Bells Considered Sacred by People of Many Faiths

IN the retreat of the Russians from Warsaw and from towns in Poland and Courland it is reported that they removed bells from their churches, and that when the bells were too large to be removed intact they sawed them into sections, no doubt with the idea that in a happier time they would have them recast. It will be recalled by those who have attentively read the history of the American revolution that when the British approached and the continental army evacuated Philadelphia they carried with them not only the Liberty Bell from the statehouse or Congress Hall steeple, but also several of the church bells, depositing and concealing them under a church in Allentown.

When bells were limited to religious uses they were looked on as things sacred, and a great part of the world has not outgrown that belief in connection with church bells, and especially the bells that ring in the belfries of the churches of one's own particular belief. Sacrilege or profanation of bells was to the minds of old-time Christians a heinous offense.

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Traditions concerning bells are without number. They have played an important part in religious ceremonies for so long that there is no record of when they first began to peal. In the books of Exodus and Ecclesiastes it is written that the ornaments of the high priest's ephod included bells so that "their sound might be heard whenever he goeth in or cometh out of the sanctuary." Their use obtains in the Eastern church even to this day, bells being found as they were of old on the fringe of the priestly garments.

In the city of Jerusalem, when all the bells were sounding, it is said that speech could not be heard in the streets. They were used on many occasions by the multitude of temple officers. A writer on this subject has said that their purpose was threefold—to call the priests for services to summon the Levites to come and sing, and to apprise persons that the unclean might be brought to the gate named Nicanor. These bells, according to the Mishna, could be heard eighteen miles from Jerusalem when they were sounded at their full power.

The time of the introduction of bells into the service of the Christian church is in dispute. Strabo, in his work on the Divine Offices, speaks of bells as not having long been in use. It should be remembered that Strabo was a Greek geographer, a native of Amasia, in Pontus, who was born somewhere about 55 B.C. and died about 25 A.D. There are authorities who ascribe the introduction of bells in church services to St. Paulinus of Nola. There are these who have argued that church bells were introduced into the services of the Roman Catholic Church by Pope Sabinian, the sixty-fifth pontiff, who was elected in the year 604 and died two years later.

In the matter of the solemn association of church bells, and the reverence paid them, a writer in the Ecclesiastical Review, a number of years ago, said:

"Solemn ceremonies attend the dedication of bells for sacred purposes, according to a form prescribed in the pontifical called 'the blessing of a bell,' though the popular term 'the baptism of a bell' was used as early as the eleventh century. Only a bishop can bless or baptize a bell. The oil used is the oleum infirmorum for the outside of the bell and the oil of chrism for the inside. The bishop prays repeatedly that the sound of the bell may avail to summon the faithful, that it may excite their devotion, drive away storms and terrify evil spirits. Bells, being consecrated, cannot be rung without the consent of the ecclesiastical authorities. Each bell receives a special name and has its own sponsor."

In reading through the literature of bells, which is extensive, and there are a number of books on this subject in the Library of Congress, one will find numerous legends that consecrated bells, if stolen, would return to their own home, ringing all the way, and also many stories concerning the efficacy of church bells in warding off evil spirits or the spirits of darkness. There is an Irish story that when a Wicklow chieftain stole a bell from St. Fillan's Church in Meath he had to tie it up to prevent it from escaping and going back to its old tower.

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One learned writer on bells has said that it is uncertain whether the jangling instruments used by the Egyptians and the Israelites can be correctly described as bells, but it is certain that bells of a considerable size were in early use in China and Japan, and that the Greeks and Romans used them for various purposes. This writer alleges that they were introduced into Christian churches about the year 400 by Paulinus, Bishop of Nola, in Campania, whence the old name for a bell compounded of the words "campana" and "nola." It does not appear that they were adopted on a wide scale until after the year 550, when they appeared in France.

The account is that Benedict Biscop, abbot of Wearmouth, imported bells from Italy to England in the year 680, but it is thought that they were ringing and pealing and tolling in Ireland and Scotland at an earlier date than that. It is related that the oldest bells in England and Ireland today are "the bell of St. Patrick's will" and "St. Ninian's bell," which are quadrangular in form, and made of thin iron plates hammered and riveted together.

It was in the thirteenth century that the famous bell, the Jacqueline of Paris, was cast, and this bell, weighing six and a half tons, was the wonder of its time. After that there was a rapid increase in the size and weight of cast bells, and in Moscow there is a bell, called the "Monarch of All Bells," which weighs 193 tons and was cast in 1735. The famous London bell, Big Ben, though a large one, is small in comparison with the great bell of Moscow, for it weighs only fifteen and a half tons and was cast in 1856.

