

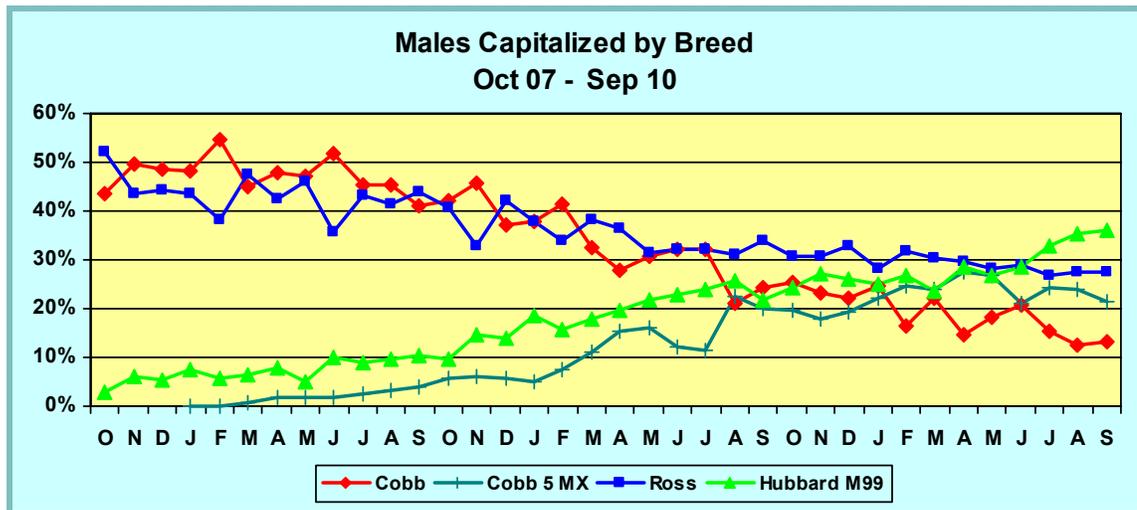
Technical Bulletin

FINE TUNED MANAGEMENT FOR OPTIMUM HUBBARD M99 PERFORMANCE

USA and Latin American Conditions

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January 2011



Over the past 4 years the Hubbard M99 male has become the most prevalent male in the U.S. due to exceptional breeder characteristics and, more importantly, unsurpassed FCR improvements to the broiler progeny. With this increased market share the male is being used within nearly every integrated broiler company in the U.S. and with that is seeing the entire range of management from excellent to somewhat challenging conditions in some regional areas. When the Hubbard M99 was first introduced, two weight guide options were recommended. Both of these options were much below other industry male weight guide recommendations. Several of the first companies using the Hubbard M99 male used the option 1 guideline and were quite successful. Some of these companies today still use the option 1 guideline. However, this low body weight guideline puts significant pressure on the male resulting in poorer uniformity and higher male mortality shortly after housing in the production house and this is especially exaggerated when management isn't "perfect". In response to this, our technicians in the field have been recommending the option 2 guideline over the last several months and customers are reporting better uniformity in the breeder house, lower mortality and increased early fertility. Due to the improved performance and ease of management of the higher body weight guide we have discontinued recommending the option 1 weight guideline. In the following sections below I will focus on the "key" time frames and associated weight guidelines that result in the best performance.

Brooding through 4 weeks



Brooding remains a very critical and important period to developing a good uniform flock of males. This is also an area where we see great variability between regions, companies, and complexes within the same company. Flocks that perform the best are typically those that receive the most attention and better management starting with brooding. Litter temperatures of 90°F (32°C) at day 1 and stepping down slowly to 75°F (24°C) by 4 weeks of age is adequate. Light intensity of 2.0 FTC (20 lux) minimum and duration of 24 hours a day for the first 5 days is recommended. Provide supplemental drinkers for the first 7 days and supplemental pan feeders through the second week.

