Demansky clan mates using a matriarchal system. When they hatch, all birds are toe-marked and wing-banded with their mother's clan mark. He records their numbers when they are cooped.

Matriarchal clans are traced through their mothers, the hens. Patriarchal clans are identified by their lineage through the cock. Cocks and hens of the same clan are never bred to each other. Matriarchal systems are usually pair-mated. Patriarchal systems may breed a male to large groups of, usually, related hens.

Birds should always be matched to others that can compensate for their weaknesses. "They are all weak somewhere," Mr. Demansky writes. "In all the shows that I have judged through the years, I never scored any bird perfect."

With the matriarchal system, eggs must be marked to identify each individual hen. Incubating them together, by hen, is most convenient.

If a pair produces good results, they can be kept together indefinitely. Or pairs can be changed to check different combinations. "This keeps any one bird from exerting too much influence on the complete flock," said Mr. Demansky.

A rooster with outstanding characteristics can be bred to all hens not in his clan. Clans are defined by relationships, not by characteristics. If a bird develops plumage or other characteristics that resemble another clan, he or she still belongs to the clan identified by lineage.

Clan matings work best with a minimum of three clans. Typically, breeders keep an odd number of clans, although any number above two will work.

Clan systems have traditionally been used by cockers and show folks.

Breeding Out-and-Out

In its most extreme form, new males are bought into the flock each year.

Even when new males are brought in only every second or third year, this method maintains a high degree of genetic diversity in the flock. Although uniformity may suffer, this method tends to produce vigorous population, and was primarily used in utilitarian operations. As with any system, starting with quality stock yields the best results.

Keeping Records

Different breeding methods require varying amounts of record keeping. Clan matings keep track of every chick. Rolling matings and out-and-out matings require little or no record keeping. Although for best results at least the year an individual was hatched should be recorded. Matriarchal clan systems require extensive record keeping but document the exact ancestry of every individual.

Each Flock Unique

Choose the method that suits your needs best. "There is a time to inbreed, a time to line breed and a time to out-cross," Mr. Demansky writes. "Knowledgeable breeders do it all, when the need arises."

Small flock poultry keepers can find methods that will suit them and their goals for their flocks. The ambitious or eager can arrange two breeding cycles a year. Others may find one adequate.

Selection of fowl with long, productive lives will develop strains with low mortality and vigorous constitutions, always the goals of old-time breeders.

Modern methods of intensive production with extremely high rates of feed conversion, rapid weight gain, early maturity and high egg production have not favored longevity. Inherent health problems are often associated with today's high production strains. In most cases, modern methods have actually shortened the profitable life as well as the actual life of domestic fowl.

For non-factory production and for establishing a flock near the breed ideal, a long-lived population with prolonged utility is desirable. The goal of the poultry conservationist and the serious backyard farmer should be to breed a strain that lays plenty of eggs without loss of vigor and retains fertility year after year.

Older birds should be subjected to normal culling and selecting. Thus a tried and true breeder might be replaced by a younger bird with far superior type.

Some feather patterns tend to deteriorate with age. A bird with proper color during the first year of life is not a cull due to later color deterioration, but would not be selected over birds of equal age, type and vitality that still retained superior color. Actually this is pretty good advice for use with any backyard breed, but certainly should be followed by anyone working with historic types, Demansky concludes.

Trap Nesting

Selection of non-broody strains and trap nesting are the tools modern breeds have used to increase egg production in modern production fowl. The selection against natural broodiness has been going on for thousands of years in areas like China, Egypt, and the Middle East where artificial incubation was available. Even in other areas where natural incubation prevailed until fairly recently, certain breeds were selected for high egg production and simply hatched by fowl that had been selected for enhanced broodiness or at least retained natural levels of the trait.

High production egg breeds and strains have existed for a long time. But it was trap nesting along with day length manipulation and better feed formulation that took egg production to the highest levels.

Small flock owners can, and have, used such technology. For those with the time and money trap nests are still available commercially and plans for home construction are also available.

In the 1960s I was aware of a number of small breeders including some that were working with broody breeds and trying to enhance or maintain the characteristic that used trap nest results as part of their selection criteria. In some cases the pullet year was spent in trap nested laying and only the best producers moved on to the breeding program in later years. For other breeders trap nesting and egg production were just one of many factors in evaluating which hens would continue with the program.

For those unable to accommodate the time and record keeping a trap nesting program requires, there are other proven, if often slower, methods that will allow the development of strains with good egg production. Start hatching early in the season. The best producers usually go into production first. Select breeders that lay well in short-day, natural-light situations. If you know your hens and their eggs well enough to know who is laying when, select hens with long periods of uninterrupted lay over hens with frequent pauses. Hens producing eggs have large, soft vents. Non-laying hens have small, often puckered, vents. Just as good producers will lay during short days and cold weather, they will also lay during hot weather. Good producers tend to molt late and rapidly. Hens that lay while molting also are usually good producers.

Whether we are talking about laying or any other trait, pick your breeders by hand, as well as eye and historical data. A breeder should be firm and well muscled without being fat. Legs should be properly placed. All breeders should be a good representation of their breed's type. Eyes should be bright, clear and properly placed. Wings should be carried properly. Use your breed standard.

Most of all, follow your breeding program. I sometimes hear from breeders who think they are using rolling matings when they breed cocks to pullets and cockerels to hens but simply drop the oldest generation each year. This reduces the system's long-term selection for longevity and deprives them of the long-term use of truly superior individuals.

A breeding program should stress the preservation of breed characteristics such as meat quality and good mothering skills in Dorkings and Games, or high egg production in Minorcas and Leghorns. In the first group a pullet that did not go broody would not be a breeder a second year. One with three cycles would be preferred to the one with only one or two. In the second group, consider egg shape and size as well as overall production.

If at all possible, do not use birds that have ever shown any signs of illness as breeders. Selection for nothing but productivity tends to reduce quality of type. Selection based solely on fancy points often reduces productivity. Combining such strains allows a good breeder to quickly produce a productive, near perfect flock.

Small closed flocks have levels of bio-security that crowded commercial operations can only dream about so once your flock is established, be very careful about adding outside birds.

Prevention of Egg Eating

Phillip J. Clauer, Poultry Extension Specialist, Animal and Poultry Sciences

Egg eating by hens is a habit formed over time which is extremely difficult, if not impossible, to break. It is important you plan and manage your facilities so that the hen never gets the first taste of a broken egg.

Prevention management practices include:

1. Reducing Traffic in the Nesting Area. Egg breakage is a major reason why hens start eating eggs. Excessive traffic in the nesting area increases the chance of egg breakage. Some precautions which can be taken include:

- a) Provide one 12" x 12" nest for every 4-5 hens in your flock. Never have less than 6 nesting boxes. Always locate the nests at least 2 feet off the ground and at least four feet away from the roosts.
- b) Keep 2 inches of clean, dry nesting material in the nests at all times. Many eggs are cracked due to a lack of protective padding in nesting boxes.
- c) Remove all broody hens from the nesting area. Broody hens reduce nesting space and cause more traffic in the remaining nests.

2. Nutrition. To keep the egg shells strong, feed a complete ration and supplement oyster shells free choice. The oyster shells serve as a calcium supplement to keep the shells strong.

Never feed the hens used egg shells without smashing them to very fine particles. If the hen can associate the shell to the egg; the hens are encouraged to pick at the fresh eggs in the coop.

3. Keep Stress Minimized

- a) Don't use bright lights in your coops, especially near the nesting area. Bright light increases nervousness and picking habits.
- b) Do not scare the hens out of the nesting boxes. The sudden movement can break eggs in the box and can give the hens a taste of egg and promote egg eating.

4. Egg Eating Can Be From Outside.

1. Egg eating can be done by predators such as snakes, rats and other predators. If your hens are eating eggs, the hen will usually have dried yolk on their beaks and sides of their heads. Egg eating hens also can be seen scouting the nests for freshly laid eggs to consume.

If you do catch an egg eater, cull her from the flock at once. Egg eating is a bad habit that will multiply the longer you let it continue. If one hen starts eating eggs, other hens will soon follow.

2. Prevention is the only proven treatment. Collect eggs often and collect eggs early in the day. Most hens will lay before 10:00 am each morning. The longer the eggs are in the barn, the better the chance it will be broken or eaten.

Reviewed by Audrey McElroy, associate professor, Animal and Poultry Sciences

CHAPTER 1

Selecting for Meat Qualities and Rate of Growth

By Jeannette Beranger, Research & Technical Program Manager, American Livestock Breeds Conservancy and Don Schrider, Communication Director, American Livestock Breeds Conservancy

This outline for selecting desirable production traits in chickens was developed as part of an American Livestock Breeds Conservancy pilot project to recover breed production characteristics of endangered poultry. These guidelines are from well-established parameters developed by “old school” poultrymen, as documented in some of the early to mid-20th century poultry texts. This once commonplace knowledge and practice has become unknown to most modern chicken farmers due to the ready availability of chicks that can be purchased from large hatcheries.

The following information can be used by the producer to identify birds that will excel in production traits and would be good candidates to retain for breeding stock. Keep in mind that any bird that is selected must also meet the established historic standards for the breed. These historic standards were written at a time when chicken breeds were being used for commercial production within several production systems. Input from the top breeders of each breed was used to establish the particulars of size, and other qualities, that would produce the best specimen for the role each breed was designed to fulfill.

When comparing birds within a flock they must be of the same breed, sex, and age in order to get an accurate assessment of their production qualities. (It’s a matter of comparing “apples to apples.”) It is best to evaluate multiple birds when making culling or breeding decisions for the flock. The first bird to be assessed will serve as the “example bird” to compare with the second bird. If the second bird has better qualities than the first, then the second bird then becomes the example for comparison – and so forth and so on it will go for the rest of the flock evaluation. There is also value in using a poor representative of the breed for comparison in order to fairly assess poor production qualities and better recognize mid-level or superior qualities. It is further suggested that the pullets be assessed first so that the initial impression of the pullet size is not influenced by having handled the naturally larger cockerels. Put aside superior birds that are potential “keepers” until the en-

tire flock has been assessed. Go back to the “keepers” to have a second or even third look at them, in order to be thorough and make sound decisions that will help to ensure the future quality and productivity of the flock.

A producer needs far fewer males than females to be retained for breeding stock. With this in mind, rigorous selection of the males is an important component to a sound, breeding program. It should also be remembered that adult size is controlled by both male and female stock – under-sized or otherwise poor quality males or females should not be retained. Better to hatch more chicks from fewer hens, than to retain under-sized or poor quality hens to increase flock size.

Purpose of the breed evaluated is critical to success if the breed is to serve in the purpose for which it is designed. Dual-purpose breeds, such as American breeds like Buckeyes, Delawares, New Hampshires, Plymouth Rocks, and Rhode Island Reds, should have equal consideration given to egg production indicators as to meat considerations in order to retain their practical usefulness. Egg laying breeds, such as Leghorns, Minorcas, or Anconas, should have more emphasis placed upon the sections of their bodies devoted to egg production, but will still benefit from a sound overall appraisal.

Choosing an Evaluation Age

Much will be served by having a standard age at which to evaluate young growing birds for productive indicators. This will allow long-term tracking of progress of efforts and comparison of mature birds for qualities, such as rate of growth, which are not readily apparent as the stock matures. Consideration of the breed’s history and purpose can affect the decision of evaluation age. One would not wish to cull young Jersey Giants too early, as an example, as the breed traditionally took 26 weeks or more to grow to market age to produce a very large roasting fowl. A unique aspect of this breed is that some individuals grow fairly quickly and flesh-out at a relatively early age – but these individuals do not reach the mature size for which the breed is known.

ALBC’s original production selection work work used

CHICKEN ASSESSMENT FOR IMPROVING PRODUCTIVITY

the Buckeye chicken breed. This breed had a history of use for the production of broiler chickens not dissimilar to some other American breeds, like Plymouth Rocks or Rhode Island Reds. By way of experiment, it was decided to evaluate the young birds at 8 weeks and again at 16 weeks of age. Interestingly, all of the

birds identified at 8 weeks as being superior for their sex were again found as superior at age 16 weeks of age. Since these two ages are good measures for most American breeds, they are recommended below. For faster or slower growing breeds experience will dictate more appropriate ages.



The proper way to hold a chicken: With its breast resting in your palm, slide one leg between thumb and index finger, and the other leg between index finger and middle finger. Tilt bird with its front slightly downward and it will remain calm.



When using hands-on appraisal, it is helpful to remember that under those feathers is a chicken to eat. The live chicken must have flesh on its bones or it will not be good when processed. This chicken had a wide body and a large thigh area.

Assessment at 8 and 16 Weeks of Age

1. Skull width – A wide skull on a chicken is a strong indicator of good growth potential. If birds cannot be physically examined, often judging skull width visually can be a reliable indicator of young birds with good growth potential. If the skull is narrow, then the rest of the bird will be narrow. As a rule of thumb, medium to large skull width is good for egg layers, and large to extra wide skulls are better for meat birds.



