POULTRY

DETAILS INSURE EGGS IN WINTER

Pullets Must Be Given Well-Balanced Ration.

If the pullets are to produce an abundance of winter eggs, they must have a well-balanced ration, plenty of room, fresh air, and clean litter and be free from lice and other annoyances. Their development and management during the critical time just preceding and during the winter laying period requires careful attention to many details.

After the range has become depleted, cabbage, swiss chard, or other green feed should be added to the ration and continued throughout the winter months. Green feed aids in egg production and helps to prevent diseases, especially colds and roup. Skim milk or buttermilk in the ration is also an aid in producing winter eggs and maintaining the health of the flock. Sudden changes in feed are to be avoided.

The house should be clean, well ventilated and roomy. Leghorns require at least three square feet of floor space and six inches of roosting space. The heavy breeds need more space.

Pullets need a great deal of fresh air. The house should have 15 to 25 square feet of open space in front for each hundred pullets. This space is kept wide open except in very windy or severely cold weather when it may be partly closed by lath wind baffiers.

The skillful poultryman will move the pullets into winter quarters before they begin to lay and will keep them perfectly free from lice and mites and other sources of annoyance.

Fattening of Poultry for Holiday Markets

The chickens that are fat will be the ones that will bring the highest price on the market during the holiday trade. Always the fat ones are bought before the poor ones. So warns D. H. Hall, extension poultry husbandman, Clemson college, in discussing the fattening of poultry for market.

The fattening ration of birds is very simple, says Mr. Hall. You have enough protein to build up muscle, but the carbohydrates content should be high. A soft feed or mash should be fed in order to make the muscles as soft as possible. The following ration will make a good fattening food: 50 pounds corn meal, 25 pounds wheat bran, 25 pounds middlings.

Mix the above with two parts buttermilk. When buttermilk is not available, meat scrap can be mixed with this ration at the rate of 15 pounds per 100 and water used to moisten the mash.

Young fowls stand confinement well, but old hens do not. It is best to fatten young fowls in coops and old hens in small runs. A fowl on fattening ration should gain from 50 to 90 per cent of its own weight.

Changing Litter Often Gives Healthy Results

Nature has decreed that no animal does well for any length of time closely associated with its own excrement. Do not forget this. Do not force your birds to pick over and try to eat out of litter which is largely composed of dust and dried hen manure.

Change the littler frequently. It is a labor, a trouble, and an expense; yes, but it is the only way to do, if you want the best results with your poultry.

Whether the floors of your house are of boards or cement, do not let them become damp.

Remember, a hen's kidneys throw off a comparatively small amount of matter, and the poor hen has no sweat glands, so that most of the liquid (and she drinks a lot of water, you know) is thrown off in her breath.

The air in a henhouse is bound to be damp enough any way, and it is the practice of a good poultryman to so arrange his floors and ventilation that dampness is kept to an absolute minimum.

Ultra Violet Rays

Windows should be hinged so that the sun can shine directly onto the hens, because the sunlight coming through glass loses the ultra violet rays. These rays have the property to make the minerals in the ration available. A hen apparently has the ability to store this factor in her body, but if she lays well and is kept out of direct sunlight for a long time, then she exhausts the supply. She may continue to lay but will make only thin shelled eggs.

DAIRY INDUSTRY NOW IS IMMENSE

Milk Represents Fourth of Production on Farms.

(Prepared by the United States Department of Agriculture.)

"The dairy industry is an immense industry. It holds an exceedingly important place in our national economic structure. This must be so, because the commodity it produces is a prime essential in our very existence," said O. E. Reed, chief of the bureau of dairy industry, United States Department of Agriculture, in addressing the first annual meeting of the North Carolina State Dairymen's association at Greensboro.

"The dairy industry is of such great size that it is difficult to realize how big it is," he said. "The steel industry was once called 'the billion-dollar industry.' In the year July 1, 1927, to July 1, 1928, according to estimates, the total income received by American farmers for all their farm products was about $12,250,000,000. One-fourth of this, or about three billions, was produced by our dairy cows. This was two and a half times the annual value of the cotton crop, two and a half times the beef and veal crop, more than three times the wheat crop, and more than twice the hog crop."

