

Greater Farm Efficiency

Decreasing Cost of Machinery Repairs
By PROF. C. A. COCK, Wisconsin College of Agriculture

WANT BOOK.

Amount to Letter and Order Number	Implement	Cost	When Wanted
Dec. 6, 1911.			
6 Spark plugs	Gas engine	\$2.00	30 days
2 Piston rings	2 H. P. gas engine	2.00	60 days
1 doz. P. 1232	L. H. C. disk harrow	5.00	80 days
1 doz. Common clevises	For single trees	2.00	60 days
2 1/2 S. S.	Corn King shredder	20	30 days
2 H. S.	Deering binder	1.00	6 mos.
2 Shares	Deers gang	5.00	60 days

Sheet from a Farmers' "Want Book."

Few farmers have a definite idea of the total amount of money invested in farm machinery. If you were to ask John Smith how much his farm machinery was worth he would be unable to answer you. He would probably tell you that the different implements cost so much and that there were a number of repairs for several of these. That these implements were so many years old, and were probably worth only about half of what they were at first. Possibly he had bought some of these second-hand, and had never kept any record of the money invested in farm machinery.

Farming being a business, should be run on business principles, if one is to know where he is making or losing money. So with the machinery the first cost and repairs should be recorded and a strict account kept of all labor involved in the up-keep of the different farm machines. This can only be done by regular business methods. The operator of the small farm may feel that this is not important, and from his point of view it may not be. Yet actual experience shows that unless some records are kept in operating a farm it is extremely difficult to

will furnish the necessary information, as "One machine bolt 2 1/4 inches by 5/8 inches." This, with others which may be required, may be purchased in one order, which will probably result in a saving of one-half.

While this system may seem at first thought somewhat cumbersome, a glance at the suggested sheet will show that it will in the end save time and money, and at the same time dispense with worry and aggravation at a very busy season of the year.

When the repairs and special bolts have arrived, take them with an extra supply of bolts, nuts and split cotter keys and a kit of tools. Proceed with the work as occasion permits, and in a short time all of the home work is completed. The work usually done at the village shop should be noted and the list left in a convenient place so that no extra time is required in locating it and arranging for the work.

Some farms are fortunate enough to have their own shop, and where such conditions exist it is not necessary to take the plow shares to the village for sharpening, but this and many other kinds of such work can be done at home. The large farms having areas

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The common feeding practice of many of the farmers of the corn belt is an expensive process. The cattle are fed during the winter months. Sheds have to be provided for shelter. The cost of hauling and feeding the roughage for the cattle when in a dry lot is not a small item. Bad weather is another objectionable feature—more feed is required by a steer to make the same gain.

The feeding practice for more profit is this: Common feeders—cattle in thin flesh—may be bought at a low price. Get steers two or three years old. Feed them plenty of roughage to keep them in good condition until they are turned out on grass. A few hours a day on pasture is long enough at first, until their systems get accustomed to the change. Feed the steers running on grass a ration of 8 to 14

LESS EXPENSIVE FATTENING SYSTEM SUGGESTED BY FLINT

Buy Cattle in Thin Flesh, Feed Plenty of Roughage and Then Turn Them Out on Grass Pasture—Prime Corn-Fed Animals Are Scarce During Summer Months and Bring Good Prices.



Excellent Bunch of Feeder Steers.

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pounds of corn. Begin with a light ration and work up gradually to the maximum. They should be ready to market the latter part of July.

Prime corn-fed cattle are scarce during the summer, as most of the feeders in the lots are finished and shipped out before this time. The packers must have cattle with some finish, and they pay a good price to get them. Coming on the market at this time, the steers fed on grass will bring almost as good a price as stock fed a full grain ration in a dry lot.

The success of this plan of feeding is due to the low price at which the cattle can be bought and the thin condition of the animals coming in the common class of feeders. Making economical gains is not a breed but a type characteristic. Often the best and poorest gains made are by individuals of the same breed.

Less labor is required with summer feeding. The cattle gather their roughage, and the manure produced by them is distributed, and evenly. In winter, dry-lot-feeding steers are fed a ration of 18 to 22 pounds of grain and 6 to 8 pounds of hay apiece, when on full feed.

POULTRY



CONSTRUCTION OF HEN HOUSE

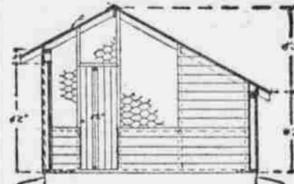
Few Practical Suggestions That Will Be of Much Assistance to the Poultry Keeper.

(By J. G. HALPIN and C. A. COCK, Wisconsin.)

For success in poultry keeping it is necessary to have a suitable house which will protect the fowls from inclement weather and from their natural enemies.

