

FEEDS FOR BREEDING FLOCK

Results Given by New Hampshire Station With Yearling Lambs—Five Good Winter Rations.

Five lots of five yearling lambs each were fed per day during three winter months, says a report from the New Hampshire station, as follows: Lot 1, alfalfa hay, 1; native hay, 0.25; roots, 2.5, and cracked corn, 0.25 pounds. Lot 2, native hay, 1.5; roots, 2.5; cracked corn, 0.125, and oil meal, 0.2 pounds. Lot 3, alfalfa hay, 1; native hay, 0.25; corn silage, 2, and cracked corn, 0.25 pounds. Lot 4, native hay, 1.25; corn silage, 2; oil meal, 0.2, and cracked corn, 0.125 pounds. Lot 5, native hay ad libitum, roots, 1 pound, and oats and bran, 1.12.

The following gains were made per head: 7.6, 2.9, 4.4, 4.5, and -0.2 pounds, respectively. In a duplicate experiment the following year the following gains were obtained: 4.7, -0.1, -0.7, 0 and -2.6 pounds, respectively.

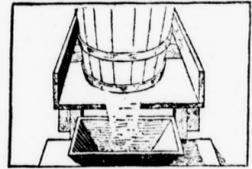
The first four rations are recommended for winter feeding of the breeding flock, but the fifth ration was unsatisfactory.

Lambs on roots made a slightly larger gain than those receiving silage. Native hay and silage appeared to be as satisfactory as alfalfa hay and silage.

EMPTY A BARREL GRADUALLY

Labor-Saving Method is Shown in Illustration for Use With Powdered or Granular Material.

The sketch shows a labor-saving method of emptying a barrel of powdered, or granular, material where the emptying is to be done slowly. Instead of taking out the material by scoop-



Emptying Barrel Slowly.

fuls in order to fill it gradually into a machine hopper, for instance, the workman quickly upends the headless barrel and works it over toward the edge of the platform and the material flows to the hopper. As the barrel settles down it must be rocked slightly so as to keep the material flowing. When empty there is a small amount on the platform to be scooped into the hopper.—Popular Mechanics.

GUIDANCE OF WOOL GROWERS

United States Department of Agriculture Issues Set of Rules—Brand Each Bale or Bag.

The following rules have been issued for the guidance of wool growers by the United States department of agriculture:

1. Adhere to a settled policy of breeding the type of sheep suitable to the locality.
2. Sack lamb, ewe, wether and all buck, or very oily fleeces separately. If the bucks or part of the ewes or wethers have wool of widely different kind from the remainder of the flock, shear such separately and put the wool in separate sacks so marked.
3. Shear all black sheep at one time, preferably last, and put the wool in separate sacks.
4. Remove and sack separately all tags and then allow no tag discount upon the clip as a whole.
5. Have slatted floors in the holding pens.
6. Use a smooth, light and hard-glazed (preferably paper) twine.
7. Securely knot the string on each fleece.
8. Turn sacks wrong side out and shake well before filling.
9. Keep wool dry at all times.
10. Make the brands on the sheep as small as possible and use a branding material that will scour out.
11. Know the grade and value of your wool and price it accordingly.
12. Do not sweat sheep excessively before shearing.
13. Keep the corral sweepings out of the wool.
14. Do not sell the wool before it is grown.
15. When all these rules are followed, place your personal brand or your name upon the bags or bales.

CHICKENS NEED GREEN FOOD

Cabbage Tied to Stake is Excellent—Long Stuff is Liable to Cause Trouble With Hens.

When green food is given to hens in confinement it should always be cut or chopped fine. A cabbage tied to a stake is excellent, but a variety is better. White clover, red clover, lawn grass, tops of vegetables, or even young corn fodder, will be relished by the hens if chopped into short lengths so that they can easily eat it.

Long food sometimes causes the hens to become crop bound.

Grit is Necessary.

It is absolutely necessary to supply grit, in order to keep fowls healthy, as grit takes the place of teeth.

UNIFORMITY IN EGGS URGED

Separate Dark-Colored Eggs From the Light and Keep the Different Sizes by Themselves.

It will be worth an experiment to assort eggs before selling them, by separating the dark colored eggs from those that are light, and also having the different sizes together.

Appearance is worth a great deal in the selling of an article, and eggs will sell quicker than anything else if sent to market in an attractive manner, which adds at least one-fourth more to the prices.

