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Signal Light Feeding Program

The main objective of the Signal Light Feeding Program is to provide uniform feed distribution during the rearing period. The program aims to train birds to associate the Signal Light with feed distribution.

The Signal Light Feeding Program contrasts to the “traditional method” of feed distribution using chains and troughs[1] where birds associate either the flock manager or the sound of the feed motor as an indication of feeding time. The “traditional method” often creates commotion where birds rush the center of the house[2] increasing the potential for piling and injuries. The frantic dash to the hoppers is often followed by birds racing around the house before finally finding space to eat. Under these conditions, timid eaters are disadvantaged and often do not satisfy their nutrient requirement to sustain adequate growth.

Signal Light feeding benefits over traditional feeding

- **Improved uniformity** - Birds tend to eat slower creating longer feed cleanup times.
- **Improved feed efficiency** - Birds consume less feed per pullet because they expend less energy during the feeding process (birds approach feeder more calmly at eat slower).
- **Improved livability** - In general, pullets reared under a Signal Light Program are calmer and less prone to piling when stressed. Since the flocks eat more slowly, the risk of feed choking is reduced. The incidence of mechanical injury from moving feeding equipment is also reduced.
- **Farm management** - Because birds do not associate eating with the flock manager, it is easier for the manager to move around the house to complete daily chores (i.e. refilling hoppers, collecting fixing equipment, etc.).
- **Improved feed distribution** - Birds do not congregate at hoppers waiting to be fed and spread evenly throughout the house during feeding.

[1] This program has been used primarily in housing with chain and trough feeders. However, flocks reared on a pan feeding system have also shown benefits in terms of improved bird behavior.

[2] Location of the feed hoppers in most houses.

Signal Light installation

Installations of Signal Lights systems are usually easy and present minimal shadow issues.

- Install the Signal Light approximately 5 to 10 ft. from the end wall of the house approximately 2 to 4 ft. from the floor (Figure 1). Ideally, the end 1/3 of the house should be illuminated with a low light intensity.
- The Signal Light should be wired with the main house lights. Wiring to the main house ensures all lights are off when the main house light timer goes off each afternoon.
- Feed and light switches should be in the house entry room for easy access without having to enter the bird area. It is more difficult to train a flock to a Signal Light program if the manager must enter the house to turn on the Signal Light. If managers must enter the bird area, the birds may continue to associate the manager with feeding.
- Use a bulb type and wattage that will only illuminate the area of the house around the Signal Light for good results. Use a low wattage bulb (5 to 10 W) to prevent many birds moving toward the Signal Light.
- It is also necessary to use a low wattage bulb to prevent illuminating the area around the feed hopper/source of feed. The area around the feed source must be totally dark so the birds will congregate and wait for feed to exit the hopper. If the birds can see the track/feed they will stay there, and Signal Light will be less affective.

Procedure

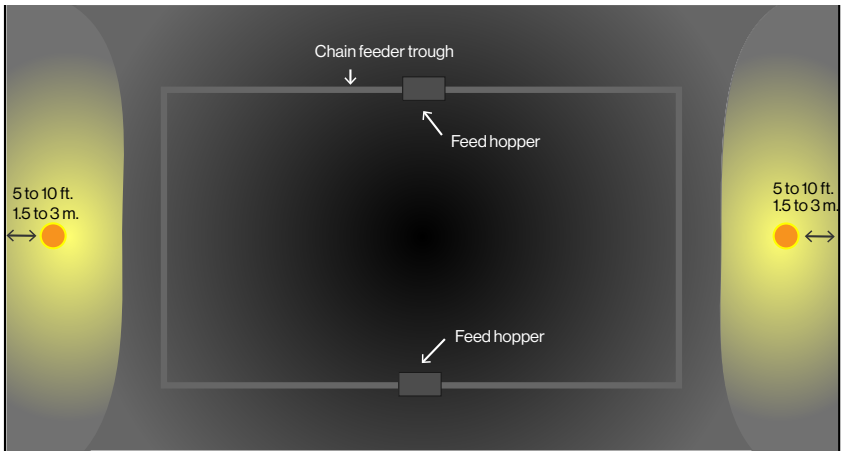
Training Period (2 to 4 weeks)

The purpose of the "Training Period" is to teach the birds to associate the Signal Light with feeding. Birds learn to move in the direction of the Signal Light and position themselves at the trough. Feeding in the dark, in the absence of a Signal Light, does not guarantee there will be an even distribution of birds around the entire feed trough.

