

Managing Breeder Male Weights

Successfully managing male turkeys for semen production is largely dependent on three key areas: lighting, selection and weight management. Information on lighting breeder males and selection can be found in the Aviagen Turkeys “Breeder Management Guidelines”. This bulletin details the techniques for managing breeder male weights.

There are two methods commonly used for managing male weight. Qualitative or ad libitum feeding and Quantitative feeding also known as managed feeding. The first section of this bulletin covers Qualitative Feeding. The last section will cover Quantitative Feeding.

Qualitative (Ad Libitum) Feeding

Qualitative feeding utilizes a dynamic system of monitoring and reacting to body weight by adjusting the diet density to achieve the weights indicated in the Aviagen Qualitative Weight Standard. Please see the Aviagen website for the most updated weight target.

Provide Appropriate Diets from Day One

It is important to get the males off to a good start by providing diets that have the correct balance of nutrients at the right time. This does not mean feeding commercial diets. These high-density starter diets can make it difficult to hold birds to the standard weights at this early age. In addition, do not feed the males according to the breeder hen schedule. This could result in males that are underweight.

During the first 6 weeks of life the fundamental development of the skeletal, cardiovascular, immune and reproductive systems occurs. Visit the Aviagen Turkeys website for diet recommendations for the birds to achieve the appropriate weight gains. Varying significantly from the target weights could result in reduced production and semen quality later in life.

Weigh Birds Weekly from 3 Weeks

Start a weekly weighing program when the birds are 3 weeks of age. It is important to monitor the weekly weights against the target to ensure the birds are on track to hit the 6-week weight, the first of the key weight measures. By the time the birds leave the brooder house at 6 weeks they should be within +/- 5% of the weight target.

From 6 weeks of age to selection (16-19 weeks of age) the birds continue to develop their skeletal structure as well as feather coverage and musculature. Achieving the weights at 6 and 16 weeks of age are key to maintaining males on target.

Moving Back to the Standard - Before 16 Weeks

If birds are off of the weight target early in life, use diets and patience to bring the birds back to the correct line. Move heavy flocks onto the next diet sooner and hold light flocks on the higher protein diet

longer. If weight gain stalls due to high ambient temperatures, move birds back to a higher protein diet to maintain desired growth. Rapid weight adjustments should not be attempted, whether the birds are over or under weight.

Drawing a New Target at Selection

At selection if the selected birds are more than 5% heavier than the target draw a new target that runs parallel to the original line. If the males are in a positive growth status at lighting, even if the flock is **slightly** overweight, the response of the bird to the light stimulus will allow good semen production. After selection, flocks **MUST NOT** be forced back to the target line by more severe nutritional controls.

Steady Growth to Light Stimulation

From selection, the objective is to keep the birds growing at a steady rate, resulting in continuous maturity and development of the reproductive system. After selection, weight can be achieved either by continuing qualitative feed management or by using quantitative feed management. The male breeder has a tremendous capacity to adapt to the feeding system. It is not unusual for qualitatively fed males to eventually go over the target weights even on very low density diets. The key point is the males continue to gain weight throughout their reproductive life. Continual weight gain will result in better quality semen. Though Qualitative feeding works well for most situations occasionally a more precisely managed approach that better coordinates semen production with egg production is needed. In this case, Quantitative Feeding is the best option.

Quantitative Feeding (Managed Feeding)

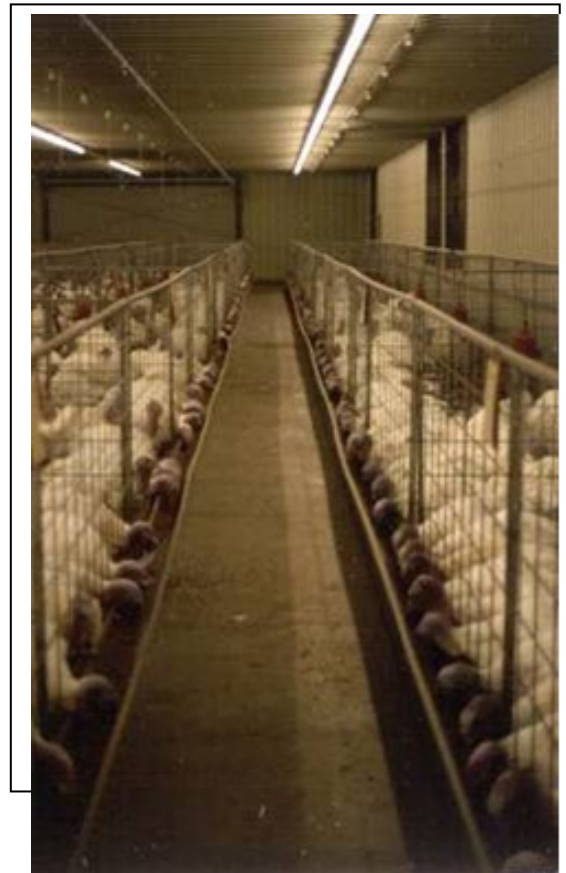
When quantitative feeding, the males are usually fed a 14 to 15% protein diet. The body weight of the male is held to the target by adjusting the amount of feed the bird receives each day.