The demand for the dairy products of American farms is increasing year by year; milk, butter, cheese, ice cream, etc., are becoming a greater part of the diet of the American people, he said.

"The increase in the demand for dairy products is due to two factors. The first is the improvement that has taken place in the quality of all dairy products generally in the last few years. There is a direct relation between quality and consumption. Milk that is low in quality is always difficult to market to advantage, whereas milk of good flavor and high sanitary quality always has, under normal economic conditions, an advantageous market and is consumed in relatively large amounts. The second factor is a better understanding on the part of people generally of the value of milk and milk products in relation to nutrition and health. In recent years a great deal of emphasis has been put upon the vitamin content of foods. Milk is rich in vitamins, those accessory food substances which are necessary for the proper functioning of the body.

"The problem of raising the general level of quality of milk and cream at the point of production, the farm, is one that must be given more consideration. The objects of quality improvement are to increase consumption and provide the consumer with clean, wholesome, and nutritious dairy products. Statistics on the per capita consumption of milk show that the southern states are low in their per capita consumption of all kinds of dairy products, as compared with other sections of the country. The producer as well as the manufacturer should make every effort to increase the consumption of milk."

Good Bulls Are Needed to Replace All Scrubs

Good bulls are hard to find, says Prof. S. J. Brownell of the New York State College of Agriculture, who is interested in finding bull calves from good pure-bred sires and from cows that have made 400 pounds of fat in a dairy herd improvement association.

Surveys in many New York townships show that more than half of all the bulls owned are grade and scrub bulls. Of the 45 per cent of pure-bred bulls, only 15 per cent of them are registered, and only 3 per cent of all the bulls owned are from cows of known producing ability.

As a result of the surveys, many dairymen who now own grade and scrub bulls have listed their desire to get better bulls. The requests for better bulls are at the rate of ten to fifteen dairymen for every township surveyed. This means that from 300 to 400 good bulls are needed to replace the grades and scrubs in the surveyed territory.

Selection of Feeds for Ration for Dairy Cow

When you wish to make up a ration for the individual cow or for the herd there are two important ingredients to be considered in selecting the feeds. These are: 1. Digestible protein. 2. Total digestible nutrients.

Protein is especially important in milk production and all dairy rations should be liberally supplied with this element, but the use of too much protein may be detrimental. The feeding of high protein feeds may be carried to extremes with the result that many cows will be prematurely burned out or become shy breeders. The increased use of alfalfa has given a protein roughage that does not require the high protein grains that we have become accustomed to using with our lower grades of hay.

LIVE STOCK

SHEEP REQUIRE MORE ROUGHAGE

Straw, Corn Stover, Winter Pasture, Silage Help.

Suggestions to sheep men for providing roughage for their stock by buying only a minimum amount of hay, are given by L. A. Kauffman, sheep specialist for the Ohio State university.

Sheep require more roughage than grain, and roughage is necessary to prevent serious digestive disorders, he says. The short hay crop makes necessary the use of straw, corn stover, winter pasture and silage more than is normally recommended. All of these feeds may be used, he advises, but due to their character and effects some laxative, high-protein supplement such as linseed cake must be supplied.

Pasturing standing corn or stalk fields, when such are available, also will reduce the amount of hay required, Kauffman says. If the corn is to be cut, this is not advisable, he believes. Better still, he says, is corn silage, when the farmer owns a silo. Silage is a cheap and excellent roughage when supplemented with a small amount of hay and a little cottonseed or linseed cake. Three pounds of silage to one pound of hay is his recommendation.

Where grass has failed, rye may be sown in stubble to provide late fall and early spring grazing. Rye also may be sown in corn. Oats, too, may be used as an emergency hay crop. When cut in the dough stage oats hay has a feeding value equivalent to mixed hay, he says.

With oats selling at 25 to 30 cents a bushel in northeastern Ohio, Kauffman suggests to southeastern Ohio sheep men that they buy in carload lots now. Oats is an excellent growing feed for sheep, and due to its bulky character, less roughage must be fed with it.