Supplemental pan feeder use through 14 days of age is instrumental in achieving good uniformity and the 4 week body weight goal of 1.45 lb (658 g). On some "deep pan" feeding systems supplemental pan feeders can be used past 14 days of age. With the use of "laser" beak treatment, the treated portion of the beak begins to fall off from 8 to 12 days of age, which is typically the same time frame that many complexes begin to remove the supplemental pan feeders. Leaving the supplemental pan feeders down an additional few days will insure that all birds have adequate access to feed during this stressful period. Full feed or an allotted amount that remains available to the birds during the light period should be available through a minimum of 3 weeks of age to insure that the 1.45 lb (658 g) body weight goal at 4 weeks is achieved. Depending upon the amount of starter feed used and the nutrient density of the diet, adjustments to the light period for the first 4 weeks may be required to give the flock adequate time to consume enough feed to reach the 4 week body weight goal.

5 Weeks through movement to production house



If a good job has been done during brooding and all efforts were made to achieve the 4 week body weight goal then this period is quite simple and normally uneventful. This is especially true with those customers that co-mingle the males with the females during this time. We recommend raising the males separate from the females until housing in the production house to allow for total control of feeding and body weights but several customers are quite successful when co-mingling the Hubbard M99. For those rearing the males separate, give weekly feed increases to achieve target body weights. The Hubbard M99 is very feed efficient and normally requires significantly less feed at a given age as compared to other commercially available males. The included table gives a range of feed amounts for a given age and is only a guideline. It would be very difficult to give an exact feed amount for a given age due to the different nutrient density of the various pullet diets being used today. The "key" during this period is to be methodical with weekly feed increases. Try to develop a "feed program" that fits your particular feed formulation.

Stay away from excessively large increases and refrain from "sitting" on feed amounts and not giving weekly feed increases. Weigh your flock to check your "feed program", not to determine what feed increase to give this week. A feed increase that is given today will typically show up in bird weight 10 to 14 days later. So if you are weighing your males to determine what feed increases to give, be aware that the bird weight you are getting today is from the feed increase you gave two weeks earlier.

Again, the "key" thing to remember during this period is to be steady and methodical with feed increases. The Hubbard M99 is very feed efficient and will respond to smaller than average weekly feed increases with adequate body weight gains. Your goal weight for 20 weeks is 5.70 lb (2.59 kg) and you should be able to achieve this on 20 lb/100 (91 g/bird) daily feed amount or slightly less at 20 weeks of age.

21 Weeks through 32 weeks



The period immediately after housing into the production house is stressful on both the males and females. Every effort should be made to ensure that the birds find feed and water quickly in their new surroundings. The proper male to female ratio for the Hubbard M99 is 10% if reared on our recommended body weight standard. The Hubbard M99 is not overly aggressive when reared on our standard. Housing 10% males combined with the good breeder house livability of the Hubbard M99 will delay substantially the timing of spiking and reduce the number of spikings needed when compared to other males. Successful male feeding strategies in this time frame are numerous and most all will work well if managed properly. A good rule of thumb is to start the males on 15 to 17 lb/100 (73 g/bird). The head size of the Hubbard M99 is somewhat smaller than other males and this allows for more "stealing" from the female feeder so resulting weight gains the first few weeks in the production house are usually above the guide.

Between 24 and 26 weeks of age most male restriction grills on the female feeders will begin to “lock-out” a portion of the males. Be ready for this occurrence and add some feed to the male feeder before fleshing begins to regress. Normally, a 1 lb increase will be sufficient. Between 26 and 28 weeks of age the males have become larger, have reached sexual maturity and mating activity is in full swing. This is another time to be prepared to add feed to keep up with the energy requirements of the active males. From 28 weeks through 32 weeks add feed to maintain proper fleshing while monitoring mating activity and overall condition of the males. I have purposely not mentioned particular goal weights for a given age during this period as fleshing and male activity should be your main indicators of when to add feed to the males. Male weights in the production house at a given age are of little importance; the weight “trend” over time is much more “telling” than the difference from the guide at any particular age. Our goal on fleshing is a “V” shape with firm breast muscle tone. We are not trying to “shave” with the keel bone nor do we want a “U” shaped breast.

33 Weeks through 65 weeks



Through this period we must maintain what we built in the pullet house and in the early production house period. Proper fleshing and body weight control of the males should be the main focus. It is important to understand that we are feeding to maintain the proper body composition (fleshing) while ensuring that we have adequate male mating activity.

This is much more “art” than science and cannot be successfully managed from the office or the front seat of the pickup truck over analyzing a particular weight for a given age. The “key” during this time frame is to handle and flesh males each week while paying close attention to mating activity and signs of mating activity (bright red vent).

