

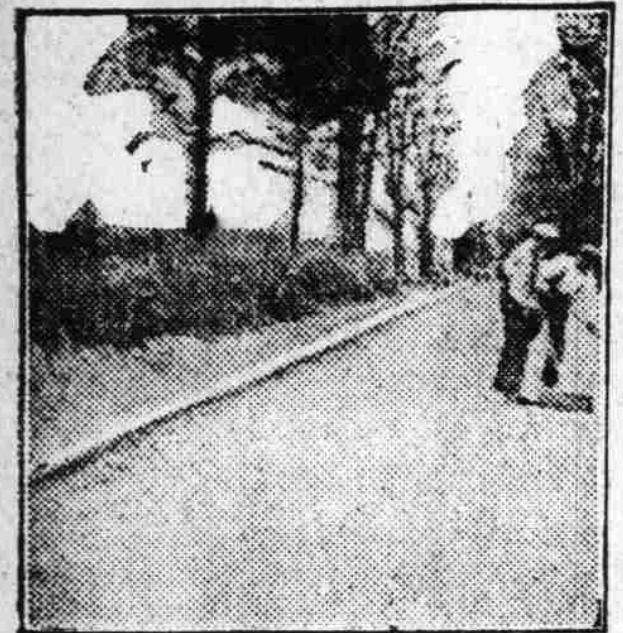
Better Roads

BETTER TO BUILD UP ROADS

Continuous Care Has Been Largely Responsible for Improved Highways in Maryland.

It is better to build a cheap road and keep it in good condition by adequate maintenance than to build the most expensive highway and permit it to deteriorate for want of care, say officials of the bureau of public roads of the United States Department of Agriculture.

Maryland, which has one of the finest systems of improved highways in the United States, if not the best,



Patching a Macadamized Road in Maryland.

has consistently followed this practice. The originally improved roads in Maryland were comparatively inexpensive, costing only what the taxpayers were willing to pay for. The first few years the average cost was less than \$10,000 a mile. In some cases the work entailed considerable grading and drainage, but in others it amounted simply to resurfacing the old turnpikes, which had already been graded and drained.

Generally the roads built at that time were macadam, 12 feet wide and six inches thick. Soon the width was increased to 14 feet. Later many were widened still farther, some very successfully, by adding concrete shoulders on each side of the existing macadam. This method of improving roads makes it possible for traffic to continue unimpeded on the road while the work is going on.

The macadam roads in Maryland have given very good satisfaction, but continuous care has been largely responsible for their success. The roads are constantly patrolled and no hole of any size is allowed to go unrepaid. Material for patching is kept at convenient points along the road for the use of the patrolman. From a relatively small investment in an admittedly low-type road it builds up a better one from year to year, always conserving the bulk of the previous investment.

KEEP ROADS OPEN IN WINTER

Federal Highway Commission Suggests That Special Efforts Be Made by State Officials.

It is suggested by the federal highway council that state and county highway departments make a special effort to keep the roads clear of snow during the winter months and thus permit of uninterrupted traffic. The transportation of certain commodities is really more important during the winter than in summer and it is then that the roads are more difficult to pass over. Then, too, the rural mail must be carried whether roads are good or bad, and when the snow drifts several feet deep over the roads the life of the rural mail carrier is anything but pleasant. As the snow melts it transforms many roads into a mire that is almost impassable. On any road, no matter how good, there is a tendency for the melting snow to soften the subgrade and loosen the base under the wearing surface, thus causing great damage to the road.

Road officials could do nothing better than to keep their equipment busy in the winter removing the snow from the road surfaces. It is one form of maintenance work that is very essential in lengthening the life and usefulness of the highways.

BENEFIT TO SUBURBAN LAND

One Advantage of Road Improvement Would Be to Open Up Territory for Homesteads.

Another change in the use of land which may result from road improvement, especially near towns and cities, is to make it available for suburban development. This might better be termed increasing the home value of the land, and it will be found to apply where the land is retained for its original uses as well as where, following road improvement, it is utilized so as to yield a higher return on agricultural products. The home value of land is one to be given consideration.