The quantitative feeding program has been designed to slow the rate of sexual maturity in breeder males and assumes that the corresponding females will be lit for production at 29-30 weeks of age. Quantitative feeding should begin after selection and continue throughout the life of the breeder male.

Managing male breeder weights through quantitative feeding may reduce feed costs and when appropriately administered will also improve reproductive performance later in the breeding season which allows better use of superior males.

The following procedures and requirements should produce excellent results:

1. Select breeder males according to selection procedures outlined in the Aviagen Selection Bulletin. Identify the selected males by marking them with food coloring or with colored wing tags.



2. As soon after selection as possible, move the males to the conditioning barns. Place no more than 25 males per pen with at least ten square feet (0.93 sq. meters) per male.
3. Using tags or food coloring, identify at least 25 males (one or two at random from each pen) to be used for sample weighing. Record individual weights at weekly intervals. These males will serve as a monitor and allow adjustments in the feeding program
4. After the males have been moved into the conditioning barns, they should be fed ad libitum for a few days to allow them to adjust to their new surroundings. Once this is accomplished, begin qualitative/managed feeding by adjusting the feed allotment to bring the weight and weight gain in line with the quantitative male breeder weight target.

The actual caloric content of the diet is not critical, but the daily allotment must be adjusted to ensure the same weight gain as suggested in the target. In addition, the daily allotment must contain sufficient nutrients to satisfy the males' daily requirements.

5. If there is a large spread in body weight, divide the flock into two or three weight groups in the conditioning barn. Feed each group accordingly so that the weight of each group is similar to the weight suggested in the quantitative male breeder weight target.
6. Feed trough design is an important aspect of a quantitative feeding program. It is recommended that only long, deep, "V" troughs be used so the feed depth in the trough will be sufficient for beak conditioned birds to feed easily. An absolute minimum of 12 linear inches (30.5 cm), with 14 inches being optimum (35.6 cm) of feeder space must be provided for each male.
7. Some tips for best performance include:
 - a. Position troughs for quantitatively fed males considerably lower than normal. This will prevent males from scooping out feed and also prevent males from bruising their necks during feeding.
 - b. Feed the males their entire allotment once daily, usually in the early morning or after semen collection.
 - c. Be careful to calculate the correct feed allotment for each pen based on the actual number of males per pen and prior week's weight gain or loss. Ensure that feed is not spilled as it is distributed in the troughs.
 - d. If the average barn temperature changes more than 10°F (5.5°C), it may be necessary to change the feed allotment to maintain the weight gains according to the standard. As a general rule, increase the feed allotment 10% for each 10°F (5.5°C) decrease in average barn temperature.
8. The most critical aspect of quantitatively feeding males is to ensure the target weight is reached when semen is needed. Weekly sample weights are very important to ensure the quantitatively fed males are on schedule. Remember, sexual maturity is influenced by both body weight and lighting. A feed specification for quantitatively fed males can be found in the Nicholas technical bulletin "Feeding Recommendations for Parent Stock". Please see the Aviagen website for the most updated male feeding chart.
9. To ensure that the males are producing adequate semen at 32-33 weeks of age, use the lighting

program suggested in the technical bulletin titled “Successful Male Management – Lighting”. If semen is needed at an earlier age, adjustments will need to be made in both the male lighting and feeding programs.

10. Two weeks prior to marketing quantitatively fed males, they can be returned to feeding ad libitum. During this period, they may gain as much as five to seven pounds and substantially increase their salvage value.

Monitor Sexual Development

- During the Sexual Development phase from 16 to 32 weeks, the behavior and development of the additional sex characteristics should be monitored. See Figure 1. If the males are behind or ahead in sexual development, adjustments can be made in the lighting schedule or weight gain to bring them in line with expectations.

Figure 1: Monitor Sexual Development



Summary

There are many factors to consider when choosing which feeding method to use, qualitative (ad libitum) or quantitative (managed). These factors include condition of facilities, available equipment, capability and availability of staff, and company practices. Either method can yield desirable results when properly managed.

Gathering weekly weights is critical part of the management process to ensure and maintain a weekly upward weight gain within the established standards. These weekly weight gains will help ensure that the flock maintains adequate nutrient intake for health and semen production. As always the Aviagen technical team is available to assist you and your team in your male management feeding program.