



The *Poultry Yard* has lately published several articles on "Selection in Breeding," from one of which we condense the following on the above subject:

In their natural state all birds lay a limited number of eggs, usually just as many as the hen can entirely cover during incubation. Those birds that rear more than one brood during the year, being no more liable to accidents than single brooded birds, rear the most young, consequently this variety predominate. Now where the jungle fowl was brought into domestication, in addition to its wild habits of laying fifteen eggs and then sitting, it is made to increase the number of eggs beyond fifteen by taking advantage of its natural power of provision for accidents, by removing the eggs as fast as laid, leaving enough in the nest to prevent its abandonment. The hen is naturally forced to lay a few additional eggs to supply the apparent deficiency in the number usual when the incubation is commenced. Under domestication the robbery of hens nests is carried on regularly and constantly, and the protection of eggs is stimulated at a great rate.

This is assisted by the abundant supply of food at all seasons. Food is plenty with wild fowls only during the breeding season, but man, by supplying plenty during winter, makes spring and summer extend through the whole year. This induces a habit of continuous laying that becomes hereditary. This work of breeding strains of fowls to be great layers by gathering their eggs daily was not performed with any conscious purpose. The keepers took the eggs because they were wanted, and carried on this practice without knowing or caring that the habits of the birds would become permanently changed thereby. This habit is perpetuated unconsciously by most people who keep fowls for use. The "gude wife," when setting a hen, always selects the eggs from hens that are good layers. "Old Brownie" is a good layer, I like the breed." So old Brownie's eggs are saved for setting. The keeper, by thus unconsciously selecting the eggs for setting, goes on improving his stock in this quality from year to year.

All these causes have been in operation for thousands of years, for the change from thirty to fifty eggs per annum to five times that amount was not accomplished in a single one hundred years.

The writer thinks that the reason why geese and ducks do not lay so continuously or so abundantly as hens, is because they were mere migratory fowls, and their breeding season is more limited than that of the jungle fowl, which is a constant resident. In the southern regions where they rested the season is short, and what was done was done quickly.

MR. MECHE ON POULTRY.

This eminent English agriculturist has the following to say about poultry: "No one item on the farm pays so well as a good stock of poultry properly managed. With them everything is turned to account. Not a kernel, wild seed or insect, escapes their scrutinizing eyes. Their industrious claws are ever at work, uncovering ready for appropriation, every hidden but consumable substance. Fowls must have free access to chalk or lime to the shells of their eggs, and grit or gravel to grind the food in their gizzards. They luxuriate on grass or clover, which are a necessity for them. In winter they like mangold or swedes. They must have access to plenty of pure water. The quality of the eggs depends upon the quality of the food.

They, like ourselves, like shade in summer, and warm sheltered corners in winter. They must have some access to shelter in wet weather. Fowls will not long be healthy on the same ground or yard—the earth gets tainted. Therefore, to prevent disease, lime and salt your yards and their usual pasture once a year, say in autumn, when the rains will wash it well in and sweeten the surface.

Broods of chickens never do better with us than on the grassy brows of patches abutting upon the growing crops, either of corn or pulse, into which they run either for insects or for shelter. The roof of the coop should be watertight, and the coop should often be removed, having only the natural ground for the floor. The ground soon gets tainted unless you remove the coop.

You can hardly make some people good managers of poultry if they lack observation and judgment. These are especially necessary in the breeding of poultry. Your

male birds should be often changed, say at least once in two years, and they should be young and vigorous. Breeding in and in will not do, any more than it will with animals.

I consider winged game poultry and birds the farmers' friends. My poultry have access at all times to my fields. Fowls are very useful in cleaning off flies. I have often been amused at seeing the neat and quick manner of their taking flies from reposing bullocks and sheep, much to their comfort.

WILL POULTRY PAY?

Yes and no! In a yard, no! unless it is in a farm yard, a yard attached to a gentleman's or other premises where there is a stable and where it is common for other things besides poultry. In such yards twenty hens will pay more and raise more chicken, making ten years in succession, than large numbers; but for all that poultry book writers may say or fanciers who know all about how every feather on a fowl should grow, and how they should be marked, pencilled, &c., may dictate, I positively state a poultry yard to be the very worst place for any kind of fowl. Yes, a strictly private, well fenced and beautifully arranged poultry yard is the worst place to grow poultry in greater numbers than a dozen that they can be kept in, and such a flock must not be allowed to set and hatch and raise chickens, or they will be diseased. I speak so decidedly because, though not knowing aught about the fancy coloring and disfiguring of fowls by top-knots and feathered legs, &c. I have, in the course of the last fifty years, seen more of the failures in raising (and of successes, too) than perhaps any other man who is living at this day; and of course as regards health and prosperity in rearing common fowls for market, will apply to the keeping of poultry selling for hundreds of dollars each.