The bell of Lincoln, England, is called Great Tom, and weighs but five and a half tons, and the bell of York Minster, which is called in a familiar way Great Peter, weighs ten and three-quarter tons, and was cast in 1845, eleven years later than the casting of Great Tom of Lincoln. The great bell of St. Paul's, London, which was cast in 1882, weighs seventeen and a half tons. It is recorded that there is a bell at Novgorod, Russia, which weighs thirty-one tons, and one at Peking which weighs fifty-three and a half tons.

The metal of which bells are usually cast is called bell metal, and is generally eighty parts copper and twenty parts tin, though the proportion is varied, tin sometimes being from one-third to one-fifth the weight of the copper, according to the sound desired or required, the size of the bell and the force with which it is to be struck. An expert on bell casting has written that the clearness and richness of tone depend on the metal used, on the perfection of the casting and on the form of the bell, it having been shown by a number of experiments that the well known shape with the thick lip, or "sound bow," is the best adapted to give a full, rich and mellow tone.

TWELVE KINDS OF TORTOISES FOUND ABOUT WASHINGTON

OF the 200 existing species of tortoises known to naturalists only about a dozen are to be found near Washington. Of this number nine are indigenous to the vicinity, two are brought to the city for commercial purposes and one has been imported for permanent exhibition at the Zoo.

When Gen. Mason made his home on Analostan Island, more than a century ago, that locality was known as the resort of the "soft-shelled turtle," an extremely esculent variety, claimed to surpass the green turtle for delicacy of flavor, but this species is not found here at the present day. It is still abundant, however, in the great lakes and the Mississippi river and its tributaries.

The snapping turtle—"snappers," as they are popularly called—is plentiful along the Potomac, and is well known to those who fish along the stream, particularly above the Great Falls. They are, as their name implies, of a bad disposition and will make short work of fingers or toes that approach them unwarily. Bathing in waters frequented by them is often a hazardous pastime. "Snappers" are very good to eat and can be purchased from local fish dealers throughout the year. The demand for them is said to be fair.

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Another fresh-water tortoise, the mud turtle, allied to the same family as the snapping turtle, is very abundant here. This species, which is often confounded with the box turtle, is of no value commercially or otherwise.

A genus of fresh-water tortoises well represented along the city water front is the Chrysemys. There are three of these, the "painted terrapin" or "slider," the concentric tortoise and the striped tortoise. The young of these three species are used for aquariums on account of their pretty coloring and daintyforms. They are lively and harmless little creatures, about the size of a man's watch. They are frequently seen in florists' windows, swimming gayly in tanks with the goldfish. Some of these become so tame that they will leave the water to eat out of one's hand.

Two other species occasionally found here are the speckled tortoise or "lady terrapin" and the yellow-bellied tortoise.

One can penetrate scarcely any distance into the woods around Washington, particularly where there are pine trees, without coming upon the very interesting box tortoise, called in the south the "pine barren terrapin." Very often one finds them feeding upon the red-capped mushroom known as a "russula," which seems to be its staple article of food when living in its native haunts. A curious thing about these box tortoises is the way their taste for food changes when they are brought into captivity. They then show a preference for melons, pineapples, berries and other cultivated fruits, and will scarcely touch the humble mushrooms which were their former means of sustenance.

The two species brought here for commercial purposes are the diamond-back terrapin and the green turtle. The very name of diamond-back brings to mind that luxurious dish known as terrapin a la Maryland. These come from the salt marshes along the Atlantic coast. They are sold at from $1 each to $16 per dozen. They are becoming so scarce that the government is now conducting three experimental stations with a view to conserving the diamond-back by means of artificial propagation. Two of these terrapin "pounds" are in Maryland and one at Beaufort, N. C. The cultivation of marine and fresh-water terrapin has been undertaken in Japan, and is said to have proved to be a successful and profitable industry.

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The green turtles are brought here from the coast of Florida, and some of them, weighing as much as a hundred pounds, are often displayed "turned turtle" in front of the wholesale fish markets. The flesh and fat of these turtles are made into the famous green turtle soup.

Owing to the fact that the government has not made any appropriation for an aquarium at the Zoo, there is no opportunity for observing the many water tortoises of this and other countries, but the park contains three splendid specimens of the gigantic land tortoises from the Galapagos Islands, off the west coast of South America. These tortoises have been at the Zoo for seventeen years, having been acquired in 1898. One weighs 185 pounds, and the other two are not quite so large. They are a clumsy-looking trio, of such slow locomotion that it has been calculated that if they traveled constantly night and day they could only cover four miles in the twenty-four hours.

These tortoises have been described at length by Darwin in one of his books, and Admiral David Porter, U. S. N., has also given an interesting account of them in his "Journal of a Cruise in the Pacific Ocean," in 1813. Admiral Porter dwelt particularly upon their value as an article of food, stating that after once tasting the Galapagos tortoise every other animal food fell greatly in estimation. These tortoises have been used so extensively for making oil and provisioning passing vessels that they are rapidly becoming extinct. One of the many curious facts about the elephant tortoise is that he carries a supply of water amounting to several quarts in a bag at the root of the neck, and explorers when hard pressed for water have been known to kill a tortoise and drink the contents of this sack.

