



Feeding experiments which have been conducted show that an acre of good clover used as pasture will produce 400 pounds of pork and an acre of soy beans 600 pounds.

The interest which leading florists of the country have in rare and choice new varieties of flowers is well illustrated in the price of \$15,000 which was recently asked for a new and rare variety of carnation.

A man's theory about early rising before he retires is a great deal more creditable to him than his performance the next morning when he is brought face to face with the proposition of jumping out in the cold.

Fear, in the general acceptance of the term, is an acquired and not a natural trait in little children. If the little ones are not taught to be afraid of the dark and threatened with confinement in the dark where bogies will get them, they will have no fear of it whatever.

We know a mother, perhaps some would call her a crank, who has her two little children sleep two or three hours every day in a baby cot on the front porch and this through all kinds of winter weather. She claims that her children know no such thing as a cold, while her neighbor across the street has two children who dare not stick their heads out of doors for fear of taking their death of cold. The fresh air treatment would seem to have good sense on its side, being in line with the latest conclusions of physicians touching the benefits of sunshine and fresh air.

The rapid progress which has been made along the line of scientific forestry since the opening of the Cornell school of forestry in 1898 is evidenced by the fact that, although the work is in a measure but in its infancy, the forest service of this country has been invited to become a member of the International Association of Forest Experiment Stations. In his letter of invitation to the forester in chief Dr. Ruhler, director of the forest testing laboratory at Tubingen, Germany, said: "In asking the United States to join the association I am but expressing the general desire. You have accomplished so much and have taken so capable a hold on investigations that the work of the association would be furthered by your membership." The benefit bestowed and derived from the association contemplated is bound to be mutual as well as considerable.

The beet pulp byproduct of the Colorado sugar factories is fed to thousands of head of sheep and cattle, which in addition are given a ration of alfalfa hay. The ration seems to be one that proves excellent from the standpoint of growth as well as fat production.

The brown tailed moth is a pest that has done untold damage in portions of the north Atlantic states. It has not only defoliated orchard, but forest trees as well, while it produces an intense irritation when brought in contact with the human skin. Vigorous efforts are being put forth to check the pest, but as yet without very substantial results.

In view of several inquiries relative to the black locust and its suitability for post timber, we hope in an early installment of these notes to have a somewhat extended article from the state experiment station horticulturist giving a summary of experience with this variety of tree through the northern states. Numerous inquiries are being made relative to the black locust in different agricultural journals, and an article of the kind mentioned will be both timely and valuable.

The Langshan.
In England there is on foot a movement to return to the old type of Langshan. The Langshan is an Asiatic fowl and originally very closely resembled the "true" Shanghai of a generation ago, except as to color. Despite the many explanations of the name, it is probable that the homely one to the effect that it is merely an adaptation from the words long shanks is correct.



At any rate, many of the British breeders are arguing that the Langshan, under the requirements of the modern standard of perfection, is losing the characteristics which first made the breed popular and that its former remarkable utility qualities are being literally refined out of it. There is probably a kernel of truth in this charge but the first experiment looking toward what seems to be a step backward in poultry culture will be watched with interest. The illustration here with gives an excellent idea of a Langshan cock of the old type.

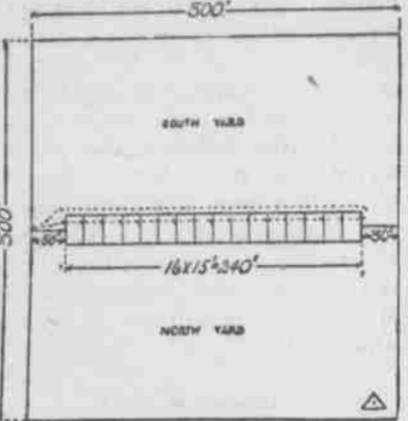
Chamberlain's Cough Remedy
Cures Colds, Croup and Whooping Cough.

SENSIBLE YARDING.

Plan Recommended by a Well Known Agricultural Authority.