In both photos the bird on the right has a wide skull and the one on the left a narrow skull. A wide skull is a good indicator of a good skeleton and good rate of growth.

2. Heart girth – A good heart girth is an indicator that there is enough space for the internal organs to be of good size, maximizing the bird's potential for growth and development. Care must be taken to ensure that the girth is accurately assessed. Often, if the bird's legs are held slightly forward during the assessment, the girth can seem larger than it actually is. For a more precise assessment have the legs of the bird pointing towards the rear of its body and place your fingers on each side of the ribs just behind where the wings attach to the birds body.



Measuring heart girth on live bird.



Heart girth is important as it yields space for the heart and lungs.

3. Back flatness, length, and breadth – A flat back makes for a more attractive carcass on a table bird. Good length and width contribute to the quality of the dressed bird as well. Flat backs are one indicator of good bone development in a bird. The back should be wide and carry its width along its length. Generous length and width of back are indicators of longevity, vigor, and provide ample capacity for egg and digestive organs. Birds with narrow or tapered backs lack the capacity for satisfactory egg production.



Feeling flatness of back.



A flat back yields a more presentable carcass.



Even with feathers, you can see the wide back on the right and narrow back on the left.



Width of back is about the body under the feathers. Hand shows position to appraise.

4. Body depth, capacity – As with heart girth, this aspect of the bird's body indicates whether there is ample or restricted space for internal organs. Body depth is the thickness between the back and the keel. Good depth gives birds an advantage for internal organ development. This factor also contributes to carcass appearance for the table bird.



Body depth is the distance from the chicken's back to its keel bone.



Capacity is the distance from the center of the back to the tip of the keel. Because chickens are three dimensional, this distance may vary even when body depth appears the same.



Notice on the processed bird how the rear is deeper in body depth than the front. This trait is found in all good egg-laying breeds as it allows more room for egg and digestive organs.



Good capacity allows more room heart and lungs, but also allows more flesh on the breast.

5. Breast and keel – The keel is examined for its straightness & length (for good carcass appearance) and the breast is inspected for development of good meat proportions. The amount of meat on the breast will ultimately drive the bird's appeal to the consumer. Position the bird in an inverted manner to get an accurate feel for fleshing.



Position to hold while appraising fleshing on breast. Pushing the legs a little toward the front of the bird will allow the breast muscles to relax.



Measuring the distance of the keel bone. Straight keel bones look much better on the plate, so breed for good straight keel bones.



Large amounts of meat on the breast of a chicken are to be desired.



The keel bone is much like the keel of ship in that all organs rest on it. A short keel will cause the chicken to look meaty, but leaves little room for healthy organs.

6. Weight – Young birds can be weighed to determine overall growth rates for the flock. Weight has the advantage of being an impartial record that can allow comparison of different generations of birds. As your flock grows and years of selection occur, target weights can be designated as minimum qualifications for retention of breeding stock. In the Buckeyes we quickly found that males should meet or exceed 5.1 pounds and females 3.5 pounds by age 16 weeks. *The heaviest birds that make the cut in the first 5 categories can be marked as potential breeders as early as 8 weeks of age.*

7. Color – Early in the flock’s management color is observed in all of the birds. Although ideal color is nice, it is not a necessity in the early stages of selection for production traits in a breed. Unless a bird is completely off color, it can be acceptable as breeding stock early on in a recovery program. It should be noted that it is more important to have males with good color than females because the males carry two genes for color (ZZ) and females only one (ZO). Once production traits meet the program’s goals, then color can be improved through further selective breeding. The bottom line is that color is much easier to correct than production traits.

Width of skull, heart girth, flatness of back, and fleshing on breast are the most significant qualities to look for in the selection process with young birds. They are characteristics that all of the superior birds excel in. Typically, the birds that excelled in these traits at 8 weeks of age will remain the top birds at 16 weeks of age.

Some Other Points

1. Appetite equals rate of growth – A bird’s body grows according to the inputs it receives. Thus, a bird that eats larger quantities of food will grow faster than a bird that eats smaller quantities of the same food. All other factors being equal, individual birds that show strong appetites should be given consideration when choosing breeding stock.

2. Protein equals rate of growth – Just as the amount of food consumed affects the rate at which a bird grows, so does the quality of the feed provided. Higher protein diets, up to 30% protein, are to be preferred for birds that have access to range and which are expected to grow at significant or reasonable rates. Low protein diets, 16% protein and lower, can reduce the rate of growth by as much as 50% and cause adult size to less than the genetic potential – not to mention that lower protein diets often cost more money in the long



The Satisfaction of serving quality chicken that you grew is what it is all about. Here Fred Beranger prepares two Buckeye chickens that he grew.

run, as the birds will often eat more total pounds of feed for pounds gained.

3. Wide feathers – Birds with wide feathers grow at a faster rate than birds with narrow feathers. This has largely to do with the fact that narrow feathers allow more body heat to escape and thus less of the food consumed goes into growth. Birds with narrow feathers can be identified at an early age, as they are apt to be slow to grow back feathers for the first 6 weeks of life.

4. Mortality – Extremely slow or excessively fast maturing chicks tend to suffer higher mortality than chicks which grow at a “normal” rate. Excessively fast maturing poultry have thinner gastro-intestinal tracts, which allow for faster nutrient uptake. But the thinness of these tracts can also make for proneness to intestinal blowouts and infections.

5. Size – Mature size and rate of growth are not positively correlated. In the Buckeye study the largest male produced weighed 9.5 pounds at one year of age. This same male weighed only 5.13 pounds at 16 weeks of age while others reached as much as 6.0 pounds by the same age. Both mature size and rate of growth are important considerations for potential breeding stock.

Resources and Suggested Reading

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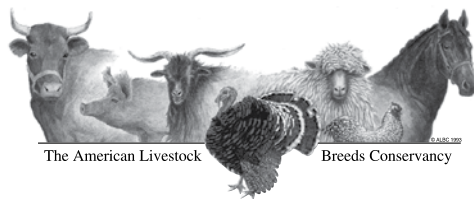
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CHAPTER 3

Ongoing Selection of Breeding Stock

Don Schrider, Communication Director, American Livestock Breeds Conservancy

This outline for selecting desirable production traits in chickens was developed as part of an American Livestock Breeds Conservancy pilot project to recover breed production characteristics of endangered poultry. These guidelines are from well-established parameters developed by “old school” poultrymen, as documented in some of the early to mid-20th century poultry texts. This once commonplace knowledge and practice has become unknown to most modern chicken farmers due to the ready availability of chicks that can be purchased from large hatcheries.

The following information can be used by the producer to identify birds that would be good candidates to retain for breeding stock. Keep in mind that any bird that is selected for breeding must also meet the established historic standards for the breed. These historic standards were written at a time when chicken breeds were being used for commercial production within several production systems. Input from the top breeders of each breed was used to establish the particulars of size and other qualities that would produce the best specimen for the role each breed was designed to fulfill.

A producer needs to retain far fewer males than females for breeding stock. With this in mind, rigorous selection of the males is an important component to a sound, breeding program. It should also be remembered that adult size is controlled by the size of the female stock – undersized or otherwise poor quality females should not be retained. Therefore it is better to hatch more chicks from fewer hens than to retain undersized or poor quality hens.

Understanding the historic role of the breed being evaluated is critical to success if the breed is to serve in the purpose for which it is designed. Dual-purpose breeds, such as American breeds like the Buckeye, Delaware, New Hampshire, Plymouth Rock, and Rhode Island Red, should have equal consideration given to egg production indicators as to meat considerations in order to retain their practical usefulness. Egg-laying breeds, such as the Leghorn, Minorca, or Ancona, should have more emphasis placed upon the sections of their bodies devoted to egg production, but will still benefit from a

sound overall appraisal. Because there is a link between the breed, the environmental system for which it is designed, and the products the breed is meant to produce, selection of breeding stock should favor those animals that excel within conditions in which the breed is meant to be raised. In other words, when planning to use a breed designed for range-based production, an animal that grows quickly in confinement should not be favored over a slightly slower growing or smaller animal that was grown on pasture. In such a case, the differences between the production systems, and not genetic differences, may cause the differences between individuals. Comparison of individuals within the same system does correlate, to a large extent, to selection based upon a measure of genetic makeup, and thus breeding potential and quality.

In 2006 and 2007, ALBC worked with Buckeye chickens and developed a model for the recovery of production characteristics within endangered chicken breeds. Through this work, it became clear that the key to success was in selecting birds for six basic qualities: rate of growth, mature size, egg-laying ability, breed type, color, and fertility and vigor.

Basic Qualities for Selection

1. Rate of Growth – Speed of weight gain influences profitability and can indicate strength of the immune system of the bird as well as suitability for system of production. It is a well-documented fact that both excessively fast growing and extremely slow growing poultry have less robust immune systems. Excessively fast growing birds can be more prone to diseases because of thinner gastrointestinal tracts which allow both faster nutrient uptake as well as easier penetration by bacterial, and possibly viral, agents. Historic level of productivity is a good guide for optimum rate of growth for the breed under consideration. For many of the American breeds, historic rate of growth, i.e. the time it takes to grow to processed size and weight, is between 12 and 18 weeks of age – with the majority of breeds falling toward to the higher end of this range. Rate of growth must also include fleshing; as it matters not how large and heavy a chicken is if it has no flesh when it is processed.

2. Mature Size – The ideal weight for each breed is outlined in the American Poultry Association’s *Standard of Perfection*. The figures given are an ideal with a permissible range of plus or minus one-half pound. It is important to remember that mature size also refers to the fleshing in the economically important sections of a bird’s body. In order to reach ideal mature size, the bird should reach desired weight and have ample flesh in the sections important for that breed. The weights and body proportions given were determined by the top poultrymen of their day, who used these breeds commercially and identified the most productive fowl for the systems and used this knowledge to create the standard descriptions.

3. Egg-laying Ability – Chickens that do not lay eggs do not reproduce. Egg-laying ability is an important economic consideration – fewer breeding hens are needed to produce a given number of offspring when the hens lay large numbers of eggs. Selection for egg-laying ability is a trait of primary importance in egg-laying breeds, of significant importance to dual-purpose breeds, and of some importance even in meat producing breeds – though high egg production and high rate of growth are not completely compatible traits. Most breeds will begin to lay at around six months of age. It has been found that selecting for earlier production reduces adult egg size. Rhode Island Red breeders have

found superior overall health and production in pullets that begin to lay at or near six months of age over those that begin to lay at eight to nine months of age.

4. Breed Type – As stated above, the American Poultry Association’s *Standard of Perfection* outlines the ideal of the breed. Type is comprised of body shape and conformation and is important because it affects the size and shape of the internal organs and the distribution of flesh, and thus the breed’s suitability for the system of production. Breeds like the Wyandotte, Buckeye, and New Hampshire have rather compact but deep and wide bodies. Such bodies are ideally suited to retaining heat, so it should be no surprise that these breed do well in cold regions. The Leghorn, Ancona, and especially Minorca tend to be rather longer and narrower proportionally and are well suited to hot climates, reflecting their Mediterranean origins. But Leghorns are also designed for egg production primarily, whereas Buckeyes should produce eggs and meat. So breed type is an important consideration for purpose as well as regional adaptation.

5. Color – You can’t eat color. So why should any consideration be placed on this trait? Color can and does impact a breed’s suitability for different systems of production. For example, while white chickens are healthy and will do well on pasture, white chickens are slightly more prone to predation. Color can also be an



Notice the outline of this Rose Comb Dark Brown Leghorn: full deep breast; long body; deeper in the rear where the egg organs are located; and legs set in the middle of her body. Such a hen will be productive for many years. Photo courtesy of Paul Gilroy.



Notice the outline of this American Game hen: full large breast; narrow, pinched saddle area (where egg organs are located); and shallow body evenly deep. Such a body is designed to produce large breast muscles but is not suitable for sustained production of eggs.



Notice the compact body found on this Delaware. Such a body retains heat well, but is only productive if large capacity is maintained with exceptional width and depth of body.

indicator of breed purity, and therefore an indicator of the genes that gave the breeds the abilities for which it is noted. Historically, individual strains sometimes had slight differences in color which were valued for giving the ability to identify and discriminate – a breeder might recognize that a given bird was not a pure representative of a particular strain, and therefore may not produce the desired results expected of that strain.

6. Fertility and Vigor – No animal that exhibits a lack of vigor or good health or which proves low in fertility should be used as breeding stock. The only exception is when salvaging a rare line, variety, or breed. High levels of vigor and fertility are the foundation upon which economic value is built. Both of these traits are of the utmost importance and together they give the breed the ability to withstand challenges – including inbreeding or disease.

Culling

An entire book could be written on culling. It is the single most beneficial practice that poultrymen can use to better the quality and health of their flocks. An old saying is that the best tool you can use to improve the quality of your birds is an axe! This applies to immune



Rhode Island Red chickens maintain capacity by being long, deep, and broad in their bodies. Notice the size of the comb on this rooster; such a comb indicates excellent egg production for his daughters. Photo by Don Nelson.

function as well as production, type, and feathers.