ALGERIAN SOLDIERS ARE VEGETARIANS

MANY races of men have distinguished and are distinguishing themselves as soldiers in the world's war, but observers who have written from the fields of operation have given it as their opinion that one of the best fighters in the French firing line is the Algerian. An interesting reflection called forth by this comment and a significant fact is that the Algerian soldier is a vegetarian, or very nearly so, because those persons who know the Algerians say that it is only twice a month at the most that France's North African troops at home eat meat, and that is when a goat or lamb is killed, and then the whole village takes part. The common and usual fare of the Algerian consists of wheat and dates, oil and milk, and beyond that figs, oranges, eggs, cheese and vegetables of all kinds.

The Algerian troops in France, according to what appears to be reliable and authentic reports, have not contracted the meat-eating habit, and while serving in the fiercest and most trying campaigns the world has known feed practically on nothing but dates and wheat porridge mixed with oil.

The Algerian troops of France, while maintaining a proud position for valor and endurance among the troops of all the warring world, are said to stand pre-eminent for military efficiency among all the African troops, there being a number of African races employed in the battlefields of northern France and Flanders. In the matter of marching it is said that they are able to outmarch any European troops and to do it on very much less food. The home land of the Algerian is a rocky country, and these men are accustomed to long, fatiguing climbs from infancy.

At the outbreak of the war the strength of the Algerian contingent in the army of France was set down as 100,000. Their losses have been heavy, but it is said that the ranks have been kept full by recruits brought forward from Africa, and that the strength of the contingent has actually been increased. In Algeria all able-bodied men are under obligation to serve three years in the French active army and seven in the reserve.

Unsophisticated.

From the Boston Transcript.

Lady—These strawberries are quite green.

Peddler—Well, mum, they're just from the country.

BIG PROFITS IN EGGS DEPEND UPON CULLING

It Does Not Pay to Keep Weaklings. Breed From Birds With Good Records.

Early Hatching Will Enable Owner to Have Pullets Laying When Market Is Highest.

BY REESE V. HICKS.

(Copyright, 1915.)

The production of market eggs has always been the most profitable end of all poultry enterprises in the past, and there is every prospect that this condition will continue for years to come.

Since the greatest profit is in the production of eggs, it is important that eggs be produced in the greatest quantities when the demand for them is strongest and the prices highest.

As soon as the hens have completed their molt, cold weather begins to have a serious effect on egg production. In fact, even in February and March, when the production has increased considerably, sudden changes to cold weather will lower the egg production materially, and this will raise the price of eggs on the market.

In connection with egg production an important thing to consider is the breed best suited for the purpose. It must be a breed that will come to maturity quickly, stand heavy feeding and go through the molt quickly and easily.

The effect of mating on the production of eggs is only shown after years of careful breeding. It does not show quickly like an improvement in color or shape, because the production of eggs is largely a matter of high vitality and ability to digest large quantities of feed.

Increase the Average Production.

In mating for egg production both males and females should be used that come from a strain that has been bred for egg production. They should be from a family of heavy egg producers, rather than from any one particular bird, that has a high egg record individually, but has no ancestors behind it with a similar record.

It is better to breed from the hens that have made good average records. Eggs from the hen that has made the highest record do not usually hatch as well or produce as strong and vigorous chicks as those from hens whose production is only slightly above the average.

The most important thing in breeding is never to use birds that have been sick or stunted in growth. In order to avoid this it is well to cull out constantly any slow-growing youngsters, as well as any that are sick, and put them in a pen by themselves or market them, so they will never be used later for breeding stock.

Selection becomes an important problem for every poultry grower. It is not a matter of selecting right at the time the males and females are put together, or "mated up" as it is called, but the selection should be made from the time the eggs are placed into the incubator.

Only choice, even eggs should be used. Eggs that show a weak germ on the fourteenth day should be removed from the machine. All chicks that do not hatch by the twenty-first day should be destroyed, while all the crippled and defective ones should be done away with.

If the percentage of weakly chicks is heavy and the poultry raiser wishes to convince himself that it will not pay to keep these weaklings he should keep the healthy and weakly birds separately and then give both groups the same treatment and feed. He will soon find that the heavier death rate will be among the weakly chicks and by far the larger proportion of culls will come out of this weak group. He will find later on, too, that the pullets that come out of the weak group will not begin to lay as early as the others, nor will they make as good and average egg production throughout the year. They will also lay a larger percentage of small eggs that will not bring as high a price in the market.

