

March 2014

EC1316 Revised with no date Steps to Quality Egg Production

Marven Vaughn

Follow this and additional works at: <http://digitalcommons.unl.edu/extensionhist>

Vaughn, Marven, "EC1316 Revised with no date Steps to Quality Egg Production" (2014). *Historical Materials from University of Nebraska-Lincoln Extension*. 2509.

<http://digitalcommons.unl.edu/extensionhist/2509>

This Article is brought to you for free and open access by the Extension at DigitalCommons@University of Nebraska - Lincoln. It has been accepted for inclusion in Historical Materials from University of Nebraska-Lincoln Extension by an authorized administrator of DigitalCommons@University of Nebraska - Lincoln.



E.C. 1316
REVISED

Steps to

quality

egg

production

RECEIVED

MAY 27 1971

COLLEGE OF AGRICULTURE

LIBRARY



EXTENSION SERVICE
UNIVERSITY OF NEBRASKA COLLEGE OF AGRICULTURE
AND U. S. DEPARTMENT OF AGRICULTURE
COOPERATING
W. V. LAMBERT, DIRECTOR E. W. JANIKE, ASSOC. DIRECTOR



STEPS to egg production

By Marven Vaughn
Asst. Extension Poultryman

Egg profits are based on the quality of the eggs your hens lay and the way in which these eggs are handled.

Prices and profits vary with egg sizes, but eggs themselves are usually of top quality when first laid. From that moment on, deterioration is rapid unless the eggs are properly cared for. If you are to profit from egg production the steps to success are how you care for, package, and market your eggs.

This circular is intended as a guide for producers. It will give you a blueprint indicating the best total production job and will help you locate any "weak link" in the total chain of "Marketing Quality Eggs."

SELECT STOCK FOR THE JOB

Stock for various specific jobs has been developed and is now available. You must select laying stock which will produce eggs of high quality, uniform size, uniform shape, uniformly good shells, and uniform color. If the market prefers a white egg, be sure your laying stock will produce white eggs.



Different types of housing call for different types of birds. Caged layer operators may prefer a smaller bird than will a conventional floor house operator, and may prefer to buy a strain proven in cages with higher feed efficiency than average strains have demonstrated.

Slatted floor house operators will probably use a smaller-type bird than the conventional housing system. Certainly, a well insulated house in southern Nebraska can use a smaller, less rugged bird than some of the uninsulated houses in northern Nebraska. Select a strain that lays the size eggs you need for your market.

Larger eggs draw a bonus for some producers. If your market pays no bonus for extra egg size, remember that 24 ounces per dozen is the desired average size for U.S.D.A. Large. Hens that lay eggs which are larger than this but which bring no premium will make less money since these hens use more feed to produce a dozen of these larger eggs.

PRODUCE HIGH QUALITY EGGS

After good stock has been selected, it is important to follow all the steps of good management. A U.S.D.A. study of marketing in the nine Midwestern States found that when seven recommended practices were followed 90% Grade A eggs were marketed. Five per cent was lost in Grade A quality for each practice not followed, dropping to 55% when none of the seven practices were followed. These practices were:

Confining of layers

Providing clean and dry floor litter

Providing clean and dry nesting material

Gathering eggs frequently

Using wire baskets for gathering

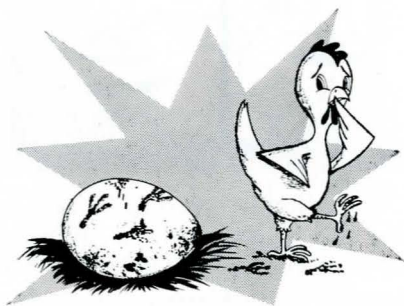
Cooling egg rooms to reasonably low temperatures

Maintaining reasonably high relative humidity

Vaccination is a means of increasing the resistance of poultry to disease producing organisms, and is generally recommended for Newcastle disease, infectious bronchitis, and fowl pox. Since an outbreak of any of these in the flock will damage egg quality, maximum protection must be made by the flock owner to prevent loss of production and egg-quality damage.