Roadside Tree Planting. Roadside tree planting had best not be in formal rows, but in groups or as a specimen tree at irregular intervals. Street trees should be in straight rows of the same species for ten or twelve blocks.

Profit in Winter Eggs. The profit is made on winter eggs. Almost any hen will lay in the spring, but prices are usually lowest then, and it requires a good many eggs to pay a hen's keep in these days of the high cost of living.

HomeTown Helps

USE OF TREES AND SHRUBS

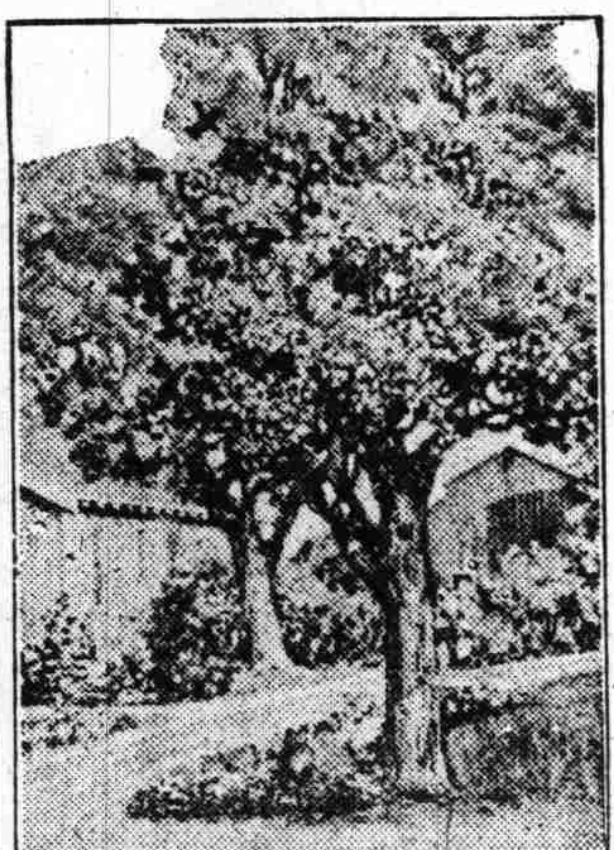
Effectively Employed, They Are of Immense Importance in Improving Appearance of House

It sometimes happens that barns are necessarily of greater size than the dwelling, and so have the appearance of being more important. Yet



Unightly Barns.

the building of chief importance always is the home. That fact can be made plain by manifesting special regard for the appearance of the house. Trees and shrubs will hide the encroaching but necessary service buildings and emphasize the true center



With Trees and Shrubs.

of interest—the home. The illustrations show how the scheme may be carried out to the best advantage.

EASY TO GROW GRASS LAWN

Perfect Greensward May Be Quickly Realized by the Use of Novel English Method.

It is proverbially a slow business getting a good grass lawn in a garden, but a new English idea makes it possible to secure a fine stretch of verdure just as one would buy a carpet at the stores. Grass seed is sown thickly on strong canvas and, when this is thickly covered with growth it is ready for making the lawn.

The site is well prepared, being made perfectly level, and special attention is given to getting the soil so that it is a favorable rooting medium for the little plants. Then the grass mats are put down on sections, these being closely fitted together. As time goes on the roots push down through the canvas and, in this way, establish a permanent lawn. Ultimately the material will rot. The value of this lies in the fact that an immediate effect can be secured. It is quite easy to have a splendid grass lawn in a situation where, a few hours before there was nothing of the kind. Thenceforward the grass will go on improving and the little plants speedily take a hold on the soil.—Scientific American.

Trees Beyond Valuation. Ten million dollars' damage annually is done to the shade trees and hardy shrubs of the country by shade tree insects, according to estimates made by the bureau of entomology, United States Department of Agriculture.