Mr. Lewis Nelson says:—"We are going to start a poultry yard on a large scale." There never was and never will be a yard on any large scale that will pay, no matter how clean they are kept. The variety of food, the extraordinary attendance, and the less eggs confinement cause to follow, will make any attempt of the kind certain loss. For interested motives, one or two large yards of poultry have been represented to prosper and to have been healthy undertakings; but they were complete misrepresentations, and in two instances were total failures, not only not paying, but every fowl dying.

In 1820 one of the most expensive and most convenient poultry houses, fattening house and yards attached, was brought into use by one of the old East India Company in England, who had retired and bought a beautiful estate. Everything that imagination could desire was afforded to make it successful. This was in the West of England, and all that the most lavish expenditure and careful management could do was done. A woman from Dorling, in Surrey, was obtained, and the best fowls known were bought, cyprians being fattened to an extraordinary weight &c., but although this was only to supply one mansion, instead of doing it, after the first start no chickens could be raised, and disease took off all the old fowls, while at the extensive farm yard, where there was no restraint, and hens, ducks, &c., had perfect liberty to roam in the pastures adjoining, prosperity abounded. The game-keeper, too, had at the same time the most astonishing success in raising pheasants, partridges and wild ducks. As a boy, with a great liking for live stock, I was in the habit of running over frequently to see them, for my father lived on the farm adjoining the preserves, and the steward's children and my brothers and sisters were school fellows.

The gamekeeper's management of his pheasants and partridges, which he raised with common hens, by putting under them eggs which used to be mowed out in the tenant farmers' fields, gave me the knowledge how to assure perfect health in great numbers of any of the feathered tribe. He has bought hens of the farmers' wives which wanted to set, or giving them a good price for the use of them, and kept them ready to put eggs under them when brought; the mowers bringing the eggs always receiving a present of half a crown, as an encouragement to take care of them and start with them so that they would not get cold. When hatched, they were put in coops and every one was moved daily on fresh ground. Several hundreds of each variety would be raised annually without the slightest ailment, because they had sweet clean green-sward to range over; and ever since that time it has been quite clear to my comprehension that the only way to keep poultry healthy is not to confine them in one place.

NEW YORK EGG TRADE.

The New York Correspondent of the *Rochester Democrat and Chronicle* thus describes the egg trade:—"The extent which this business has reached shows how greatly a small item may expand under favorable

circumstances. In former days the market was supplied from Central New York and New Jersey, but the present railway facilities are changing the state of trade. The great centre of supply is now Ohio, while large quantities are brought from Indiana & Illinois. The chief depot of the egg trade on this continent is the village of Cardington, which is less than 100 miles south of Cleveland, and in the midst of a very productive country. Although the population of Cardington is under 1,200, it is a lively place of business, but the egg trade absorbs most of its energies. As the market is liable to be glutted in hot weather they have adopted the custom of pickling eggs, and one concern has had at one time nearly 10,000 doz. thus laid up. These eggs are kept until autumn, when good prices may be obtained, and now they are coming in very rapidly, the receipts being more than a thousand barrels per month. When a vat is full it is covered with muslin, the top of which is coated with whitewash. The pickle is called a secret composition, but it is generally understood among the trade. During the month of September eggs are often packed in barrels without straw, which protects them from the injurious influence of the atmosphere. They can be kept in this manner for one or two months, all that is required being to have the barrels turned from one head to another every day.

VALUE OF DIFFERENT BREEDS.

The following may be beneficial to those not acquainted with the prominent points of some of our pure breeds:—

In the egg producing class, the Leghorns stand pre-eminently above all others. This variety consists of the white and brown. The whites appear to be the favorites, being hardy, easily raised and mature quickly, the pullets often laying at four months. Pullets of this breed have been known to lay 240 eggs during the year. Their large comb and pendulous require a warm house during our rigorous Canadian winters.

The next in high favor is the Black Spanish; these, like the former, are non-setters and prolific, but not so easily raised. They do not, until nearly grown, get their full feathers, being generally half naked for a considerable time after hatching. These, like the Leghorns, require comfortable winter quarters, owing to their large comb and watery freezing and then mortifying. The Houdans, a French breed, come next as non-setters. This is what they call a *made* breed between the Poland and Dorking—showing the characteristic crest of the former and the fifth toe of the latter. Although not as continual layers as the two varieties mentioned, yet they possess points superior to the others in size, delicacy of flesh and hardihood, but very liable to disease. *Poultry World.*

The Apiary.

BEES AND WASPS.