DAIRY FACTS

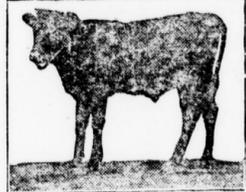
SERIOUS DISEASE OF CALVES

Diphtheria is Due to Specific Infection and May Appear in Animals Only Few Days Old.

(By DR. M. H. REYNOLDS, Minnesota Experiment Station.)

Calf diphtheria is due to a specific infection, and is always a serious matter. The trouble may appear with calves from three to five days old. Such calves refuse to drink milk or suck. They show more or less discharge of saliva from the mouth and inflamed patches inside the mouth. These patches gradually develop into ulcers covered with a dead, granular, or cheesy mass, which does not peel easily from the raw surface underneath. There is considerable rise of temperature and an offensive odor from the mouth. The trouble may easily extend to neighboring parts, to the lining membrane of the nose, and then there appears a yellowish discharge. In some cases the lining membrane of the digestive tract is similarly affected and then there is tendency to diarrhea. Little pigs show similar symptoms.

So far as now known the germ is a normal inhabitant of the intestines of healthy hogs and cattle and prob-



Healthy Calf.

ably always virulent. When the disease is prevalent, the virus is, of course, scattered everywhere. Very young animals are most easily and most seriously affected, but cases have been reported in calves and pigs six or eight months old, and even occasionally in adult cattle and adult hogs.

The sores may be cleaned with two per cent creolin in warm water, and then treated with Lugol's solution, applied twice a day to the ulcers. Permanganate of potash may also be used, two ounces to each gallon of water; make up fresh each time, as the mixture cannot be kept from day to day. Entire treatment should be given to valuable animals about twice a day for from four to six days.

DATA ON BREEDING FOR SEX

Expert of Maine Experiment Station Gives Result of Investigations—He Has Made.

For ages untold the subject of the control of sex has been discussed and studied over, with very little progress except to discover that many theories do not work. At that, knowing what not to expect is a great deal. The most promising theory now relates to the influence on sex of the time of breeding. Of that Dr. Raymond Pearl of the Maine experiment station writes in a private letter which Hoard's Dairyman quotes:

"My own investigations on the relation of the time of service in the heat period itself, that is whether early or late, shows that it does have an effective influence on the control of sex. We are collecting extensive statistics on the matter by means of co-operation with breeders all over the country and the more data we get, the more clear does it become that in this matter, time of service related to the heat period is a significant factor."

FEED FOR MILK PRODUCTION

Common Cows Frequently Capable of Returning Larger Yield Than That Secured by Feeders.

(By T. L. HAECKER, Minnesota Experiment Station.)

Common cows are frequently capable of producing a much larger milk yield than the average feeder secures from the average common cow. For ten years back we have always had a number of cows with no dairy heredity in the dairy herd at the university farm. The average of 23 yearly records of these cows is 5,000 pounds of milk and 222 pounds of butter.

The value of 222 pounds of butter at 27 cents a pound is equal in round numbers to \$60. The average common cow of this state produces a return yearly of but \$48. She is, therefore, yielding \$14 a year less than if given the same care and feed that the cows in the university herd received.

LIME VALUABLE IN FREEING POTASH IN THE SOIL.

H. J. PATTERSON, Maryland Agricultural College.

Lime has not only the effect of aiding in the formation of unions of potash which will be held in the soil, but it also has the ability to liberate potash from combinations which are locked up and unavailable to plants. This is particularly marked when lime is applied to land containing fragments of feldspar. Gypsum is particularly useful in rendering potash available, and the sulphate of lime in dissolved phosphates often have an indirect value in this way.

HORSES PIGS and CATTLE

SHEEP NEED LITTLE CAPITAL

No Other Way of Investing Money on Farm That Comes Back So Profitably or So Soon.

Very little capital—that is, money—invested in sheep is called for, and there is no other way of investing it on any farm that comes back so profitably or so soon. One year's use only is called for before the money is coming back into the owner's hands, with its double interest.

The fleece will pay one interest on the cost and the lamb another, and if the sheep have been well selected there will be another interest paid back in their growth. The benefit to



Making Use of Sheep in Cleaning Up Weeds in Cornfield After Cultivation Stops.

the land will easily pay all the costs of a flock for the year's feeding, and, in general, this service to the owner of a flock from the year's feeding, and a field has been known to add so much to the next season's crop as to repay the whole amount of money cost of the sheep, but it is a mistake to start with too many.