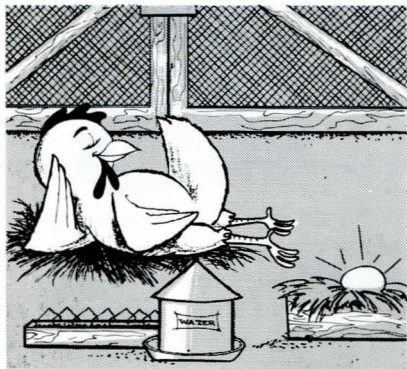
Clean eggs are a must in order to make a sale at the top market price. Dirty eggs sell for much less; many times bringing less than cost of production. No treatment has yet been devised to cause the egg to be higher in quality than when the hen laid it.

Dirty eggs are primarily caused by dirty nests and dirty feet. Provide deep, dry litter. Regulate the ventilation system to keep the litter dry. Increased air movement will carry away excess moisture. Air will hold ten times as much moisture at 100° F. as it will retain at 32° F.; hence, the need for more air movement to keep the litter dry during cold weather



Check trouble spots around waterers, feeders, etc., and remove wet spots when they develop. Check the roosting pits to see that the wire is satisfactory to prevent hens from walking on droppings. Confine the hens to keep them away from mud. Provide sufficient nests to prevent nest crowding; a nest for each five hens will do the job. Keep good depth of nesting material in the nest. Remove all soiled nest litter from nests. Gather eggs often. Don't fill the egg basket over $\frac{2}{3}$ full at gathering.

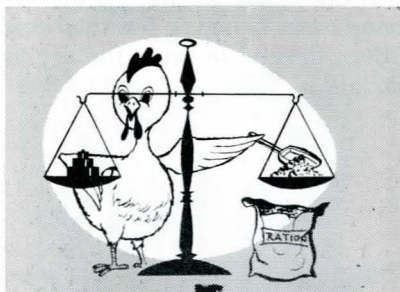
CONFINE HENS



Confined hens produce a more uniform egg. The ration of confined hens can be controlled. Variations in the diet of hens means variation in yolk color, albumen quality and less consumer appeal. The confined hen gets a controlled ration and her eggs have a more uniform yolk color.

Confinement also means cleaner eggs since the hens won't get outside in the mud. Missouri reports 6% more clean eggs under confinement than from ranging hens. Confinement of the laying flock also means isolation from the growing pullets, which holds down disease. Good poultrymen prefer confinement as it means closer supervision of flock, a flock which is more easily handled, and less chance of loss from varmints.

FEED AN ADEQUATE RATION



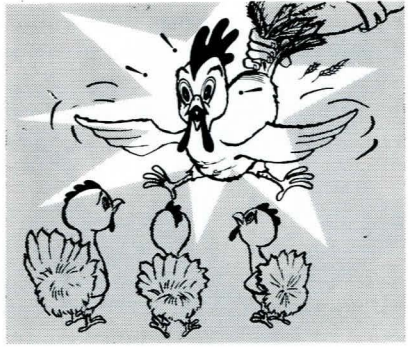
Feed is an important factor in producing high quality eggs. Hens must have a complete ration, along with plenty of fresh water and limestone or oyster shell. Layers are bred with the ability to produce good eggs with thick white, strong and sound shells, and with few blood spots, but the feed must help get the quality job done.

A uniformly good feeding program can assure the producer that the eggs he packs will be uniformly good and the internal quality will be uniform for the ultimate consumer. Most consumers look for uniformity in yolk color and uniformly light colored yolks are the accepted goal of shell egg producers.

The most common practice in Nebraska and one endorsed by the University of Nebraska is the practice of feeding a complete ration to laying hens. This may not be quite as economical as the "free-choice" use of our abundant Nebraska grains, but these grains can be ground and combined with a commercial supplement in proportions recommended by the manufacturer to give the poultryman the uniform quality desired.