A style of yarding recommended by Professor James E. Rice of Cornell College of Agriculture and shown herewith consists of a long or continuous house 240 by 15 feet, divided into pens 15 by 16 feet, there being sixteen pens or fewer, the same proportion, of course, being maintained. This is a most convenient arrangement, says L. E. Keyser in Poultry Success. The yard is 300 feet each way, containing 90,000 square feet or pasturage for 800 or 900 fowls. The pens are ample for fifty fowls. There are a little over two acres in the yards. A method followed with similar yards is to confine the fowls to the north yard about Aug. 1. Then the south yard is plowed and about Sept. 10 sown to rye and grass seed, or clover may be sown on the rye in the spring. When the rye has made a good start, say the middle of October, the hens are turned on it and allowed to run there until confined to the house for winter.

In the spring the north yard is plowed and planted to corn, which is cul-



LOCATION OF HOUSE AND DOUBLE YARDS.

ivated in the usual way. After the last cultivation and the corn has reached a considerable height, which will be about the 1st of July, the hens are allowed to run in both yards. The corn affords them shade, and they wallow in the soft earth, eat the lower leaves and suckers and keep the corn well cultivated. They will get some of the lower ears, but on the whole the crop will be about as large as if the hens did not occupy the yard. They will not have been able to stamp down the rye, and some of this grain will ripen. If the hens do not secure it all, it may be cut and used for winter litter. In September the hens are again confined to the south yard, the corn in the north yard is cut, the land plowed and sown to rye, and the following season the south yard is planted to corn. This gives a constant rotation of crops on the land, which keeps it sweet and at the same time affords considerable food for the fowls.

Feed For Waterfowl.

In feeding the young of all kinds of waterfowl depend upon the mash. Nothing is better for them than ground oats, corn and bran, says the Feather—equal parts in weight mixed into a semi-dry mash and fed to them in boxes or troughs, not a large amount at any one time, reasonable amounts frequently. Always have a full water supply near at hand. Waterfowl always eat a little, then drink a little. This they keep up until fully satisfied. An inexhaustible supply of green food is an absolute necessity for the raising of geese. Nothing is more easily raised when once hatched than the young goslings. After they have become a few days old they may wander with the mother goose, provided they are watched a little when they go about the water or storms come upon them. After they are a month old they can battle with the parent geese in the struggle for life.

"Sealy Leg" Is Contagious.

Sealy leg is a form of scabies or mange, caused by the mite known as the Sarcopites nutans. It is a contagious disease, but does not spread very rapidly, and there may be only a few affected birds in a flock at one time. When the disease is first observed prompt and energetic measures should be adopted to eradicate it. The affected birds should be isolated to prevent the spread of the contagion. Begin treatment by soaking the legs in warm water to which soap has been added until the scales have become thoroughly softened, and the loose scales can be removed without causing bleeding. After this has been done apply a good coat of carbolic ointment or balsam of Peru. This should be repeated daily for three or four days.

Beef Scraps.

Beef scraps is the name of a byproduct of slaughtering houses and consists of waste pieces of the animals, such as shins, heads, lights, the "sticking pieces," etc. These are steam cooked, then subjected to strong pressure to extract all the fat possible, then kiln dried and ground into scraps or meat meal. When rightly made, they are a fine animal food for hens and chicks, but if filth and offal are thrown in with them they are anything but a good food. They are then only fit for fertilizer.

The Buff Turkey.

The buff turkey is of American origin, having been brought out but a few years ago. Plumage color, pure buff, the wings being a very light shade of buff. Standard weight: Cock, 27 pounds; cockerel, 18 pounds; hen, 18 pounds; pullet, 12 pounds. Disqualifying weights: Cock, less than 18 pounds; hen, less than 12 pounds.

Promptness In Treating Disease.

If you hope to cure ailments in poultry, you must commence to treat them with the appearance of the first symptoms. Do not delay, or you may never cure them.

CUT GREEN BONE.

It Is Unquestionably the Most Valuable Food Used For Poultry.

It isn't hard to see why fresh cut green bone has given such phenomenal successful results to poultry raisers the world over, says a writer in Western Poultry Journal.

It simply is the most available food product that has yet been discovered to supply fowls with the elements most difficult to get from grain and most needed—to make bone, to make muscle, to make feathers, to make eggs, to maintain health, vigor and vitality.

That's why green bone doubles the egg yield.

It contains more than four times the egg producing value of grain.

That's why green bone makes eggs more fertile.

