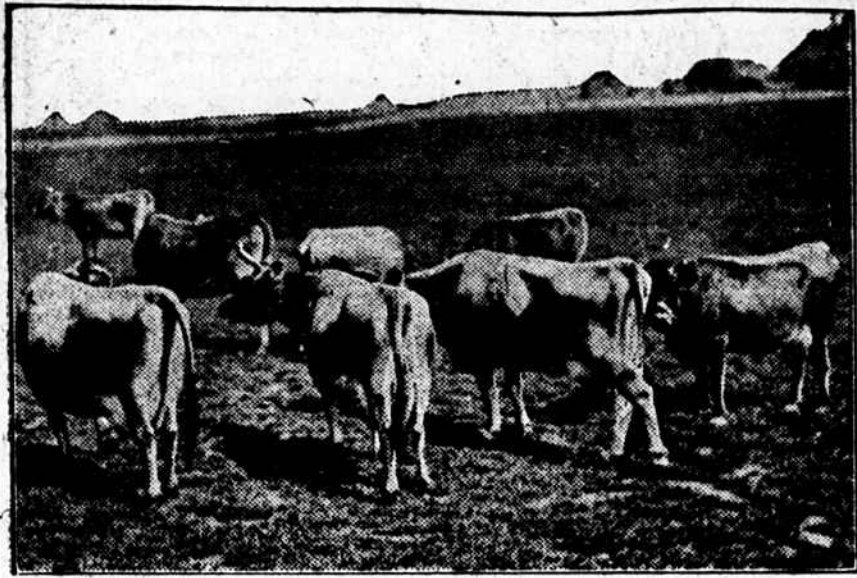


PLAN FOR MORE ECONOMICAL COW FEED



A Fine Herd of Dairy Cows.

(By R. G. WEATHERSTONE.)
In all sections where dairying is being conducted cattle foods are each year becoming more costly and every dairyman should make every effort to reduce the cost of his cow feeds.
Instead of feeding hay that is worth fifteen dollars a ton he should replace a large portion of it with ensilage, which can be raised chiefly by machine labor.
Instead of supplementing a poor pasture with purchased grain foods he should raise oats and peas, green corn and other green soiling crops.
Instead of buying fattening foods like corn meal he should buy milk-producing foods like bran, cottonseed meal and gluten meal. As a rule it is most profitable to buy the kind that will produce the most protein at the least cost.
Make the business as self-supporting as possible by raising as much of the feed for the dairy as your farm and circumstances will allow.
Many of the failures in dairying are due to the fact that farmers disregard these points and go out and buy grain foods without discriminating judgment.
To keep good cows and feed them good, wholesome food in abundance and provide this food cheaply is absolutely necessary if we make a substantial profit from the business.
There is no rule for feeding dairy cows that can be laid down, that will apply to all cows alike; and still the success of the herd will depend largely upon procuring the best production at the lowest cost from each cow.
Cows should be fed to their capacity.

have a keen appetite for their next feeding. Watch their droppings to see that no food passes through them undigested.
Watch results closely from any new line of feeding that may be introduced. Never make too sudden or radical a change in the line of feeding practiced. Treat the cows kindly, feed them regularly, milk them at regular hours and, if possible, always have the same person milk them.
In increasing grain ration we should never increase it more than one-half pound a day. In this way the cow's digestive organs have an opportunity to become adjusted to the change and are able to take care of the additional amount of feed. In this way you can safely increase her feed until she is obtaining all that she can economically handle.
Care must be exercised that we do not feed so much grain food that there is no room or appetite left for coarse fodders.
Coarse fodders are highly essential in preserving the health of the cow and not tending toward making fat.
As a general proposition it will be found a safe rule to follow to feed twice as many pounds of hay as we do grain. The cow that is being fed eight pounds of grain a day should have sixteen pounds of good hay.
If ensilage is being fed we must count three or four pounds of that equal to one pound of hay or dry fodder.
Methods of preserving ensilage are better understood and the prejudice against milk and butter from cows that are fed ensilage is fast disappearing.

many feeders do not seem to realize what we mean when we speak of a dairy cow's capacity.
We should study our cows closely. Watch their feed boxes to see that they clean up all of their feed and

GIVE BROOD SOW ATTENTION

As Farrowing Time Approaches Animal Should Be Placed in Separate, Roomy, Clean Pen.

(By J. FULLER.)
Healthy sows that have been properly cared for during pregnancy will have little difficulty at farrowing time. They should be housed in proper quarters and up to farrowing time have their usual feed. Knowing the date the sow was bred, the date she is due to farrow can be determined easily. The period of gestation for swine ranges from 112 to 116 days.
As farrowing time approaches, the sow should be put into a clean, roomy pen in a hog house or into a separate portable pen. When the udder of the sow becomes distended and milk can be drawn from the teats, she may be expected to farrow in about 24 hours. She should be watched closely now to see that her bowels are operating in the proper manner and that she may be comfortable. At this time a slop ration is better than a dry feed.