PRODUCE INFERTILE EGGS

Fertile eggs do not hold up in quality as well as infertile ones. Remove roosters except when flocks are producing hatching eggs. One advantage gained by disposing of the roosters is that the feed and space each male uses is enough for another hen. Also, there will be less fighting and unrest in the pen in the absence of males.

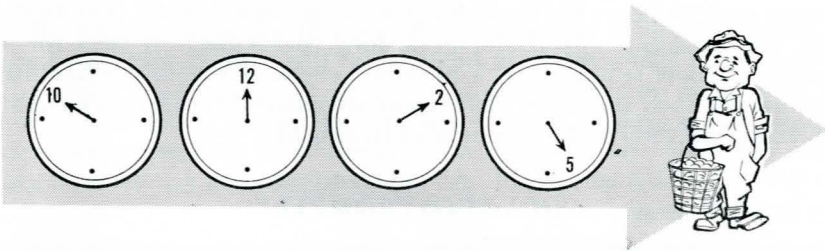


GATHER EGGS FOUR TIMES DAILY

The rapid transfer of the egg from the hen house to the egg room is very desirable even if this means three or four gatherings per day. Promptness of gathering depends upon the size of the business and the importance to the producer that every bit of quality be preserved.

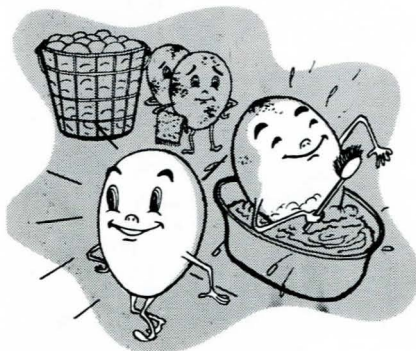
Frequent gathering permits more rapid cooling. Less dirty and broken eggs will be gathered when nests are emptied frequently. Missouri reports 83% clean eggs when gathered four times daily as compared to 69% clean eggs when gathered once. Gathering four times daily is a must during the long, hot summer days while three times daily during the shorter winter days may be adequate.

Wire baskets are used quite commonly for egg gathering since they allow more rapid cooling and are adapted to direct use in egg-washing equipment. Large operators are using Keyes Filler-flats to case clean eggs directly and save handling.



SORT OUT AND CLEAN DIRTY EGGS

Most poultrymen use a wire basket for gathering since it allows more air movement and more rapid cooling. In order to prevent putting both clean and dirty eggs through the egg washer, an additional container attached to the basket has been used to separate dirty eggs from the clean eggs during gathering. This practice saves time and additional handling.



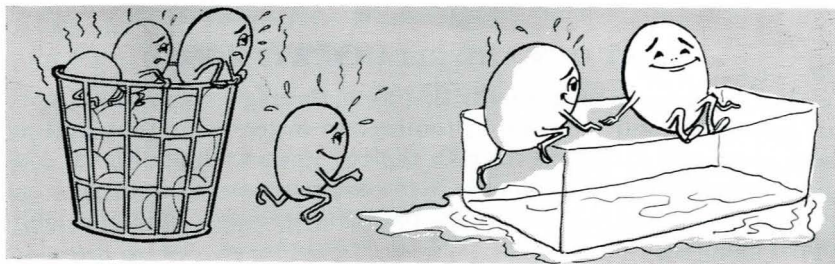
Washing of eggs becomes necessary when eggs are so dirty that buffing results in an unattractive or damaged shell. Some producers prefer to wash all eggs as a labor-saving feature. This may have some merit but places additional burden upon the washer-operator to protect the clean eggs from washer-water contamination. Eggs produced clean and kept clean save labor and are the most profitable.

If eggs are to be washed, they need it as soon as they are gathered. The main reason for the deterioration of washed eggs is the contamination of the egg contents with bacteria from surface dirt. Therefore, any condition that increases the chances of penetration of the egg shell by bacteria should be avoided. An approved detergent germicidal solution should be used according to the manufacturer's directions. The solution should be warm (100 to 110 degrees F.). The detergent sanitizer should not be rinsed off the egg since its germicidal power helps to protect the eggs after washing. The eggs should be dry before they are cased.