In some communities any egg is an egg, without regard to size, but the choicest markets are now dividing eggs into No. 1 and No. 2. No. 1 must weigh twenty-six ounces or more to the dozen to meet the requirement.

Early Hatchings Important.

Early hatching is important for two reasons:

The pullets will begin to lay in the early fall and lay through the winter, while the pullets that are hatched late in the season will not begin to lay, sometimes, until well into the winter, and this will hold the egg production down.

The second reason is that a pullet lays small eggs at first, and when hatched early in the season will lay all her small eggs and begin to lay her large eggs when the market is high. If she does not start to lay until January the majority of eggs will be small and will not bring as much on the market. She will not begin to lay large eggs until after the price has considerably depreciated.

It is also contended that the early hatched pullet will make a better yearling layer than the late one, because the late one does not seem to have as much size and vitality.

Poultry Yard Notes.

Healthy, normal hens are not in the habit of laying soft-shelled eggs; neither do hens properly fed and housed lay such eggs. Usually they are the result of an inability to retain the egg until fully developed—a condition that is a sign of weakness in one direction or another, much the same as dropping more than one egg at the same time. Soft-shelled eggs are also more numerous in the spring of the year, when the losses are often considerable. In a study of the several causes for this difficulty, made by the poultry department of the Washington State Agricultural College, it has been learned that the yolk of the egg is fully formed when it breaks from the hen's ovary and drops into a funnel-shaped mouth of the oviduct. It is at this point that fertilization of the egg takes place, probably within a few minutes of the breaking loose of the yolk, and in about three hours' time the formation of the thicker albumen is completed. The next section of the oviduct secretes the shell membrane, which ordinarily requires about three hours; by the expansion and contraction of the walls of the oviduct the egg is forced forward into the shell gland, where the lime of the egg is deposited, and within twelve or twenty-four hours the egg is laid. One can readily see that anything that would have a tendency to make the egg pass too rapidly through the lower two-thirds of the oviduct would cause the hen to lay soft-shelled eggs.

The first and usual cause of soft-shelled eggs is that the birds are too fat. The muscular movement of the oviduct is hindered by layers of fat, and instead of the egg being controlled by firm muscles, it merely slides through a flabby mass without getting its shell on. The difficulty will vanish if the birds are made to scratch hard in the clean, dry straw litter for all of their grain and the ration fed is not overfattening. Sprouted oats will be a valuable food, as they will be less fattening than either wheat or corn. In some cases it might be advisable for a few days to omit all mashes from the ration.

The second source of soft-shelled eggs is lack of lime in the hen's ration in this case the shell-secreting part of the oviduct fails to do its work because of lack of material. Clam shell is not so readily soluble as oyster shell. What is commercially known as beach shell is preferable to clam shells. It is claimed by some poultrymen that the use of a limestone grit also helps to supply egg material to the hen. It is so often recommended that the old plaster be broken up and thrown in a box in the pen for the birds to pick at as a source of lime

The third cause of soft-shelled eggs is the forcing for too frequent egg production. A second yolk breaks off from the ovary and drops into the funnel of the oviduct, and the first one is forced too rapidly on its way for it to be completely formed when laid.

The fourth cause of soft-shelled eggs comes from scouring—that is, feeding a too-loosening ration to your birds. Beets or mangles will sometimes produce this result. The droppings normally should be a dark slate or dull black color, firm enough to maintain a spiral shape, as seen on the dropping boards.

These several explanations suggest their own remedies. In other words, after faulty conditions of environment and feeding and the trouble will soon right itself.

In farmers' bulletin No. 624, issued by the Department of Agriculture, is given the following advice for grain and mash rations for feeding chicks:

Grain—Two parts of cracked corn and one part of wheat, or equal parts of cracked corn, wheat and oats. Feed in hopper.

Mash—Two parts of bran, two of middlings, one of corn meal, one of low-grade flour and 10 per cent sifted meat scrap. Feed in hopper. If fed moist, keep a hopper of dry bran before the chicks all the time. It is recommended that the meat scrap be omitted from the mash and fed separately in a hopper. Ground bone not needed when the chicks are on good range.

The poultry industry of Australia has been affected by the war quite as much as England. Many of the Australian soldiers serving the mother country were drawn from the agricultural ranks, hence all rural industry in Australia has suffered. One of the results of these conditions is a lively export in eggs from California to the antipodes.

Experiments conducted at Washington agricultural experiment station, Pullman, Wash., show the rapid growth of chicks. Leghorn chicks that average 1.4 oz. when hatched weighed on the average of 5.6 oz. at five weeks of age, or an increase of four times their original weight. Rhode Island Red chicks did even better, growing to an average weight of 8.4 oz. in five weeks, almost six times their weight when hatched.

Corn is a fattening food, and if fed to excess is invariably inimical to the greatest egg-production. Other things being equal, wheat as a single grain is better, but best of all is a variety, with wheat as a base.