It tones up the entire system and fills the head of the flock with vim and vitality.

That's why green bone makes stronger, livelier chicks at hatching.

Bone fed hens lay eggs with life and vitality in them.

That's why green bone develops earlier broilers and earlier layers.

It promotes growth and the development of bone and muscle by providing abundant material for making bone and muscle.

That's why green bone makes heavier market fowls.

It gives a good framework to start with and helps lay on heavy flesh.

That's why green bone makes red combs, bright eyes and glossy plumage.

It gives a tone to the entire system of the fowl that nothing else will.

The Molting Period.

The best care should be taken of our fowls to keep them in good condition during the trying period of molting. It is a great drain upon their vitality to grow a new coat of plumage. Too often the needs of our fowls are totally ignored during this really critical season because they have dropped off in egg yield, says American Poultry Journal. It is best to select such fowls from one's flock as you desire to retain for breeding and market the balance before they begin to shed their feathers. We are too apt to look on time spent on our Biddies getting their "new clothes" as lost, not giving due credit to them for the long months of faithful service given in filling the egg basket and hatching and rearing our young birds. In consequence when eggs grow scarce we call into use the hatchet, and not infrequently the most useful members of our flocks lose their heads because of the ragged condition.

Farmers and Poultry.

The farmer has a real grievance against the poultry fancier in that he has done all of his crossing and inbreeding of fathers, daughters, uncles and aunts without any regard to practical utility, says Farming. Whether the hens from which he has been breeding were producing sixty eggs a year or 200 made no difference. His whole aim has been to breed out a foul flight feather or two or to create a better comb or eyes of a better tint at a sacrifice of everything else. The result is that when a farmer goes into the market to buy thoroughbreds with his money in his pocket ready and willing to pay for the best stock he not only often pays for qualities he does not need, but actually pays a premium for something that has been obtained at a sacrifice of the very qualities which he does need. There are a few men, however, raising thoroughbred stock that is "bred to lay" or to meet certain market demands, and these are the men that should be patronized.

White Holland Turkey.

The white Holland turkey is said to be a native of Holland. This breed of turkeys as described by the American standard of perfection is far and away a larger and much more beautiful fowl than the common white turkey of Holland.

The standard weights are: Cock, 20 pounds; cockerel, 18 pounds; hen, 16 pounds; pullet, 12 pounds. Disqualifying weights: Cock weighing less than 20 pounds; hen, less than 12 pounds. The plumage is pure white throughout; shanks and toes, white or pinkish white; eyes, hazel; head, rich red, changeable to bluish white.

Bad Habits In Poultry Culture.

There are a few bad habits in poultry culture. Among those none are so injurious as lack of exercise, overfeeding, overcrowding and the presence of insect vermin, says the Feather. The union of these four destroys many that might otherwise be prosperous flocks and this can be traced to either the ignorance or neglect of the attendant. Either or all should be blamed upon the caretaker. In this day of poultry enlightenment no one can present a reasonable excuse for ignorance, and there cannot be any possible excuse offered for carelessness or neglect.

Delaying Pullet's Maturity.

You can keep pullets back from laying by moving them from one place to another as soon as they show decided reddening combs. A poultryman who wants to get large size on his Barred Rock pullets follows this plan each season, with the result that he holds them back an average of about a month, he thinks, and when they do begin to lay they lay larger eggs than do small pullets and keep right along at the laying.

Belgian Hare Flesh For Fowls.

Nothing is so good for a meat food for fowls and growing chicks as Belgian hare. Boil thoroughly and when dry run through a meat grinder. Nothing in the world can equal this food for winter egg getting. Five does and a buck will supply the needs of a good sized poultry plant.

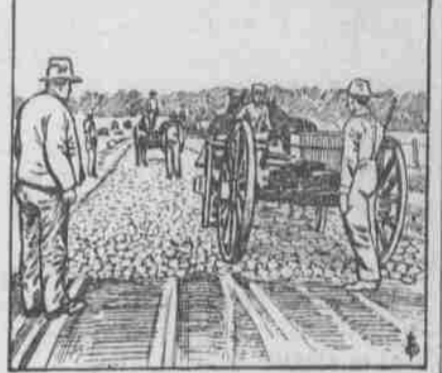
MOST USEFUL ROCKS

VALUE OF CHERTS AND NOVA-CULITES AS ROAD MATERIALS.