Three sheep to the acre are sufficient for the land that can be appropriated for the feeding of them. Thus, if one has ten acres of land that can be used for a flock each year, 30 sheep only should be procured. It is an easy matter to add to the number if desired. But it is to be considered that the flock will grow very fast, doubling almost, under favorable conditions, every year, if well cared for, and the ewes are not more than three or four years old. It is a great mistake to make a start with a flock of old ewes, and is money and care wasted.

BEST TREATMENT FOR COLIC

Improper Feeding is Most Common Cause of Trouble—Physic of Salts or Oil is Favored.

(By L. L. LEWIS, Oklahoma Experiment Station.)

Colic in horses and cattle is from various causes, but is more particularly due to sudden changes in feed or to eating more feed than can be easily digested by the animal at that time. The amount of feed that an animal may digest at one time under certain conditions may be entirely too much under other conditions. Since colic may be caused by so many different things, no one remedy will prove effective in all cases.

As a general rule, most of the colics that are seen in farm stock are due to improper feeding. In those cases the best general treatment that might be used would be to give as early as possible a physic of salts or oil. To relieve the pain seen particularly in spasmodic colic, the safest general treatment that can be used is to give from one to one and one-half ounce of chloral hydrate, dissolved in a pint of water, to which has been added one teaspoonful of ground ginger.

Do not give laudanum in such cases, as it only tends to produce constipation, and on this account is one of the poorest remedies that you can use.

TREATMENT FOR HOG WORMS

Best Preventive is to Give Animals Clean Troughs—Keep Away From Stagnant Water Pools.

To keep hogs free from worms they should at all times have a drink from clean troughs, feed from a clean floor and keep away from yards, wallows, manure piles, pastures and stagnant waters.

For worms, give eight grains of san-tonine and five grains of calomel for every 100 pounds of body weight. Give the medicines in a little slop after starving the pigs for 18 hours. Repeat in two weeks if thought necessary.

Measuring Productivity.

The productivity of live stock is measured by the value of the returns to the farmer.

Winter Horse Feeds.

Do not try to carry the horse through the winter on a hay or straw ration. Such feeding induces indigestion.

Children Cry FOR FLETCHER'S CASTORIA

USE LIME FREELY IN SOIL BUILDING

The Kind To Use And How To Apply It Economically.

H. J. PATTERSON, Maryland Agricultural College.

The kind of lime to apply will depend almost entirely upon the relative cost of the different forms. The main function of lime is to correct acidity; any form will do this but it requires practically twice as much Ground Limestone or Shells, and 1 1/2 times as much Hydrated Lime as Burned Lime to do the same amount of good. The fineness to which the raw material is ground determines to a great extent its effectiveness. The finer the better.

Whether we should use lime derived from Lime Stone or Oyster Shells depends upon how we are situated with regard to transportation, since freight rates are an important item to consider.

We cannot say that either source of lime is decidedly better than the other.

How To Apply Lime.

The method of spreading lime will depend upon the kind used. If we use Lump Lime we may slack it in a large pile and spread it with a manure spreader, or it may be placed in small piles over the field and after slacking, spread with shovels. If the latter method is used, 20 pound heaps (1 peck) placed 20 feet apart each way, or one bushel 40 feet each way, will provide about one ton per acre. The small piles have the advantage over the larger ones in stacking more readily, and on account of being close together, will not necessitate it being thrown so far with the shovels when spreading. Mixing this Slacked Lime with fine earth before spreading will make it less disagreeable to handle.

If the ground Stone or Hydrated Lime be used, the most convenient way to distribute it will be with a lime spreader. Caustic Lime should never be mixed with manure or commercial fertilizers. It is better to plow the manure under and put the lime on top of the soil after plowing. If commercial fertilizer is to be used the lime should be applied a few weeks before the application of the fertilizer is made.

Amounts of Lime To Apply.

It is generally the best practice to apply not less than one ton of Burnt Lime or two tons of Ground Lime or Stone Oyster Shells per acre. Hydrated Lime should be used at the rate of 1 1/2 tons per acre. Such an application need not be given oftener than once in five years, which makes the cost not more than 50c to \$1.00 per acre per year.

When To Apply Lime.

There is no doubt a best time to apply lime and for many reasons that time is just after the land is plowed for the corn crop. The processes required in securing a good seed bed and the cultivation of the corn will mix the lime thoroughly with the top layer of the soil where it will be most effective in performing its main function; correcting acidity.

If clover has not been doing well on the land and an application of lime be given as suggested, we may expect a vigorous growth of that crop when it is again sown to clover. Probably on no other crop will lime have so decided effect as on the clovers. If for any reason we do not get to make an application of lime for corn we should not hesitate to use it in the fall when preparing the land for wheat.

