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Published by Cooperative Extension, Institute of Agriculture and Natural Resources, University of Nebraska-Lincoln

NF609

Proper Light Management for Your Home Laying Flock

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Raising a home flock for the primary purpose of producing fresh eggs can be a rewarding and challenging venture. The main goal for egg producers is to ensure that their hens continue to produce eggs year-round. To accomplish this goal, one of the most important factors to consider, next to the overall health and nutrition of the flock, is lighting.

The avian reproductive cycle, which is how a hen produces eggs, is stimulated in poultry by increasing day length. As day length approaches 14 hours per day during early spring, chickens begin laying eggs, gradually increasing their production as the day length increases. They will reach their maximum egg laying potential when the day-light reaches approximately 16 hours per day. Nature utilizes this characteristic so that chicks will hatch in the spring and have the warmer months of summer and fall to mature before the harsher winter season arrives. By providing artificial light, growers can manipulate this natural cycle to their advantage and increase the egg laying potential of their flocks.

As mentioned above, approximately 14 hours of light per day is required to stimulate a hen to lay an egg. Anything below that will cause her reproductive cycle to shut down, triggering the hen to cease egg production until spring when the natural day length will increase to sufficient levels once again. Artificial light needs to be applied when the day length approaches 15 hours per day; which happens in September. Any supplemental light should be added during the morning hours, as sudden darkness can cause chickens to panic and pile up in a corner, which can consequently cause them to suffocate each other. By applying extra light in the morning rather than the evening, chickens will naturally go to roost with the setting of the sun.

Another consideration when setting up sources of artificial light should be the type of bulb and wattage needed to most effectively supply the proper amount of light. The type of bulb is an important factor to consider. Fluorescent bulbs are less expensive to operate than incandescent bulbs, but are more expensive to install, harder to maintain in a dusty henhouse, and are more difficult to regulate light intensity with, as the entire fixture needs to be changed compared with incandescent bulbs that only require a dimmer switch to alter light intensity. Should the choice be made to use a fluorescent fixture, a "warm" wavelength bulb (appears as orange or reddish light) must be used since the "cool" wavelength bulbs, which are commonly used in offices and households, will not stimulate the hen's reproductive cycle. Light fixtures in the coop should be placed above feeders and waterers, and care should be taken to avoid having areas in the chicken house that are shaded from light.

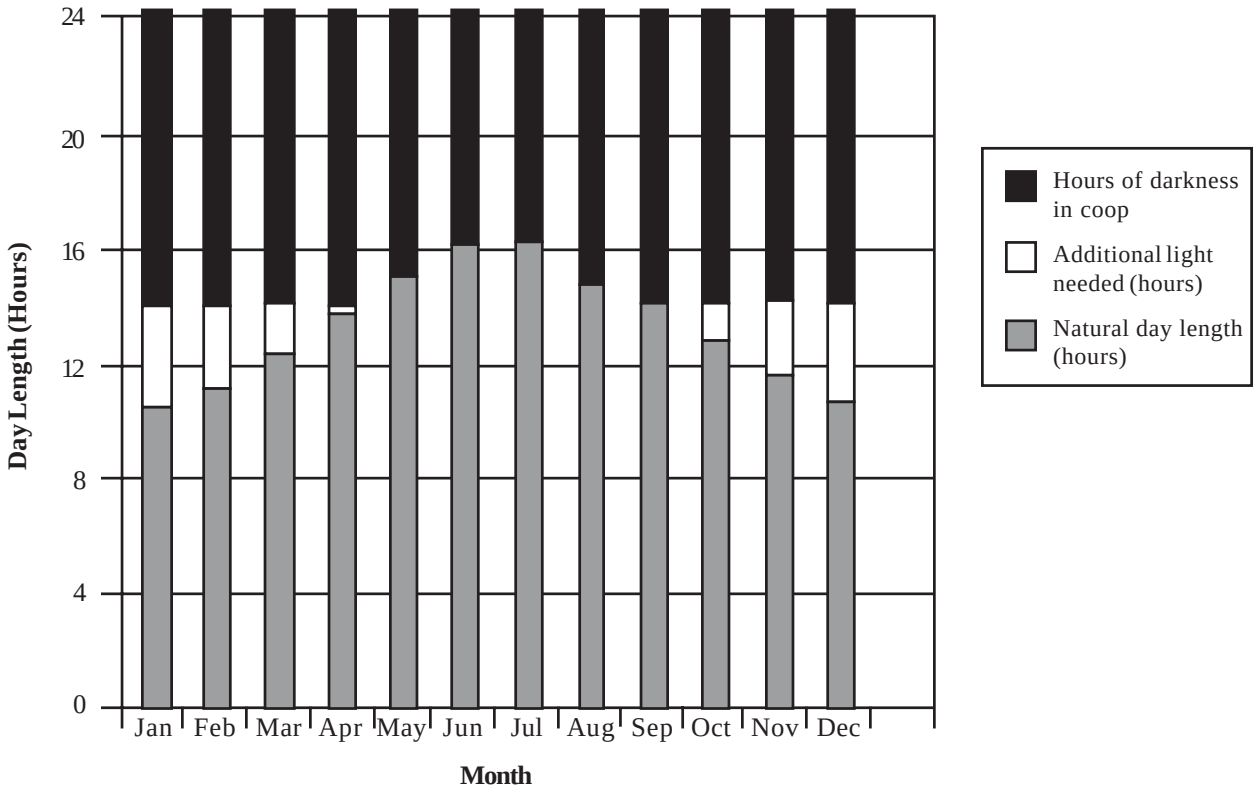
An additional consideration for the producer is the cost associated with implementing a lighting system. Depending on the size of a poultry operation, supplying artificial light can noticeably raise electrical bills. Since it is easy to forget to turn the lights on in the morning and usually not cost effective to leave the lights turned on all the time in the chicken house, a timer is a viable and cost effective remedy to ensure that laying hens receive the amount of light they require to continue producing eggs, while minimizing electrical bills. Other money saving steps that can be taken include: cleaning the dust off of bulbs periodically and using reflectors to intensify a lower wattage bulb.

In any egg laying operation, whether it is a small hobby flock or a large commercial flock, pullets, which are female chickens under 16 weeks of age, will eventually be introduced to replace hens that either die or are no longer producing a desirable number of eggs. As with an older hen, light will stimulate the reproductive cycle of a pullet. When raised and grown in nature, the natural day length prevents

a chick from sexually developing and laying eggs before their body has matured enough to handle the strains of egg laying. If grown under artificial conditions, too much light, too soon, can stimulate the young female chick to sexually develop before her body is ready to support egg-laying. Any supplemental light other than that required for providing heat should not be applied before they reach 16 weeks of age, or weigh 2 pounds. When chicks are hatched from April to July, natural lighting patterns are sufficient, and chicks will gradually develop into pullets and lay eggs. If artificial light is needed to stimulate egg production, begin by exposing pullets to 8-10 hours of light per day. When the pullets reach 16 weeks of age, the maximum of 14-16 hours of artificial light can be applied without harm by increasing light exposure 1 hour each week. By implementing proper light management practices, producers can prevent the complications in their birds that can occur as a result of producing eggs at too young of an age.

Although there are many issues to consider when implementing an artificial lighting program, most producers find it to be a rewarding investment. By properly managing the amount of light that the residents in your chicken house receive on a daily basis, you will be ensured of a year-round supply of eggs.

Light Requirements in Egg Production



File under: POULTRY
C-3, Management
Issued October 2004