

# Farm and Garden

## DRY CORN FOR HOGS.

Results of Experiments Made by the Iowa Agricultural Station.

The Iowa experiment station double the 100 has made investigations relative to the preparation of corn for hogs. Six forms of corn were tested—dry ear corn, soaked shelled corn, dry cornmeal, soaked cornmeal, dry corn and cob meal and soaked corn and cob meal. The experiment included 312 hogs of all ages, fed in thirty-two lots. The results were summarized and



DURKIN-FERRY BARROW.

(Fed dry cornmeal and meat meal eighty-four days, weight at start, 40 pounds; gain, 27 pounds, or 138 pounds a day.) (Photo from Iowa agricultural experiment station.)

The conclusions drawn that dry corn is highly relished by hogs and the most convenient to feed. Owing to the greater time required to masticate it, pigs ate it more slowly than soaked corn and cornmeal.

The fastest and most economical gains were obtained by feeding dry ear corn until the hogs were close to 200 pounds in weight. Attention is called to the fact that whether fed dry or soaked before feeding, a bushel of corn ground without the cob made more pork than a bushel of corn ground with the cob. A bushel of ear corn made as much gain as one and one-third bushels ground into corn and cobmeal at the expense of 6 cents a bushel.

Writing on this subject, the American Swineherd says:

The farmer who makes a practice of raising grain exclusively, hauling it to the elevator and selling it is robbing himself, or, in other words, depleting the fertility of the farm.

Every year as the crop is gathered and sold off the place it is left with decreased productive power for the future. It is like mining or digging out the value of the soil and shipping to the market. It is selling your farm virtually through the elevator.

Selling the corn by the hog route or through any other live stock is retaining the fertility. By a proper system of diversified farming and rotation of crops you can build up and improve instead of destroying the productive-ness.

## HOW TO COLOR STEEL.

Method of Making Permanent Black Free From Rust.

To insure success the steel articles must previously be polished and freed from grease. When this is done prepare a bath of 1,000 parts of hot water and dissolve the following chemicals in it: Five parts of caustic potash, ten parts of cyanide, five parts of potassium chlorate, one-fifth part of white arsenic and twenty parts of Schlippe's salt (sulphammoniate of sodium).

Use the bath with zinc contact. If it is of moderate temperature the color will range from pearl gray to gray black. By adding about twenty parts of copper hemisulphide it will become deep black. It is advisable previously to treat the article with the steel matting brush.

The second process is to be applied cold and without any contact. Coat the articles by means of a brush with a solution consisting of two parts of hydrochloric acid, two parts of water and one part of tin salt.

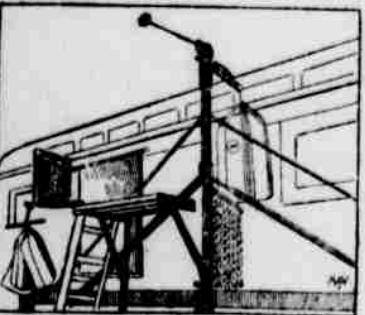
After about fifteen minutes coat with a copper solution of one part of vitriol in sixteen parts of water. With the addition of sufficient aqueous ammonia to dissolve the blue deposit which has been formed to a clear blue fluid. When the article is dry after this process wash it well with water and place it for a few minutes in a diluted solution of potassium sulphide. Then remove it, rinse it well with water and dry it. A dead gray black color will be obtained by this process.—Journal der Goldschmeldekunst.

## MAIL CATCHING DEVICE.

Delivers and Recovers Mail Bags From Moving Trains.

A new mail catching device which not only delivers mail bags to fast moving trains, but recovers them as well, handling two or more bags as easily as one, is being installed on the Freeport division of the Illinois Central railroad.

