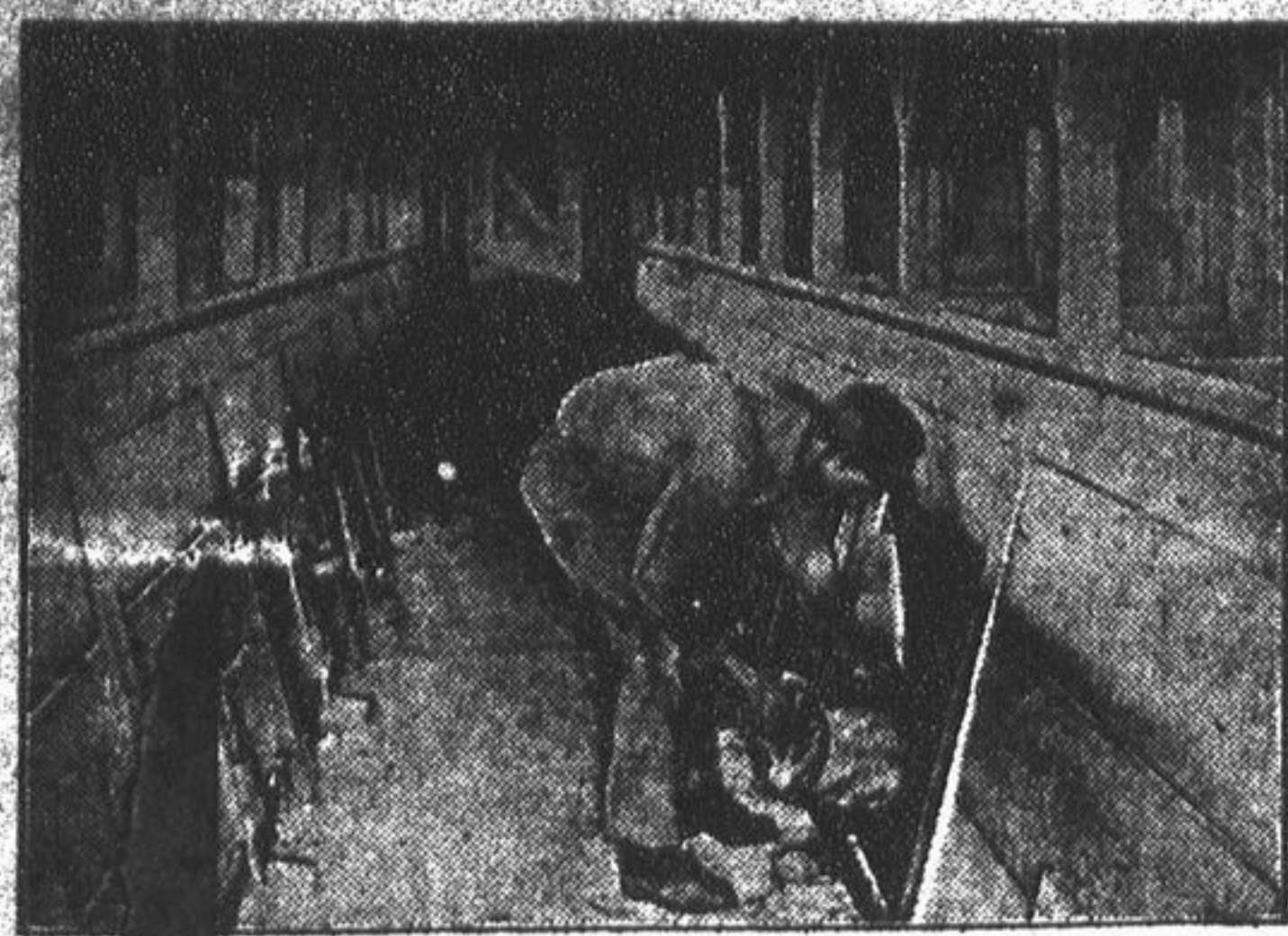


PROFIT IN ECONOMICAL FEEDING OF PIGS



Swinging Pig Pen, to Prevent Pigs From Entering Trough Before the Feed is All In.