It is very difficult to estimate the money value of the shade trees and shrubs of the country, but a very conservative estimate would place their value at \$1,000,000,000. These figures were reached after extensive correspondence with the forestry and other authorities of states and municipalities. A more definite census is aimed at, but the figures are taken as dependable for general purposes. They are based on the value of trees to cities, parks and private property, and have no reference to the bare intrinsic value of wood or lumber. An old oak tree which, because of its condition is not worth \$2 for lumber, may add \$500 to the value of the city lot on which it is located.

City Has Right Idea. A campaign to beautify school surroundings has been started by the architectural-engineering department of the public schools. About \$95,000 will be spent this year, it is announced. A. D. Weeks, director of the department, says that from a landscape standpoint Detroit schools rank poorly in comparison with eastern cities though they compare favorably in architecture.

In the past, work of this sort has been largely assumed by the pupils who performed the labor and bore the expense.—Detroit Free Press.

LIVE STOCK

COLLEGE EDUCATION FOR BOY

Kentucky Lad Saves Enough From Sale of Litter of Fine Pigs to Pay for Schooling.

Here is the story of how a litter of pigs produced an agricultural college education, a system of farm water-works and general improvement on a backwoods farm that had only primitive advantages.

The education went to Jeff Anderson, a Kentucky boy of Pulaski county.



Pigs Almost Ready to Root for Themselves.

Jeff belonged to a boys' club which had been organized by the county agent. He was encouraged to raise a litter of fine pigs under the club system by which the boys applied approved methods and kept account of the results. The pigs sold for a fancy price. Jeff, who had made sure progress, saved some money from his labor and in 1918 entered the Kentucky State College of Agriculture for its short course.

He had been used to seeing his mother and other women carry water 150 yards up a hill for washing and cooking. At the agricultural college he realized the convenience and benefit to be gained by running water conducted to a tap in the kitchen. When he returned home he persuaded his father to let him put in a water system. A stand pipe 60 feet high was built with a 500-gallon tank on top, which gave sufficient pressure to force water to the dwelling 400 feet away. He rigged up a gasoline engine and pump at the spring under the hill. He had learned a little about plumbing, so he did all the pipe fitting in the house. One month's work at odd times, coupled with a little of the knowledge he had gained at the State College of Agriculture put the water right into the kitchen. Jeff has gone back to complete his college education; and they're still raising better pigs at the Anderson farm.

RANGE STOCK IS IMPROVED

All Kinds of Sires, Bulls Especially, Are Receiving Close Scrutiny by Breeders.

In the western range states all kinds of sires—bulls especially—are receiving scrutiny by live stock owners. There is increasing evidence that good purebred males have wide influence on the quality of young stock and on the returns from stock-raising operations.

One day recently the United States Department of Agriculture enrolled in the "Better Sires—Better Stock" movement several ranchmen, each of whom had more than 1,000 head of live stock. One flock of sheep contained 250 purebred ewes and 3,450 crossbred ewes, the sires being all purebred. A cattle raiser who enlisted in the campaign the same day notified the department: "I have disposed of two grade Hereford bulls recently, having decided to run nothing but purebred sires." This remark is typical of the progress of the movement in Montana.

TO RESTORE MORGAN STRAIN

Efforts of Department of Agriculture Shown in Recent 300-Mile Test for Horses.

Efforts of the United States Department of Agriculture to restore the Morgan strain of horses, which had become nearly extinct, showed their effect in the recent 300-mile test for army horses. Out of 27 entries, only ten finished, and of these the sixth and seventh were Morgan horses, one of them raised on the department's stock farm in Massachusetts. The horses were required to travel 60 miles a day for five days, carrying the regulation cavalry load of 245 pounds.

PROFITABLE TO RAISE MULES

Plan Suggested to Farmers Who Experience Difficulty in Selling Young Horses.

Men with good-sized mares, who are having a hard time disposing of young horses will find it more profitable to raise mules than to raise colts. Medium-priced jacks can now be purchased with a reasonable certainty of breeding.

SUNDAY SCHOOL LESSON

By REV. P. B. FITZWATER, D. D., Teacher of English, Bible in the Moody Bible Institute of Chicago. (© 1920, Western Newspaper Union.)