The only time to stuff fowl is in the roasting pan, ready for the oven. To stuff them with food and neglect feeding the following day is to invite disease and vicious habits.

How many of those a little new to the poultry business neglect the green feed for their birds? Especially does this apply during the dry summer season. Its nutrient value and physical action and aid to digestion are not to be overestimated. Are your birds supplied regularly with a variety of greenery?

The annual change of clothes to which bird life is subject is a natural process, and in wild life regulates itself. Where fowl are under domesticated conditions some attention should be given the birds, both for their welfare and for economic reasons. During the molt egg-production is much reduced; hence the experienced breeder aims not only to maintain vigor in his flocks, but also to accelerate the return of normal egg-production. To augment the growth of feathers and bring the bird through the process of molting in good condition, this is usually done by feeding a highly nitrogenous ration. Wheat, bran, middlings, beef scraps, meat meal, gluten feed, oats, oilmeal and similar substances should be used freely. It is better that the birds be fat than poor, safer to have them overfat than barely in good condition.

Most poultrymen do not advocate starving the birds on a narrow ration for the first two or three weeks of the molt and then feeding them up heavy on fattening foods to accelerate the molt. Radical changes in diet and overstimulation are apt to disturb the system and in the end leave the bird in a weakened condition.

When Biddy sings her song of maternity in an out-of-the-way place, hunt for a stolen nest and rob it of its contents before the hen fruit begins to spoil.

The Union of South Africa produces poultry products of the value of about $500,000, and in addition imports about $400,000 worth of eggs. The principal sources of supply are Italy and Russia.

Standard-sized eggs will usually produce good-sized chicks of the breed that produced them. This, however, does not signify that abnormally large eggs will produce desirable offspring. To secure chicks true to type of breed and variety use shapely, well formed eggs.

Learn to enjoy your birds and their care and they will respond gracefully in product of eggs and carcass, as well as in breeding qualities and showroom requirements.

One sure way of curing the egg-eating hen is to eat her. Indeed, some breeders regard this as the quickest, surest and most satisfactory method. Besides, a dead hen on the dining table will not teach the habit to others of the flock.

The advantage of unfertile eggs can be tersely stated, viz: They do not hatch nor develop germs, withstand heat, ship well, are easily preserved, slow to decay, cost less to produce, require no male birds and are produced as often as the fertile.

Now, as much as ever, hens need exercise, and more, especially if confined. Exercise is the price of health in a flock and also that of success with their owner.

A scratching shed is of little use unless well supplied with clean litter. Without this it is about as useful as a bedstead without springs and mattress.

According to the Geneseo (N. Y.) Democrat of a recent date, twenty-five years ago merchants of that town were paying 10 cents per dozen for eggs and 10 cents per pound for butter. Prices are better now, though it is questionable whether the average poultryman fares any better in 1915 than his forerunners in 1890.

Some people seem perfectly satisfied if hen fruit is merely "fresh laid" when it reaches them from their source of supply, thus giving little or no attention to other considerations of equal importance. Obviously eggs from diseased hens, from hens fed cheap and sloppy foods, hens kept in insanitary quarters are factors that have an important bearing on the quality of hen fruit. It is the writer's conviction that dealers are often criticised for selling so-called stale eggs for freshly laid when the product is really newly laid, but inferior in quality for the reasons just mentioned. The "certificate" egg has not yet made its appearance, but if the pure food experts keep on advancing in their profession, it is only a question of time when it will be featured and demanded—especially for use in sanatoriums, hospitals, etc. To verify the influence of feeding stuffs, give your birds onions, cabbage, celery, fish and other strong-flavored vegetables and animal matter and see how soon the flavor of your product is vitiated. Wholesome foods free from strong flavors, sanitary quarters and healthy birds are the considerations that produce prime quality hen fruit.

A syllabus of an illustrated lecture on farm poultry has been prepared by the Department of Agriculture as a guide for lecturers addressing popular audiences. A list of fifty-one lantern slides for illustrating such a lecture is given in the appendix, together with references to twenty-three publications of the Department of Agriculture on poultry, and to eight important books on poultry keeping. So much has been written upon the subject of poultry keeping that novices are apt to be confused by the amount of material at his disposal. This compilation, published as syllabus 17, illustrated lecture on the production of poultry and eggs on the farm, provides a simple and easily grasped basis for the acquisition of further and more detailed knowledge. It includes a brief discussion of the various breeds, the proper construction of poultry houses, hatching with and without incubators, brooding, feeding and marketing.

All Around the Place.

Soil improvement, urgently needed almost everywhere in this section, is a process that is almost elementary in its simplicity, yet few farmers and gardeners have more than the haziest knowledge of its principles, and as few apply even what they know.