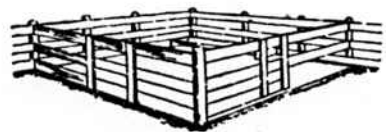


Fencing in the Feed Lot—Portable Fences are Almost Indispensable in the Hog Lot.

The farrowing pen should be supplied with fresh, dry, clean and dustless bedding. Fine rye, wheat or oat straw or shredded corn fodder makes excellent bedding, but barley straw and wood shavings should not be used. Dusty beds are likely to cause coughing or pneumonia. Individual sows differ as to the amount of bedding needed at farrowing. Some make bad use of it and should be given but little; others can be allowed a liberal supply. Little pigs are very sensitive to the cold and if they arrive during the cold weather they must be given special attention to prevent them from getting chilled.
A sow should be kept quiet and fed very little during the first 24 hours after farrowing. She should be allowed drinking water, and when she shows signs of hunger a limited amount of a thick slop ration, largely of bran, may be given her. This will satisfy her appetite, and keep her digestive tract open and in the proper condition. Now, it is much better to

keep her hungry than to overfeed her. In fact, the only way to keep early spring pigs from growing too rapidly and becoming too fat when the sows are confined is to feed the sows sparingly.
Under ordinary conditions when sows and pigs are given plenty of exercise, the feed may be gradually increased until from ten days to two weeks after farrowing a liberal feeding of a heavy ration is being given. When the pigs are from four to six weeks old they will begin to eat with the sows. They should be fed

separately by penning off a small space on the feeding floor or hog lot where the young pigs have access to the feed. The feed should be given in a small trough which can be cleaned easily before each feeding.



Creep for Feeding Small Pigs—Little Pigs Begin to Eat from Three to Four Weeks of Age and Should be Provided With a Separate Enclosure From the Sows.

Immature Breeding.
By breeding the heifer at less than two years of age you are sure of getting her to producing something at an early age, but you are also sure that she has been stunted before she reached maturity; that her calf will not be as large and vigorous as it should be and that she cannot possibly produce as much milk as she would had she been bred at a period when her capacity for production was nearer perfect development.

GENERAL FARM NOTES

Impure water will not produce many eggs of any kind, and none that are good.
If a ewe is constipated put her in the hospital pen and give her more linseed meal.
If a sheep has snuffles it is a sure sign of exposure or mismanagement somewhere.
The fertilizer problem is getting to be a big one and could be greatly reduced by keeping more stock and selling less hay and straw.

LIVE-STOCK-FRUIT-DAIRYING-GARDENING-FIELD CROPS-SILOS-PIGS

New Wrinkles
in
Progressive
Agriculture

FARM AND FIELD

Making the
Farmers'
Business
Profitable

TOLD IN AN INTERESTING MANNER EXPRESSLY FOR OUR READERS

FEED FOR THE DRAFT FOALS

Youngster Makes One-Half His Mature Weight First Year of His Life—Ration From Wisconsin.

The feeding of draft foals is a very important matter. One only appreciates this when he realizes the fact that a draft foal makes one-half his mature weight the first year of his life. The foal must be fed, not starved, if he is to develop into a good draft horse. The foal fed an improper and unpalatable ration the first winter usually has a big middle and two very poorly developed ends.
Considerable attention has been given to feeding draft foals at the University of Wisconsin the last few years. At one year of age they have weighed from 1,000 to 1,200 pounds. These foals were all accustomed to a small amount of grain before five months of age when they were weaned. After weaning they were given the following ration until turned on grass at about thirteen months of age.
Ration for 100 pounds mixed feed: 65 pounds crushed oats, 15 pounds corn meal, 10 pounds bran, 15 pounds finely cut alfalfa or clover.
They were fed all of this mixture they would eat three times a day and were given no hay other than that in the mixture until they were about one year old. The amount of this mixture eaten per foal per day varied from 9 to 15 pounds (20 to 30 quarts)



Fine Type of Draft Stallion.

WINTER WORK IN ORCHARDS

When Ground is Frozen is Favorable Time for Hauling and Spreading Manure—Add Bone Meal.