The unique feature of the catching device is the baggy steel chain nets, which operate in the following man-



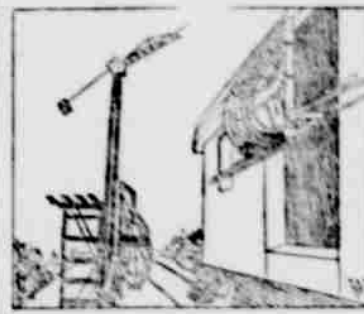
DEVICE IN OPERATIVE POSITION.

ner: Attached to the outside of the mail car is a square steel frame, to which the chain net is attached. This frame is made to swing on hinges attached to sliding bars so as to permit the device to be quickly shifted from one side of the car door to the other, according to the direction in which the car is moving. Attached to the lower outside corner of the frame is the one end of an iron rod, with the other end traveling on a bar attached to the car

side containing a set of spiral springs so adjusted as to bear by compression the shock resulting from the frame and not catching the mail bags. On the same outside corner of the frame, below where the rod is attached, is a hook or finger for the attachment of the bags to be delivered.

The roadside device, which acts in conjunction with the one attached to the side of the car, is similar in all respects, except that the bags it delivers to the train are hung above the receiving net, while with the car device the bags hang below the net.

The illustrations show clearly how the device operates. One of them shows the car approaching the roadside catcher, with the bags in position to be delivered to the station and one



THE MAIL EXCHANGER.

bag in position to be delivered to the train. The devices make the train rushes past, and the exchange is made, the force of impact being absorbed in the slack of the chain net and by spiral springs. The reflex action of the springs throws the frame and chain nets back, as shown in the lower illustration, with the mail bag surrounded by the nets.—Popular Mechanics.

## LEAD IN MONTANA.

Ores in the Bearpaw Mountains May Prove Valuable.

The approaching exhaustion of the world's richer known lead producing districts gives special interest to the study of any possible source of lead in countries where increasing prices or improved methods may soon make even low grade deposits valuable. Accordingly the United States geological survey has published a report by L. J. Peppercorn on the little known lead field of the Bearpaw mountains, in Montana.

The region considered was long ago prospecting for gold and silver, but no valuable mineral deposits were found until about 1888, when work was begun on a vein of argentiferous galena near Lloyd. A claim on this vein was patented in 1892, but work was suspended because it proved to be unprofitable. Since that time several other claims have been patented, and some work has been done, though no ore has yet been produced.

The rocks in this region are widely mineralized. The ores were probably deposited by hot waters ascending from great depths. Later, during the long continued wearing down of the Bearpaw mountains by erosion and weathering, the metallic minerals were dissolved, carried down again into the rocks by rainwater and redeposited in concentrated form within moderate distances of the surface.

The ore contains a little gold, forty or fifty ounces of silver to the ton and 50 or 60 per cent of lead and is easily crushed and concentrated. More thorough prospecting in this region may develop ore bodies of greater value.

## Lightning Rod Protector.

The lightning conductor point and point rod protector herewith illustrated is the invention of Carl Bajer of St. Louis. It was designed for the purpose of protecting the point rods from the corroding effects of gases due to combustion. Due to the nitric, sulphuric and muriatic acid fumes present in various gases of combustion light-



## SCIENTIFIC AMERICAN.

LIGHTNING ROD FOR CHIMNEYS.

ning conductor points on power plant and smelter chimneys are frequently eaten away or so badly corroded as to destroy their efficiency. To overcome this condition the lightning conductor point here illustrated has been invented, which consists of a platinum tipped point mounted on a rod which is protected by a tubular jacket of carbon.

## USING POULTRY MANURE.

Three Farmers Express Opinions About Its Value as Fertilizer.

The following opinions concerning the use of poultry manure were gathered by the Orange-Judd Farmer:

"As poultry manure is the richest and most valuable farm fertilizer I take special care of it. The most profitable way I have found in disposing of it is to use it as a top dressing for grass. It is also especially valuable for onions and newly set strawberry plants. Corn and nearly all garden crops do well with it. It is especially rich in nitrogen and is quickly available for the use of plants. I never mix it with wood ashes or anything that contains lime, because lime sets free the nitrogen in the form of ammonia. Sifted coal ashes are not objectionable, nor is gypsum. Sand and loam are useful; dry muck is especially so."—Henry R. Ingalls, Greene County, N. Y.