It must be remembered that from the standpoint of the hen, appearance makes very little difference, but the house must be so built and so arranged that it will be a comfortable place for the hens to live; otherwise they will not thrive and production will not be satisfactory. On many farms the hens are not provided with a house constructed especially for them, but are housed in an old building originally made for some other purpose. As a rule this sort of a house is not economical, for, unless it is constructed especially for hens, it will seldom be found possible to reconstruct it in such a way as to make economical production possible.

Poultry houses should be located where it is dry and well drained. If the ground is not naturally dry, it should be ditched and drained artificially, for poultry will not thrive in a house when the floor is constantly wet. A damp location means a damp



Proper Way to Make Partition.

poultry house all the way through, and the result is that the fowls are affected with many troublesome diseases.

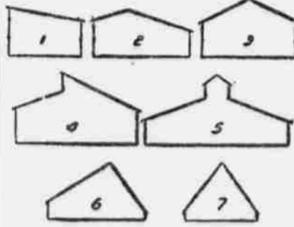
Houses should be placed so that they will not be subject to violent winds, yet good air and drainage are essential. A house should never be placed in a low, damp spot where early fall frosts are likely to occur. These places are always cold and unhealthy for fowls.

One hundred hens will thrive in a pen 20x20 feet, that is four square feet of floor space per hen, but one hen will not thrive in a pen 2x2 feet. In a large pen each one has a chance to wander about over the entire floor space, thus getting more exercise.

Generally speaking, it is far cheaper to build a wide house than a narrow one. A house 20x20 is cheaper than a house 10x40 and contains as much floor space for the hens. A house 20 feet wide, however, will be found impracticable for some types of roofs and will not be found satisfactory where one wishes to keep a number of small breeding pens. There are several common types of roofs used on poultry houses.

Just which style of roof should be chosen is largely a matter of personal preference, but the type of roof will be found to influence the cost of construction to quite an extent.

Wherever there is only one poultry house a partition is always advisable as it permits one to keep the hens sep-



Different Types of Roofs Used in Poultry Houses. 1 is a shed roof, 2 a combination roof, 3 a gable roof, 4 a semi-monitor roof, 5 a monitor roof, 6 a slanting front roof, and 7 an A-type roof.

arated from the pullets early in the winter and makes it possible later to make up a breeding pen of the best fowls. In a small house, that is one not over 30 feet long, one should use boards for the partitions for about two feet from the floor. The rest may be made of wire or cloth except between the roosts of the different pens, where the boards should run to the roof.

Feed for Growing Ducklings.

Growing ducklings thrive best on a feed composed of equal parts, by measure, of corn meal, ground peas, bran and middlings, all made into thick mash, either with scalding hot water or milk, the latter being the better. The mash is improved by adding short-cut green grass, clover or some other green stuff, and a few handfuls of coarse sand.

Bad Air and Incubation.

The atmosphere of a cellar where vegetable are kept is not fit for an incubator. The air, according to Popular Mechanics, is charged with carbonic gas, which is fatal to young chicks.

WONDERS OF THE DEAD SEA

Interesting Trip Around This Body of Water Told by Jacob E. Spafford.

Jerusalem.—An interesting trip around the Dead sea was made in a motor boat by Jacob E. Spafford, a member of the American colony in Jerusalem.

In circumnavigating the lake four or five very fertile plains or ghors were met with. "These plains," writes Mr. Spafford, "naturally bring to mind the connection of the Dead sea with Sodom and Gomorrah, the 'cities of the plain' that were overthrown. They have been variously placed on every side of the sea.

"These plains and the small oases at Engedi are the only places where life of any kind and water are to be



Defile Leading From River Ammon.

had. This evidently was a little paradise in the time of Solomon and is frequently mentioned in the Old Testament.

"About ten miles from Engedi lies the peerless natural fortress of Macada (Sebbel), first fortified by the Maccabees, then used as a place of refuge by Herod. At the foot of the tableland can be seen the Roman wall of circumvallation and the two Roman camps on either side of the small ravine.

"The fortress, which is 1,700 miles above the sea, has steep sides at about an angle of 75 degrees and cannot be approached, except from a connecting neck called the Serpentine. A mora inhospitable place or one more disadvantageous to besiegers could not be imagined.

"Eight miles away is Jebel Usdum, a mountain of rock salt rising to a height of 500 feet. In this mountain is a large cave which was explored to the extent of about 200 yards, at which point a tapering cylindrical shaft of about 20 feet in diameter was discovered, piercing the solid rock salt 80 feet high, as though through polished marble, evidently the effects of the rain.

"Great snow white stalactites hung from the ceiling. The approach to this mountain presents most fantastic appearances of walls, buttresses, parapets, projecting towers, etc., caused by the stratification and lay of the salt boulders.

"A little south of Masada lies the rich Ghor-el-Mizra. Here and elsewhere about the apple of Sodom described by Josephus."

