

BREEDING MALE OF IMPORTANCE

Cockerels Can Be Bought More Advantageously Now Than Later in Season.

SEEK HIGH EGG PRODUCTION

Flock Average of 150 to 160 Eggs a Year Is Excellent—Trapnest Record of Mother Should Always Be Insisted On.

Progressive poultrymen are already looking forward to the mating of their flocks next spring. Cockerels which have been hatched this spring are now available for sale on many farms for breeders. They may be bought more cheaply now than they can be later this fall. A breeding male that will command from \$5 to \$10 in November may be purchased now for about \$3.

Head of Breeding Flock.

In purchasing cockerels one should insist that an exact pedigree be given on delivery of the bird, says O. W. Harvey of the University of Missouri college of agriculture. It is believed that the male bird is more important than the female in transmitting the character of high egg production. Not all male birds transmit the character. Ordinarily, a hen which lays 30 eggs or more during the winter season of November, December, January and February, will lay approximately 200 eggs a year. Of course, some environmental factor, such as a late spring, which we have been having this year, may affect the summer laying cycle, and thus reduce the production of the hen to a figure below 200, even though the winter cycle has been 30 eggs or more. The fact remains, nevertheless, that with our present knowledge of breeding poultry for egg production cockerels from hens that have exhibited this 30-egg production during the winter laying cycle are the ones to buy to head the breeding flock.

Secure Trapnest Record.

It is but a small proportion of the flock that lays 200 eggs or more during the year. The day of the 200-egg flock has not yet been attained. Poultrymen must not be misled by advertisements that have been appearing in the poultry papers by large fanciers offering birds for sale which have exceptional fancy points and at the same time are claimed to be from a 200-egg



High Producing White Leghorns.

strain. A flock average of 150 to 160 eggs a year is excellent production. Of course there are exceptional individuals in every flock. Approximately ten per cent of the White Leghorn pullets on the University of Missouri poultry farm show a trapnest record of more than 200 eggs a year. It is this small proportion of the flock that is used in pedigree breeding. Cockerels from this selected number are the ones that are believed to transmit the character of high egg production. If the farmer buys a cockerel without securing a trapnest record of its mother's pullet-year production he has no means whatever of knowing whether the bird can transmit the ability for a 30-egg production during the winter season. In other words, 200-egg daughters, or whether he will transmit an ability for producing no eggs at all during the winter season when eggs are highest in price. A trapnest record which shows that the mother of the cockerel has laid 30 eggs from November to March inclusive should always be insisted upon when purchasing new male birds for breeding. To buy on any other basis is a very uncertain procedure, and the chances are less than half for increasing, even in a small degree, the general flock average.

SOME ESSENTIALS FOR PIGS

Important That Porks Be Provided With Shade, Fresh Water and Abundant Pasture.

This is the season of the year when pigs should have lots of good water, shade and pasture, says R. W. Clark, of the Colorado Agricultural College. The farmer who does not provide these things need not blame the packers next fall when he sells his porkers.

The way some farmers handle their pigs during the growing season they would need a dollar a pound to break even.

A little grain along with pasture will secure good results and it should be provided by all means.

MARKET ASSOCIATION PAYS LARGE PROFITS

Pinto Bean Growers of New Mexico Making Money.

Form Organization, Eliminating Local Buyers Who Were Rapidly Destroying Industry Through Careless Packing.

"The pinto bean growers of this state have earned \$82,000 in additional profits from their 1919 crop through their co-operative marketing association initiated by specialists of the bureau of markets, United States department of agriculture," was the recent statement made by a New Mexico pinto bean grower.

Before the association was formed the beans were purchased by local buyers who practically controlled the market and therefore paid almost any price they chose. These buyers were rapidly destroying the possibilities that offered in the marketing of pinto beans through the lack of care in grading and packing. Choice re-cleaned pinto beans was a technical trade name that came to mean nothing, for the beans often contained splits and dirt, as a result of which the trade could not depend upon the quality of the product.