LESSON FOR JANUARY 23

PROMOTION IN THE KINGDOM.

LESSON TEXT—Matt. 20:17-23. GOLDEN TEXT—The Son of Man came not to be ministered unto, but to minister, and to give His life a ransom for many.—Matt. 20:28.

REFERENCE MATERIAL—19:27-30; Mark 10:32-45; Luke 22:34-30.

PRIMARY TOPIC—Wanting More Than Our Share. JUNIOR TOPIC—How to Win First Place. INTERMEDIATE AND SENIOR TOPIC—Right and Wrong Ambitions. YOUNG PEOPLE AND ADULT TOPIC—Greatness Through Service.

1. Jesus Foretells His Death and Resurrection.

1. The King on His way to Jerusalem (vv. 17-19). This is His last journey to the beloved city. He took the twelve disciples aside from the group of traveling pilgrims to make known unto them what was before them. On the journey He went ahead of the disciples. The courage thus shown by the Lord amazed the disciples who were following in fear (Mark 10:32). "Christ, the conscious and certain sufferer, is courageous. His followers who had nothing to fear were afraid."

2. Betrayal and death foretold (vv. 18, 19). He went forward fully conscious of the awful tragedy of the cross. He for the third time since the transfiguration tells the disciples of His suffering and death, but they are so filled with their ambitious schemes that they do not understand Him. The treachery of Judas Iscariot; the fierce persecutions of the chief priests and scribes; the unjust judgment; the delivery to Pontius Pilate; the mocking; the scourging; the crown of thorns; the cross; the hanging between two malefactors; the nails; the spear; all were spread before His mind like a picture. Though He knew all this He desperately pressed on. The joyous outlook upon the victory which would be accomplished by the shedding of His blood led Him forward. He went courageously, for He knew the time had come for the accomplishment of His Father's will.

3. The resurrection foretold (v. 19). Truly this would have been a dark picture had the resurrection not been made known.

11. The Ambitious Request of James and John (vv. 20-23).

1. The request (vv. 20, 21). This request was made by their mother. The request is for a place of prominence in the kingdom. It is right for mothers to be ambitious for their boys, but they should know that earth's pinacles are exceedingly dangerous.

2. Jesus' answer (vv. 22, 23). He spoke directly to the men, not to their mother, declaring that they knew not what they were asking. He showed them that the way to this position of glory was through suffering. The cup of which they were to drink was that of great suffering and agony. The positions which they craved were attainable, but in a very different way from what they apprehended. The way to the places of glory in the kingdom of Christ is through the path of lowly and self-forgetful service, even great suffering.

3. How to Be Truly Exalted (vv. 24-28).

1. The angry disciples (v. 24). When the ten heard of the request of James and John they were filled with indignation against them. Their displeasure did not arise from the fact that they were free from the same selfish spirit, but that these two had thrust themselves to the front; it was an admixture of indignation and jealousy.

2. Greatness among the heathen (v. 25). The rule of the world has always been by the strong hand. The standards have been not moral excellence, but wealth, station and power. Even today the reason one nation rules the other is that the one possesses sharper swords and heavier clubs than the other.

3. Greatness among Christ's disciples (vv. 26, 27). Here the standard is in sharp contrast. The way to the places of prominence in Christ's kingdom is the way of self-abasement. It is not wrong to be ambitious to be great, but the basis of true greatness is that which human selfishness seeks to avoid. There will be degrees of rank in Christ's kingdom, but this rank will be character, not position or authority.

4. Christ is the supreme example of greatness (v. 28). All who would be great should study and imitate Christ. Let them forget self and serve others, even to give their lives. This will eliminate all scrambling for place and power. The one grand test by which to know whether Christ's Spirit controls one is whether he is serving or seeking to be served.

Christianity is Still Alive.

The greatest tribute to the necessity of religion is that it survives its outward form; the greatest proof of the essential truth of Christianity is that in spite of the twaddle talked every Sunday in the name of Christ, Christianity is still alive.—H. R. Hawes.