(By W. B. GILBERT)
A mistake that we often make is that we wear our pigs too young. I believe in getting the little pigs started off to eat at three or four weeks old, and there is nothing better than a little milk and shorts to get them started. Then feed them liberally and by the time you wean them at eight or ten weeks old, you have a big, strong, lusty pig.

I am satisfied that a great many of our farmers lose all the profit in the business by the way they handle the pigs at the weaning time. I am a strong believer in raising the little pigs out in the open. Of course you must have shelter for them in storms and for feeding purposes, but let them have access to the earth; keep them on the ground and give them green food, and you will get them to develop bone and muscle and a strong stomach.

They are always on their feet and always at their feed. I like to have them out on a clover pasture or on peas and rye. For later pastures, rye gives satisfactory results. Of course, you must feed the pigs reasonably at the same time.

We all know that for economic production a mixture of several grains fed together will give better results than any one grain fed alone.

I cannot lay down a hard and fast rule. Some seasons oats might be

very satisfactory, but if you get such a combination as high-priced oats it would be foolish to advocate them, especially when we have to purchase our feed.

During the winter months in a root-growing country I believe roots are a good food, and should compose a large proportion of the ration, and I believe in boiling the roots and feeding some grain.

Do not load them up with a great lot of water; feed the roots in rather a thick water, and mix in your shorts and middlings and whatever grain you might happen to have. For the larger pigs pulp the roots and feed the meal sprinkled on. In a section where winters are cold, it is well to take the chill off the food, and always see that the pigs clean the troughs up and do not leave any material in them.

A great many people make the mistake of having food left in the troughs. Pay particular attention to cleanliness, have dry beds and give them dry straw to lie on. The bedding should be changed often.

In the winter months give them wood ashes and charcoal and sod or some kind. Earth seems to be absolutely necessary to keep the digestive organs in good condition. Milk is one of the best things for a pig. Nothing lengthens them out like milk, if properly handled.

GOOD RATIORS FOR EWES WITH LAMBS

Clover Hay is Better Than Timothy—Mouldy or Sour Corn Silage is Dangerous.

(By HOWARD HACKEDORN, Missouri Experiment Station.)
Clover hay and grain is a better ration for breeding ewes than timothy hay and grain.

Clover hay alone will maintain pregnant breeding ewes up to lambing time. After lambing, the addition of grain is advisable.

Corn silage when fed with clover hay, with grain, and with both clover hay and grain, is slightly better roughage than corn stover fed with the same combination of grain and clover hay.

Mouldy or extremely sour corn silage is a dangerous feed for sheep. Eleven ewes were lost in one week from accidentally feeding mouldy silage.

A ration of corn silage, clover hay and grain is the most efficient way of utilizing silage.

Feeding corn stover, clover hay and grain is the most satisfactory method of utilizing stover.

Corn silage and stover are better roughages than timothy hay when fed with grain.

ONE MAY PREVENT BLOAT IN CATTLE

Avoid Rank Grass and Wet Green Clover or Alfalfa—Some Precautions.

(By DR. A. S. ALEXANDER, Wisconsin Experiment Station.)
Rank grass and wet, green clover or alfalfa are likely to cause bloat in cattle. Bloat may be avoided if right precautions are taken. Here are a few of them:

Gradually change cows from winter grain and hay rations to fresh pastures and meadows.

Prevent indigestions, because indigestion is the direct cause of bloat.

Feed cows their usual ration of dry hay and grain before turning them out to pasture.

Keep cows off clover and alfalfa fields until dew or rain has dried off and never turn them on such fields in moisture-laden, "muggy" days.

Give cattle access to a mixture of salt and slacked lime.

Visit pastures frequently in early summer, and, if possible, take along proper remedies and instruments for relieving bad cases of bloat.

DAIRY

MAKING A PROFIT IN CREAM

Many Dairymen Are at Loss to Know Which is Most Profitable Way to Dispose of Product.

(By G. L. MARTIN, Montana Experiment Station.)