A well-known Leghorn breeder and poultry judge, Mr. Richard Holmes, used to tell a story about a master breeder of White Leghorns who in his early years hired an older poultry judge to come and cull his flock. The old judge locked himself in the poultry house and started catching and killing Leghorns. The story goes that the discards came fast and heavy. When the judge was finished the breeder had only one trio left out of 150 birds. The breeder later commented that from that day forward he made progress!

Disease Resistance

- The old-time breeders used to say to never use a bird in the breeding pen that had been medicated that year. While the bird may seem healthy, that the bird suffered disease is one indicator of low immune function. Also, in some cases of disease, the symptoms may have dissipated but the animal may not have completely recovered.
- Culling all birds that become sick is one way to positively select for disease resistance in breeding stock within the region in which the flock is located. Many



The chicken on the right has medium-sized feet and somewhat narrow shanks. The chicken on the left shows large feet and thick shanks – a sign of vigor and good health.

poultry breeders have found that after a few generations of culling all sick birds, illness will no longer be found in the flock. This practice should not be expected to work for highly pathogenic diseases.

- Master breeder of Brown Leghorns, James P. Rines, Jr., said many times, “Your flock will have only what you tolerate.” This saying can be broadly applied to all aspects of breeding, including disease resistance.

Vigor

- Selecting for vigor requires selecting from amongst the dominant cockerels and pullets when choosing future breeding prospects.
- Select male and females that have bright red combs without dark tips. Dark tips can be an indicator of heart trouble.
- Select birds with bright, strong eyes with well-formed irises and correct eye color for breed. Some diseases, such as leucosis, prevent the iris from forming a nice round shape and may leave the eye off colored.
- Very active and animated individuals are often highly fertile and vigorous.
- Birds that have thick, well-fleshed shanks for their breed tend to be more vigorous.
- Fertility into old age and longevity are indicators of vigor.



A wide back leaves more room for egg organs and intestines. When wishing to maintain egg production within a line, males should be appraised for width of back as shown in this photo.

The Law of Ten

Quality versus quantity. It is an old breeding axiom that improvements and high quality are found in small portions of a population. The law of ten states that in order to find one good representative, ten must be produced; to find one great individual, one hundred must be produced; to find one exceptional individual, one thousand must be produced. Retaining only the top ten percent each season will allow a breeder to make progress toward their desired goal.

As ALBC began work on the Buckeyes, culling was organized such that the best representatives from each mating were retained so that no mating was favored over all others, even ones that produced more superior individuals. This approach allowed progress in productivity to be made while still retaining much needed diversity in the breeding population. The law of ten was also applied by retaining as breeding stock only those individuals that made it to the top ten percent of those produced that year. Three years of breeding represented significant progress and overall increase in quality of the stock produced.

Some Other Breeding Points

- Monroe Babcock, creator of the Babcock B2000 commercial egg-layer, recommended using hens for breeding that lay before 10 am. He noted that such hens tend to lay more eggs, and are generally healthier and long lived.

- Eggs from the best layers tend to hatch as well or better than those from poor layers.
- Evidence indicates that breeding from only two-year old and older hens increases longevity and reduces mortality within a strain.
- Keep track of your most productive hens. Sons from these hens should be favored during selection and mated, when possible, to hens that lay near the top of your flock's ability in order to produce highly productive offspring.
- First- and second-year egg production should guide retention. Hens with high records from these two years should be used as long as productive.
- Malposition of chick or air cell accounts for chicks that do not make it out of the eggshell – this is highly heritable. Cull all chicks that are unable to hatch unassisted.
- Overly large eggs result in chicks that have faults such as extruded yolks and other incubator-related weaknesses and hatchability problems. Placing too much emphasis on large egg size can result in poor hatchability for your flock.
- Rough, coarse comb texture can be linked to reduced fertility.

Applying Selection

Though there is an annual cycle to breeding, there is also an entry point and a desired goal when improvements are needed. Below is a sample breeding plan for dual-purpose poultry, which can be adjusted to fit the particulars of any poultry breed.

Year One

- Hatch. If attempting to make progress, it is best to hatch in sufficient numbers to allow selection and retention of superior individuals rather than maintain the status of the strain. By understanding the law of ten, it is easy to see that a target of thirty offspring should be set to simply find one good trio – sixty to find two trios to retain as breeders.
- In the first year, selection should be harder on male offspring than females when starting from a small group. In the Buckeye work, the first year produced only five pullets – thus all five had to be retained as breeders for the following spring.

- Do not weed out different lines. Try to hatch enough offspring from each line so that diversity may be conserved while selecting the top ten percent for retention.
- Evaluate the young birds for rate of growth. For the Buckeyes we choose 16-week weights and evaluations as ideal because this age was a good choice for selecting potential breeders, and because the young birds would be at or near processing age. Superior birds should be banded for retention.
- Keep records of egg laying, fertility, and molting ability of the parent stock used. Mark individuals that excel in any of these qualities and retain for use again in year two.

Year Two

- Set up matings to avoid close inbreeding and to make good use of the genetic diversity available.
- In late February appraise the hens and mark those that have begun production and which indicate potential superiority as appraised for egg laying ability. These should be retained for continued use as breeders.
- Also in February, appraise the males for the potential to pass on good capacity for egg production in their daughters and make notes as season progresses on fertility.
- Adult weights should be taken in March or April, as at this time all cockerels and pullets retained from the previous season should be approaching adult weight. Compare weights with standard requirements for the breed.
- Hatch. Again, allowing for selection of the top ten percent. Ideally, produce 10-30 chicks per female used so that hens can be evaluated as well as males for the quality of their offspring.
- Evaluate young birds at 16 weeks of age. Mark superior individuals and compare to last year's appraisals.
- During the late summer, observe the molting of the adult birds. Make note of individuals that molt in late August or September and those that drop all their feathers at once. Preference should be given to these individuals.
- Throughout the year make note of egg laying, fertility, and molting ability of parent stock.
- Cull parent stock as necessary to retain quality for egg production, rate of growth, fertility, and diversity while fitting flock size to facilities.

- Appraise all retained breeders for proper type for breed – special emphasis should be placed that females have correct type.

Year Three

- Set up matings.
- Appraise cocks and hens in late February as before.
- Weigh adults.
- Plan hatching to facilitate desired number of offspring and good quantity from each hen.
- Evaluate young stock – same age as previously. Set minimum requirements for rate of growth that all young must achieve to be retained – this will likely equate to year one’s better rates of growth.
- Evaluate molting of parent stock as before.
- Cull adult males based on a combination of rate of growth, capacity for egg production, adult size compared to the standard for breed, fertility, and vigor. Color may be included at this stage if numbers allow.
- Appraise all retained breeders for proper type.

Year Four

- Continue as in year three, but minimum requirements should be increased.
- Eggs may be culled for size and shape before being placed in the incubator, though pullet eggs should be compared only to other pullet eggs and not hen eggs for size.
- Consistency of size, rate of growth, and color should be more apparent in young stock.

- Color and plumage quality will certainly be considerations for young males this year.
- Parent stock that continues to meet requirements should be retained in the breeder flock as long as viable.

Year Five

- Continue as in year four.
- Eggs may be culled for color before being placed into the incubator.
- Females may now be culled based on color and plumage as well as males.
- Minimum requirements may need adjustment.

Summary

Breeding is not simply a static, intellectual pursuit, but requires a certain level of creativity and flexibility. The choices made by the individual breeders not only help to mold a strain of poultry, but they can be a source of pride and satisfaction for the effort of managing the breeding stock. Breeders should feel empowered to tailor choice of selection criteria to fit their desired goals and needs.

However, there are some basic ideas that should be kept in mind as you progress. In the first year of selection there is much advantage to emphasizing rate of growth and body capacity. Males in particular must be viewed not only for their obvious positive qualities, but also for their potential to produce both excellent sons and daughters. To that end, appraising males as if the were hens in production of eggs greatly supports the maintenance of egg production within the strain. It is better



Healthy, robust chicks should be the goal of every breeder.



A nice pen of Buckeye chickens showing deep, productive bodies.

to keep your second best cockerel for breeding if he is close to the best male for rate of growth and fleshing, and if he has superior width in the back and a larger distance between keel and pelvic bones. Such a male will produce offspring that will grow well and lay well. It is also best to give small consideration to fine points, such as color, in the first few years. As progress in other areas is made, emphasis can be added first to male offspring and in later years to female offspring.

There are some cautions worth considering that help to make sound long-range decisions. Intelligent breeders must keep in mind their long-range goals and avoid shortcuts so that the final result is a strain that has the diversity to stand on its own while producing as expected. Much faster progress can be made by discarding matings that do not excel for the traits focused upon, but later the diversity these “lines” lend is well worth the effort to bring them up to the levels of the other lines of the strain.

Resources and Suggested Reading

American Standard of Perfection, the American Poultry Association, various editions.

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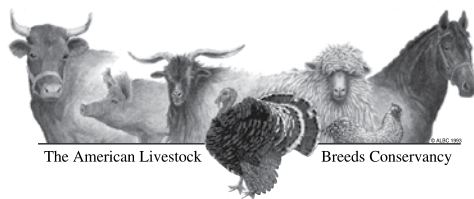
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**SUBURBAN
RANCHER**



Portable Poultry House

The author is Ralph E. Pfost, Area Farm Advisor, Parlier.

This portable poultry house is 5' x 10' when assembled and can be used to house 50 fryers, 20 laying hens or 15 turkey roasters. University of California Leaflet 2656, *Starting and Managing Small Poultry Units*; Leaflet 2919, *Feeding Chickens*; Leaflet 2954, *Common Poultry Diseases*; and Leaflet 2733, *Growing a Small Flock of Turkeys* can be of great help for small flock owners.

In high rainfall areas, the house can be set on a cement slab. One side of the house or roof can be raised several inches to promote water drainage off the roof. The area around the house should be properly drained. In burrowing rodent areas, it can be set on 1" welded wire covered by 2 to 6 inches of soil. Without added protection, this house is not designed for use in subfreezing weather. In hot climates, it is best to place the house in the shade of a large tree.

An electric infrared red bowl reflector light bulb (250-watt R40 with heat-resistant glass) mounted in a socket with a bulb guard can be hung about 18 inches above the litter by a metal chain from the center rafter instead of the center feeder during brooding.

By keeping baby chicks inside a cardboard ring with feed and water, up to 50 chicks can be brooded with one infrared lamp in weather down to freezing (see diagram, next page). Lesser numbers of pullets or turkeys can be brooded by the same method.

This house is assembled by bolting the six preassembled sections together when twelve 5/16" x 2-1/2" bolts and attaching three 1" x 4" rafters with nails or bolts. When the house is no longer needed or used, it can be unbolted, washed, disinfected, and stored or sold. Since each section is only 5' x 6', it can easily be transported in a pickup truck.

The three rafters act as wall braces, roofing supports, and hangers for pan feeders that will each hold up to 25 pounds of feed. The end wall can be used to support an automatic float-type waterer, and the floor should be covered with 6 inches of wood shavings or other absorbent materials.

The lumber and roofing materials shown here are only suggestions. Lumber of other widths and thicknesses can be substituted. Plywood, shiplap, or tongue-and-groove can be used for siding. The shade material can be made from burlap, plastics, or canvas. Light needs to go through it but not wind or rain.