The Instructor.

My hurt has been my instructor, and I wish it may make me more cautious and less simple.—Thomas a Kempis.

GUINEA FOWL IN GREATER DEMAND

Of Big Value in Various Sections as Substitute for Many Game Birds.

MAKES GOOD AS POLICEMAN

Hotels and Restaurants in Large Cities Eager to Secure Young Birds Which Are Tender and of Fine Flavor.

The great majority of guinea fowl are raised in small flocks of from 10 to 25 upon farms in the Middle West and in the South, but a few of the large poultry raisers, particularly those who are within easy reach of the large Eastern markets, make a practice of raising a hundred or so guineas each year. Many farmers keep a pair or a trio of guineas more as a novelty than for profit, and from these a small flock is raised.

Warns of 'Marauders.' The guinea fowl doubtless would be more popular on farms were it not for its harsh and, at times, seemingly never-ending cry, say poultry specialists of the United States Department of



Peculiar Cry of Guinea Gives Warning of Marauding in Poultry Yard.

Agriculture. However, some people look on this cry as an argument in the guinea's favor, as it gives warning of marauders in the poultry yard. Similarly, their pugnacious disposition while sometimes causing disturbances among the other poultry also makes them show fight against hawks and other common enemies, so that guineas sometimes are kept as guards over the poultry yard. Often a few guineas are raised with a flock of turkeys and allowed to roost in the same tree, where they can give warning if any theft is attempted during the night.

Used as Substitute.

The value of the guinea fowl as a substitute for game birds such as grouse, partridge, quail and pheasant is becoming more and more recognized by those who are fond of this class of meat and the demand for these fowls is increasing steadily. Many hotels and restaurants in the large cities are eager to secure prime young guineas, and often they are served at banquets and club dinners as a special delicacy. When well cooked, guineas are attractive in appearance, although darker than common fowls, and the flesh of young birds is tender and of especially fine flavor, resembling that of wild game. Like all other fowl, old guineas are very likely to be tough and rather dry.

RIDDING HENHOUSE OF MITES

Cleanliness and Disinfection Required to Destroy Parasites That Live on Fowls.

To rid the henhouse of the little red mite that stunts the hens so much requires cleanliness and disinfecting. The fith must be cleaned up, the house ventilated and the sunlight let in. Removable roosts and drop boards will help clean up the house. To disinfect the roosts and house everything should be painted or sprayed with a solution of two parts of oil and one part of stock dip. Applications should be made in pairs about five or six days apart in order to kill the mites that have hatched since the last spraying.

GREAT ASSISTANCE OF BIRDS

Little Feathered Songsters Do Much Toward Good Crop of Fruit by Devouring Insects.

A good crop of birds goes a long way toward a good crop of fruit. Encourage the children to feed the birds during the cold, stormy weather and in spring they will pay you a hundred-fold by clearing the orchards of insect pests.

SQUEALING PIG BEST

The pig that keeps still is the pig that sucks the most swill, runs a saying. Maybe so, but we have observed that the hungry porker who is always complaining to high heaven about his appetite usually proves a growther, thrifter, and consequently more profitable individual than his tongue-tied brother.

CUSTOMERS SECURED FOR POULTRY SHOWS

Persons at Summer Resorts Buy Produce in Winter.

City People Have Inspected Producer's Farm and Know Under What Conditions Foodstuffs Are Raised—One Case Cited.

Many producers living near summer resorts supply produce in the summer months to the persons at the resorts, and during the other months of the year ship produce to these persons while they are in the city. This, say marketing specialists of the United States Department of Agriculture, is one of the best methods of obtaining customers for direct marketing, as the producer and consumer have some acquaintance. In most instances the customers have been at the producer's farm and know under what conditions the articles are produced.

One man who lives near a summer resort in Indiana is about twelve miles from the nearest town of any size. He does not desire to drive to this town to dispose of his farm produce and is not satisfied with the prices that the hawksters pay. Consequently he built up a business of supplying products to resorters in the summer and of shipping produce by parcel post and express to these persons at their city homes in the winter.

