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## *HATCHERY/BREEDER TIP . . .*

### **FEEDING BREEDERS, THEORY AND PRACTICAL APPLICATION**

The concept of providing feed to birds is clear-cut when the discussion revolves around full feeding broilers or commercial layers, however, restrictive feeding to broiler breeders is a different concept. The general theory in feeding broiler breeder birds is to spread a limited amount of feed to a large group of birds in an organized manner that yields similar body weight birds at all points during the growth and egg production phases. The goal is to take a uniform group of chicks and continue that uniformity for body weight. When immature pullets are housed for egg production, these birds should be housed and managed to maintain flock uniformity during the lay phase. Now, some folks might ask why is body weight uniformity important? Breeders are group fed from one feeding system, if the flock has widely varying body weights with a restrictive feeding program some birds will not consume enough feed while others will over consume effecting egg and semen production and mating behavior. Obviously, with breeder flocks failure to consume the proper amount of feed will impact flock performance.

**Feeding programs.** In an effort to provide uniform feed distribution to each bird in the house with limited feeder space and aggressive appetites, many feeding programs have been developed. Breeders are normally full fed for one to six weeks after placement in the rearing house, with the first 7-10 days being fed from hand filled feeder lids or trays. Over time this period of free choice feeding has become shorter, because growth rates are continuing to improve with genetic selection for fast gain. After this full feeding period, the birds are fed a limited amount of feed on a daily basis for 2-4 weeks (depending on the time the birds are full fed).

If the birds remain on a limited daily feeding program, the feeding period will become extremely short (under 30 minutes per day), and the less aggressive birds may receive an inadequate amount of feed. There are two main feeding programs: skip-a-day and 4-3 feeding. With the skip-a-day program the birds are fed twice the daily amount of feed every other day. In a 4-3 program the birds are fed 4/7<sup>th</sup> the weekly feed amount on 4 days out of each week. In any given week under skip-a-day the birds will have feed presented to them on 4 days one week and 3 the next week. With a 4-3 program, birds are fed 4 days every week. The 5-2 program is a slight variation of the 4-3 program and is sometimes used toward the end of a the rearing phase as the volume of feed provided on the feed day is at the highest level to prevent the birds consuming such a great volume of feed that they choke.

#### **PUTTING KNOWLEDGE TO WORK**

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Between the time that immature birds are moved from the rearing house and early egg production, birds are switched from the skip-a-day feeding programs to a limited daily amount of feed. This change in feeding schedule is dictated by feed volume, feeder space and type of feeder. As soon as the amount of feed the birds need to consume is great enough to be distributed throughout the house when the feeder is activated, the birds should be changed to daily feeding (early lay period).

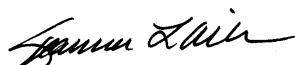
**Mechanical feeding equipment.** In general there are two types of feeders: trough and pan feeders, and there is some difference in how the feed is moved or delivered within these feeders. In trough type feeders the feed moves via a chain or an auger in the bottom of the trough. Chain feeders have been used in the poultry industry since the 1930's. Chain feeders are easy to maintain, relatively simple mechanically, and somewhat inexpensive. Speed of feed deliver is slower with a chain feeder with the practical maximum speed of the chain at 60-90 feet per minute. As poultry house length has increased from 300-500 feet, there is some concern about speed of deliver to all parts of these long houses, birds migrating with the feed around the house, and birds picking over the feed as it goes around the house (eating the larger particles). Some of these concerns are addressed by putting in more sites where the feed enters the line reducing feed distribution time. Others activate the chain feeder before the lights come on to offset the slower feed delivery of these type feeders. Birds do learn the sound of the feeder, but have a difficult time getting to and feeding from the feeder in the dark improving overall bird access to feed. An innovation in trough feeders has solved the speed of deliver issue by putting an auger in the bottom of a trough instead of a chain. These drag auger trough feeders move the feed at 100 feet per minute. However, with this increased speed comes a more complex and expensive feeding system that reduces bird migration and pick over problems.

Pan feeders afford more feeder space than the trough type feeder and deliver the feed more rapidly throughout the house. Feed is delivered to each pan by an auger tube at the top of the feeder that stays full of feed at all times, allowing feed to enter the pan within seconds of the feeding system being activated. Pan systems prevent bird migration and feed segregation (fine and coarse particles separating) by delivering the feed to all parts of the house quickly. In addition, pan feeders do not allow the birds to pick-over the feed as it is moved around the house (eating the large feed particles as the feed slowly moves around the house). Pan feeders also have an associated feed savings over chain type feeders. However, pan feeding systems tend to be more expensive and mechanically more complex.

**Space issues.** As bird density increases in rearing or laying houses, feeder space decreases. This issue becomes critical as the birds achieve adult body size, as they cannot physically get close enough for all birds to feed at the same time when feeder space is less than 4 inches per bird. Most guides suggest 6 inches per bird. Adding more birds to the same feeder space reduces feeder space per bird, and the less dominant or aggressive birds will consume less feed reducing flock uniformity for body weight.

**Types of Feed.** Breeder diets may contain low energy feedstuffs like wheat midds, rice or soy hulls to reduce diet density (nutrient). This addition is aimed at increasing the volume of feed to again try to disperse the feed more evenly among the birds in the flock and improve flock uniformity. Additionally, breeder diets are often presented in a mash or non-pelleted form to increase the time it takes the birds to consume the feed. Pellets are typically consumed in about half to two-thirds the time it takes for mash feed to be consumed, again the theory is that the longer feeding period will allow birds to consume a more similar amount of feed.

**Key point:** Birds are creatures of habit. It is essential that feed time be consistent daily. Whether the feeder is controlled by a time clock or human hands, the time of day that the birds are fed must be the same each day. If inconsistency occurs, birds get anxious waiting on feed and will often migrate to where the feed enters the house and often spill feed in an effort to get access to the feeder. This type of activity counteracts efforts to get fast, even feed delivery and sustain good flock uniformity.



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