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Division of Agricultural Sciences
UNIVERSITY OF CALIFORNIA

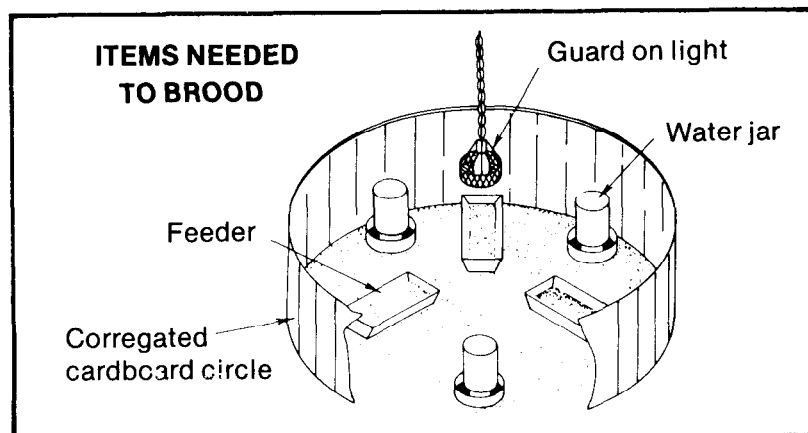
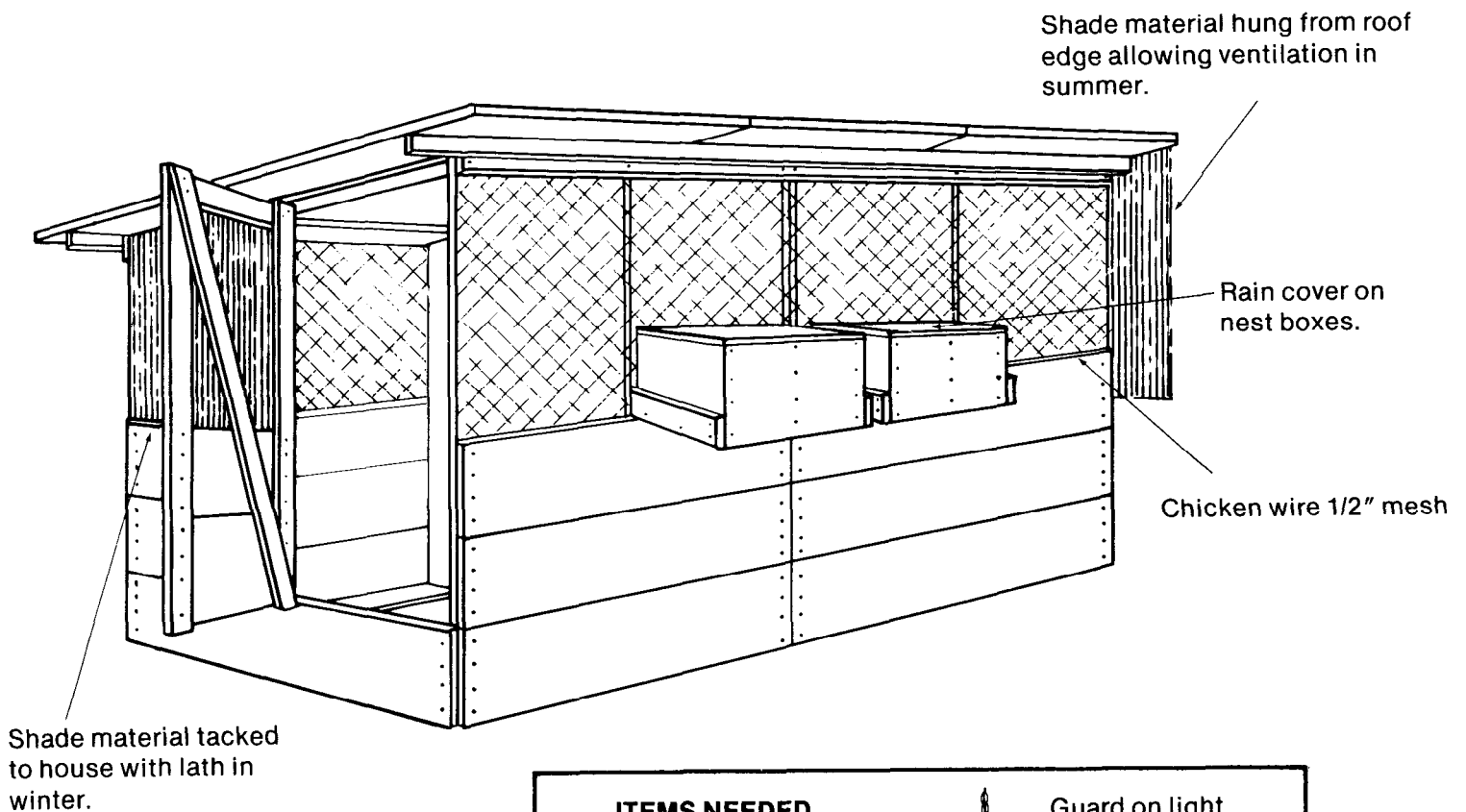
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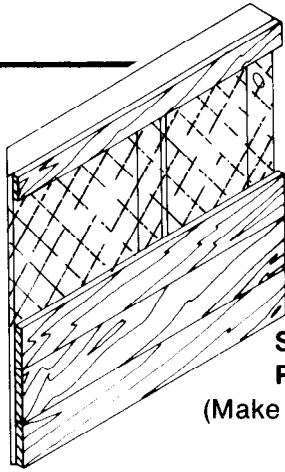
B

CONSTRUCTION PROCEDURE

1. Cut lumber and assemble 2 Panel A's, 2 Panel B's, 1 End Section with Door, and 1 End Section without Door. Assemble Side Sections by bolting 1 Panel A and 1 Panel B together.
2. Set sections in place and bolt together (see diagram, last page).
3. Assemble door and hang.
4. Bolt or nail 3 rafters between side sections. Nail lath to upper facing on either side so it overhangs 12" to support roof. Nail metal roofing in place and paint house if desired.
5. Assemble nest boxes. Cut away section of chicken wire and bolt boxes in place. Cover boxes to protect from rain.
6. Install feeders, waterer, lights, and brooder.
7. In cold weather, tack shade material with lath on top and bottom of each screened opening. In hot weather, suspend shade material from edge of roof for ventilation and shade.

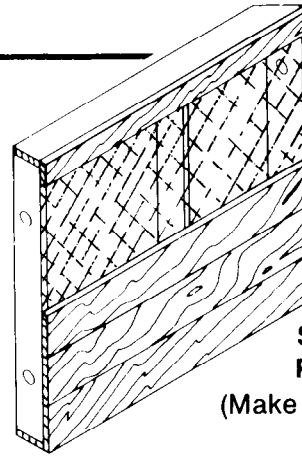
PORTABLE POULTRY HOUSE





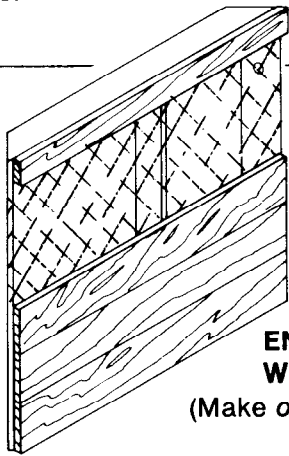
**SIDE SECTION—
PANEL A**
(Make two of these)

1. Take 2 plates 1" x 4" x 5' long and cut left end of each to an angle of 45°.
2. Take 3 studs 1" x 4" x 6' long. Center, mark, and drill 1/2" holes 2 and 4 feet from the bottom of each. Nail studs between plates, nailing left one at a 45° angle.
3. Nail 2 siding boards 1" x 12" x 5' long to bottom of panel, nailing lower board to bottom plate. Attach chicken wire to open part of panel. Then nail a third siding board 1" x 12" x 5' long above the first two. Nail a facing board 1" x 4" x 5' long to the top plate.



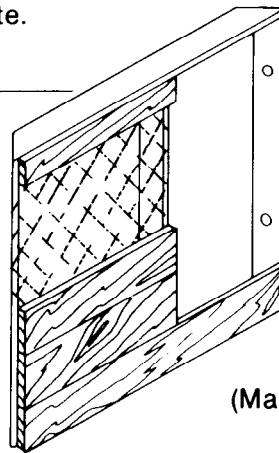
**SIDE SECTION—
PANEL B**
(Make two of these)

1. Take 2 plates 1" x 4" x 5' long and cut right end of each to an angle of 45°.
2. Take 3 studs 1" x 4" x 6' long. Center, mark, and drill 1/2" holes 2 and 4 feet from the bottom of each. Nail studs between plates, nailing right one at a 45° angle.
3. Nail 2 siding boards 1" x 12" x 5' long to bottom of panel, nailing lower board to bottom plate. Attach chicken wire to open part of panel. Then nail a third siding board 1" x 12" x 5' long above the first two. Nail a facing board 1" x 4" x 5' long to the top plate.



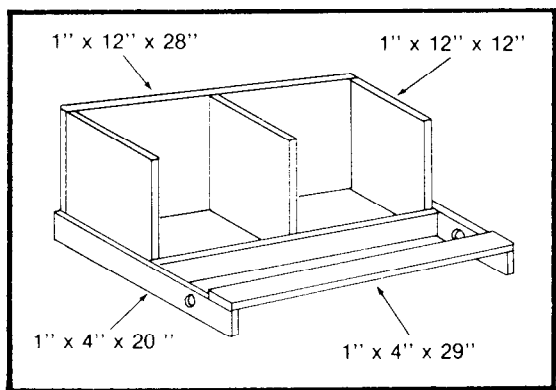
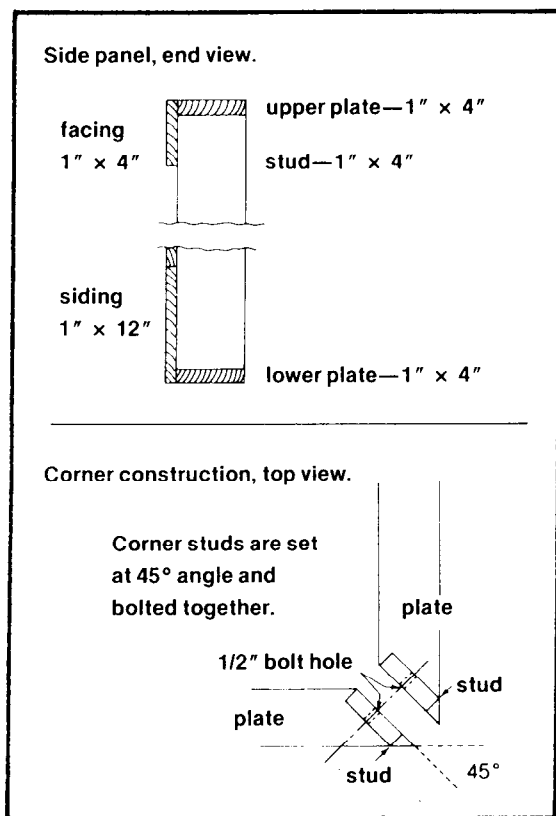
**END SECTION—
WITHOUT DOOR**
(Make one of these)

1. Take 2 plates 1" x 4" x 5' long and cut both ends of each to angles of 45°.
2. Take 3 studs 1" x 4" x 6' long. Center, mark, and drill 1/2" holes 2 and 4 feet from the bottom of each. Nail studs between plates, nailing both end studs at 45° angles.
3. Nail 2 siding boards 1" x 12" x 5' long to bottom of panel, nailing lower board to bottom plate. Attach chicken wire to open part of panel. Then nail a third siding board 1" x 12" x 5' long above the first two. Nail a facing board 1" x 4" x 5' long to the top plate.



**END SECTION—
WITH DOOR**
(Make one of these)

1. Take 2 plates 1" x 4" x 5' long and cut both ends of each to angles of 45°.
2. Take 3 studs 1" x 4" x 6' long. Center, mark, and drill 1/2" holes 2 and 4 feet from the bottom of each. Nail studs between plates, nailing both end studs at 45° angles.
3. Nail one siding board 1" x 12" x 5' long to the bottom plate. Above this board, nail one siding board 1" x 12" x 2 1/2' long between middle and left studs. Attach chicken wire to open part of panel above boards, leaving right section open for door. Then nail a second board 1" x 12" x 2 1/2' long above the first one. Nail a facing board 1" x 4" x 2 1/2' long to the top plate between middle and left studs.



DOUBLE NEST BOX

Construct 2 nest boxes like this and bolt between the studs of the poultry house. One nest is enough for 5 layers. When bolts are used, the nests can be taken out and put back as needed. Put a 3" layer of rice hulls in the bottom of the nests.

MATERIALS NEEDED

Lumber	Pieces	Dimensions
Siding	16	1" x 12" x 5'
Siding	4	1" x 12" x 2-1/2'
Plates, facing, door, rafters	23	1" x 4" x 5'
Facing, door	2	1" x 4" x 2-1/2'
Studs	18	1" x 4" x 6'
Shade support	30	Lath—4' lengths
Metal roofing	3	48" x 7' x 19 ga.
Chicken wire		36" x 30' x 1/2" mesh
Shade material		36" x 30'
Lighting equipment		Permanence of installation will vary with planned use of house
Hardware	12	Bolts 5/16" x 2-1/2", nuts, washers
		2-1/2 lbs. 6d Nails
		1/2 lb. Roofing nails
	2	Hinges with screws
	1	Gate latch
	1	Waterer
	3	Feeders
	1	Brooder
		30' Wire to hang feeders and waterers
Nest boxes	6	1" x 12" x 12"
	4	1" x 12" x 28"
	4	1" x 4" x 20"
	3	1" x 4" x 29"

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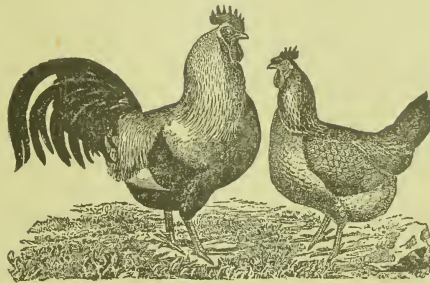
State	Silver Grey	Red	Coloured	White	Cuckoo	Crele	Other
N.S.W.							
Qld							
Victoria							
Tasmania							
S.A.							
N.T							
W.A							
Bantam							
N.S.W.							
Qld							
Victoria							
Tasmania	0	0	0	0	0	0	0
S.A.	0	0	0	0	0	0	0
N.T	0	0	0	0	0	0	0
W.A	0	0	0	0	0	0	0

If you would like to help us with our survey please send numbers and colours to Victor Hazlett and these numbers will be added to the survey data and published . No specific details of numbers of birds etc of members will be given out, to help to protect from theft of our precious Dorkings.