Practically every farm, large or small, in this section is worn out as far as the supply of humus is concerned. Humus is the decayed vegetable matter contained in the soil, upon which crops are dependent. If the soil has been robbed of its humus no amount of artificial stimulation by means of commercial fertilizers will take the place of the lack. The only thing that can be done which will restore the lost fertility and make it permanent is to restore the humus, and this can only be done, on a permanent basis, by the use of green manures or growing crops plowed under and left to decay and to be assimilated or amalgamated with the soil itself.

Fertilizers, either natural or commercial, are valuable aids in increasing fertility. Either of them, however, performs its functions best when used in conjunction with green manures. Ordinary fertilizers may be used year after year, without humus-forming materials, with the result of stimulating the soil to produce annual crops, but leaving it in such a condition that each rain washes the top soil away until at last only barren clays or gravel strata remain.

A soil full of humus, on the contrary, becomes better each year, provided the humus is renewed annually. For example: A small farm near Washington was purchased a few years ago, the new owner finding the land utterly robbed of humus, badly gullied and washed, and in most places incapable even of producing a growth of ragweeds. The new possessor of the placed learned that the land, the preceding year, had produced twelve bushels of corn to the acre. He plowed the place the first spring, planted corn and when the corn was given its last cultivation he sowed cowpeas thickly between the rows. When the corn was cut that fall he plowed the rank growth of cowpeas under and sowed the land to crimson clover. The following spring the clover was plowed under, corn was planted again, cowpeas were sown between the rows, to be turned under in the fall and the ground again sown to crimson clover. The second year the ground produced twenty-one bushels of corn to the acre. The process was repeated each year for six years, and the crop of corn produced the seventh year was a little over seventy-five bushels per acre.

This result was brought about wholly by the use of the two green manure crops each year, as the owner of the farm had no supply of natural fertilizer and was not so situated financially as to be able to buy the commercial kinds, except for a small amount of lime, which was applied to the land the first spring. This amounted to only 400 pounds per acre.

In this case the fertility of the soil was restored without the necessity of losing the use of the land even for one year, and the benefits were seen each year in the rapidly increasing yield of corn.

What was done in this case can be done by any farmer or gardener who is willing to do the little additional plowing and seeding necessary. If a supply of barnyard manure is available, for spreading on the clover before the latter is turned under in the spring, results will be obtained in even less time. If an analysis of the soil is obtained and the chemical elements found missing, if any, are supplied by the addition of properly balanced commercial fertilizers to the barnyard manure and the green manure, even quicker results will be noted.

It is the too common custom of farmers almost everywhere to leave the soil unprotected during the winter, the inevitable result being that the elements of fertility are leached and washed out by the rains of winter, the soil itself washes away, and the land soon becomes too thin and poor to produce crops. The common plea in defense of this wasteful practice is that it costs too much to plow in the fall and seed the land to a cover crop. If it were possible for the farmer to measure in actual dollars and cents the injury wrought by this practice, it would be seen that the loss of fertility caused by the rains of a single winter more than overbalance the cost of fall plowing and seeding for three or four years.

Every owner of agricultural land, even though it be only a few acres, injures himself and decreases the value of his land every time he allows the land to remain unprotected by a cover crop, or green manure crop, over the winter. Seeded to rye and the rye plowed under in the spring, the soil will be protected against much of the washing that takes millions of tons of fertile soil off the farms of the country each year, to be borne away in the creeks and rivers. If the land is sown to crimson clover the protection is better, while the clover is much more valuable as a restorer of fertility and a medium of adding humus to the soil. Several of the vetches make good cover crops, preventing soil washing and serving as green manure; while, as has been said, if liberal quantities of manure are available for use in connection with the green manure, the fertility of the soil is treated will increase by leaps and bounds.

It is always well to have samples of soil analyzed before any plan for soil restoration is adopted. This work is done by experts in the Department of Agriculture, as well as at all of the state agricultural colleges, and usually without charge, or at very small cost. The expert soil analyst finds what elements are lacking, prepares what may be called a "prescription, which tells just what should be done to put the soil from which the sample was taken back into first-class condition, and it is then up to the owner of the land to have the prescription filled and administer the remedy to the sick soil. By directing a letter to the bureau of soils, Department of Agriculture, the proper procedure for obtaining analyses of soil may be learned.

The careful, thoughtful farmer or gardener is devoting a great deal of attention at this season of the year to preparations for the coming winter and next spring. Chief among these preparations, of course, in the case of intelligent farmers, is the fall plowing, either for grain crops or for the sowing of cover crops. In many cases crops of the latter class will be cut for hay next year, though the cash obtained for the hay, in most cases, will not be equal to the actual cash value of the crop if it were plowed under as green manure.