Do Not Need Crushing—Are Better Adapted to Light Traffic Than Harder and Tougher Rock—How to Use Them in Road Work.

Cherts and novaculites are among the most useful and valuable of materials for road construction, says Maurice O. Eldridge in the Good Roads Magazine. Aside from the fact that most of them cement readily and wear well, they can frequently be used without being first crushed and separated, a process so essential to a successful road if traps, granites or other hard rocks are used. Assuming that it costs 25 cents per cubic yard to crush the rock for a road one mile in length, fifteen feet wide and surfaced to a depth of six inches (consolidated), the total cost for this item alone would be about \$550. By the use of a material which does not require crushing a considerable saving can therefore be effected when many miles of road are to be built.

Cherts and novaculites are both siliceous rocks and are very similar in



SPREADING CHERT MATERIAL ON A ROAD.

appearance. The two rocks differ materially in their origin. Cherts occur usually in chalk and limestone formations and are generally believed to be formed by a chemical precipitation from sea water. Novaculites, on the other hand, are thought to be true sedimentary rocks, having been formed by deposits of very fine material—silt and sand—in sea water and subsequently solidified. The useful qualities of novaculites as abrasives for sharpening fine tools are well known and are due to the hardness and smoothness of this rock.

In order that a road may bind well, its surface must be composed of fine particles of suitable rock which form the bond. If these particles are blown or washed away they must be replaced, or the bond will be broken and the road will ravel. When roads are surfaced with limestone or chert a comparatively light traffic can be depended upon to supply enough binder to keep the road from raveling. For this reason these materials are better adapted to light traffic than harder and tougher rocks.

When bank cherts are first spread upon the road they are sometimes soft and brittle and apparently almost useless as a road material, but when the materials are exposed to the action of traffic and the elements the surface soon becomes a solid, compact mass.

Cherts and novaculites are invariably found in sedimentary formations. The material is also found sometimes completely covering the ground, sometimes in the beds of streams and narrow valleys, where it has been deposited by the action of the water, and again in banks and pockets on hill and mountain sides. Cherts are usually found in nodular masses, but, like novaculites, may occur in angular fragments, varying in size from about one to six inches.

Where these materials are found in banks or the beds of streams they are commonly called gravel. Creek gravel, formed from chert or novaculite, is usually of uniform size and comparatively clean, while the bank gravel often contains earthy matter and fine particles of the same material. The creek gravel usually wears the best, but it does not bind so readily or form as smooth a surface as the bank deposits. Where both creek and bank gravel is available good results can be obtained by using the former for foundation and the latter for wearing or binder course. The writer used this method at Florence, Ala., with marked success.

Where the material is plentiful and where a good quality of bank gravel is available for a binder it is unnecessary to go to the trouble and expense of cutting out a subgrade or to prepare earth shoulders, as is done for regular macadam. If the shoulders are dispensed with, however, it is absolutely essential that the surface course contain a sufficient quantity of good binding material; otherwise the bond will soon be broken, the material will spread, and much of it will eventually be forced or washed into the side ditches. The roadbed should of course be shaped with a road machine before the material is placed and given a slight crown of from three-eighths to one-half of an inch to the foot from the center to the sides. The foundation should then be rolled and the material for the first course spread in two layers and rolled and sprinkled in the usual manner. The spreading of the material can be accomplished by the use of a road machine, provided the gravel is not too large. The total depth of material may vary from four to nine inches at the center, as soft and traffic may require, and gradually diminish in thickness to what is commonly called a "feather edge" at the sides. If the most approved method is followed, shoulders should be provided to hold the material in place. The material should then be spread to a uniform depth from the center to the sides.

THE SUNDAY SCHOOL

LESSON VII, FIRST QUARTER, INTERNATIONAL SERIES, FEB. 17.

Text of the Lesson, Gen. xlii, 1-14; Memory Verses, 8, 9; Golden Text, Luke xli, 15—Commentary Prepared by Rev. D. M. Stearns.