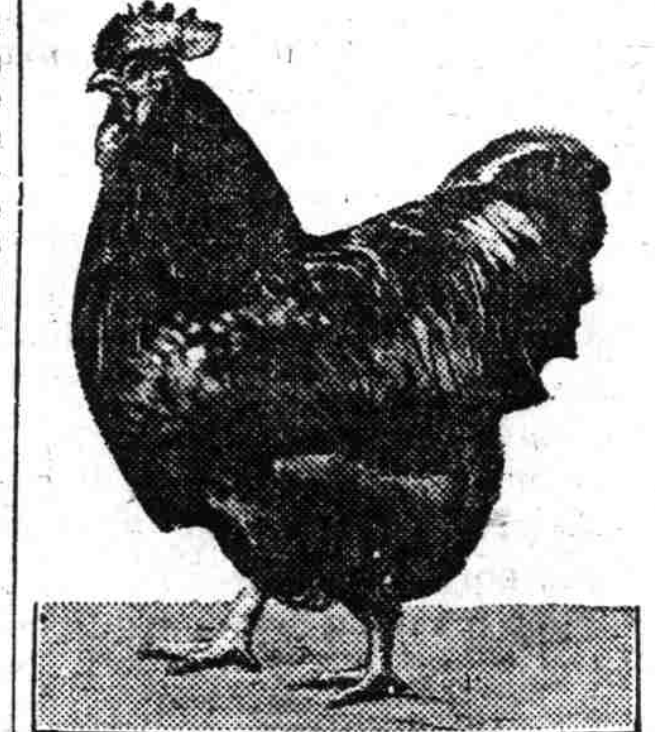
The principal products shipped are butter, eggs and dressed poultry. This producer uses good shipping containers and packs produce attractively. As he is acquainted with his customers, he renders statements of accounts only once a month. In this way the matter of making payments is simplified for the customers.

This producer has had no trouble in establishing his business nor in retaining customers. He states that his only trouble has been in getting enough high-grade produce to supply all of his customers.

OBTAIN BEST HATCHING EGGS

One Male Should Be Used With Every 15 Hens of Breeds Like Orpingtons or Rocks.

The male must be in the flock from ten to fourteen days before the eggs laid can be used for hatching purposes. After the male has been removed from the flock, hatchable eggs will be laid for about three weeks thereafter. To secure good, hatchable eggs, provide one male to every twenty leghorn or other egg breeds; use one male to



Single Comb Black Orpington.

every fifteen Rocks, Reds, Wyandottes or Orpingtons, and one male to each twelve Langshans, Brahmans or other meat breeds.

BARIUM POISONOUS TO RATS

Tests Indicate That a 20 Per Cent Mixture With Food Makes Most Satisfactory Bait.

A study of barium carbonate as a rat poison, made by the United States Department of Agriculture, indicates that a 20 per cent mixture with food makes a satisfactory bait. With this percentage a rat ordinarily needs to eat only one-third or three-eighths of a meal of average size to get a fatal dose. It was found that with this dose many of the rats poisoned died within 24 hours, though an occasional rat was found which survived an even larger amount, thus indicating that 100 per cent mortality is not to be expected in any case.

A summary of results of experiments conducted by various persons with a view to determining the deadliness of barium to different animals shows the fallacy of the assumption that barium is poisonous only to rats. It is pointed out that the fatal dose of barium per pound tends to decrease relatively as the size of the animal increases, and that a bait calculated to be fatal to rats may be assumed to be more or less dangerous to small domestic animals also.

SUCCULENT FEED FOR FOWLS

Now That Good Qualities of Forages Are Well Known Hens Should Be Given Ample Supply.

Everyone knows that a hen lays best when she gets the succulent grasses that first shoot out of the earth in spring. Most successful feeders use in their mash a base of some heavy, nonfattening, yet nutritious food. For a long time the best feeders of the country used wheat bran for this base, but now that the good qualities of forages are well known the bill of fare should be changed to suit.