The rapid development of the ice cream business within the past few years and the increased call from city trade, hotels and restaurants has created a large demand for sweet cream. For these trades it is desirable that the cream should test about 20 per cent, but often the test may vary up to 40 per cent, depending greatly upon the method of operating the hand separator. When selling cream to creameries, the price is quoted per pound of butterfat, but for ice cream and hotel purposes it is customary to pay by the gallon. As a consequence many dairymen are at a loss to know which is the most profitable way to dispose of their cream. The following general rules may serve to determine the relative market price per pounds of butterfat or gallon of cream:

To find the value of a gallon of cream when butterfat is a certain price per pound, multiply the percentage of fat by 8 (the number of pounds in a gallon) and the product by the price per pound. At 30 cents per pound for fat, 20 per cent cream would be worth 48 cents per gallon; 25 per cent cream, 60 cents per gallon; 20 per cent cream, 72 cents per gallon; 40 per cent cream, 96 cents per gallon. At 25 cents per pound for fat, 20 per cent cream would be worth 53 cents per gallon, and so on.

To find the price per pound for butterfat when the price per gallon of cream is known, divide the price per gallon by eight times the per cent of fat. At 40 cents per gallon, 20 per cent cream would be worth 25 cents per pound of fat. At \$1 per gallon, 40 per cent cream would be worth 31 1/2 cents per pound of fat.

CONVENIENT AS MILK STOOL

Lard Tub or Large Candy Pail Can Easily Be Converted Into Handy Device for Dairy Barn.

(By G. A. RANDALL.)

The tub shows a handy milk stool and one very easily made. From a lard tub or large candy pail, with a key-hole saw cut out the wood at the top, as shown. One may thus make three or more legs, as desired. I find four



A Convenient Milk Stool.

are best. The top hoop must be removed to do this. Remove the side handles or ball and put in the center of the bottom two semicircular openings to fit the hands as desired, these for a handle. This stool is stout, light and the right height for an ordinary person.

Most Profitable Cow.
The dairy farmer realizes that the comfortable cow is the most profitable cow and that induces him to look after the comfort of all his stock. Naturally he gets better returns from them.

Cleaning Dairy Pails.
In cleaning the dairy pails, special attention must be given the ears and seams, else dirt and milk will be lodged there, souring and tainting the milk as soon as drawn.

Unprofitable Cow.
There is no longer an excuse for the unprofitable cow, the Babcock test and a pair of scales, and it is easy to ascertain whether or not she is "delivering the goods."

DAIRY NOTES

To have your cows milk long, milk them clean.

Uneven salting and working make streaky butter.

Good cows are the first essential of profitable dairying.

It pays to please and satisfy a cow. A happy cow is a profitable cow.

Use the curry comb and brush on the dairy cow every day. It pays.

To feed economically, cows should be fed as individuals, not as a herd.

Cream that is being ripened should be strained several times before it is ready for churning.

There is more money in feeding a steer than in feeding a poor dairy cow, and much less work.

Protect the cream and milk from being contaminated by stable air by keeping the cans covered.

Skimming milk at the right time prevents rancid butter.

The man who knows the least about dairying usually sees the most druggery in it.

And, mind this: If you want your mixer to present an attractive appearance, market it early in the day.

After making the butter, keep it in a cool dark place until next morning, as air is most destructive to quality.

ESSENTIALS FOR SUCCESS WITH POULTRY



Black Minorca Cockerel.

1. Select Good Foundation Stock.
2. Feed Meat and Egg Producing Rations.
3. Call Out the Loafers.
4. Keep the Flock Clean.
5. Make the Flock Comfortable.
6. Fight Poultry Pests.
7. Take Pride in Their Work.
8. Sell to Good Advantage.

(By J. G. HALPIN, Secretary of Wisconsin Poultry Association.)

1. Select Good Foundation Stock.
Use only mature, good laying hens and mate with strong, vigorous males. If egg production is desired, secure stock from a high-producing strain. If market fowls are desired, secure stock of a good market type. For dual purposes, select males of a medium breed and from high-producing females with well-meated breasts.