CHEESE DENOTES THEIR RANK

Swiss Family Found Without Aged Variety of Delicacy Is Scored.

Lucerne.—The English, the Germans, and the Norwegians are great consumers of cheese, but the people of Switzerland surpass them all. The cheese of Zermatt is so hard that one is obliged to scrape it or cut off chunks with a hatchet, and its use is considered most important on all ceremonial occasions. The rank of a Swiss family is known by the age of its cheese, and the more affection or respect a guest inspires the harder is the cheese which is cut in his honor. It is said that there are families in Switzerland whose cheeses date from the first French revolution, and these are served only at baptisms, weddings and after funerals.

The larder in every family is guarded with care and the cheese is named. Upon the birth of a new heir a cheese is made that takes the name given him or her, and that particular cheese is never under any circumstances cut until the boy or girl grows up and is married. On such occasions each of the guests takes a piece of cheese from the bridegroom and from the bride and drinks to their felicity, the cheese held aloft.—Harper's Weekly.

Sold Water Tower to Farmer.

Chicago.—Lloyd Moulds, just in from the farm, liked the looks of the old North side water tower, and "con" men immediately sold it to him for \$26. A policeman arrived in time to save his money.

Was Wrapped in Film.

New York.—A moving picture film 1,000 feet long was wound about the body of Victor Weiss when he was arrested by police, who charged him with robbing a film company's plant.

1910 Wagon. Cost \$750.00
July 10 Purchased
Dec 8 Broken Reach Renewed 2.00
1911
Mar 11 Broken Eveney Renewed 1.25
Aug 6 Setting Four Tires 3.00
Nov 24 Broken Bolster Renewed 5.00

1910 Gang Plow Cost Returns
July 10 Purchased 80.00
Sept 8 Sharpening Shares 3.00
Nov 1 To plowing 100
acres of stubble
for the season \$400.00

How to Keep a Record of Cost and Repairs of Different Farm Implements by Means of a Card System.

now on what money is being saved and made.

To keep farm machinery in repair is a small item, and frequently time lost being delayed during a busy period while waiting for repairs is the cause of a still greater loss. The time loss in many cases might be done away with if more care was exerted in overhauling the machinery during the winter, when farm work is somewhat slack. Many farmers make a habit of making some repairs during winter, but there is a greater while to spend time to do such work, but believe they will have time enough in the spring or before it is time to use the machine again. As a rule, the work is not done until the machine or implement should be in the field, which ought not to be the case. The repairing, to be done at the least expense and loss of time should be done in the winter, or at least most of it. There are some implements that one might find difficult to repair, especially in some of the machinery sheds which are found on farms.

With a good machinery shed and a work shop at one end where a stove could be set up to take the chill from the air, this work might be handled very nicely with little if any discomfort, even in the coldest weather. There will be a great many stormy days when little if any work can be done out of doors, when the work in the shop can be very satisfactorily tried on. Where the repairs cannot readily be put in the respective places, they should be attached to the broom part and everything put in readiness for the time when the machine is taken from the shed. I am now making of the grain harvester, which frequently behind many of the other machines, making it rather difficult to get at for repairing. In case of the grain and corn harvester a good plan to follow is to make a note of such parts as show wear and order these parts for coming season.

"Want book" and a box of shipping tags should be a part of the equipment of the farm office. In the book should be made a notation of the broken or broken part, and with it the order number, thus: "For the grain harvester, blader driver dog H."

A shipping tag with letter and number should then be attached to the part to assist in quickly locating when the parts are to be put in place. The book holds true with reference to the harvester. When housing the machinery may not have the proper bolts on hand, but the "want book" and tags

requirements will naturally require more machinery, so that the one in charge of the machinery should not lose sight of the fact that a large supply of common repairs is better than to be out half of the time, thus causing unnecessary delays in the farm operations.

The stock of duplicate parts to be ordered should be for sickle sections, for mowers and binders, also sickle heads and pitmans for the mowers. Rivets, wearing plates, ledger plates, guards, etc., or any such list as seems necessary to prepare for the necessary farm machines. Any one who is at all interested in farm machinery should be able to devise some plan which would greatly facilitate the handling and repairing of the farm machinery.

To insure the greatest efficiency of plow, cultivators and all such implements, it is a good plan to cover the face of the moldboards and shovels with a good grade of heavy machine oil or a fair grade of hard oil. This treatment will keep the working surfaces free from rust, so that the extra work of scouring these implements in the spring will be done away with. To get the greatest returns for money invested in farm implements one must have as few delays as possible.