The winter when the ground is frozen hard is a favorable season for hauling out with cart or sled the manure needed. In spring the ground is too soft to haul over and other work is too pressing; the result is this important matter is put off for another year. The manure should be hauled and spread evenly over the ground. Do not place directly around the trunks; it only affords a harbor for mice and insects. The manure should be rotted and from grain-fed cattle or horses. Straw and corn-stalks, mixed with a little animal manure, is poor stuff and is only valuable as a mulch. This kind of manure should be hauled out to the orchard and piled. Mix a half-bushel of raw bone meal in each two-horse wagon load of manure as it is piled and make a compact heap, which will soon rot down, and, when well rotted, should be spread. About one to two bushels is the proper quantity for each large tree. The manure should be spread in a circle as far out as the branches extend.
Practical growers are now using from 400 to 800 pounds of animal bone and potash fertilizer per acre. The fertilizer is drilled in with rye in the early fall, the rye is turned under in April for green manure. This method is found to be the cheapest and best method of fertilizing the orchard.

SPRAY FOR SAN JOSE SCALE

Best Remedy for Pest is Thorough Treatment With Lime-Sulphur Mixture Late in Winter.

(By C. F. GILLETTE, Colorado Experiment Station.)
San Jose scale is one of the worst pests attacking orchard trees in this country. It is extremely important that orchards should be so treated as to exterminate the scale from them and prevent its spread to surrounding orchards.
This scale is a thorough treatment with lime-sulphur mixture late in the winter or early in the spring, before the buds begin to open on the trees. If the commercial concentrated lime-sulphur mixtures are used they may be diluted in the proportion of about one part of the concentrated preparation to ten parts of water. If homemade lime-sulphur sprays are used, probably there is no better formula than the following:
Good lump lime, 15 pounds;
Flowers of sulphur, 15 pounds;
Water, 50 gallons.
The lime should be slaked in warm water and, as soon as the slaking has been well started, the sulphur should be added and enough water kept in the receptacle to keep the mass thin and sloppy. Boil for at least forty

minutes, or until the liquid is a deep brick red in color; then dilute to fifty gallons and apply at once.
Protect Grapes From Mildew.
To protect grapes from mildew which may or may not attack them they should be dusted or sprayed with sulphur. For a few vines or the family vineyard a good way is to put the sulphur in a piece of burlap or a grain bag and shake the sulphur over the vines. A sprayer which will force the sulphur among the leaves more completely is of course more effective.
Fruit for Home Use.
In pruning fruit trees for home use let there be no varieties of inferior quality selected. There is nothing too good for the home use. It is a pleasure to hunt out these good things and to take an interest in getting them started in the home garden and orchard.

the next most common cause of failure is lack of experience. No one should enter the poultry business off-hand without any experience in raising chicks. He should serve an apprenticeship on some poultry farm, or

TEACHING CHICKS TO ROOST
Difficult Matter to Keep Little Fowls Clean if They are Permitted to Remain on Floor.
It is often advisable to teach the chicks to roost when eight to twelve weeks old. When they are allowed to remain on the floor it is difficult to keep them clean and to keep them from crowding. If wide roosts, three to four inches, are used there is but little, if any, more danger of crooked breasts than if the chicks are allowed to remain on the floor.
The chicks can generally be taught to roost by putting the perches near the floor and placing with them one or two old hens or older chicks that are in the habit of roosting.
If this plan is inconvenient or does not prove effective, the chicks may be placed on the perches after dark for a few nights until they have learned to go there on their own accord.

FOWLS DEMAND PROPER FOOD
Green Feed, Meat Scraps, Grain and Lime Are Required—Fresh Water is Also Necessary.
Laying hens, like the milk cow, demand proper food. A mixed ration comprising green feed, meat scrap and grain, will, with the addition of lime in some form, supply all that is required. Fresh water is also a necessity. Chaff from alfalfa or clover affords green food. The former, ground ready for use, may now be bought by the pound. Hens eat it readily. Being rich in protein it is better for laying fowls than most forms of green food, and makes necessary less meat in the ration.
Color Affects Price.
The color of eggs has something to do with their sale in most markets. Some prefer the brown tints and some the white. In preparing baskets for sale it is well to cater to these tastes. Put all browns in one basket, all whites in another. Paper cartons for transportation, holding one dozen eggs, can be had at paper dealers'. Brown shelled eggs are apt to be large, since most of the larger breeds of fowls lay colored eggs. Color really has nothing to do with contents.
Well-Fed Hen Pays.
Are you going to allow the price of grain to cause you to underfeed your chickens? Better sell them now. It does not take a half-starved hen long to eat her head off. The well-fed hen will lay enough eggs to more than pay her keep.



Preparing Mixture for San Jose Scale.