2. Feed Meat and Egg Producing Rations.
For egg production feed clean, wholesome grain in a deep litter of straw. Feed a mash of finely ground grain. If fed wet, feed once a day in troughs of sufficient length to allow ample room for each bird. If fed dry, allow birds to eat at will. Feed succulent feed once per day. Provide fresh water and, if possible, skim or sour milk for drink; oyster shell and grit. For meat production confine birds and finish off with a fattening mixture of finely ground grain, high in cornmeal, and mix to a batter with sour milk.

3. Cull Out the Loafers.
Cull out slow-growing chicks, overfat and non-producing hens, hens that lay small or ill-shaped eggs, and, if possible, cull out or separate from the flock hens that lay eggs with weak germs; i. e., at time of incubation a large percentage die in the shell. Individuals susceptible to diseases should be isolated from the flock as soon as noticed.

4. Keep the Flock Clean.
Use dropping boards during the winter and clean same frequently. Keep the feeding floor well bedded with clean, dry straw. Keep nests well littered with short straw, fine hay or shavings. Drinking dishes should be clean and well filled with fresh water. During wet weather confine birds to the house; muddy yards cause dirty eggs and dirty nests.

5. Make the Flock Comfortable.
Have special henhouse where hens can eat, exercise and sleep during bad weather. The house must be wind and storm proof, must furnish plenty of fresh air and sunlight, be clean and free from draughts, dampness and sudden changes of temperature. Special pains should be taken to keep the birds free from lice and especially mites.

6. Fight Poultry Pests.
The most troublesome pests are mites, lice and intestinal worms. Mites live in cracks and crevices, especially near the roosts and nests. Spray the house frequently and thoroughly, especially during spring and summer.

Lice live and multiply on the hen's body. Keep dirt baths always available. Dust hens with insect powder or grease with blue ointment.

Intestinal worms may be avoided by raising chicks on clean, fresh ground and by giving epsom salts occasionally in the mash.

7. Take Pride in Their Work.
Avoid frightening the birds. Know the best individuals and be constantly on lookout for sick or injured fowls. Take one or two good poultry papers and keep up to date. Improve the flock by rigid selection of males and females. To punch every chick and

ADVICE

FIGHT APPLE TREE INSECTS

Something of the Habits and Vulnerable Points Must Be Learned Before Combating Insect Pest.

(By E. M. PATCH.)

Before it is possible to combat an insect pest intelligently we must learn something of its habits and of its vulnerable points. When these are known proper remedial measures may then be taken for its repression or extermination. In the United States alone more than four hundred species of insects are known to affect in greater or less degree the apple tree or its fruit. For convenience in dealing with the species of insects which damage apple trees, they have been classified, in accordance with the character of the injury they cause, into three primary groups.

A. Injuring root, trunk or branch; borers and sap feeders.
AA. Injuring the foliage; biting or sucking insects.
AAA. Injuring the fruit; maggots; caterpillars, bugs and beetles.

In the class of those injuring root, trunk or branch, are the borers—roundheaded, spherothed and shot borer—which are destructive to the wood; the scale insects and plant lice, which include the oyster shell and San Jose scale and the woolly aphis.

In the second class—those injuring foliage—are the plant lice, small,



Mottled Fruit Caterpillar.

greenish, blackish or reddish lice, like sucking insects, such as the green apple aphid, and rosy aphid. Insects feeding upon the leaves without a nest and not concealed within, leaf or bud—caterpillars, several species of caterpillars, brown tail, gypsy and tussock moths; caterpillars living in web nests in spring or summer, or cocooned in folded leaf or bud; fall web worm, but caterpillar, but moth, leaf sewer, and cigar case bearer; conspicuous winter stages—several moths, such as orchard and brown, tall moth nest, antique and white marked tussock moths.

The third classification: insects injuring the fruit; caterpillars, lesser appleworms, codling moth and the mottled fruit caterpillar, legless maggot or grub, railroad worm and curculio; mature insects with wings and legs, plum curculio, core chaffer, tarnished plant bug.

The mottled fruit caterpillar is a very familiar apple insect. The eggs are laid in a mass attached flatly to the leaf. The larva is a smooth, hairless caterpillar, one and a half inches long when grown. Its head is shiny yellow with one dark blotch on each lobe. Its body is mottled grayish brown above and pale grayish green underneath. This caterpillar feeds upon the foliage and the fruit.