SHELL TREATMENT OF EGGS

Shell treatment of eggs is one of the newer developments which helps preserve interior quality. Several preparations are in use, all of them using light weight mineral oil as the coating agent. Oiling shell eggs appears to benefit storage life appreciably; treatment of eggs which aren't over 24 hours old seems to give the greatest benefit. The benefits are apparent only if storage is long, particularly if held for a period at room temperature. You should check with your egg handler before any such treatment since many secondary handlers prefer that their eggs all receive the same type of treatment.

COOL EGGS PROMPTLY

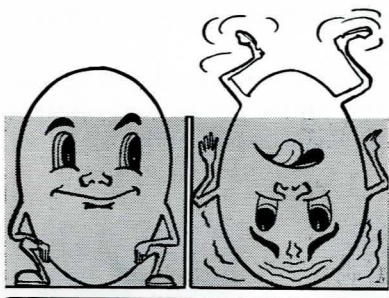


Eggs are a perishable food. They should be kept at a constant low temperature to preserve their original quality as nearly as possible. As soon as gathered, they should be taken to a cool place with a temperature of 45 degrees to 55 degrees fahrenheit, at a relative humidity of 70%. For temperatures of 55 to 70 degrees fahrenheit, the humidity must be raised to 80%.

Many commercially manufactured egg-coolers are now operating in Nebraska and the producers seem well satisfied with the premium they receive under quality-controlled programs. Egg handlers are finding more uniform quality between producers' eggs when feeding methods are uniform and eggs are held under conditions which are constant from farm to farm.

If eggs are packed in cases before the heat has been removed, they will deteriorate faster than if cooled before packing.

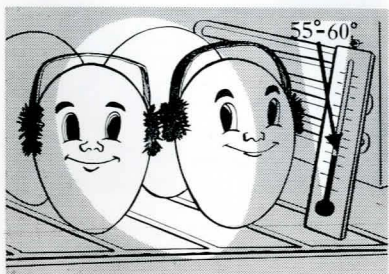
CASE PROPERLY



Place the small end down. Studies show that eggs retain their quality three times as long when packed that way. Pack eggs in cases with fillers and flats that have been pre-cooled. This is important because a dry, warm case will draw one or two pounds of moisture per case from the egg interior when good fresh eggs are placed into it.

REFRIGERATE

If Nebraska eggs are to compete in the heavy consuming quality shell egg markets, they will need some sort of advantage to overcome the space disadvantage of about a thousand miles or more, plus a time disadvantage of two to five days enroute. A farm cooler which controls temperature and humidity, both of which are necessary, during farm storage and conditions the egg for its trip is a "must" if Nebraskans are to stay in the quality shell egg business.



Refrigeration and humidifying units are available to convert insulated boxes, unused commercial incubators, and fruit cellars or caves into egg coolers. Many producers are now using commercially manufactured coolers. Most of these are enjoying a premium for their eggs.

HANDLE CAREFULLY

Avoid any unnecessary jolting of the eggs, either in basket-handling or in transit. Rough handling of the egg certainly will damage quality, either by causing loose air cells, broken shells, or thin albumen. Be sure that your trucker understands how important this is to you.

MARKET FREQUENTLY

Egg quality does not improve by holding. Most poultrymen will want to deliver their eggs twice a week and first receivers will move all eggs within a week after they are received.

SELL THROUGH A DESIRABLE OUTLET

Once you have decided upon an egg marketing outlet be loyal to that outlet and give it a chance to work for you. There will be fluctuations in price between outlets caused by variable demand in various consuming areas. Your egg marketing outlet will strengthen as your supply of good eggs becomes more constant and as the total supply of eggs furnished by you and your neighbors becomes more nearly a year-round supply.

Some enterprising Nebraska egg producers have developed special markets for undergrade eggs. Poor-quality shells, cracks, and off-sized eggs have been "cracked-out" for use by bakeries, cafeterias, or other special uses.