The Signal Light feeding program should commence once the flock is placed on a skip day feeding program (i.e. every-other-day; 5 and 2; 4 and 3). If restricted everyday feeding is prolonged, begin using Signal Light feeding no later than 3 to 4 weeks of age.

Protocol (It is recommended that the grower is present during the feeding process).

1. Turn the main house lights "on" for 10 to 30 minutes.
2. Turn the main house lights "off " for 1 minute (*the house should be in blackout conditions).
3. After 1 minute of darkness, turn the Signal Light "on" for 45 to 60 seconds (or enough time for the birds to begin to move toward the light and away from the feed source).
4. Once the Signal Light has been on long enough, start the feeding system with only the Signal Light on.
5. Ideally, all feed should run out in one complete loop. The feed level gate on the hopper must be managed for feed to run out in one complete loop and be appropriately distributed.



Install Feeding Signal Lights 1.5 to 3 m (5 to 10 ft) from the end wall.

Troubleshooting

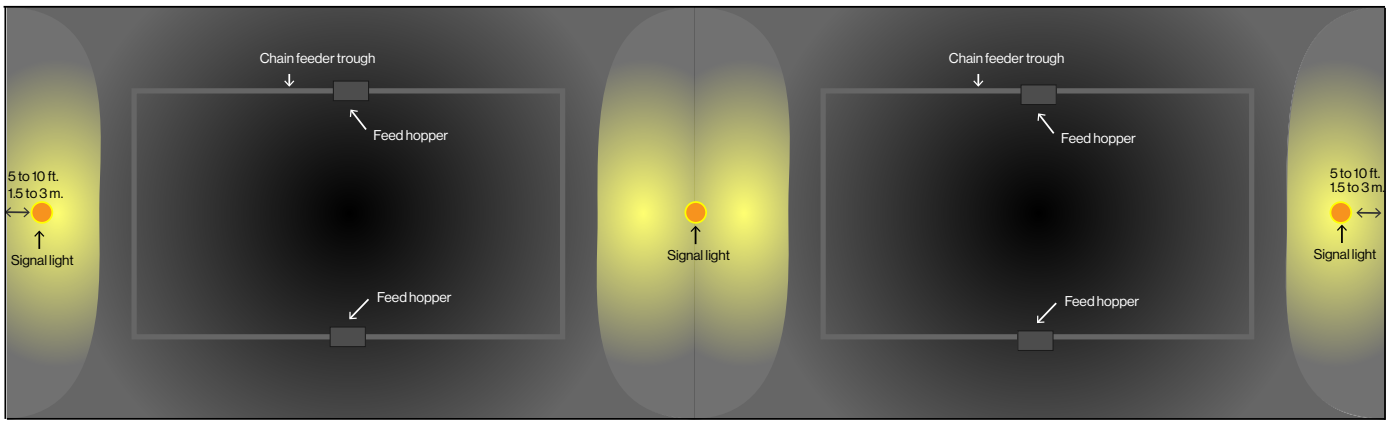
Birds move but seem to congregate at the hoppers:

Birds that congregate at the hoppers can happen in houses that have split feed systems with two sets of hoppers at the ¼ and ¾ positions of the house. A 3rd Signal Light is recommended at the middle of the house to draw birds away from the hopper areas and prevent congregating around the feed source/hoppers. With three Signal Lights, there will be a Signal Light at each end wall and one in the middle. Three Signal Lights may require an even lower wattage/lumen bulb to prevent illuminating the area around the hoppers.

Birds do not move away from the feed hoppers:

Protocol (It is recommended that the grower is present during the feeding process).

- Depending on house set-up and length, it may be necessary to use a lower (or higher) wattage bulb to correctly illuminate the end 1/3 of the house.
- Painting the bulb with black paint can also help reduce the brightness.
- The height of the Signal Light from the floor may require adjustment to ensure the correct pattern of light dispersion on the floor.



With split feeding systems, install an additional light in the center of the house.

Pan Feeding Systems

Pan feeding systems also benefit from Signal Light feeding by helping with feed distribution down the pan feeder line. Birds moving away from the feed hoppers towards the signal lights allows feed to move down the pan feeder line so that pans further away from the hopper can be filled appropriately. When pan systems are operating correctly, feed should drop into all the pans during the initial run. When birds are eating closer to the hoppers, the volume of feed that being moved down the auger to the pans further down the line is reduced. This can create uneven feed distribution and challenges with bird uniformity.

Summary

A Signal Light Feeding Program is a proven method to help manage feeding and can potentially improve performance during the production period. Uniformity and livability are consistently improved in flocks reared on this program. Uniformity and livability are essential to produce flocks capable of high peak production and persistence and low hen mortality.