In keeping before you the first cost and repairs of the different farm implements, a few cards as here shown will be of great help. In this way you can quickly find how much your wagon, mower, or any implement has cost since it was purchased. The depreciation can also be more quickly calculated, and in many ways this will assist in determining the gross earnings of the farm each year. This card system might be carried still further by adding to it a double column at the right, the extra column showing the amount of work or the value of the work done with each implement. This is shown on card describing gang plow.

The scheme described here is not entirely new, as some farmers are using methods which in some ways are similar, but the card system and day book are much handier and more economical.

Feed for Hens.

Dried lawn clippings aren't much of a feed unless full of white clover. Clover to the hundred pounds contains 29 per cent. dry matter, 2.1 ash, 2.9 protein and 16.4 carbohydrates. Its nutritive ratio is 1.5, while that of wheat is 1.7. Clover dry or steamed and mixed with mash is bulky for hen health and eggs.

YOUNG WOMAN GOT HER EGGS

Small Flock of Pullets Installed in the Back Yard in Portable House Furnish Medicine.

A young lady living in a small city had impaired her health by too confining work in a city office, says Christian Herald. Her physician ordered her to a sanitarium for rest and rebuilding, and when she returned to work he instructed her to eat four fresh-laid eggs daily; two eggs for breakfast, and the others raw, in milk. Finding it difficult to obtain dependable fresh eggs, she persuaded her mother to permit her having a small flock in the home yard. A portable house was purchased and fifteen pullets installed in it. A small brooder was paid 10 cents a week to feed and care for the flock, two bags of ready-mixed food were bought, and the result of the venture was not only all the eggs the young lady needed and a supply for the family, but there was a surplus which found a ready market at the corner drug store, bringing 10 cents a dozen above the market price.

ALABAMA MAN HAS NEW TRACE

Wheel in End of Whiffletree Holds Trace so That There is No Danger of Its Loosening.

Considerable cleverness went into the designing by an Alabama man of the trace connector shown in the cut. The end of the whiffletree has separated parallel sides, with notches in the ends. Pivoted between these sides is a wheel, with two radial slots and lateral passages running off the slots. To us this connector a ring is inserted in the wheel by lining up one of the slots of the wheel with the notches in the end of the whiffletree.



New Trace Connector.

Once the wheel is turned there is no danger of the ring slipping out of the slot, as the sides of the whiffletree prevent that. The trace is connected with the ring by a spring hook and the operation of hooking or unhooking a trace requires only a few seconds when this device is used.

HOGS REQUIRE GOOD PASTURE

Every Farmer Having Swine Should Sow Patch of Rape Seed to Make Suitable Grazing.

Hogs require green food along with a moderate amount of grain; but they will keep in good, thrifty condition during the summer months on clover and grass alone. Every farmer having hogs should sow a patch of Essex rape seed. Sow four pounds of clean, new crop seed to the acre; the ground must be deep, finely pulverized and in good order. In ten weeks from sowing this makes a good pig pasture and good grazing; the pigs will grow fast and will be kept healthy. When fed on rape the pigs should have at all times a mixture of wood and coal ashes, mixing one handful of salt and one of sulphur in each peck of ashes. The fattening properties of rape are probably twice as good as those of clover. Last fall's pigs should be given fine-cut clover hay, mixed with wheat bran and wheat middlings. Mix with boiling water. A few small ears of corn may be given after the mixed feed is eaten. Have the pens clean and dry; give a thick bed of dry leaves or cut straw. They should have fresh water daily. Expert breeders give the following mixture to their hogs; they consider it better than wood and coal ashes alone: Ten pounds of burnt bones, 10 pounds of water and 19 pounds of sulphuric acid. The burnt bones are put into an iron pot and moistened with the water; the acid is then slowly poured over the mass and well stirred in. Great care must be used in handling the acid, as the least drop on the hand will burn like fire. Mix this with an equal quantity of freshly burnt hardwood ashes; let the pigs have a little of this mixture twice a week. It is especially good for pigs troubled with tumors caused by eating too much corn. Have a grass pasture or dry yard adjoining the pens, as they must have plenty of exercise to keep them in good, thrifty condition.

Weather Effects on Calves.

According to some experiments made in Ireland calves born in the autumn made faster gains during the winter when housed at night in a well ventilated shed than did calves which received no shelter, but by midsummer there was little difference in the two lots. Wet weather had a more injurious effect on the unprotected cattle than did a protracted cold spell.

Queer Feed for Horses.

Horses and cattle in the country near the Persian gulf are fed locusts, fish and dates. In Tibet horses are fed pig's blood, and in the cold mountain regions of Asia meat is regarded as a necessary part of a horse's diet. The increasing use of meat meal in our country indicates that stockmen are finding such a feed a useful addition to the live stock ration.

Swamp Lands in West.

It is claimed that there are 77,000,000 acres of swamp and overflow lands in the Mississippi valley that can be converted into fertile farm property at an expense of five to seven dollars an acre.