"I have applied several hundred

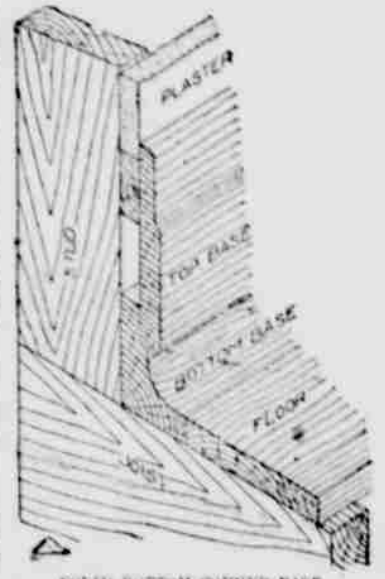
bushels of poultry manure mixed with twice its bulk of stable manure in the fall or early spring to corn land that was badly run down. The result was a yield at the rate of eighty three bushels of corn to the acre. I have also used considerable poultry manure on the garden, but here it should be applied in the fall and harrowed or disked in to give best results. If applied in the spring it often burns tender plants. My best results have come on the corn. In my estimation it is much better than any complete fertilizer costing \$24 to \$30 a ton, provided it is kept dry by being mixed, as made, with truck or other good absorber."—Fred Grunsky, Greene County, Ill.

"Every day I sprinkle the dropping boards in my poultry house with sifted coal ashes and clean them off every morning. The manure thus secured is spread on the garden in preference to every other fertilizer. My garden beats those of all my neighbors."—E. B. Leek, Suffolk County, N. Y.

## SANITARY BASEBOARD.

New Type of Interior Finish Eliminates Square Corners.

In finishing the interior of dwellings the right angle corner formed by the baseboard and the floor, either with or without a quarter round, has never been quite satisfactory. The square corners catch the dirt, and the pieces forming it have a tendency to warp and form cracks. The accompanying



sketch shows a new type of a two piece baseboard which entirely eliminates these troubles. The lower piece joins the flooring and is laid with it, while the top piece is put on after the interior is finished. When complete it has a very neat and pleasing appearance, and it is also sanitary.—Popular Mechanics.

## TO PREVENT JOLTING.

German Invents Substitute For the Pneumatic Tire.

Automobilists undoubtedly will hail with delight the invention of a former German infantry officer by the use of which the running of an automobile over a pavement curb would result in the occupants of the car feeling no jolt. It is asserted that cobblestones and uneven country roads may be negotiated in automobiles with as much freedom from discomfort as is experienced by passengers on railroad trains.

In reporting the invention to the state department Consul Talbot J. Talbot of Brunswick, Germany, sends the following translation describing it: "The greatest difficulty in automobile construction has been the pneumatic hooping of the wheels. The tires are a constant source of worry and, in case of explosion, of danger to the owners of such vehicles. All substitutes, such as spring wheels or solid rubber hoops, have failed to supplant the pneumatic tire. The solid rubber hooping is too dear and, besides, does not possess the requisite elasticity.

"A former German infantry officer has apparently succeeded in solving the difficulty. He has shifted the point of elasticity, which formerly consisted of metal spring plates under the body of the wagon, to the axes of the wheels by an ingenious angle lever system. The result is astonishing. The inventor uses ship's cable for hooping, but even with wooden wheels he can maintain a completely elastic course over cobblestones, country roads, etc., as the wagon jolts are no longer up and down, but move in a horizontal plane, forward and backward. He can cross the pavement curb without the occupants of the automobile feeling a jolt, as the body of the wagon is not raised, as formerly, but drawn under."