Now the farmers do their own marketing through the association. Sixteen warehouses, properly equipped with grading and packing machinery, have been erected. The beans are carefully graded and then packed in new, even-weight 100-pound bags, which are neatly sewed and branded. The association demands clean cars from the railroad, and in loading the seed ends of the sacks face one way. The association believes in the bureau of markets' proved theory that when a buyer throws open the door of a car he is instantly impressed if the contents present a clean, orderly appearance. The New Mexico association has 1,500 members and marketed 250 carloads of beans last year. It is constantly calling on the bureau of markets for assistance, which is cheerfully given.

SHEEP REQUIRE PURE WATER

Regular Daily Supply Is Important in Winter as Well as Summer for Best Results.

Some farmers seem to think that sheep do not need water and will do just as well without it. Although not heavy drinkers, sheep certainly need a regular daily supply of water in winter as well as in summer. If they cannot get clean water they will find dirty water, or in winter, will eat snow.

Experienced sheep men see to it that water for sheep is always and easily accessible. The best of feeding with hay and grain is useless without water. The body suffers without water, the appetite is lessened and a poor, run down animal is the result. Besides water, the sheep need salt. All these things are necessary to keep sheep in good condition.

SYSTEMS OF FEEDING FOWLS

Danger of Bowel Trouble Lessened Where "Dry" Plan Is Used—Also Saves Labor.

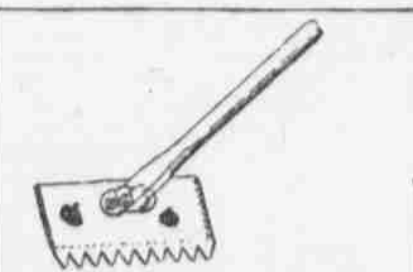
There are two systems in use for the feeding of fowls, in one of which all the feed is given dry and in the other of which one or more of the daily feeds consists of a moistened mash. For convenience they may be termed the "dry-feed" and the "mash" systems, although in the dry-feed system a dry mash is often fed. Dry feeding is used by many where it is not convenient to make and feed a moistened mash. The greatest advantages to be derived from the dry system are the saving of labor and the lessened danger of bowel trouble resulting from sloppy or soured mashes.

PROPER TIME TO CUT WHEAT

When Straw Has Lost Nearly All of Green Color and Grains Are Not Entirely Hard.

Wheat may be cut with safety when the straw has lost nearly all its green color and the grains are not entirely hardened. If cut sooner than this shriveled kernels will result. If left standing until fully ripe a bleached appearance, due to the action of the elements, often results, and loss from shattering may ensue. Wheat that is fully ripe is also more difficult to handle. Where the area of wheat is large, cutting should begin as early as it can be done safely. Farmers' Bulletin 885, United States Department of Agriculture.

CONVENIENT STABLE RAKE



The improvement claimed here is that the rake has two working edges; the toothed edge is used to rake loose litter, and the smooth edge to take up the finer particles which pass through the teeth. It is made of a single piece of metal.

DAIRY FACTS

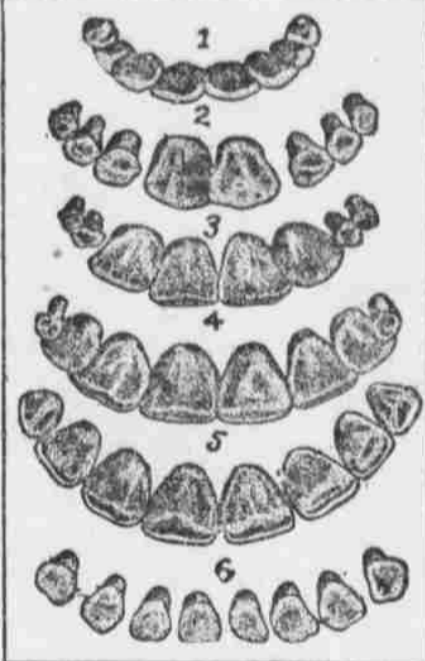
AGE OF CATTLE DETERMINED

Each Year Leaves Its Mark on Grinders of Animal, Gradually Wearing to Stubs.