GET SOUND BREEDING STOCK TO PRODUCE WINTER LAYERS.

ROY H. WAITE, Maryland Agricultural Experiment Station.

Let us begin now to prepare for a flock that will produce eggs for our next winter. To many people a chicken is just a chicken. Little do they stop to realize that the way a chicken is made or built up determines to a large extent its usefulness as a layer.

Most persons realize pretty fully the general requirements of a strong builder. They know that it is necessary to have a solid foundation and then that it is essential to make each step or section of the construction just as strong. They know that it does not do any good to put a lot of time, energy, and expense into making the top part of a building substantial if the foundation or lower part is weak. But these same people, many of them, seem to forget these things when they start building a flock of chickens, which they expect will be strong enough, and healthy enough to withstand a severe winter and have enough energy left to produce eggs.

The foundation of the poultry flock is the breeding stock. If it is ill-matured, poor, sickly or improperly nourished it will be a waste of time to try to breed from it. The resulting flock will hardly pay for its keep. If on the other hand your stock is well-matured, in good flesh, healthy and properly nourished you have the proper foundation for a good flock for egg production next winter.

It will pay most any one to take a little trouble to select out a few of the strongest and healthiest, most vigorous birds and save only eggs from these for hatching. Sometimes it may be best to cull out the poor birds from the flock and keep them separated for a time or what is probably better sell them for market or eat them.

My Lord, the Elephant.

Recently an old circus man recounted a personal experience of an elephant's intelligence in obtaining what it wanted.

When feeding it with potatoes, which the animal had been taking from his hand, the animal failed to secure one which rolled just out of the reach of its trunk.

Contemplating the situation for a few seconds, he blew a gust of wind against the potato, causing it to rebound against the wall, and thus to come within reach.

Horticultural Advice

SCIENCE IN HANDLING FRUIT

Grower May Secure High Prices for Product by Exercising Care in Sorting and Packing.

A great saving may be effected by the scientific handling of fruit of all kinds. In this case "science" means right knowledge and care. The fruit grower cannot always sell direct to the consumer, but he can, by sorting and carefully packing his product, get a much better price when selling to the retail dealer than he can if he follows the old-fashioned methods of dumping everything into boxes, baskets and barrels regardless of size and condition. The shrewd dealer will make the most of the bad condition of the stuff offered him, beating down the grower to the lowest possible price and then add to his profits by the work of a few boys in the basement who are instructed in the art of cleaning and repacking. The grower, himself, could get this added profit if he



Dumping Apples Into Barrels Without Sorting Gives Middleman Greater Profits, Because He Grades and Sorts.

would only take a little more trouble in preparing his fruit for market.

Some associations of fruit and vegetable growers have adopted this plan, and made certain brands famous.

The fruit sold under these various brands is carefully selected and packed under the supervision of the manager employed by the growers, and packages are guaranteed to be up to standard in every way.

As most of the apples grown in this country are sent to market in barrels, it may be well to set down here some rules adopted by the best associations of fruit growers for the barreling of the fruit.

In the first place the apples are taken from the trees and placed in baskets or bags slung around the shoulders of the pickers, and some very careful growers insist that the pickers wear gloves, in order that their fingernails may not cut the fruit. It is a well-known fact now that a tiny abrasion made by the fingernail will often admit harmful bacteria which will, in a short time, destroy the apple.

The apples are then brought to the packing tables, which are covered with canvas or burlap under which is a padding of moss or straw in order to prevent bruising. The greatest care is taken to prevent the apples from falling from the table, or against one another in a way to cause the slightest bruise. The fruit is rapidly sorted into their proper grade and the package—whatever the form of packing may be—labeled with the grower's name. A barrel properly packed can be shipped long distances without injury to the fruit.

MAKE SUCCESS IN ORCHARDS

Growers Should Note That Thorough Tillage is Most Profitable Method of Soil Management.

(By DR. E. H. JENKINS, Director, Connecticut Experiment Station.)

Certain soil orchards under special conditions, such as heavy manure mulching, together with some pasturing to keep the grass down, give good results—perhaps as good as clean cultivation. But the skillful fruit grower can expect more than the law of averages will give. And even the general grower should note that thorough tillage is the most profitable method of soil management.

Lends Zest to Game.

The man who keeps accurate track of his cows' production always has a record to beat, and beating a former record lends zest to any game.

Children Cry FOR FLETCHER'S CASTORIA

Children Cry for Fletcher's CASTORIA

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