## Coins of Aluminum.

After many months of discussion and experimenting the French government has decided not to adopt aluminum coinage. This is on the recommendation of the commission of scientists whom the government appointed to consider the subject. A certain number of aluminum coins were made as a test, but the lightness of the white metal, which was one of its chief recommendations, has condemned it. A five centime piece (1 cent made of aluminum weighed only 1.9 grams as against 5 grams in bronze, and it is thought that a coin so light would slip through the fingers, especially the rough fingers of a workman. Tests are now to be made of bronze, containing 10 per cent of aluminum, which, if adopted, will reduce the weight by one-half. This combination of metals possesses a fine golden yellow color, and the coins made of it will therefore be perforated so that they may not be mistaken for twenty franc pieces.

**Removing Old Paint From Iron.**  
The following is Dr. M. F. Bonzano's recipe for preparing caustic potash lye for removing old paint from iron: Dissolve two pounds of potash in a bucket of water, add about one and a half pounds of slaked lime and stir it well. With a mop apply this mixture to the paint, and after a few minutes it may be easily removed by scraping. As rapidly as the old paint is scraped off rinse the iron with fresh water and dry it. This will leave the iron clean and bright.

## SAVE LABOR ON FARM.

Every Detail Needs Attention if Profits Are to Be Realized From Work.

Much time and money are lost upon the farm by inconsideration. To the farmer labor is money, and time is valuable. Whenever time is lost and labor is sacrificed the profits are apt to be small.

Fences should be located with reference to convenience. The location should be carefully planned before fences are located and fields are laid out for the different crops. Fences are expensive, and they should be constructed with reference to convenience and adaptability. The gates should be properly made, adequately supported and conveniently located. No unnecessary time should be lost in passing through gates and getting the teams to other fields.

The root shed, the barn, the godden and the pasture should all be located with reference to the needs of the man and the horse. Thirty minutes lost every day for a year means a loss of nearly a month's work.

Perhaps less attention is given to the water supply than any other necessity upon the farm. On many farms the well is located in the wrong place and on not a few stock water becomes so difficult to reach. This is extremely unfortunate for the animals as well as for the manager of the farm. Animals are sometimes driven several miles for water and in this way cost themselves more than they are worth.

For convenience the farmstead should be carefully planned before the different buildings are located. Mistakes in building are costly and should not be made. Inadequate buildings, poor fences and inefficient water supply not only reduce the profits of the farm, but cause the hands and teams to be overworked and the children to become discouraged with farm life.—Farm and Ranch.

The average grain crop yield per acre in Ohio has been gradually but surely decreasing. The entire 1910 Ohio wheat crop will be required to pay the cost of the two battleships recently ordered by congress.

## HOPPER FED POULTRY.

Good Results From This Method Where Large Number of Hens Is Kept.

Where hens are kept in large numbers no plan will give better general results than hopper feeding a dry mash and scattering hard grain in a litter. The economy in feeding the mash dry from a hopper is in the reduced labor, which is one of the most expensive items. Doing the work with half the labor, says New England Poultry Journal, means that we can keep twice as many hens, and if each individual hen does not pay its large profit as where more labor is given her the aggregate will be larger.

For instance, if 500 hens at a fixed cost of \$500 produce 8,000 dozen eggs it would be more profitable with the



SELF FEEDING HOPPER.

same labor to keep 1,000 hens at a fixed cost of \$1,000 and produce 10,000 dozens of eggs. If the eggs sell at an average price of 30 cents a dozen we would receive in the first instance \$1,500, or \$1,150 profit, and in the second instance \$3,000, or \$2,000 profit. There would be the increased investment of 500 hens and additional house room, amounting to about \$500. But this would be fixed capital, and the interest and depreciation would not amount to more than 10 per cent, or \$50. So by keeping 1,000 instead of 500 we would really gain \$900 above all expenses.

This of course is a loose estimate, for with good care 1,000 hens quartered on four or five acres will lay more than 10,000 dozens of eggs in a year than if we have the right kind of hens. Poor hens will not pay a profit anyway, so there is no use figuring on them. That is a mistake many make. They think one hen is as good as another of the same breed.

The breed has little to do with the laying of individual hens. As a race some fowls are more prolific than others. A simple diet and hard work mean a lot of eggs.