Sir John Lubbock has just read a paper on the above subject at the Linnean Society. The paper commenced by pointing out, with reference to the power of communicating with one another said to be possessed by the Hymenoptera, that the observations on record scarcely justify the conclusions which have been drawn from them. In support of the opinion that ants, bees and wasps possess a true language, it is usually stated that if one bee discovers a store of honey, the others are soon aware of the fact. This, however, does not necessarily imply the possession of any power of describing localities, or anything which could correctly be called a language. If the bees or wasps were merely following their fortunate companions, the matter is simple enough. If, on the contrary, the orders are sent, the case will be very different.

In order to test this, Sir John kept honey in a given place for some time, in order to satisfy himself that it would not readily be found by the bees, and then brought a bee to the honey, marking it so that he could ascertain whether it brought others or sent them, the latter, of course, implying a much higher order of intelligence and power of communication. After trying the experiment several times with single bees and obtaining only negative results, Sir John Lubbock procured one of Marriott's observatory hives, which he placed in his sitting room.

The bees had free access to the open air; but there was also a small side or postern door that could be opened at pleasure, and which led into the room. This enabled him to feed and mark a very particular bee; and he recounted a number of experiments, from which it appeared that comparatively few bees found their way through the postern, while of those which did so, the great majority flew to the window, and

scarcely any found the honey for themselves. Those, on the contrary, which were taken to the honey, passed backwards and forwards between it and the hive, making on an average five journeys in the hour.

Sir John had also, in a similar manner, watched a number of marked wasps with very similar results.

These and other observations of the same tendency appear to show that, even if bees and wasps have the power of informing one another when they discover a store of good food, at any rate they do not habitually do so; and this seemed to him a strong reason for concluding that they are not in the habit of communicating facts. When once wasps have made themselves thoroughly acquainted with their way, their movements were most regular. They spent three minutes supplying themselves with honey, and then flew straight to their nest, returning after an interval of about ten minutes, and thus making, like the bees, about five journeys an hour. During September they began in the morning about six o'clock, and later when the mornings began to get cold, and continued to work without intermission till dusk. They made, therefore, rather more than fifty journeys in the day. Sir John had also made some experiments on the behavior of bees introduced into strange hives, which seemed to contradict the ordinary statement that strange bees are always recognized and attacked.

Another point as to which very different opinions have been propounded is the use of the antennae. Some entomologists have regarded them as olfactory organs, some as ears, the weight of authority being perhaps in favor of the latter opinion.

In experimenting on his wasps and bees, Sir John, to his surprise, could obtain no evidence that they heard at all. He tried them with a shrill pipe, with a whistle, with a violin, with all the sounds of which his voice was capable, doing so, moreover, within a few inches of their heads, but they continued to feed without the slightest appearance of consciousness. Lastly, he recounted some observations showing that the bees have the power of distinguishing colors. The relations of insects to flowers imply that the former can distinguish color; but there had been as yet but few direct observations on the point. *Rural New Yorker.*

WHEN BEE KEEPING DOES NOT PAY—WHAT THEN?

Hogs have sold for less than the value of the corn fed in fattening. Cattle brought less than cost of raising. Poultry could be had for less than the value of food fed them. Yet all required as much care as if sold at a profit. We would, however, think that farmer very unwise who would quit the raising of live stock or grain, because of low prices or severe winters. If bee-keeping farmers would use as much precaution in preparing pasturage and shelter for their bees as they do for other stock, I doubt not but a few years' experience, backed with a comparative table of facts and figures, would convince them that bee-keeping would prove as remunerative as any business in which they are engaged. The man who expects a large crop of fine fruit each year, without pruning or cultivating his orchard; he who hopes to harvest a heavy crop of wheat, corn or oats, without properly ploughing or pulverizing the soil; he who expects to cut a heavy swath of hay every year from a meadow which he devotes half the year to pasturage; and the bee-keeper who expects to get a large yield of honey without giving his bees any attention whatever, are all sure to be disappointed with their business, and declare "it don't pay." *Bee Keeper's Magazine.*

THE USE OF COFFEE.

Some persons disapprove of coffee, and undoubtedly there are constitutions for which it is inappropriate. But there is high medical authority in favor of its general use, particularly among persons predisposed to sluggishness of the kidneys, or to gout or rheumatism, or devoted to sedentary pursuits. Some one has computed that a cup of well-made *café au lait* contains from six to ten times as much solid nutriment, and three times as much nutritious matter, as does the same quantity of ordinary broth. In hot summer weather it is a most refreshing and invigorating drink, taken either hot or cold. It should be made, however, very strong in the first instance—say, a dessert spoonful of ground coffee to each cup—and then weakened to the taste. Try it once or twice without milk or sugar.

CURE FOR RHEUMATISM.

The following is said to be an excellent cure for rheumatism: Half a tea-spoonful of Rochelle salts, to be taken every morning half an hour before breakfast. Hot drinks, spirits, wine, beer, cider, pepper and spices to be avoided, and all grease except sweet butter. Fresh meat or poultry may be eaten twice a day, but salt meat and fish must be abstained from.