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Price, 25 Cents.

THE BOOK OF THE DORKING.



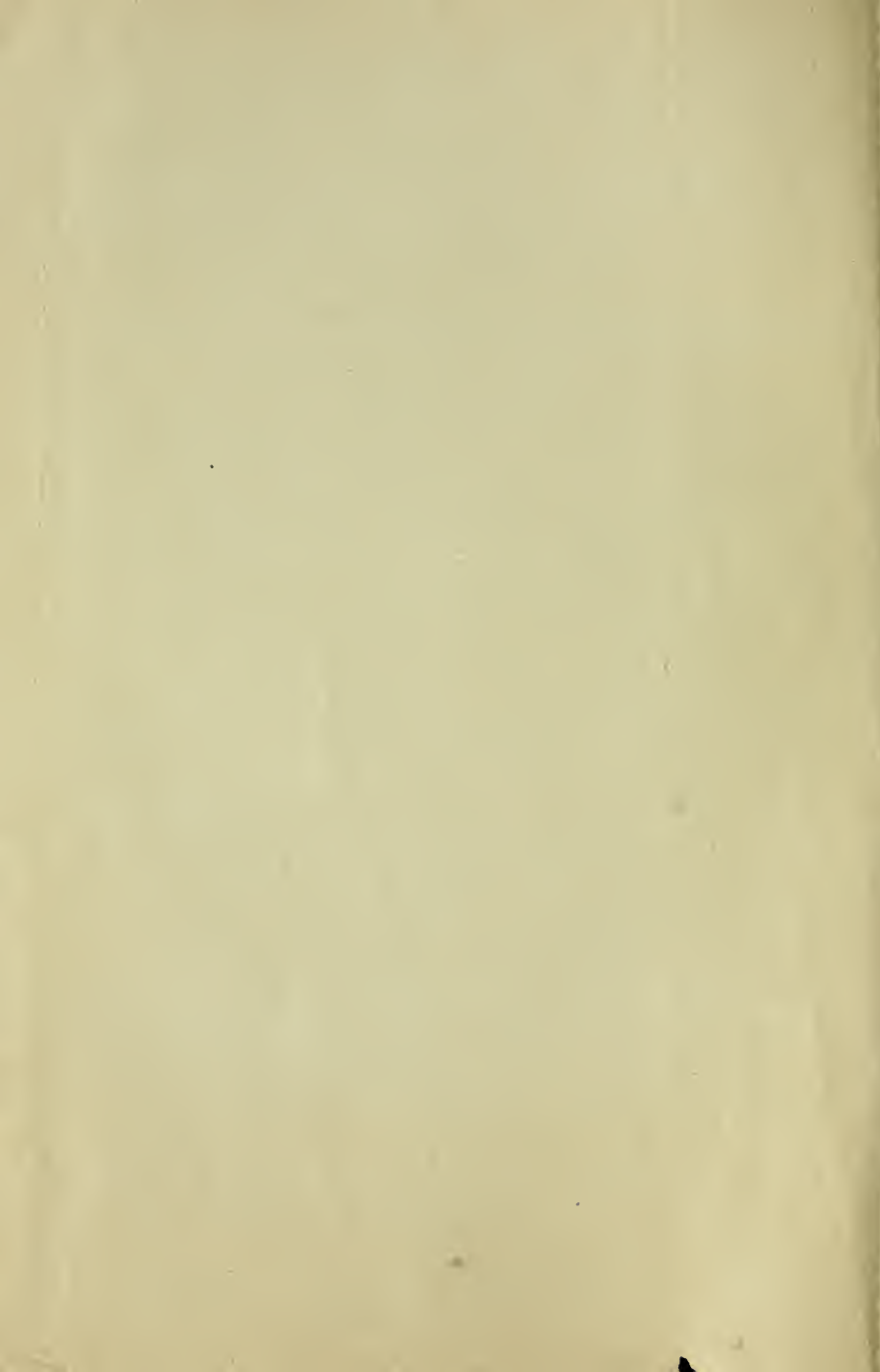
A BRIEF MONOGRAPH
UPON THE
Origin, Varieties, Breeding and Management
OF THE
DORKING FOWL.

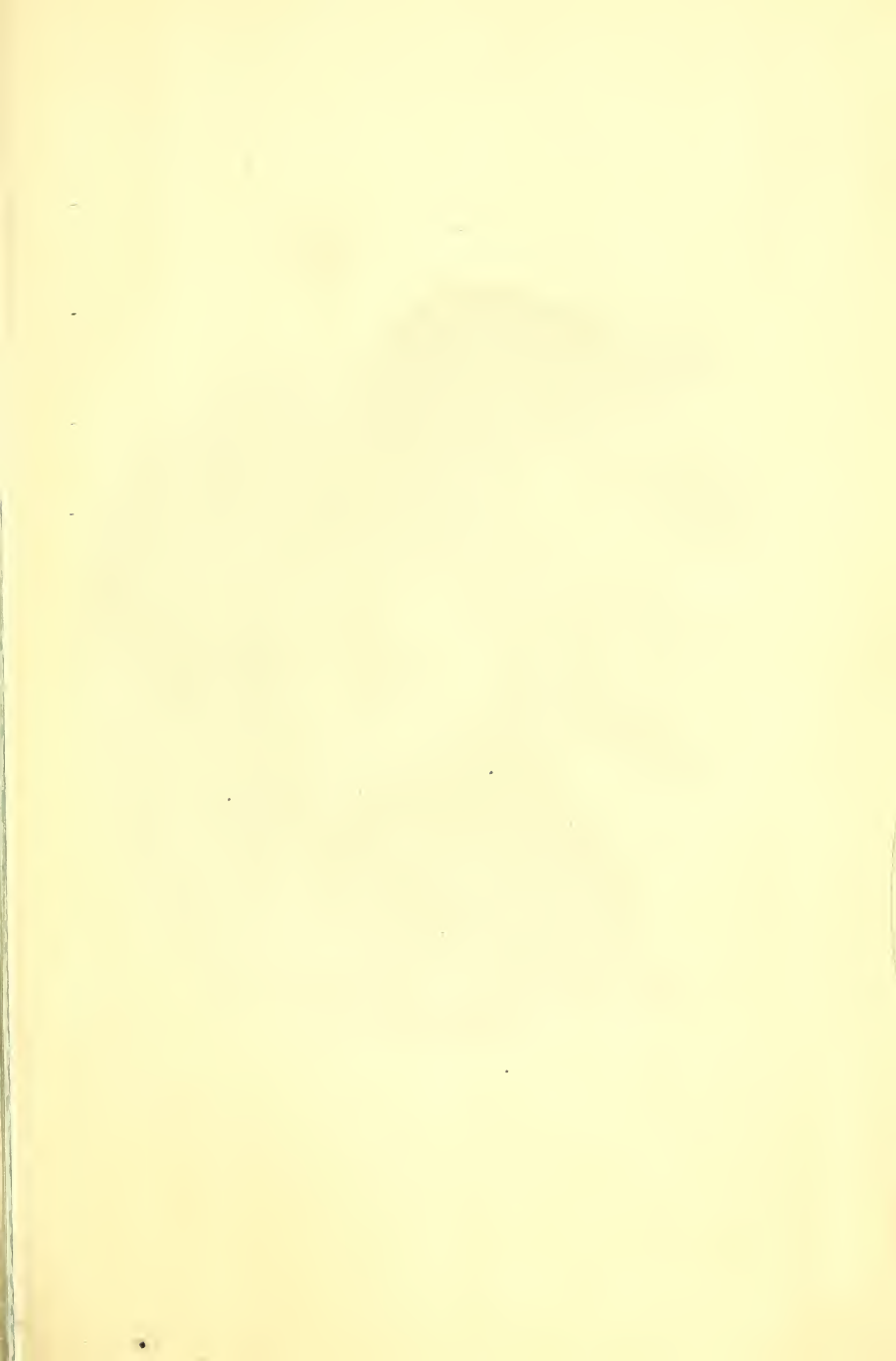
By H. H. STODDARD,

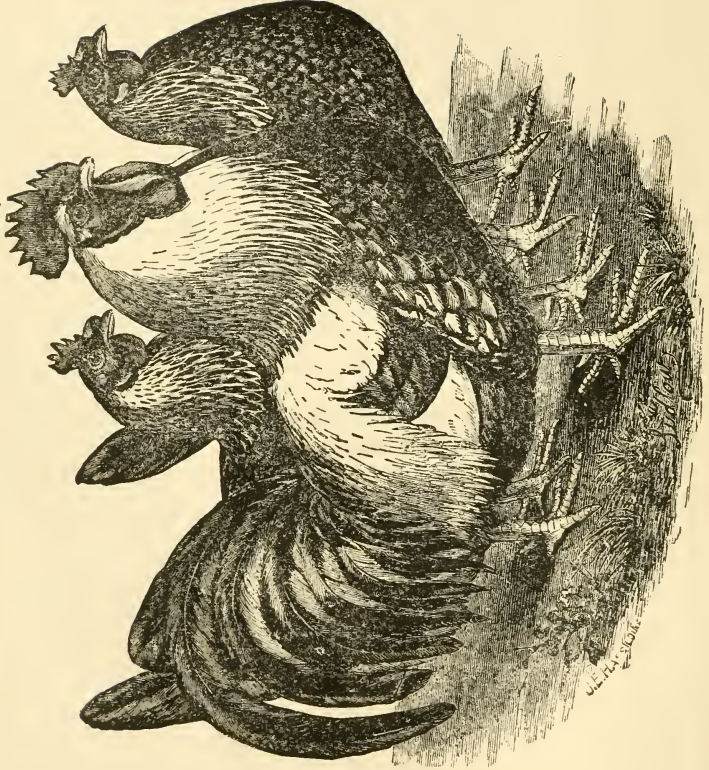
EDITOR OF "THE POULTRY WORLD," "THE AMERICAN POULTRY YARD," AND "THE CO-OPERATIVE POULTRY POST." AUTHOR OF "AN EGG FARM," "POULTRY DISEASES,"
"POULTRY ARCHITECTURE," "LIGHT BRAHMAS," "WHITE LEGHORNS,"
"BROWN LEGHORNS," "PLYMOUTH ROCKS," "WYANDOTTES,"
"THE BOOK OF THE GAMES," "THE BOOK OF THE BANTAMS," "DOMESTIC WATER FOWL,"
"HOW TO FEED FOWLS," "HOW TO WIN POULTRY PRIZES," "HOW TO PRESERVE EGGS,"
"INCUBATION; NATURAL AND ARTIFICIAL," "HOW TO RAISE PIGEONS," ETC.
PUBLISHER OF "HOW TO RAISE POULTRY ON A LARGE SCALE,"
"A POULTRY COMPENDIUM," ETC.

HARTFORD, CONN.

1886.







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THE BOOK OF THE DORKING,

A BRIEF MONOGRAPH

UPON THE

Origin, Varieties, Breeding and Management

OF THE

DORKING FOWL.

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THE LAW OF THE TOWN

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THE BOOK OF THE DORKING.

HISTORICAL.

IN a picturesque valley twenty-nine miles south of London by rail lies the market town of Dorking. It has a population of about five thousand. The town is situated on a small brook, a tributary of the Mole, in a sheltered vale near the base of Box Hill. It is well built and clean. Among its noted buildings are the Parish church of St. Martin's, a handsome edifice, and St. Paul's district church, a building of some pretensions. Several elegant mansions have been erected in the vicinity of the town, notably that of Deepdeen, containing a gallery of sculpture collected by the late Thomas Hope, the author of Anastasius; near by is also the Rookery where Malthus, celebrated for his essay on population, was born. Lime of exceptionally good quality is burnt to a large extent in the neighborhood, and forms an important article of trade; it is derived from the Lower Chalk formation. The old Roman road from the Sussex coast to the Thames passed close to the town. Dorking is celebrated throughout England for its romantic scenery, and has long been famous for a finely flavored breed of fowls, distinguished by their having five claws upon each

foot. These fowls are in great demand in the London markets, and are regarded as the best table fowls produced in the country. They are known by the name of Dorkings, derived from the town which has so long bred them in a high degree of perfection.

The English people are very conservative. The family tree is regarded as the most important of all trees. They really believe that it grew in the Garden of Eden. A long lineage is something to boast of. It is told of a certain noble family that in the portrait gallery there is a picture representing one of their ancestors entering the ark and bearing in his hand a roll containing the family pedigree for centuries previous to the flood. The truth of this story we do not vouch for, but it fittingly represents the feeling of the people. They are fully in harmony with the sentiment, "Old wood to burn! Old wine to drink! Old friends to trust! Old authors to read!" Like Goldsmith, each one says: "I love everything that's old. Old friends, old times, old manners, old books, old wine," and we may add, old varieties of fowls. Unlike the American people, who resemble the ancient Athenians in their rage for something new, age gives, as it ought to, an added value to everything in the eyes of the English. Age does add worth, for it insures stability, and when excellence can boast of age, it becomes even more excellent. It means in poultry that the characteristics have become so fixed as to be uniformly transmitted that we can expect the chick to be like its parents, for its parents are like a long line of ancestors, every one of which possessed the same characteristics. Nothing so tries the patience of the poultry

breeder as to find that a fine looking pen of fowls produces a lot of chicks uneven in quality and uncertain in characteristics, resembling neither themselves nor their progenitors. And this is the result to be expected from new breeds.