Among the late summer and fall activities should always be the cleaning up of all waste spots about the place. Weeds that may have been permitted to grow unchecked during the last few weeks should be cut and heaped with the stable manure, to compost during the winter. The fall pruning of fruit and shade trees should not be neglected. The old canes in the berry patches should be removed and the patches given a final cultivation for the season. Fodder should be taken from the fields and put under shelter before the greater part of its feeding value is leached out by the autumn rains.

All of the little repairs needed about the house, barns and outbuildings should be attended to before the coming of cold weather. Walks that need mending, window frames that require refitting, doors that have developed a tendency to shrink away from their casings, broken window glasses—all these things should be attended to before the arrival of the bad weather of fall and early winter. Too many residents of the rural districts resemble the Arkansas farmer who, when asked why he didn't mend his leaky roof, said that when it wasn't raining the roof didn't need mending, and when it rained he couldn't mend it.

If preliminary work on a hotbed and cold frames is done in the fall the job of getting the beds ready for use next spring will be much easier. By writing to the Department of Agriculture pamphlets containing full instructions as to making hotbeds and cold frames for all purposes may be obtained free of charge.

A strawberry bed that will bear next spring may be made this fall if pot-grown plants are used. These are plants that were rooted last spring and which have grown during the summer. They are to be obtained from any of the reliable seedsmen and nurserymen, together with complete instructions as to the preparation of the ground for a strawberry bed and the manner of setting out the plants. The cost is very small, considering the fact that a full year is saved in getting a strawberry bed into full bearing. The plants are shipped each in its own ball of wet soil, and rarely is even a single plant killed in shipment. Set out now, the plants will be well established in their new location before bad weather arrives, and if properly protected by a straw mulch, placed over them at the advent of actual freezing weather, they will be ready to bear a full crop next spring. And what country place is complete without its bed of strawberries?

Sweet potatoes should be dug on a bright day when the soil is dry. The time for digging varies in different sections, but the potatoes should be dug before there is any danger of hard frosts. When grown on a small scale, sweet potatoes may be dug with a spading fork. Great care should be taken not to bruise or injure the roots in handling. After digging, the roots should lie exposed for two or three hours to dry, after which they should be placed in a warm, well ventilated room. The temperature during the curing period of about ten days should be about 80 to 90 degrees Fahrenheit. After the curing period the temperature should be lowered gradually to about 55 degrees Fahrenheit and held at that point during the remainder of the storage period. A small crop may be cured near the kitchen stove and afterward stored in a dry room where there is no danger of their becoming chilled. Handle sweet potatoes as little as possible.

Rotation of crops is as important in growing vegetables as in growing field crops, and the same principles can be applied. Crop rotation is important in checking diseases and insects and in keeping the soil in good condition. Where diseases are very severe, the same crop should not be planted continuously on the same area. Rotation of crops is one of the safeguards against soil infection.

TRAVELETTE

BY NIKSAH.

Colombo.

The cross-roads of routes of all the east is Colombo, Ceylon. There, as at Constantinople, may one expect to meet representatives of all races, with the dominant Turkish Mohammedan of the former city replaced by the Indian Buddhist, the minarets of the temples of the latter being substituted for the gilded domes of the mosques of the city by the Golden Horn.

Tucked away in the warm seas to the south of Asia, Ceylon is known as the "garden of the world," and heralds itself to the approaching steamship by the odors of its cinnamon groves and of its limitless vistas of scented, colorful flowers.

At Colombo is a breakwater-inclosed harbor that suggests the presence of men of the west, and sure enough, the flag of Britain floats from the lighthouse of the port, which likewise serves as a clock for all who dwell thereabouts. The town was Dutch before it became English 120 years ago, and there remain Doris structures in evidence of its former allegiance. Even before that it was Portuguese, as is evidenced by the architecture of cathedrals that remain. Yet earlier it was dominated by the Arab, and from these conquerors, and not from the discoverer of America, does it get its name.

The British tore down the fort that occupied the water front fifty years ago, and in its place has sprung up a modern city which transacts the mass of the business that comes to this gate of the far east. There is a fresh-water lake near by separated from the sea by a spit of sand and bordered with flowers—the most fashionable parade on the Indian ocean.

Back of this is the native quarter, where the Tamils, those jugglers and sinuous charmers of marvelous mystic power, perform their miracles. There are to be seen the Moormen, with their tall, brimless hats; the Madiys, the Syrian Jews, the Cinghalese,—whose men folk wear brilliantly colored petticoats. There are uncounted children, to whom any stitch of clothing is unknown. The jinrikishas hurry hither and thither, the bull carts bump over the cobblestones, and the stately elephant, more at home here than anywhere else in the world, strides past in lordly dignity.

Built of bamboo is the native house, with no wall to shut out the view from the street, and there the women of Colombo demonstrate to whomever wishes to see their methods of housekeeping, while the men folk pursue their favorite diversions in strange games of chance, which are beyond the knowledge of men of the west.

