



The University of Georgia

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HATCHERY/BREEDER TIP...

HATCHING EGGS FROM HIGH YIELD BREEDERS

Most hatchery managers have complained about lower hatchability in eggs from high yielding breeders. Hatchability losses have resulted from reduced fertility and increased embryo mortality. Are eggs from high yielding breeders more sensitive to environmental conditions in egg handling and incubation? Should the hatchery manager manipulate the incubation environment (temperature, humidity, gaseous content of air, turning) to get these eggs to hatch better? NO! - - to both questions. In most cases, the hatchability potential of the eggs has already been determined by the time the eggs are laid. Manipulating the incubation environment usually does not help, and in many cases, hatchability and chick quality become worse after incubation changes.

To get the best hatchability from eggs of high yielding breeders, a breeder manager must optimize management, especially body weight control. This has been confirmed by one major broiler integrator company. For example, one company in the southeastern United States has had phenomenal success with high yielding breeders without any manipulation of the incubation environment. Their records of recent hatchery performance in the week before the writing of this Poultry Tip averaged 88% hatchability for the week. All eggs came from high yielding breeders. The live production manager says the key to his success is careful body weight control, especially in males, through both rearing and production. One day last week, the hatchery hatched eggs from six flocks. Even though one of the flocks was 62 weeks old, the average daily hatch was 89.8%.

The secret to this company's success (let's call them Company X) is starting with a smaller frame male. Most companies have the 4 week target male weight set at 1.4 to 1.6 pounds. Company X targets their 4 week male weight at 1.2 pounds. The smaller weight at 4 weeks of age results in a smaller frame male throughout his life. The small frame male requires that they be managed with extreme care through the rearing and production phases. With such a small frame, it is easy for these birds to get fat. Another potential disadvantage is that these males may be behind in the development of the females at the time of housing in the breeder house. This can result in reduced mating and

PUTTING KNOWLEDGE TO WORK

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fertility. This has rarely happened in Company X because they are very careful with their feeding and body weight management program.

Following is a brief description of their program, and the table gives the male target weight at various ages.

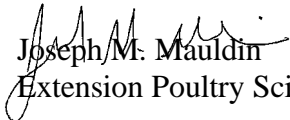
1. Start with a 1.2 pound male at 4 weeks (keeps frame size small).
2. Weigh birds every week until 30 weeks.
3. Starting at 30 weeks, weigh birds every 2 weeks.
4. Weigh the males one at a time only.
5. During all weighings, handle males and check fleshing carefully.

Company X's male target weights at various ages.

Age (weeks)	Target Weight(pounds)
4	1.2
20	5.8
25	7.0
26-65	0.1 gain/week
65	10.5

Company X's male feeding program changes somewhat from normal management at 20-30 weeks of age. They bring males in (20 weeks) at 25 to 27 pounds of feed per 100 males. The normal range is 22 to 23 pounds per 100. By 30 weeks of age, Company X feeds 30 pounds per 100, then backs off on the amount of feed given.

This program puts additional pressure on the management of the birds to prevent them from getting overweight. When the program is carried out successfully, there are three significant advantages. One is that males do not develop leg problems (bumble foot, twisted legs, etc.). The second advantage is that hen mortality from male aggression practically disappears. Finally, the most significant advantage is improvement in hatchability.


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****Consult with your poultry company representative before making management changes.****

“Your local County Extension Agent is a source of more information on this subject.”