As in the early production period we are still trying to maintain a “V” shaped breast with firm breast muscle tone. Do not be too overly cautious with feed amount changes during this period. The common mistake is waiting too long to make a feed change. Feed amounts can be increased or decreased weekly based upon fleshing of the males.

As the males age and become larger their feed amounts must increase slightly to keep up with the larger maintenance requirements and ensure adequate mating activity. A common occurrence in this period is for a portion of the males to become under fleshed. A good “tool” to use to “rescue” these under fleshed males during this period is “boost” feeding (feeding 50% more feed to the males 1 or 2 days in succession) and then re-evaluate male condition and fleshing the following week. Feeding this large amount of feed at one time allows the smaller, under fleshed males the opportunity to consume more feed. If feed is just increased 1 or 2 lb/100 (5 to 9 g/bird) and then scattered out among 150 male feed pans, do the males that need the feed get it? Probably not.

Again, you will notice in this section we did not focus on particular weights for a given age. It cannot be emphasized enough: good male management in this period is driven by a focus on conditioning (fleshing) and observing mating activity, not where the weights fall in relationship to the guide.

Spiking

As in our previous technical bulletin, our recommendations for spiking remain the same. When 10% males are housed with the pullets and due to the above average livability of the Hubbard M99 male in the breeder house, spiking is usually not required until 38 to 40 weeks of age.

At this time bring the male ratio back up to 10%. Under proper male management most Hubbard M99 flocks will only need to be spiked twice with the second spiking occurring around 50 weeks of age. With this said, a good portion of Hubbard M99 flocks in the field today are only being spiked once and are achieving very good life of flock hatchability.

HUBBARD M99 MALE FEEDING AND BODYWEIGHT STANDARD									
Age		Ration (lb/100)	Bodyweight	Growth	Age		Ration (lb/100)	Bodyweight	Growth
Weeks	Days				Weeks	Days			
STARTER FEED					GROWER FEED, continued				
0		<i>AD LIB.</i>			20	140	21.00-22.50	5.70	0.25
1	7	<i>AD LIB.</i>	0.28		21	147	22.00-23.50	5.95	0.25
2	14	7.00-7.50	0.65	0.37	22	154	23.00-24.50	6.20	0.25
3	21	8.00-8.50	1.05	0.40	23	161	24.00-25.50	6.45	0.25
GROWER FEED					BREEDER FEED				
4	28	9.00-9.50	1.45	0.40	24	168	24.50-26.50	6.75	0.30
5	35	10.00-10.50	1.80	0.35	25	175	25.00-27.00	7.05	0.30
6	42	11.00-11.50	2.10	0.30	26	182	25.50-27.50	7.30	0.25
7	49	11.50-12.00	2.40	0.30	27	189	26.00-28.50	7.45	0.15
8	56	12.00-12.50	2.65	0.25	28	196	26.50-29.00	7.60	0.15
9	63	12.50-13.50	2.90	0.25	29	203	26.50-29.50	7.70	0.10
10	70	13.00-14.00	3.15	0.25	30	210	26.50-30.00	7.75	0.05
11	77	13.50-14.50	3.35	0.20	31	217	26.50-30.50	7.80	0.05
12	84	14.00-15.00	3.55	0.20	32	224	26.50-30.50	7.85	0.05
13	91	15.00-16.00	3.80	0.25	35	238	26.50-30.50	8.00	0.05
14	98	16.00-17.00	4.05	0.25	40	252	26.50-30.50	8.25	0.05
15	105	17.00-18.00	4.30	0.25	45	266	26.50-30.50	8.50	0.05
16	112	18.00-19.00	4.55	0.25	50	280	26.50-30.50	8.75	0.05
17	119	19.00-20.00	4.85	0.30	55	350	26.50-30.50	9.00	0.05
18	126	19.50-20.50	5.15	0.30	60	420	26.50-30.50	9.25	0.05
19	133	20.50-21.50	5.45	0.30	65	448	26.50-30.50	9.50	0.05

Note: During rearing bodyweights are taken on the non-feed days. Adult target weights are shown with the crop empty. Feed amounts are just a guideline. Actual feed amounts may vary widely especially in the breeder house depending on the type of male restriction grill or pans in use.



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