Comparisons of Summer and Winter Rations

An interesting deduction from the self-feeding experiment in West Virginia is that heifers that make gains above normal in winter will make gains below normal the following summer on pasture. In four comparisons of three groups of heifers—one group for two pasture seasons—that were self-fed grain and given free access to roughage, the average winter gain was 316.5 pounds per head, whereas the same heifers gained only 85.2 pounds on pasture. No grain was fed on pasture. Similar heifers, hand-fed, averaged 154 pounds per head for the winter feeding periods and 190 pounds per head for the pasture season. No grain was fed on pasture. It should be remembered, however, that the hand-fed groups were well fed. It would be a mistake to deduce from these figures that poor winter feeding will be overtaken on good pasture. If a calf is stunted by poor winter rations, it cannot make as good use of pasture as the more vigorous, well fed calf.

Satisfactory Remedy for Vermin on Cattle

(By W. H. PETERS, Montana Experiment Station.)

A mixture of half powdered sabadilla seed and one-half sulphur sprinkled along the back and over the neck of the animal is a fairly satisfactory remedy for lice on cattle in the winter months. This powder need be sprinkled only lightly into the hair and it does not take very much to treat one animal.

One-eighth of a pound of sabadilla seed and one-eighth of a pound flower of sulphur would be sufficient for treating one animal two or three times. It is best to sprinkle an animal infested with lice once every four to six weeks through the winter months to keep the lice down.

Ground Wheat for Live Stock Is Satisfactory

Advisability of feeding wheat to live stock is a question which often confronts live stock feeders when the prices of corn and wheat are close together. E. T. Robbins, extension specialist at the Illinois experiment station, reports that coarsely ground wheat is worth as much or more as the same weight of shelled corn for hogs. When wheat is 75 cents a bushel and can be ground for 5 cents or less, it will pay to feed wheat instead of 75-cent corn. Cheaper corn, however, would likely be a more economical feed. Ground wheat, according to Mr. Robbins, has about the same value for other stock as for hogs.

Clean Orchards Discourage Bugs

The Fruit Grower May Save Himself Much Trouble by Fall Spraying.

Harvest time is the best time in the year to diagnose the reason for cull apples and the prevalence of disease in the orchard.

"By examining the cull apples the producer finds various troubles," says H. R. Niswonger, extension horticulturist at the North Carolina State college. "He will find some of the fruit spotted with San Jose scale; other apples have worm holes in the side caused by the codling moth with late rots developing about the areas, and apple scab and blotch added a number to the cull pile. Much of this trouble may be reduced by starting a clean-up method of attack. Give the orchard a thorough spraying this fall with either lime-sulphur or oil sprays, and those trees which are badly infested with San Jose scale need another spraying next spring. Examine each tree for disease areas and cut out the diseased portions and burn them. Mummified fruits should be removed and destroyed. These will spread bitter rot during the next season if allowed to remain on the tree."

Especially is a clean-up practice needed for the control of the codling moth. The pest was most abundant this season near the packing sheds and storage places. Late rots developed most at such points also. The packing house, piles of cull apples, old baskets and old boxes provide fine places for the codling moth to pass the winter. Mr. Niswonger says that from one packing house which had been carefully screened, 5,500 moths were caught at one window.

He recommands that the houses be thoroughly cleaned and screened if possible. He also suggests that all the refuse about the packing house be raked up and burned. There are usually some stray trees about the orchard that are worthless. If these are not worth spraying they should be pulled out and burned. Some of the more successful orchardists also scrape off the loose bark from the apple trees and burn this.

Tractor Valves Burned Out Because of Defect

The most common cause of a tractor repeatedly burning out the valves is that they are set with too close a clearance, so that when the valves become hot and expand the valve is held up a trifle and lets the flame blow through. There should be a space of .020 inch between the valve stem and the push rod at its lowest point. If your mechanic has been adjusting closer than .020 inch, this may be the cause of the trouble.

Running with too late a spark or with too rich a mixture may cause the valves to burn, but these troubles will usually cause the tractor to overheat badly. Using too lean a mixture also is likely to burn the valves, and this may not always show by the engine everheating. Where all the valves burn, it would almost have to be one of the above causes.

Repair Feed Bins to Guard Against Pests

Examine the wheat bins carefully before laying in a large supply of feed. Sometimes boards become warped and cracked and it does not take much of a crack to permit wheat to trickle through. Make the bins as proof against rats, mice and sparrows as possible. The amount of good grain that these pests take in a year would help many a poultryman to take a fine vacation and buy a new radio.