The age of cattle can be approximately determined by the appearance, development and subsequent wear of their second incisor teeth, according to Farmers' Bulletin 1096 just issued by the United States department of agriculture.

Cattle have eight incisor teeth, all in the lower jaw. In the calf at birth two or more of the temporary or first incisor teeth are present. With the first month the entire eight incisors have appeared. Each of the six stages in the development of the teeth is shown in the bulletin by illustrations which will be very helpful to the person desirous of becoming proficient in judging the age of cattle.

As the animal approaches two years of age the center pair of temporary in-



(1) Internal Face of Incisors of Calf. (2) At Two Years. (3) At Three Years. (4) At Four Years. (5) At Five Years. (6) At Twelve Years.

terior teeth or pinchers are replaced by the permanent pinchers, which at two years attain full development.

At from two and one-half to three years the permanent first intermediates are cut and are usually fully developed at three years.

At three and one-half years the second intermediates or laterals are cut. They are on a level with the first intermediates and begin to wear at four years.

At four and one-half to five years the corner teeth are replaced, the animal at five years having the full complement of incisors with the corners fully developed.

At five to six years there is a leveling of the permanent pinchers, the pinchers usually being leveled at six and both pairs of intermediates partially leveled and the corner incisors showing wear.

From seven to eight the pinchers are noticeably worn; from eight to nine the middle pairs; and by ten years the corner teeth.

After six years the arch gradually loses its rounded contour and becomes nearly straight by the twelfth year. In the meantime the teeth have become triangular in shape, distinctly separated, and show the progressive wearing to stubs.

NEGLECT BUTTERFAT TESTS

Operation Is Comparatively Simple Where Proper Facilities Are Available.

Many dairymen maintain milk record sheets continuously and well, but they fall short on doing the dairymen's work up brown, in that they neglect to make frequent and regular butterfat tests of their milk.

This chemical operation is relatively simple where the proper facilities are available and every farmer with a little practice will be able to get accurate and dependable results from its use. A simple, handpower Babcock test outfit is inexpensive and will pay for itself in a few months in the increased efficiency which attends its use.

DAIRY NOTES

Love for your work is the key to your success. Learn to love your cows.

The season of the fly pests, which make life miserable for stock during the summer, is on.

If it pays to raise calves at all it pays to feed and care for them from the day they are born.

Each calf should be fed separately, carefully regulating the amount of milk by the size of the calf.

Do not mix new, warm cream with cold cream until it has been cooled in the shotgun can provided for this purpose.

Use a metallic strainer. It is practically impossible to keep cloth strainers sweet and clean and free from bacteria.

POULTRY CACKLES

MAKE SURE EGGS ARE FRESH

Method Generally Employed by Commission Houses for Purpose Is Known as "Candling."

When supplying a fancy trade with eggs, or on receiving eggs from outside sources, it is often desirable to determine their freshness. The method generally used by commission merchants for this purpose is known as "candling," and consists in holding the egg between the eye and a light so as to note the contents. This should be done in a darkened room, using one of the egg testers on the market or simple home-made tester.

The air space in a perfectly fresh egg is very small, and as the egg loses part of its contents by evaporation this air space increases in size with the age of the egg. Fresh eggs should appear clear and bright, showing no dark spots. Those accustomed to "candling" soon learn to detect stale eggs with a good degree of accuracy and rapidity.

Another method employed by some who have not a great number to test is to put the eggs in a basin of water. If good they will lie on their sides; if bad they will stand on the small ends. The older the egg the more upright it stands, and if very old it will be suspended in the water or even float on the surface.