The Dorking is the most popular fowl in England. It boasts of a long lineage. It traces its origin to a time when England was not a nation, when the inhabitants of that now most highly civilized country were painted savages. It antedates royalty. Before William the Conqueror, the Dorking was; before the battle of Hastings, the Dorking had conquered popularity. It takes us back to the ancient city of Rome, "which sat upon her seven hills and ruled the world;" it brings us to the fountain of jurisprudence, to the foundations of order and society. In comparison, other breeds are puny upstarts without a pedigree, the *nouveau riche*, the plebeian nobility, made and unmade by a royal word. It is the most patrician of the patricians, the noblest of the nobles, the most regal of the royal families.

It is supposed that the Dorkings were introduced into Britain by the Romans. Along with the conquering cohorts of Cæsar, marched the equally victorious Dorking. The walls that were built, the fortifications that were erected and the roads that were made still bear witness to the Roman invasion; and no less so does this celebrated breed of fowls. In very early Latin writings we find a description of fowls, both white and colored, that accurately represents this breed. Columella has thus clearly described the modern Colored Dorking: "Let them be of reddish or dark plumage, with black wings.

* * * * * Let the breeding hens be of robust body, square built, full breasted, large heads, with upright and bright red combs. * * * * * Those are believed to be the best bred with five toes."

There has always been a dispute as to which was the more ancient variety of Dorkings, the White or the Colored. As both varieties are known to have existed, if we may rely upon the ancient writers who have given a description of a fowl which fits the Dorking, at so early a date as to leave their origin in the mythical period which precedes the dawn of history, no satisfactory settlement of this dispute is likely to be arrived at. The difficulty remains an insoluble one. The advocates of the claims of the White to priority urge that the Colored Dorking was produced by a cross of the White variety upon the ancient Sussex fowl, and instance the fact that some strains of Colored Dorkings were very uncertain in the production of the fifth toe; the advocates of the Colored Dorking, on the other hand, claim that, as the Colored surpasses the White variety in size, the White is, therefore, but a degenerate descendant of the older variety. Mr. Martin Doyle, the author of "The Illustrated Book of Domestic Poultry," makes the following ingenious suggestion: "If we may venture to offer a conjecture on this abstract point of physiology, we should say that as in vegetable propagation, white flowers are often found to break or degenerate into colors, although colored flowers do not become pure white,—so, by analogy, the white bird would degenerate into a colored one though the converse would be unnatural." This explanation we cannot, however, accept. Analogies are always

dangerous things to rely upon, especially when, as in this case, they are drawn from different kingdoms of the created world. We know that white birds are constantly appearing as "sports" among colored ones, but never knew of the converse. White crows, white blackbirds, white sparrows, white Spanish, white Langshans, white Javas, white Plymouth Rocks, white Wyandottes, have frequently appeared, but who can cite a well authenticated case where a colored domesticated bird appeared among white ones, when it could not be shown to have come from a cross or was the result of reversion? White feathers are easy to get and hard to get rid of. If the Colored Dorking sprang from the White variety, as some eminent authorities believe, it resulted from a cross and not otherwise; but the White Dorking might have appeared as a "sport." We are willing to allow this question to remain unsettled, claiming no superiority of antiquity for either White or Colored Dorkings.

VARIETIES.

In this country three varieties of Dorkings are recognized by the *Standard*, the White, the Silver Gray, and the Colored. In size the White is the smallest of the three, the Colored the largest, and the Silver Gray intermediate between the two. The White is bred with a rose comb only, the other two varieties with either rose or single combs, although the greater number of Colored and Silver Gray Dorkings, both in this country and in England, their native home, are bred with single combs.

All three varieties, with the above exceptions and with the added one of color and marking, possess the

same characteristics. They all have white or flesh colored legs, five toes upon each foot, white skins, long bodies, full breasts, heavy thighs, small bones and are wonderfully compact and meaty in their make-up. As an old writer describes them, "These fowles have very short legges, and are small boned throughout, and the offal is very light, consequently the proportion of flesh is very large."

Mr. Baily, an eminent London poultry judge, says that "There is no breed to be compared with the Dorking, which unites in itself, more than any other, all the properties requisite for supplying the table; that the hens are good sitters and good mothers, and that there is a natural tendency in the breed to fatten, so that the young ones are made to attain to eight or nine pounds' weight, and at table they surpass all others in symmetry of shape, and whiteness, and delicacy of flesh."

The Rev. E. S. Dixon writes: "For those who wish to stock their poultry-yard with fowls of the most desirable shape and size, clothed in rich and variegated plumage, and not expecting perfection, the speckled (*i. e.*, *Colored*) Dorkings are the breed to be at once selected. The hens, in addition to their gay colors, have a large vertically flat comb, which, when they are in high health, adds very much to their brilliant appearance, particularly if seen in bright sunshine. The cocks are magnificent; the most gorgeous hues are frequently lavished upon them, which their great size and peculiarly square-built form display to the greatest advantage. The breeder, and the farmer's wife, behold with delight their broad breast, the small proportion of offal, and the large quantity of



From the
Illustration

WHITE DORKING FOWLS.

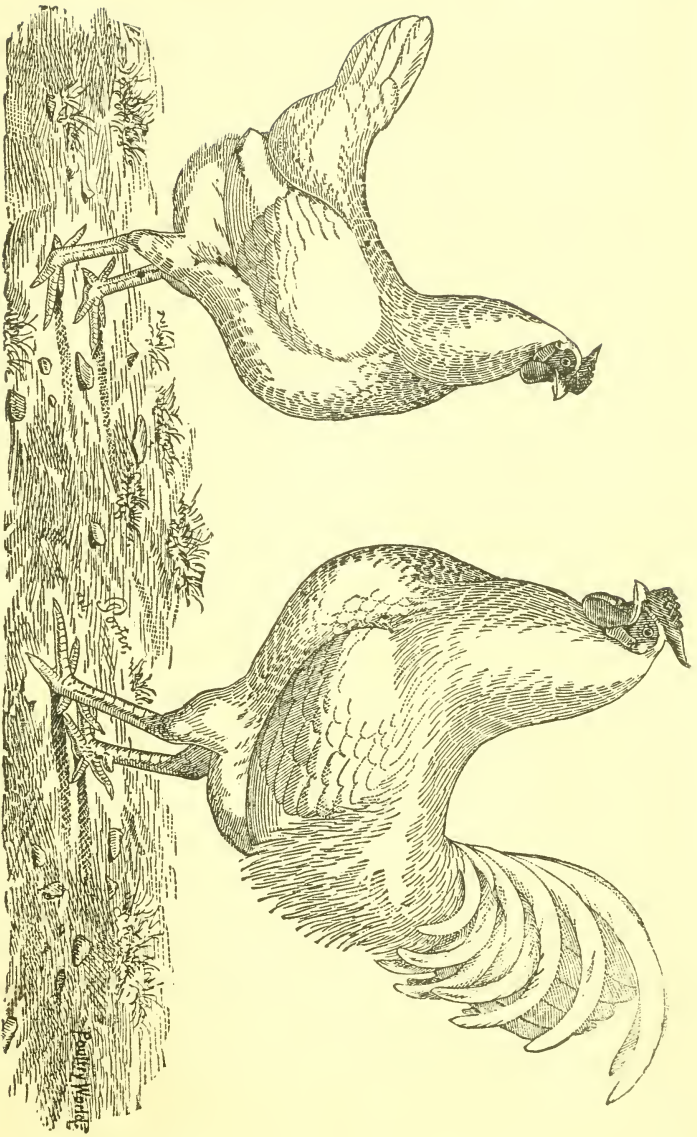
profitable flesh. The cockerels may be brought to considerable weights, and the flavour and appearance of the meat are inferior to none. The eggs are produced in reasonable abundance, and though not equal in size to those of Spanish hens, may fairly be called large. They are not everlasting layers, but at due and convenient intervals manifest the desire of sitting. In this respect they are steady, and good mothers when the little ones appear."

Another writer says of them, that "of all domestic fowls with which he was acquainted, the Dorkings must carry off the palm for their good size and lofty carriage, for the beauty and variety of their plumage, and, lastly, for their exceptional table qualities."

Mr. L. Wright, an eminent poultry author, thus describes the Dorking: "The body should be deep and full, the breast being protuberant and plump, especially in the cock, whose breast, as viewed sideways, ought to form a right angle with the lower part of his body. Both back and breast must be broad, the latter showing no approach to hollowness, and the entire general make full and plump, but neat and compact. Hence a good bird should weigh more than it appears to do."

These descriptions ought to bring before the reader's imagination a fowl in which solidity is a pre-eminent quality, whose peculiar figure fits it for the table. No better shape could be devised for this purpose, as it provides for little waste in comparison with the amount of flesh.

May we not, in view of the mania of our people for new varieties, echo the sentiment of the editor of the



WHITE DORKING CHICKS.

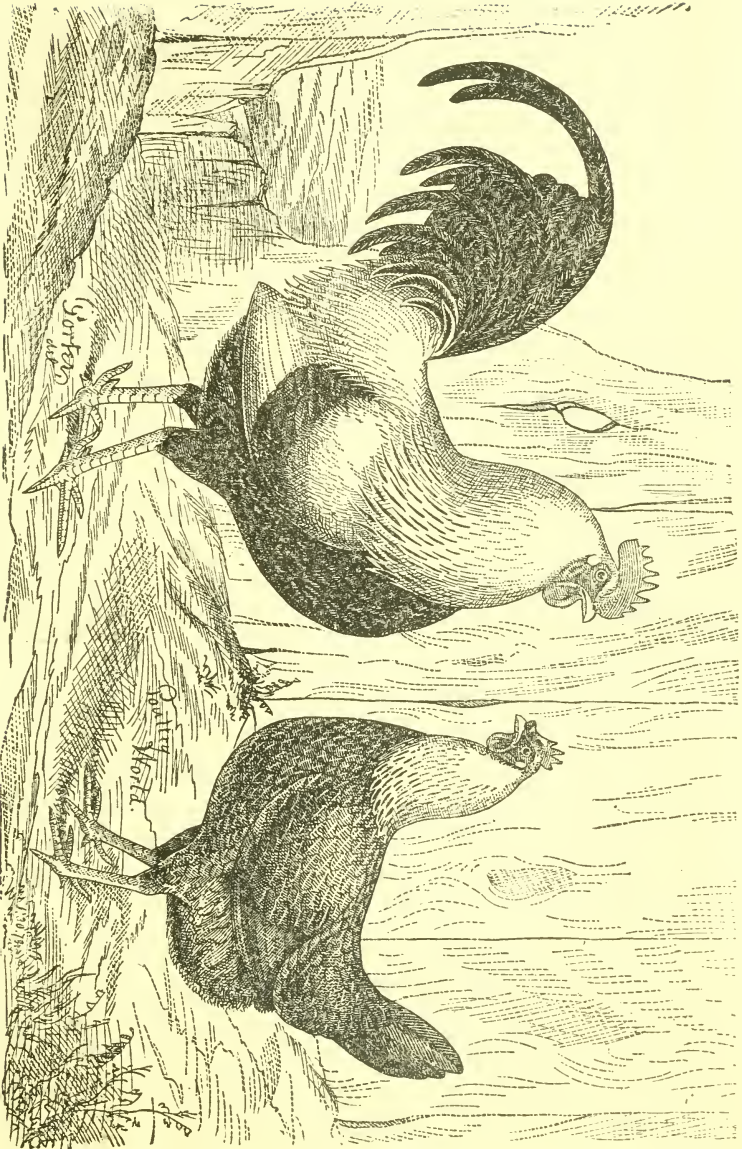
Poultry World

Agricultural Gazette, who said of Mr. Baily, that "he should be encouraged in his endeavor to bring us back to Dorkings and common sense?"

THE WHITE DORKING.

The White Dorking, by some regarded as the oldest of all varieties of Dorkings, has the general characteristics of all the varieties. In plumage it is pure white, although there is more or less tendency in cocks to become somewhat yellow upon the back, hackle and saddle. This is a characteristic of all white fowls. It is bred only with a rose comb, which should be square in front, fit firmly and evenly upon the head, be comparatively flat upon the top and evenly covered with small points, and terminate in a large spike or projection behind, which should curve slightly upwards. The carriage should be elegant and stately. An old writer upon the subject of Dorkings, as quoted by Mr. George T. Goodwin, an enthusiastic and eminent breeder of Dorkings, says: "This variety seldom attains the large size of the darker shades, but this does not prove any inferiority. For general use we do not advise this variety, unless the location should be on a dry and sandy soil, as success in breeding would require constant attention to prevent any discoloration of feather. This disadvantage is no greater than in other pure white varieties, and the fowls have also the great advantage of the small bones and tender flesh so peculiar to this breed, in all its varieties."