Sometimes a few sheets of galvanized iron such as is used for metal roofs, can be nailed inside of wooden wheat bins to help keep out the mice. A poultry farm is the most apt to become infested with rats and mice if breeding and hiding places are provided. There is more or less feed on the place at all seasons of the year and feed bought in large quantities must be stored for long periods.

FARM NOTES

Good seed costs money. Be ready to pay for the quality you demand.

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Quality products are profitable because they satisfy customers and get repeat orders.

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Heavy city traffic is favoring farmers' roadside markets, at the expense of municipal produce markets.

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Fruit trees of all kinds are subjected more or less to serious injury each year by rabbits and field mice, particularly during the fall and winter seasons.

Fertilizer Effect on Quality of Crop

Higher Yields and Better Product Result.

At the Michigan Agricultural experiment station studies of the effect of fertilizer on the quality of lettuce, spinach, radishes, beets and tomatoes show that the correction of mineral deficiencies in the soils resulted in crops of larger yields, improved quality and better keeping qualities.

An excellent illustration of the effect of good cultural operations and liberal fertilizer applications upon the quality of the tomato crop is offered by the work of the Ten Ton Plus Tomato clubs of Indiana. The aims of these clubs are to secure more profitable yields and better quality for the packers. The farmer who joins the club agrees to follow certain recognized good cultural practices among which is the use of 500 pounds of a 2-12-6 fertilizer per acre or its equivalent. During the past five years over 3,000 members have belonged to these clubs and their average yields have been practically double that of nonmembers of the same community. That these higher yields result also in improved quality is shown by the enthusisatic support which the canners give to this work. One canner reported in 1928 that over 78 per cent of the tomatoes delivered by Ten Ton club members were graded U. S. No. 1.

Sweet Clover Cropping Can Be Done Too Often

The cropping system in which sweet clover may be used as a green manure should include it only about once in three or four years, says M. F. Miller, chairman of the soils department of the Missouri college of agriculture. As a matter of fact it is actually possible to get too much nitrogen in the soil by turning the crop under too often. In such cases the soil becomes unbalanced and often the corn tends to fall down just as small grains tend to fall under similar circumstances.

A cropping system including one or two years of corn, followed by oats and the oats by wheat in which the sweet clover is seeded, is a pretty good one where both oats and wheat are satisfactory crops. In such a cropping system no legume hay is provided for animals so that it is necessary to set apart a special tract of ground for alfalfa for hay or to have a second rotation on the farm in which legume hay is provided. Farmers interested in this crop as a green manure will do well to consider the whole matter carefully both from the standpoint of getting a stand of sweet clover and from the standpoint of the cropping system best adapted to their conditions.

Careful Use of Manure Means Daily Hauling

When a ton of protein supplement is fed to cattle as much as half of the value is often passed on to manure in the form of nitrogen potash, and phosphoric acid when these fertilizers are figured at commercial prices. In order to realize full return from such feeds every pound of residue must be conserved if possible. Careful use of manure necessitates daily hauling to the fields, or safe storage in a special pit or shed.

Carefully conducted studies at various experiment stations have proved that increased crops, as a result of its application, give manure a value of from $2 to as high as $7 a ton. At the Tennessee experiment station two 20-year series of experiments on fertile upland soil and rich bottom land proved that manure resulted in crop increases of $2.25 and $2.12 a ton respectively. On poor soil, over a 10-year period, manure was worth $7 a ton in improved crop yields.

Market Prefers Short and Stocky Potatoes

The New Jersey agricultural experiment station has found that the trade prefers short and stocky sweet potatoes rather than those of long and lean shape. As a result of extensive fertilizer experiments it has been shown that the stocky shaped potatoes can not be grown unless there is a good supply of potash in the fertilizer in relation to the amount of nitrogen. By means of carefully controlled greenhouse experiments the reasons for the effect of the fertilizer treatments were worked out. It was shown that the stocky-shaped potatoes were higher in protein nitrogen than the long lean-shaped potatoes. When insufficient potash was available for the plants they were unable to synthesize sufficient protein to form the thick layers of cells necessary to give the stocky shaped potato. Similar effects of fertilizers on the shape of irish potatoes have been shown by other investigators.