TURKEYS EAT GRASSHOPPERS

Fowls Take Bulk of Their Food From Field Insects, Devouring Millions of Bugs.

Turkeys range far afield and prey upon insect forms that escape hens. From the time the young are old enough to begin foraging for themselves, perhaps early in June, until near frost, turkeys take the bulk of their food from field insects, devouring millions of grasshoppers and other injurious forms in meadow and pasture, says the United States department of agriculture.

In regions where wooded areas are still fairly extensive mast is an important item in the diet of the turkey. When the insect stores begin to fall,



Turkeys Must Have Free Range to Thrive.

the mast larders are beginning to be filled. Feeding on acorns, chestnuts, beechnuts, and the like, turkeys will go a long way toward fattening themselves for the Thanksgiving or Christmas market and will not require much feeding of corn or other grain to finish them. Generally speaking, turkeys will require a larger feeding of grain than chickens to fit them for market, but, as they utilize forms of waste that hens and their broods would not reach, the keeping of a fair number of turkeys is good economy.

BEST BROILERS FOR MARKET

Squabs Should Weigh When Dressed From Three-Fourths to One Pound Each.

The market demand is for broilers of three sizes: Squab broilers weighing, when dressed, from three-fourths to one pound each; small broilers weighing from one to one and one-fourth pounds each, and large broilers weighing from one and one-half to two pounds each.

At the age of six months the increased weight is slight and the quality poor. As the age of the cockerel increases above 12 weeks the quality decreases materially.



Mites help to keep cost of eggs high.

There is no room for poor birds on the farm.

Heat is the great enemy of eggs, both fertile and infertile.

Of the infectious diseases of turkeys, blackhead is the most destructive.

Mites multiply more rapidly in warm weather, so that war should be made on them now.

Be sure that the early hatched pullets on which you are depending for winter eggs are making steady growth.

When we consider the fact that the cock is the sire of so many birds we may be impressed with the importance of a good male bird.



ROAD BUILDERS STUDY SOILS

Highway Engineers Expected to Obtain Important Information by Investigation.

An investigation which promises to place at the disposal of highway engineers important information regarding the relation of soils to highway durability has been undertaken by the bureau of public roads, United States department of agriculture. This work includes taking samples of soil at spots in the subgrade of a highway where the road has begun to fail, studying surrounding geological conditions to determine how moisture arrived in the subgrade, thus destroying its value; making laboratory tests to determine the physical characteristics of soils, and obtaining a scientific measure of the bearing value of soils. In this investigation it is proposed to obtain as much co-operation as possible from the various state highway departments. The bureau of soils is co-operating with the bureau of public roads in this work.

Preliminary investigation has been started in Maryland on the Washington-Baltimore road, and will be extended beyond Baltimore and on other roads in Maryland. Progress has been made in the matter of laboratory tests, a number of samples of subgrade material and other samples already having been examined.

The federal highway engineers point out that soils differ widely in their ability to support loads, particularly when they are wet. Just why this is true and just what are the characteristics which make them different is little understood at present. It is in



Improved Highway Near Washington, D. C.

this field of investigation, of increasing importance because of the growing volume of heavy traffic, that the federal investigators expect to secure important information.

POOR ROADS ARE HINDRANCE

Farmer Made Unable to Take Advantage of High Prices—Cost of Market News Wasted.

Today the farmer has wire communication facilities unsurpassed in the history of the United States. He knows, day by day, the fluctuating prices which prevail for his produce at the marketing points and knowing these things he can arrange to get his goods to market on the day when the price is the highest if the road is good. If the road is bad or impassable then much of the effort which has been expended in getting the news of market conditions to him is lost.

MONEY TO IMPROVE HIGHWAYS

Counties and States Appropriate \$1,000,000,000 for Improvement of Local Roads.

Our counties and states have recognized the economic importance of road construction by appropriating more than \$1,000,000,000 to local improvements. It is the nation's part to build and maintain highways, which are of national importance and which will serve to effect economy, facilitate interstate commerce and strengthen the common defense.

