

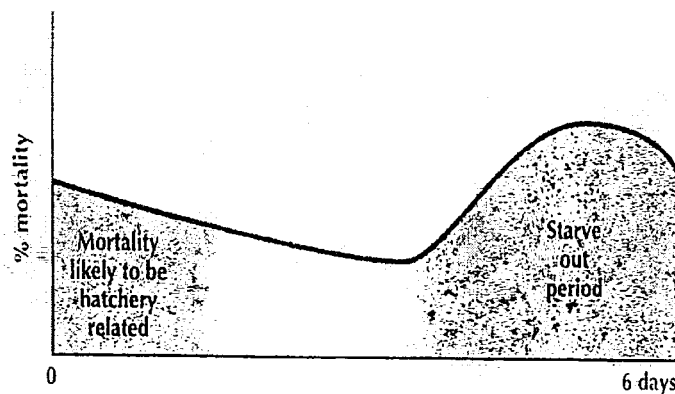
Improving Poult Livability

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The title “Improving Poult Livability” is a broad spectrum topic that incorporates largely management factors (breeder, hatchery, field) and diet. During the first two weeks, the dietary component largely involves factors other than simply the nutrient content of the diet. These factors include but are not limited to ingredient digestibility, feed form (good versus poor quality crumbles), hatch and pull schedule, distance from the hatchery and hydration status. Remember, Day 1 in the life of a poult is the day it arrives at the farm, not the time or day of hatch.

The first issue with respect to poult livability is assessing the uniformity status and “thriftiness” of the flock. Uniformity is not necessarily whether the poult are big or small but are they all big or all small and why? The obvious questions of strain, breeder flock age and number of flock sources would hopefully answer the question but if not, more in depth questioning needs to be done. Healthy, active poult that are not uniform may cause some plant problems down the road but will not become livability issues during the first two weeks.

With respect to the diet, the major factor influencing livability is getting the poult off to a good start with respect to intake and this really has nothing to do with nutrient content and everything to do with feed manufacturing and uniformity of the feed throughout the feed line. Constraints within the feed mill, ingredient choices and corporate policy on dietary cost will all influence the “quality” of crumbles or pellets.



Within the mill itself, the number of

microingredient bins, fat application capabilities, and time of the year can all have an effect on the consistency of the diet. The number of available microbins will control the number of small ingredients that can be added to diets and whereas the ability to spray fat on complete pellets versus adding it to the mix prior to pelleting can significantly influence the integrity of pellets in high fat diet. In Table 1 is shown data collected from a commercial turkey starter house. Crumbled feed was collected from the bin inside the house prior to distribution and from the last feeder pan in the feed line. The feed samples were weighed in 200 gram subsamples and the segments separating into # 6 and # 8 screens together with fines were weighed and expressed as a percentage of the total sample.

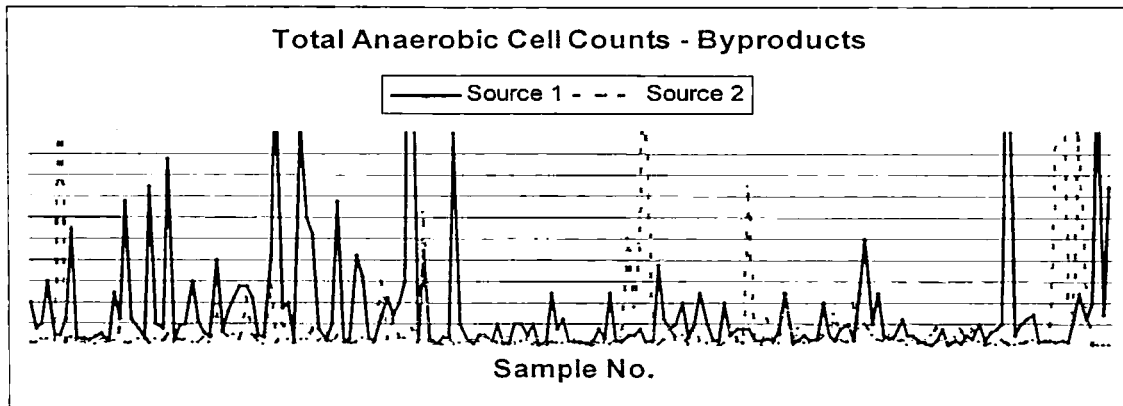
Table 1. Crumble distribution within a brooder house

Screen Size	Starter Bin	Last Feeder Pan
# 6	11.5 %	6 %
# 8	14 %	9.5 %
Pan	74.5 %	84.5 %
Total	100	100

6 – Pellets and larger pieces, crumbles, # 8 – smaller pieces and crumbles, Pan – fines

The choice of ingredients is an important component of the initial nutritional environment. Turkey starter diets will often contain high levels of animal byproducts in order to meet the protein and phosphorus requirements of the newly hatched poult. In Figure 1 is shown the total anaerobic cells counts from two byproduct meals collected from January to mid-September 2006. The samples from Source 2, while not completely free of bacteria, is consistently lower than Source 1 and this led to the decision to use Source 2 alone in all diets rather than a mix of the two sources.

Figure 1.



In summary then, ingredient choice and the management situation in which birds are placed is a primary determinant of poult uniformity of growth and livability.