

## Don't get their heads stuck: the female story

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The use of sex-separate feeding is widely used in the broiler breeder industry. The system was originally developed by dr McDaniels, especially to be able to give a separate feed for males and females. The idea was that males not only need less protein and calcium than females, and would even benefit if they would get a special feed. To be able to feed the males and females separately, McDaniels used a grill over the female feeder to keep the males out of the system.

The special feed for males has not really given the expected benefits in field situations, but the opportunity to feed the males a specific quantity and therefore control their body weights has proven to (partly) prevent the drop in fertility that normally occurs later in production.

Although it is often believed that the advantages of sex separate feeding are in the a better control of body weights of the males, research has shown that this is not the only factor involved. In experiments where males were fed to the same body weight, sex separate feeding did still give an advantage in fertility over non-sex separate feeding. The researchers suggested that the system of forcing the males to eat together might influence their behavior, in such a way that the less dominant males are less easily intimidated by the dominant males, and therefore will attempt to mate more. In a practical situation, some females tend to avoid mating by avoiding the dominant males, a problem that becomes more significant in the second half of the production period. Experiments with trap nesting have shown that with sex separate feeding there are less females that are (almost) never mated. This might suggest that with sex separate feeding, less dominant males are mating with the so-called loose hens, the hens that avoid mating by the dominant males. Another explanation is that by moving the males through the house to their specific feeding place, there is a better movement and a better random mixing between males and females, which also can result in a better mating of the loose hens.

When sex separate feeding systems were first introduced, It was believed that the system should be adjusted in such a way that no male would be able to eat with the females. As the original purpose of the system was to give the males a separate feed, this was quite logical. And because it was first introduced for dwarf breeders (dwarf females mated with normal males) this worked quite well.

However, when the system was used with normal breeders, it became quickly obvious that this approach was not correct. When we measured the head size of males and females, we noticed that the heads of the largest female was actually bigger than that of the smallest male, also later in production. Having the male excluder on the female feeder so narrow that the smallest male would still be excluded would mean that the biggest female was excluded as well. A lot of integrations learned an expensive lesson with that, as in the first years the introduction of sex separate feeding resulted sometimes in massive drops in production.

Nowadays we see that most of the grills that we use on the female feeder system have an opening of 44 or 45 mm, which is normally sufficient to allow the biggest female to eat. However, in specific situations even this standard size can be too small. When the heads are swollen due to a respiratory problem, or when the birds are for other reason having unusually big heads, we have to be careful. Also we still see systems of 43mm wide or even smaller, which also means we have to pay attention. Observe the behavior of the females during feeding time, and if it is noticed that more females are

looking for a place to eat than normal, check if they might be limited by the grill size. If so, do not hesitate to remove some of the grills, to allow these females to eat normally.

A special point of attention is needed for pans with adjustable grill size. This is a very nice system as it allows to adjust the grill to the actual size of males and females. However, the fact that it is adjustable also means that it has to be adjusted! Sometimes we see that at transfer the grills are fixed to a certain position, big enough for the females to eat and the males to be excluded. But if the grill opening is not adjusted afterwards to compensate for the increasing head size of the females, peak production is sometimes not achieved.

Sex separate feeding systems are a great help for maintaining fertility in the second half of the production process. But the rule of thumb should be to have the system wide enough to allow the last female to comfortably eat, not to have the last male excluded from the system. When we allow the birds to get their heads stuck, they will pay us back with a loss of production.