Keeping Track of Soldiers.

IT is doubtful whether any foreign war office follows with an accuracy greater than that displayed by the United States War Department the movements of its officers. The following is an interesting case in point.

A young army officer who had seen service in this country and in the east was once with a small scouting party in Arizona. After two weeks in the desert his squad came to the railway near a small station. Within ten minutes a telegram from Washington was brought to him by the station agent. It asked if the officer wished to be transferred to one of the new artillery regiments then forming.

He answered by telegraph that he would be glad to enter either of them. Then with his squad he set off again across the desert.

It was six days later when they again struck the railway, this time eighty miles from the point at which they had previously crossed it, but the officer's reply from the War Department was awaiting him. It had been telegraphed to every station within two hundred miles.

A more striking instance of accuracy occurred after the same officer's transfer to the east. He was traveling home on leave and, as the regulations require, had notified the department of the day, hour and probable route of his journey. After he had been on the train for eight hours at a small station the conductor entered with a telegram, asking if any one of his name was on board. On opening the telegram the officer found that it ordered him to detached duty.

Exactness of detail could not be carried much further. The War Department knew the whereabouts of a second lieutenant even when he was traveling on leave of absence.

In Time of Trouble.

DURING one of the revolutions in Haiti a party of Americans made a riding tour of the mountains. One morning a member of the party suddenly drew rein and pointed to a lone ridge where an old tattered Stars and Stripes fluttered on a bamboo pole.

"We must pay our respects," some one said.

After some search they found a path that zigzagged up to the wild place. They followed it, and at last discovered an aged negro sitting before his wattled hut smoking his pipe, while he kept an eye on the flag.

"What's the flag for?" some one asked.

"Pertection," said the old man, quietly. "I heah dey done begin anudder resolution, so I put it up. Yes, sub, I come hear twenty-two yeahs ago, an' has dat flag wid me. I'm George, cook on a steamer outer Savannah.

"Like de place? Yas, sah. I'lant yam an' coffee an' cassava. Resolutions don't trouble dis ridge. Every time de resolute rander up goes de flag, an' dat's all dere's to it."

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GREEN FEED ESSENTIAL IN RAISING TURKEYS

Onion Tops, Chopped, Best for Poults—Growth Depends on Plentiful and Regular Supply.

There is no more important element in a complete turkey-ration than green food. Healthy turkeys may get along fairly well for months together with little or no succulent growing stuff, but they will never do as well as when fed appetizing fresh green growths in abundant quantities. And under certain circumstances—when turkeys are herded, in relatively large quantities, on relatively small areas—when a flock of turkeys is weak or generally run down—and particularly with flocks of small poults—it is absolutely essential to feed a plentiful supply of green.

Green food for young turks can be fed to best advantage when chopped fine. With old turkeys this is usually unnecessary. Also, the kind and quality of the chopped food for poults differs quite widely from that which makes a satisfactory ration for mature, hardy stock.

The very best green food of all for young turks, and one that has not a little to do with the successful growth of poults through the "danger period," between two weeks and two months, is chopped onion tops. If baby turks are being fed chopped hard-boiled egg, or curd, it adds greatly to the efficiency of the ration if quite a quantity of onion tops are chopped and thoroughly mixed with the food. If bread and milk, crackers and milk, bran or any of the other foods that may be satisfactorily fed to young poults are used, it is well to give at each feeding a handful of onion tops, chopped fine, which can be sprinkled on the feeding ground immediately after other food is thrown down. Any one who has never fed onion tops to small turks is sure to be surprised at the results obtained when this important element is added to the diet.

When green onion tops cannot be procured, it usually pays to feed old onions, chopped fine. These are not quite so good as the tops and should be fed somewhat sparingly, but make, under ordinary circumstances, a very useful equivalent.

Other Greens to Use.

Next to onion tops and onions, clover leads the list of satisfactory green foods for baby turks. The quicker the growth of the clover that is used, the more fresh and green the leaves and clover stalks, the more the poults will relish it, and the more good it will do. Like the onion tops, the clover can best be fed to very small poults when chopped fine; as a greater bulk of clover than onion tops can usually be fed, it is just as well to feed the clover separately, either at the times when other food is given to the covey or at odd times during the day. From the time poults are two or three weeks old they will eat prodigious quantities of fresh green clover. The easiest feeding method is simply to throw a couple of handfuls of freshly pulled clover leaves before the small birds, or, if they are confined in brooder coops, on top of the wire cover, so that they can reach up and peck at the pile from below.

Green alfalfa ranks next to clover, being inferior only for the reason that leaves and stalks are somewhat coarser and so must be chopped with rather more care in order to make a satisfactory ration for small turks. An alternative of chopping alfalfa fine is to give the turks bunches of fresh green alfalfa stalks, from which