Upon a lawn a white fowl shows off to great advantage, and the goodly size, even though less than that of the other varieties, the plump, compact figure, the bright



SILVER GRAY DORKINGS.

red comb and wattles contrasting with the pure white plumage, make the White Dorking a fine appearing fowl where it can have a good grass run.

THE SILVER GRAY DORKING.

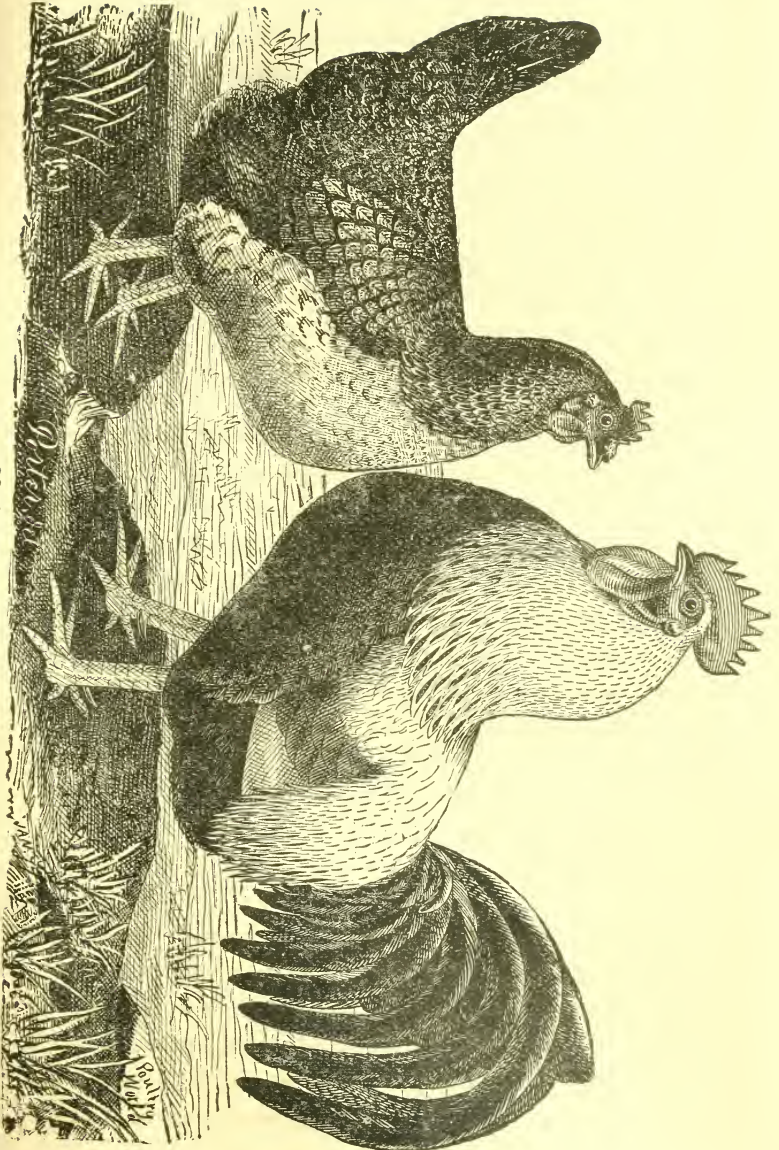
The Silver Gray Dorking originated without doubt from the Colored variety. In a brood of Colored Dorking chicks there frequently appears one or more that are much lighter in color than the others. The selection of these lighter chicks as breeding stock in time produced this variety.

Although descended from the Colored variety they are hardly as large as that variety, but larger than the White.

The Silver Gray cock has the head, neck, and back clad in a plumage of silvery whiteness. The wing-bows are also silvery white. The breast is a rich, glossy black; the wing-coverts are a metallic black with a greenish lustre, and form a wide bar across the wing; the tail is large and full, and of a rich black color, the sickle-feathers having a green lustre; the tail-coverts are of a glossy black, the lesser coverts having an edging of white. The under parts of the body and the thighs are also black.

The Silver Gray hen has a silvery white neck, silvery or slaty gray back, salmon-red breast shading off to gray towards the sides, silvery or slaty gray body, dark gray tail, and ashy gray thighs.

Both cock and hen are clad in a handsome plumage, and the appearance of the cock is especially striking.



COLORED DORKINGS.

THE COLORED DORKING.

The Colored Dorking cock closely resembles the Silver Gray in plumage, and the one is easily mistaken for the other by the casual observer. The hackle of the Colored cock displays a broad black stripe down the center of each feather; the breast is sometimes splashed with white, although a solid black breast is preferred; the wing-bows are white or sometimes mixed with black; the back is black and white; but in all other respects the plumage of the Colored Dorking cock is like that of the Silver Gray.

The Colored hen has a black or nearly black head, the feathers of the neck black edged with gray, the back dark gray marked with black, the breast dark salmon marked with black, body dark brown, tail dark brown or gray on the outside, black on the inside, and the thighs dark gray or brown. She is darker throughout in her plumage than her Silver Gray sister.

The *Standard* fixes no weights for the White and Silver Gray varieties, but for the Colored it gives the following :

Cock, 9½ lbs.

Hen, 7½ lbs.

Cockerel, 8 lbs.

Pullet, 6 lbs.

These weights are rather high, although occasional specimens are found to exceed them. A cock which weighs 8 lbs. and a hen which weighs 6 lbs. may be regarded as good birds. Cocks have been known to reach 12 lbs. in weight and hens 9 lbs., but such instances are rare, and the great weight was due to excessive fatness.

THE DORKING AS AN EGG PRODUCER.

The Dorking lays a good-sized, white egg with a slight creamy tint, not pronounced enough to be called a colored egg. The eggs are of a good flavor and excellent for culinary purposes. But they are not produced in so great abundance as one could wish. The fowl's chief claim is for its admirable table qualities. It has been bred for this purpose for centuries, and it would be nothing surprising if prolificacy should have been overlooked. And yet among Dorkings some hens will be found that are prolific layers. There is a record of a Dorking hen which laid one hundred and eighteen eggs in one hundred and twenty-one days, a record not easily broken even by the Leghorns or Hamburgs.

Mr. Martin Doyle, in his "Illustrated Book of Domestic Poultry," furnishes a series of interesting tables showing the comparative merit of four breeds of fowls as producers of eggs. From this series we make the following table.

HATCHED April 10th, 1851.	When began to lay, 1851.	Number of eggs laid to April 10th, 1852.	Number of eggs laid from April 10th, 1852, to April 10th, 1853.	Total number of eggs laid during two years from date of hatching.	Total weight of eggs.
4 Shanghais,	Oct. 19,	709	1059	1768	oz. 3569
4 Spanish,	Dec. 7,	452	928	1380	3456
4 Dorkings,	Dec. 1,	471	969	1440	3004
4 Polish,	Nov. 26,	512	885	1397	2961

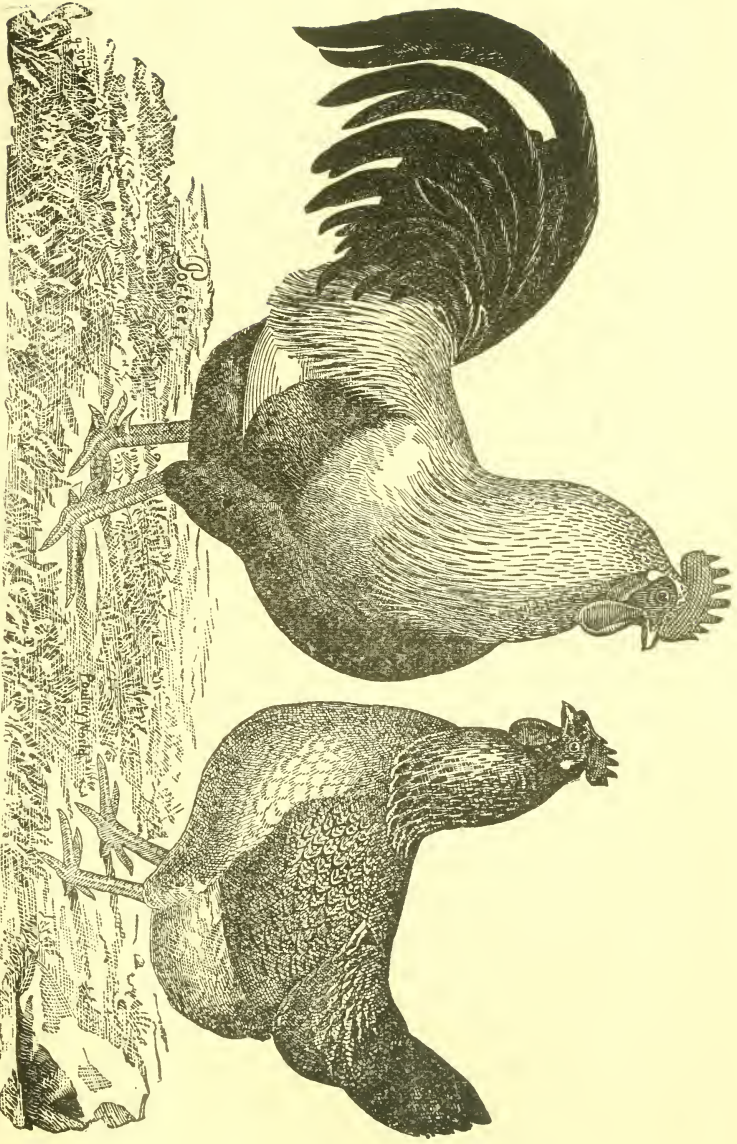
An examination of this table shows that from the date of hatching until the fowls were two years old four Dorking hens laid 1,440 eggs or an average of 360 eggs each, which would be 180 eggs per year, but if we reckon the laying from the time when they began to lay, viz., December 1st, we shall have as the actual laying time but one year, four months and ten days, or at the rate of over 249 eggs each per year, a rate which even the best strains of Leghorns seldom equal.

In our own experience we have found Colored Dorking hens that were exceptionally good layers, but as a rule Dorkings are not the best of layers. By selecting from these extra layers eggs for hatching and continuing to follow this practice for a number of years, a strain of Dorking hens possessing extraordinary prolificacy might be established. There is good material to build on, and we can see no reason why success might not crown the wisely directed efforts of any breeder who has persistency as one of his endowments.

AS A TABLE FOWL

the Dorking acknowledges no superior. The flesh is disposed just where it is most wanted; it is juicy, tender, and of delicious flavor. As Mr. Goodwin says: "No man knows better than an English Squire that when he has a bird of this breed properly cooked and served on his board, he has the best that the kingdom affords." Mr. L. Wright, than whom there is no better authority, says: "The great merit of Dorkings has already been hinted at, and consists in their unrivalled excellence as table fowls. In this respect we never expect to see them

COLORED DORKINGS BREED BY V. A. BLAKESLEE, WINSTED, CONN.



surpassed. The meat is not only abundant and of good quality, surpassing any other English breed except Game, but is produced in the greatest quantity in the choicest parts—breast, merry-thought and wings. Add to this, that no breed is so easily got into good condition for the table, and enough has been said to justify the popularity of this beautiful English fowl.”

We might multiply quotations to the same effect for many pages, but enough already has been said to point out the simple fact that for the table the Dorking stands without a rival.

CAPONS.

Caponizing a fowl is the same thing as castrating a calf. We shall not attempt a description of the process, as no one would undertake it without procuring a suitable set of instruments, and with each set of instruments complete printed instructions are sent. The operation is not a difficult one to perform, and a little practice would enable one to become quite skillful in it. It is surprising that more capons are not made, for there can be no more profitable way of disposing of the extra cockerels that are annually reared and not wanted for breeding purposes. No variety of fowl is better suited for this purpose than the Dorking, especially the Colored Dorking. Delicious capons of great size could be reared that in the city markets would command a very high price. We think the time is not far distant when this branch of the poultry industry will be better understood, and when capons will be more abundant than they now are. As our population more and more centers in the cities, the

demand for "a good fat capon" will be increased; and as the merits of the Colored Dorking for this purpose become better known the demand for them will become still greater.

CROSSING.

We do not believe in keeping cross-bred fowls, and yet it cannot be denied that great advantages arise to the market poulterer from crossing. By the purchase of a single cock the value of his year's produce may be greatly increased. For market purposes a Dorking cock can be confidently recommended. The farmer may keep for instance a flock of Leghorn hens to supply him with an abundance of eggs. With these he can allow a Dorking cock to run, and while the supply of eggs is not diminished the value of his chicks, for market, both on account of the greater size and the improved quality, is very appreciably increased. The Dorking crossed with any of the large breeds, the Brahas and Cochins, produces an admirable table-fowl, the Dorking blood improving greatly the quality of the flesh, and rendering the fowl more easily fattened for the table. The rearing of market poultry has not received that attention in this country which its importance demands, and which it is destined to receive in the near future. When that time comes, as come it must, we shall find many cross-bred fowls which owe their excellence as table-fowls to the blood of the Dorking.