## Importing Burdock Root.

Notwithstanding the thousands of acres of burdock that yearly mature their unsightly crop of seed in vacant places all over the country, we nevertheless import annually from European countries 125,000 pounds of dried burdock root, those preparing it receiving from 3 to 8 cents per pound for it.

## ONE VIEW OF FARMING.

Read Here About Conditions Found Thirty Miles From Chicago.

"I am willing to believe anything about the prosperity of western farmers after a recent adventure of mine near Chicago," said a man just returned from his vacation. "My wife and I were visiting friends in Chicago when I received a letter from an old school mate asking us to 'run out to the farm' and pay them a little visit. The farm, he wrote, was some thirty miles out of Chicago, and we were to come informally."

"We started out to the farm. The train would land us there at 2 o'clock in the afternoon, and, remembering my boyhood in New Hampshire, I knew that at that hour they would just be washing up the dinner dishes. So we took particular pains to have an early luncheon before we started. Our first surprise was at the station,

a small, one horse affair. Up to the station at a spanking trot came my old friend N., driving two well bred horses in a smart carriage.

"But this was as nothing to what awaited us. At the end of a three mile drive N. turned in at what you'd call a lodge gate in England, with the home lock nearly a quarter of a mile from the road. It didn't look so very large or very fine, but the first thing I noticed on the piazza was N.'s three small children playing, attended by three unscrupulous in white aprons and caps. Mrs. N. came out to greet us, dressed in a dress that my wife says couldn't be bought for less than \$100.

"It grew worse and worse or better and better, according to your point of view. N.'s 'man' escorted our small nephew upstairs and Mrs. N.'s maid appeared with a large dressing bag for my wife and a kitbag that fairly made her eyes water. A third menial of some fancy variety announced to us that dinner was ready. It seems that they had it regularly at 3 o'clock.

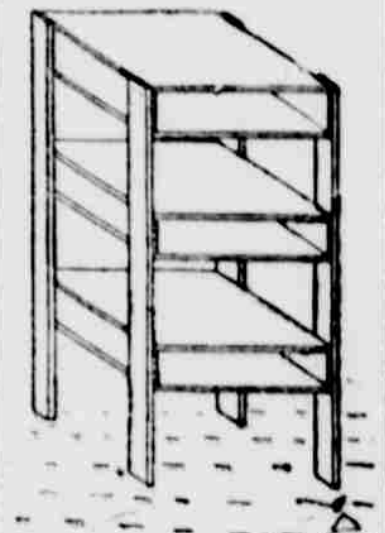
"Dinner was served by the butler. It began with oysters on the half shell. Besides the usual fixings of a six course dinner, they had crabs, frogs' legs, alligator pears and champagne. I hardly dared look at my wife, remembering the luncheon we had so carefully taken at the Chicago station to avoid making extra work for the farmer's wife. When the champagne came on that nearly flubbed us.

"Back to the farm? Well, I guess, but not in the rocks of New Hampshire. When I take to farming it will be raising garden truck for Chicago or St. Louis."—New York Times.

## Outbreaks of dangerous and contagious disease among live stock should be reported to the state department of agriculture at once.

## Cracker Box Compartment.

Having a number of small wood cracker boxes, the seventy-five cent kind, we conceived the idea that they could be easily converted into a handy compartment for the many little things that accumulate around the shop. We



MADE OF CRACKER BOXES.

(From the Iowa Homestead.)

made one from three boxes, as illustrated, and it was amazing the amount of floor space it cleaned up when set in one corner of the shop and filled with paint cans, plow lays, hinges, etc. that had theretofore been occupying floor space.—Iowa Homestead.

## Water Farming Recommended.

Among the multitude of wise sayings from the lips of Secretary Wilson this comes back to us frequently: "The time will come when a farmer will realize a greater profit from the acre of fish pond that lies on his place than from any single acre of land."

Suppose we write to the department of agriculture for whatever literature it may have on this subject and then ask the state fish commissioner on what terms the state will stock that stream. Even if there is no money in it there's the possibility of a good many tasty Friday dinners.—Farm Press.