PICKED UP IN THE HOG LOT
Overcrowding is Anything but Economical Plan—Alfalfa Furnishes Excellent Grazing for Pigs.
Do not keep too many pigs together and compel them to sleep in one nest. The most economical gains in pig feeding are obtained by a judicious blending of nitrogenous and carbonaceous foods.
Crossing may improve the hogs for the feed lot alone, but not for the purpose of perpetuating their kind.
Every hog grower should make a great effort to have a few acres of alfalfa, because it furnishes unusually valuable grazing for hogs, and can be pastured off several times during the season.
There is nothing more disgusting than to have a lot of unruly hogs running at large about the farm buildings. With modern woven wire fence, it is easy to confine them within their proper limits.
There is nothing gained by mixing corn meal with chopped alfalfa, except to insure larger consumption.
The longer any herd or family of hogs is subjected to a ration of corn or confined to small pens and barren yards the lower will be their vitality and prolificacy.

COMFORT FOR SETTING HEN
Should Be Guarded Against Fussy Work of Laying Fowls—Plan for Arranging the Nest.
In setting a hen well one must see that every surrounding is the best possible. That the nest is not too deep and rounding in the bottom, but nearly flat, with rounded sides so that the eggs will lie in a single layer and not pile upon each other in a manner that is more than likely to cause them to get broken.
In cold weather it is a good plan to line the nest box first with paper, then the nesting straw or chaff. This prevents the cold from getting to the eggs so easily from below.
It is essential that the setter be guarded against the fussy work of the laying hens. A laying hen using the same nest will soon break up all possibility of a good hatch.
On the other hand, the setter must not be confined so closely that she cannot come off at will to feed and dust herself.

USE ONLY GOOD INCUBATORS
Many Little Details Require Skill and Intelligence in Operating Machine Successfully.
Homemade incubators are not generally desirable, since they are seldom scientifically adjusted, nor made of best material, nor properly fitted up. The lamp, its burner, its wick, its chimney, its location for heating, all require skill and intelligence. So does the body of the incubator, as regulator, ventilation, the moisture supplies and the tray.
Do not buy from any old firm or buy any discarded machine. Get the best by test and give it the best that is in you. Then keep a record of hatches from both hens and incubator and compare results, not forgetting that your hen is free to lay again while her first eggs are hatching.
Legs of Birds for Show.
If show birds have rough legs, bandage them in cloths spread with vaseline, for a week before the show—washing them first, of course. The vaseline leaves a stain on the feathers which is hard to get out in the wash, so be careful to push the feathers back and bandage under them.
Onions for Poultry.
Onions make an excellent feed and, chopped fine and fed to the poultry occasionally during the winter, will materially help to keep them in good condition.

CAUSES OF MANY FAILURES IN POULTRY



A Badly Mixed, But Busy Family.

Every failure in the poultry business can be traced, according to James G. Halpin, poultry man at the Wisconsin College of Agriculture, to one or more of the following reasons:

1. Too expensive and too impractical buildings. Flocks do not require costly equipment, and of course the poultry man must pay interest on his investment.
2. Lack of experience and failure to raise chicks properly. Many a man has jumped into the poultry business with little or no experience, and naturally has lost money in his plunging.
3. Failure to market right. To produce a superior product is not enough. It must be advantageously marketed.
4. Starting with poor stock. It costs little or no more to start with profit-producing stock than it does with inferior fowls.
5. Neglect in improving breeding stock. By carefully selecting the hens and mating them with well chosen males more improvement will be secured.
6. Neglect in cleaning. Filth is a certain cause of loss to the poultry man.
7. Neglect in fighting lice and mites. These pests are a source of heavy loss to all who do not fight them.
8. Poor management. Like every other business, poultry raising requires close attention to details.

If he can, and before he starts out for himself, he should take a course at some recognized poultry school. After he has learned the ways of the flock he may have some assurance of success. But many mistakes and failures are sure to beset the path of the inexperienced.

Many poultry men fail to market correctly. They either get too far away from the market or try to force themselves upon an overcrowded market. And they often fail to put their goods up in attractive packages and do not advertise efficiently. A good understanding of the market conditions of a given locality is essential in building up a trade there.

It is absolutely essential to have good stock to start with. No poultry man need expect to have any success if he starts out with a flock of boarders. The stock need not be pure bred, but it must be good enough to more than pay for its keep.

The flock must be improved by careful selection and by the introduction of new strains when necessary. Each brood of chicks must be better than the last if the poultry business is to be a success. The boarders and the stragglers must be culled out. Constant improvement is the surest road to success.

A very common cause of failure is just plain neglect—neglect in cleaning up the house; neglect in spraying and in fighting lice and mites. There is no excuse for this kind of failure. The poultry man should be continually on guard against insects and diseases. And above all, he must always keep his house and his birds clean.

All of these causes of failure may be summed up in one word. And that word is "Mismanagement." The three great laws of success in poultry may be summed up as follows: Get some

experience before going into business. Improve your stock. And keep clean all the time. The only cure for mismanagement is common sense, and the farmer who expects to make a success out of poultry should keep a good stock of it with him.