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We have but one lesson assigned in the two chapters xlii and xli, and we must endeavor to get an idea of the contents of the two. Last week we had Abram in a bad way, wandering from God, fearing he might be killed, and fearing a lie and being reproved by a heathen king. How blessed it is that though we forget Him and wander away still He doth love us wherever we stray, and when we turn back He is ashamed of our wanderings He is always ready to receive us. John vi, 37 stands ever true for sinner or sinner-wise cast out." The lesson today opens with Abram returning to God and his altar at Bethel and again calling on the name of the Lord. If through temptation we ever wander from God, let us quickly return, for if we confess our sins He is faithful and just to forgive us our sins, because of our obedience (1 John 1, 9; ii, 1). He who longs to forgive seventy times seven practices the same Himself, and what a wonder it is that He so watches over His wandering children that if any dares to touch them He at once stands up for them (chapter xli, 17).

Abram and Lot have now grown so rich that it is impossible for them to dwell together, and when Abram saw that his herdmen and those of Lot were at strife in the presence of the inhabitants of the land he said that it must not be, but that they must be separated. So he gave Lot his choice of all the land and said that he would take what Lot did not choose. How this must have excited Abram, but specially the God of Abram, in the eyes of the heathen, and that is the one thing the children of God are on earth for, to magnify the name of the Lord, that He may be known.

Lot did not know God as his uncle Abram did, but was more apt to think of himself and his own welfare, so he took advantage of his uncle's offer, probably with great alacrity, and was soon settling himself in the cities of the plain toward Sodom, not seeming to consider the wickedness of the people of Sodom, though he doubtless knew it (verses 12, 13). Lot lifted up his eyes, like so many now, just high enough to see something which appeared to be to his advantage, regarding what God had to say about it. We do not read of Lot building an altar or calling on the name of the Lord.

This separation of Lot from Abram (verse 11) was a good thing for Abram and his servants, but it was a bad day for Lot when he went away from Abram. There are those who, being so weak in themselves and not knowing how to lean upon God, seem specially to need some godly person ever near them to counsel them and keep their eyes upon the Lord. Blessed are all who are willing to be separated from all that is not of God that they may live as near to Him as possible and walk humbly with Him. Nothing separates from the world like the conscious and enjoyed presence of God, for as Moses believed and taught and Paul also (Ex. xxxiii, 16; 11 Sam. vii, 23, 24; and the Spirit, through Paul, emphasizes the same good truth (1 Cor. x, 17, 18). On the other hand, as we choose the world and the gratification of self, we lose that fellowship with God which is our high privilege. One or the other we are choosing always, and as you read this will you not lift up your heart and say to Him who reads the heart with His eyes as a flame of fire searching every part, "Lord, what dost Thou see my heart choosing and longing for?"

To stop at verse 13 would be to miss a most important part of the lesson, for after Abram had humbled himself and given Lot the first choice, instead of insisting on his rights as the one whom God had called and to whom He had given the land, then the Lord said to Abram, "Lift up now thine eyes," and commanding him to view the whole land, reassured him that it was all given to him and to his seed, which would be as numerous as the dust of the earth, forever (14-17). Abram might justly have insisted that Lot had not say in this, that all his wealth and prosperity were due to being with his uncle and that he must make his own behave themselves or else get away back to Haran or somewhere else. Today the head of the concern would be apt to make the other man go under.

Contrast Lot going down into the world and his sinfulness for the sake of gain and Abram going still farther away up to Hebron, which signifies fellowship, and building his altar unto the Lord (verse 18). To Lot it is first business, getting on in the world; but to Abram it is "first the Lord and His righteousness."
In all the story of Lot we must remember that it is written of him, "that righteous man" (11 Pet. ii, 8), otherwise as we read of him and his doings we will hardly think that he was righteous; but, seeing him as such, we will better understand God's dealings with him. In chapter xiv, 12, where we read that he and all his goods were taken by the enemy, we see the uncertainty of riches (1 Tim. vi, 17), and God was evidently teaching His unworthy worldly child this lesson, but He had pity upon him and allowed Abram to rescue him. He had been getting on in the world by getting more into the world (compare xlii, 12; xiv, 12), but this chastening did not profit him, for after his return, he gets to be a ruler in Sodom (chapter xiv, 1), one who sits at the gate.