## Sunflower Seed For Poultry?

Sunflower seed is recommended for feeding poultry from the fact that the kernel of the seed contains oil that is thought to be beneficial for improving the quality of color and gloss upon the plumage of fowls and as an aid to poultry during molt. The facts are that sunflower seed is more than 50 per cent waste matter, the hulls of sunflower seeds being very difficult for the fowls to digest and of little or no feeding value, says the Country Gentleman. A few sunflower seeds may be of benefit to poultry. Any considerable amount of them would be a damp squib.

## To Keep Brasswork Bright.

Brass rails or other brasswork on barns or boats can be easily kept bright by the use of sperm oil. Some boatmen polish their brasswork only once with putz or polishing powder, while for the rest of the season they keep it bright with sperm oil, which is rubbed on with a very oily cloth. Before starting on a trip the brasswork is rubbed over with the sperm oil cloth to prevent the salt from reaching the brass, and on the return the salt is readily taken off, leaving the rail bright. This method was recently suggested to me by an automobilist, who found it to be a great success, because he could polish up his brass very easily after it had been left several days.—Scientific American.

## To Blacken Light Woods.

To blacken light woods make a preparation of an ounce of borax, dissolved in a quart of water, with two ounces of shellac. The liquid is then to be boiled until a perfect solution is obtained, then stir in two teaspoonfuls of glycerin and complete by adding a sufficient of soluble aniline black to completely darken the liquid, which will now be ready for use.

## Big Farm For Students.

James R. Huggins, noted horseman, miner and owner of the Elmendorf farm in Fayette county, which comprises 5,000 acres of the finest land in Kentucky, has agreed to let the students of the state university have the use of Elmendorf in order to study agriculture to better advantage.



Copyright by American Press Association.

## WOODROW WILSON

Born Staunton, Va., Dec. 28, 1856.  
Graduated Princeton, 1879.  
Studied law University of Virginia.  
Practiced law Atlanta, Ga., 1882-3.  
Took a course in political economy at Johns Hopkins.

Professor history and political economy Bryn Mawr, 1885-8.  
Same chair Wesleyan university, 1888-93.  
Professor jurisprudence and political Princeton, 1890-1902.  
President Princeton, 1902-10.  
Governor of New Jersey, 1911.



Copyright by American Press Association.

## THEODORE ROOSEVELT

There is no use in disguising the fact that the two men above are the real contestants in the presidential campaign—Woodrow Wilson, a progressive Democrat, and Theodore Roosevelt, a progressive radical Republican. But for the fact that the International Harvester Trust is financing Roosevelt, there would be no doubt of the result—Roosevelt's election. As it is, with Taft in the race, it assuredly looks like the election of Wilson is a certainty. Taft will no doubt prove a poor third in the poll. Kansas going 2 to 1 for Roosevelt against Taft, Tuesday, shows the trend of public preference as between the two candidates opposed to Wilson.

## AUCTION SALE

I will sell at public auction at the Farmers' Stable Main street, Hillsboro, east of Hotel Washington at one o'clock, p. m. on SATURDAY, AUGUST 10. Sixteen head of high-grade dairy cows, all but three of them in milk, mostly fresh, and the three above mentioned soon to be fresh. Part of these cows are full-blood Holsteins, some are graded Jerseys, and all give a good milk flow. Herd can be seen on the L. W. Guild place, located 1 1/2 miles east of Laurel. Also a nearly new, light farm wagon, with springs.

Terms of Sale:—Cash, or bankable, approved note, at 8 per cent. Five per cent, off for cash on the dairy stock.  
L. E. ROGERS,  
John Vanderveld, J. C. Kuratli,  
Clerk, Auctioneer.

Miss Myrtle Grabel, daughter of Mr. and Mrs. J. N. Grabel, departed for Newberry, Tuesday, to be the guest of Miss Ruth Nottingham, who has been visiting friends in Hillsboro the past week.

Thos. Talbot, of Cornelius, one of the substantial of that city, was down to the city Monday afternoon.