A glistering brown object, about three-quarters of an inch long. This caterpillar is readily dislodged, jarring the tree and killing the insect on the ground is a convenient combative measure.

POULTRY AND GARDEN STUDY

Several Most Essential Points Necessary to Raising and Keeping Chickens—Keep Coops Clean.

At one of the agricultural normal school courses in agriculture, a student gave the following answers to the question: "What objects are to be obtained in the study of poultry and garden?"

Some of the most essential points necessary to raising and keeping chickens are:

1. Have good healthy fowls to begin with.
2. Of a suitable age, not too old.
3. Keep the coops clean and free of vermin.
4. Give plenty of dust for dust baths.
5. Have good food and measured rations.
6. Dry mash must be given.
7. Have two-thirds of the food green vegetables or grass.
8. Have plenty of room for the chickens.
9. Keep coops free of cold drafts.

MAN MUST PROTECT ORCHARD

All Dead Grass, Weeds and Brush Where Insects May Harbor During Winter Should Be Burned.

The man who expects to harvest any fruit must protect his orchard from the ravages of insects and animals. All dead grass, weeds and piles of brush where insects may harbor during the winter should be hauled out and burned.

Insects deposit their eggs in the summer and fall in the grass and weeds and brush piles. These hatch out in the spring and make their attack upon the trees to the destruction of much fruit. Of course, in season the spraying should be carefully done.

A good deal of fruit may be harvested without spraying, but most of it will be defective.

Pruning is Profitable.
An orchard survey in an Iowa county showed that it paid to prune trees every year; that the orchards pruned annually gave average net returns of more than \$125 an acre, whereas orchards pruned occasionally or not at all gave a return of slightly less than \$55 an acre.

Keep Windfalls Picked Up.
Keep the windfalls in the plum and apple orchards picked up. They harbor insects. Figs turned in among the trees will rid the ground of windfalls. If they are not removed there is little danger of their being the trees.

MAKE CONCRETE STOCK TANK

Directions for Making and Installation of Reservoir for Water Supply on Any Farm.

Here is a little construction sketch of a concrete stock tank I completed just recently. I made the form, inside and out, of 1 by 2 inch yellow pine boards, with two-inch cleats about two feet apart, supporting the form with wooden chills, which I braced in between the boards.

Where we wanted the tank to stand we filled in the ground with an eight-inch base of concrete. On this we put up the outside form. Then we were ready for the concrete.

The bottom is eight inches thick 1-3-4 concrete. For top 2 and walls 1 like to have the concrete rather wet.



Concrete Water Tank.

After the bottom had become somewhat stiff we put in the inside form and began filling the sides. For this we used a richer concrete, 1-1-2-3-4.

The whole tank is reinforced, as shown in the sketch, with a good size wire, No. 4, with stays six inches apart. Around in the top I put square twisted half-inch steel rods.

After two days I took off the form. Then I mixed cement and water to the thickness of cream and with a whitewash brush I polished the inside tank two or three times over the holes and corners, spots were smoothed up.

SWINE ON ALFALFA PASTURE

Desirable to Have Fields Planted into Suitable Areas to Stock From One to Another.

(By G. W. BARNES, Arizona Experiment Station.)
While a few hogs can be raised in a limited area, the best results are obtained when such quarters are well planned. They will do better, remain longer, produce pork more abundantly, and they have plenty of alfalfa to eat.

It is desirable to have the pasture fenced off into sections so that the hogs can be moved from one pasture to another. This only provides fresh pasture, but also gives an opportunity to rotate the hogs if need be to distant pastures.

Practically all kinds of parasites, worms, which are common to swine, are contracted from infected pastures. Therefore, by pasture rotation, the help keep your hogs free from parasites.

Lime Sulfur Solution.
Make a lime sulfur solution by mixing a good quantity of lime with water. Before the hogs are moved to a new pasture, spray the old pasture with this solution. It will prevent any parasites from remaining on the old pasture.

Keep Windfalls Picked Up.
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