WEEDS ARE VEXING PROBLEM

One of Principal Reasons Is That Farmers Have Permitted Plants to Spread Over Land.

One of the principal reasons why weeds are such a serious problem on many farms these days is that farmers and land owners failed to keep a close watch of fields for new weeds and to have them identified before they had spread over such large areas as to make their eradication costly.

Joy Riders on Farms.

The day when the city dweller could be looked on as a joy rider and could be accused of wishing roads for his personal benefit and enjoyment has passed, for there are more joy riders living on the farms than in the cities.

Service Is Requirement.

Modern roads are being built or planned with service as the primary requirement. The interests of both the business man and the farmer are served in the comprehensive programs for road work now under way.

ORCHARD GLEANINGS

PLAN FOR SUMMER PRUNING

Trees of Succulent Growth Should Be Treated Severely in Order to Check Growth.

When a young tree is becoming unbalanced or unsightly in form, we can often correct this fault by pinching or cutting back the several shoots that are causing the fault. Trees of very succulent growth should be summer pruned rather severely in order to check the growth and thus promote the vigor and development of the fruit buds.

Briefly, the principles of summer pruning are the removal of undesirable



Peach Pruned to Make It Grow into Right Kind of Tree.

branches and shoots which tend to make the head too dense and exclude the sunlight, and the cutting back or topping of shoots so as to retain the desirable low-spreading form. The benefits derived from summer pruning are:

1. The amount of winter pruning is lessened.
2. Correct form of tree is more easily secured and retained.
3. Fruitfulness is encouraged.
4. A more vigorous and harder growth, that will resist winter injury to a great extent, is secured.

COVER CROPS HELP GREATLY

Rye, Vetch, Clover or Oats Will Produce Heavy Growth to Be Plowed Under in Spring.

Cover crops planted during the late summer in orchards have been found to aid materially in producing plant food for trees and keeping the orchards in good condition at the Ohio experiment station. Under the cover crop system, rye, hairy vetch, crimson clover or oats are sown during the latter part of August, so that they produce a heavy growth and then are plowed under in the spring. The cover crops have been found to take up the excessive moisture, which allows the trees to better withstand a severe winter. The legume cover crops also add nitrogen to the soil, which is valuable for producing fruit the next season.

SPRAY FOR CHICKEN HOUSES

Farmers Who Have Been Using Lime-Sulphur on Trees Can Afford to Treat Hen Coops.

At this season of the year a good many people have an opportunity to thoroughly clean and spray their poultry houses, and thereby destroy the lice and mites. Orchardists who have a spray and are using lime-sulphur for their fruit trees can very well afford to use the same spray in a rather stronger mixture to thoroughly disinfect and deodorize their chicken houses. If this is not available, thoroughly spraying with kerosene or a strong solution of stock dip will kill the mites. Sodium fluoride if dusted into the feathers of the birds will destroy many of the lice. It is quite inexpensive and may be purchased at practically all drug stores.

BLIGHT, RUST AND MILDEW

Fungous Diseases Are Effectively Controlled by Spraying With Bordeaux Mixture.

Bordeaux mixture is a well-known spray which effectively controls fungous diseases. When only a small quantity is needed it is made by dissolving one tablespoonful of copper sulphate in one-half gallon of water, mixing this just before the spray is put on with one-half gallon of water to which one and one-half tablespoonfuls of limestone, previously slaked, has been added. The two liquids should be strained as mixed. Be sure to wash the sprayer thoroughly after using this mixture.

DEMAND FOR NURSERY STOCK

Those Wanting Trees, Shrubs and Vines Should Get Their Orders in Before the Rush.

There will be more demand for trees, shrubs and vines than can be supplied by reliable nurserymen. Those who are intending to put out ornamental, shade or fruit trees, shrubs or vines should get in communication with growers of known reliability and place their orders early.