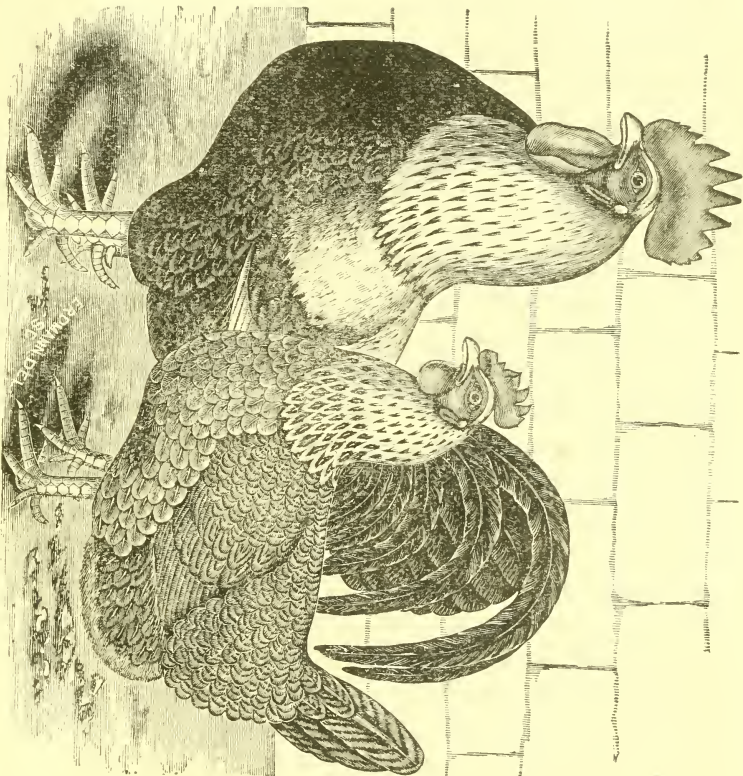
THE DORKING AS AN INCUBATOR AND BROODER.

There is no better sitter than a quiet Dorking hen. Objection has been made to the fifth toe as more liable

to break the eggs or tread upon the chickens, but experience proves this objection utterly unfounded. In a season when other hens brought off broods of five and six chickens, we have hatched under a Colored Dorking hen every egg. As mothers they are exemplary. They run with their chickens longer than many varieties, and take excellent care of them. As incubators and brooders we can recommend them as "equalled by few and surpassed by none."

TAMENESS.

We have found the Dorking a fowl that can be easily rendered tame. This is a quality frequently overlooked in making the choice of a breed, but one which counts for much in the satisfaction to be derived from keeping fowls. Some varieties are naturally shy, and although subjected to the kindest treatment, the sudden appearance of the owner will set them wildly flying in every direction. But Dorkings are unlike this. They welcome the presence of their attendant and crowd around him whenever he appears. They are frequently very amusing in their ways. We had a Colored Dorking hen that would come running up to us, and would pick at the buttons on our shoes until we took her up and petted her, and then she would seem contented, as if she had gained the attention that she felt she deserved. One soon becomes very much attached to a flock of tame fowls, and would not willingly part with them. And there is something more than sentiment in this quality. It is a very great convenience. It is often necessary to examine a fowl closely, and it is very try-



COLORFUL DORKINGS

ing to the patience and temper to be obliged to spend a quarter of an hour in the pursuit of a bird, and then perhaps not succeed in catching it. When one has tried this he quickly wishes that he owned a flock with a different disposition, and he is quite likely to feel the necessity of making a change in the breed kept. We have never known any one, for this reason, to wish to change his Dorkings for any other variety.

MATING.

In mating White Dorkings, it is necessary to select birds having a pure white plumage, with no colored feathers, a good comb, not too large, and setting squarely upon the head, and birds of the largest size obtainable. The smaller size of this variety has been one of the greatest obstacles to its achieving the popularity that it really deserves. We believe that the size might be improved by mating with a White cock some of the lightest colored hens of the Silver Gray variety. From such a mating some pure white chicks would be obtained, and a cockerel from these could be bred back to White hens. A few colored feathers might appear in the second generation, but by selecting only pure white specimens of this generation to breed from, and mating them again with White birds, in the third generation colored feathers would probably not appear, and the breeder would be amply repaid in the increased size of the fowls.

In Silver Grays it is essential not only that the cock and hens should be of the standard colors and markings, but should be bred from Silver Grays themselves. In a flock of Colored Dorkings, Silver Gray chicks oc-

asionally appear, but they cannot be relied upon for the breeding of Silver Grays. Many of the chicks from such a pen, from the operation of the law of reversion, will throw back to their grandparents, and will resemble the Colored Dorking in color and marking. The cock should have a pure silvery white hackle, free from any black stripe, saddle, wing-bows and back of the same character, and a solid black breast. The hens should be of large size, and of standard color. In all matings of Dorkings the size of the hens is an important matter. Upon the hen, more than upon the cock, depends the size of the chicks.

In mating Colored Dorkings the black stripe in the hackle and saddle-feathers is to be insisted upon, and a plentiful admixture of black upon the back and wing-bows is essential. If the hackle has the broad black stripe, the back and the wing-bows will be of the desired character. We prefer that the cock should have a solid black breast, other things being equal, but a good bird otherwise is not to be rejected because the breast is slightly mottled. The hens should be well broken in feather, the black markings being clearly discernible, and they should be of good size, and of standard color.

In mating both Silver Grays and Colored Dorkings, the cocks and hens should have the same kind of comb, rose combs being mated to rose combs, and single combs with single combs.

In all varieties of Dorkings the peculiar shape of the body, a well defined parallelogram, the characteristic fifth toe, and the white or flesh-colored leg, are matters not to be overlooked.

Such matings will produce chicks that will show a good percentage of birds, when matured, that are fit for the exhibition room or the breeding pen.

NUMBER OF HENS TO COCK.

The number of hens to cock will vary somewhat according to the activity of the cock. An active cockerel, about one year old, will answer for about ten hens. An old cock ought not to be allowed more than five or six. We prefer a cockerel mated to hens two or three years old, allowing him eight or ten. If pullets are used, we should prefer to mate them with a good two year old cock. Avoid, so far as possible, mating young birds together, *i. e.* pullets with a cockerel. The very best mating is of a cockerel about one year old with large two or three year old hens. The chicks from an old hen's eggs are larger and stronger when first hatched, and this advantage they maintain at all stages of growth. Chicks from the eggs of pullets never overtake those from the eggs of hens, and the losses in rearing are much larger. This is a matter the importance of which is to a great extent overlooked, but the breeder cannot afford to neglect it. Each year the most promising pullets should be saved and kept among the laying stock, and the next year from them the breeding stock should be selected.

INBREEDING.

Avoid inbreeding. No fowls deteriorate more rapidly when inbred than the Dorkings. Fresh blood is indispensable, if size and hardiness is to be kept up. The breeder of Dorkings should either keep enough pens of

breeding stock to insure the introduction of fresh blood annually, or should each year purchase a good male bird from the yards of some responsible breeder. It will pay him to do so. He will get more and better chicks by so doing. If we were to condense the subject of the successful breeding of Dorkings into three principles, we should name them as follows :

First. *Fresh blood!*

Second. FRESH BLOOD!!

Third. FRESH BLOOD!!!

Nothing is of greater importance than this, and too much stress cannot be laid upon it.

THE CHICK.

The White Dorking chick is, of course, white in color when first hatched. The Silver Gray and Colored Dorking chicks are of brownish gray color, with well defined stripes on their backs, like the chipmunks of New England. They are "sleek, line-backed, five-toed beauties." The wing-feathers appear at a very early age and show the characteristic gray color. All Dorking chicks, from the earliest age, display the characteristic Dorking shape.

As chicks they are somewhat delicate to rear, although hardy as fowls, and should not be hatched either too early or too late in the season. We have met with the best success in May and June hatched chicks, preferring these months to all others for this purpose. Hatched at this time they thrive, and but few die. They grow rapidly and mature quite early, and are fit for the spit

at almost any age. They make the best of broilers, because of their meaty qualities. They can be used for this purpose at the age of about eight weeks, and from that time on are ready for market at any period of their growth.

Dry feeding is the best. Our plan of feeding is as follows: The chicks are left undisturbed until about twenty-four hours old. They are then removed with their mother to a suitable coop, and are fed for four or five days upon hard boiled eggs, chopped very fine and mixed with bread crumbs. Fresh water is kept constantly before them. At the expiration of four or five days we give them steam-cooked oatmeal dry, such as is purchased for family use, and in the state that it is obtained from the grocer, alternating with fine cracked corn. As soon as they are old enough to eat it, we vary this diet with whole wheat. Cracked bone and oyster shells are kept constantly before them. Ground beef scraps are fed about every other day. Milk, sweet or sour, is given them for drink when we have it. We should like to keep it constantly before them. In case the chicks appear to droop, we give them an occasional boiled egg, chopped fine, with a little Indian meal wet up thick with boiling water and seasoned slightly with cayenne pepper, but we find this very seldom necessary.

For the first two or three weeks we feed our chicks five times a day, in the morning, in the middle of the forenoon, at noon, in the middle of the afternoon, and at night. After that we feed three times a day until well grown.

We keep a sharp outlook for lice. Nothing so saps

the vitality of a chick as the presence of lice. They are generally to be found upon the head, burrowing into the skull. If the chick is not very closely examined, their presence will not be detected. When a chick begins to droop, even if an examination does not disclose any lice, it is perfectly safe to grease the head thoroughly with lard. For lice we use lard, sulphur, or Persian Insect Powder, each separately, but never in combination. Sulphur and lard combined we regard as deadly to chicks, an opinion reached by the experience of the loss of two whole broods which we had annointed with the mixture. Dry sulphur thoroughly sprinkled through the down, or Persian Insect Powder so used, will cause the vermin to disappear. Greasing the head alone we have found very effectual.

With this kind of care we have succeeded in rearing whole broods without the loss of a single chick. Other methods of feeding and care may be equally good, but we are satisfied from actual trial that this is good enough. We have tried other methods but none that gave us better satisfaction.

EXHIBITING DORKINGS.

In matching Dorkings for exhibition great care is essential. It is necessary in the White variety that the plumage should be pure white, free from colored feathers, and from all stains. It is justifiable and necessary sometimes to wash the birds before exhibiting them. They should be carefully dried and kept warm, so that no cold will be taken after the washing. Size is very important, and the largest birds of the best shape should be selected.

The combs should be rose, and those of the hens should be as nearly of one size as possible, and of both cock and hens such as are described in the *Standard*. The legs of both cock and hens should be of the same shade of color, and the characteristic fifth toe should be found on all the fowls.

In Silver Grays, the cock should show no black in hackle, back, saddle or wing-bows. His breast and under parts should be solid black. The hens should match in color and size. The combs may be either rose or single, but should be the same upon both cock and hens; they all should have rose combs or single combs.

In Colored Dorkings, the cock should weigh $9\frac{1}{2}$ lbs. or more, the hen $7\frac{1}{2}$ lbs., and in chicks the cockerel should weigh 8 lbs. and the pullet 6 lbs. These are the standard weights, and it is well to have exhibition birds full on weight, especially as this point counts twelve in the score. The cock may have a mottled breast, but a solid black one is preferred and stands a better chance of winning. The hackle should have a broad black stripe down the center; many Colored Dorking cocks fail in this, but as this is one of the distinctions between the Colored and Silver Gray, it is well to insist upon it. The markings and colors should be according to the requirements of the *Standard*. The hens should match in color and size, and both cock and hens should match in combs, all having either single or rose combs.

In judging Dorkings, special attention is given to Symmetry, Size, Comb, Breast and Body, forty-two points out of a possible hundred being allowed for these parts. While other parts are not to be neglected in selecting

exhibition birds, it is well to select those that are as nearly perfect as possible in these parts. After these, be careful for Back, Wings and Tail. Condition is also another point to be specially regarded, and the birds should be in perfect health and full plumage.

THE SUPERIORITY OF THE COLORED OVER OTHER VARIETIES OF DORKINGS.

While we admire all varieties of Dorkings, we place first in our estimation the Colored variety. We do so for the following reasons :

1st. They are the largest variety. The Dorking being first of all bred for its flesh, size is the most important of all the qualities. Too much breeding to feather has somewhat reduced the size of the Silver Gray, although it originated from the Colored Dorking. It is still a noble bird, and of good size, but seldom attains the great weight that is reached by the finest specimens of the Colored variety.

2d. They are the hardiest. Too much inbreeding, to fix the color of the Silver Gray, has not only reduced its size, but has diminished its hardiness. This has not been the case with the Colored Dorking. Greater latitude in feathering has been allowed, and breeders have selected the largest and hardiest specimens for their breeding pens.

3d. We think the plumage of the Colored superior to that of the Silver Gray or White. The hackle of cocks especially is very handsome, the broad black stripe adding much to the beauty of the feathering.

4th. We believe the Colored the most prolific variety. The causes which have operated to reduce the hardiness



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