

A Time for Change

By Jihad Douglas, Ph.D., MBA, President of Aviagen Turkeys Inc.

At the National Turkey Federation meeting in Tucson I outlined a business strategy where Aviagen Turkeys Inc. would enter the commercial turkey poult and egg business. The strategy was well received by the industry. We strongly believe that it is our responsibility as the leading American primary turkey breeder to ensure that genetic gain is continuous and that it is available to the entire industry.

George Nicholas was never afraid of change – he only feared that he would not anticipate it far enough in advance. Building on the legacy of George Nicholas we know that it is those companies that adjust to change that will prosper and be successful. Below is a description of why the change is essential and why we believe it is important to provide the industry with healthy competition and a strong viable supply option.

Drivers of Change

For the last several years we at Aviagen Turkeys have been evaluating our current position and our competitive advantages in order to develop a long term business strategy. Serving the needs of the turkey industry and our customers are the main drivers in the development of this strategy. Our customers hold us accountable for annual genetic improvement, yet in many cases we have limited influence on how our product will perform due to the variables shown in Figure 1.

Figure 1. Factors that Impact Product Performance



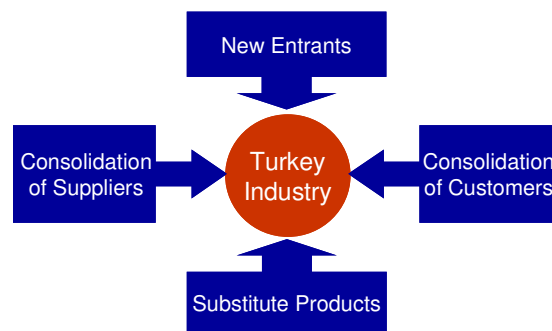
Selection pressure and genetic integrity at the parent stock level, parent stock health, egg quality and the hatchery have great influence on final product performance. Furthermore, many customers make decisions based on past experience

and when there is limited supply of our product, for whatever reason, those customers have not been able to experience the improved genetics.

Business Evaluation

As with most industries, there have been many changes in our turkey industry over the last 20 years (Figure 2). New entrants into the market, substitute products and the consolidation of both customers and suppliers and their subsequent changes in bargaining power are the basic variables that are continuously evaluated by any business and are some of the drivers that changed in our industry.

Figure 2. Factors that Impact the Industry

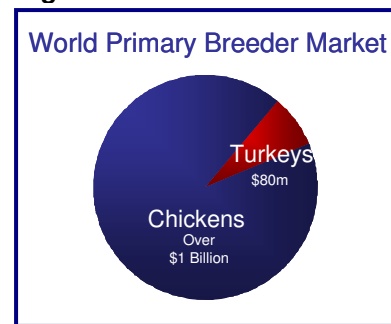


The evaluation is essential to ensure the implementation of a plan that delivers the vision of our company and serves the needs of the customers.

New Entrants

It is not surprising that we have not seen new entrants into turkey primary breeding for several decades. The potential gross revenue in this segment of the industry is small compared to other species (Figure 3) and has been static if not declining for many years even in the face of increasing production and research and development costs.

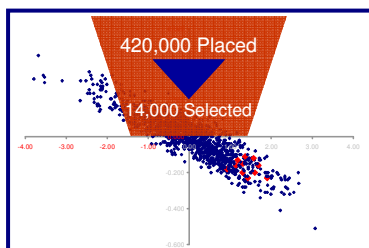
Figure 3. Market Size



One of the reasons that primary breeding is expensive is that we must invest significantly in feeding and housing large populations in order to select the top one to six percent of the progeny depending on the sex and line. The top selects are used to regenerate the improved pedigree population. Pedigree and Great Grandparent (GGP) populations represent a significant cost in our operations.

Every year we place 420,000 day old poults in our pedigree program alone and only 14,000 of those birds are selected to produce semen and eggs (Figure 4). Selection pressure, technology, accuracy and consistency are essential key performance indicators for the primary breeding business.

Figure 4. Selection Pressure



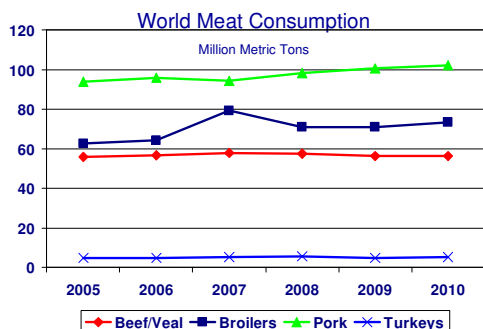
Unlike Canada, select out birds generate limited meat revenue in the U.S. In Canada the meat from select out and spent birds is about 70 to 80 cents per lb versus 10 to 35 cents in the US. The Canadian quota system is a subsidized meat revenue system that gives our competition a significant income advantage and allows them to sell grandparents. This statement is not a complaint about the system but rather a business fact that we have to deal with as competition.

Therefore, in order to maintain a viable US turkey primary breeding business, it is important that we find ways to protect our margins and look at all options to serve our customers' needs.

Substitute Products

Competition with other protein sources: World per capita consumption of pork, broiler, and beef is significantly higher than turkeys (Figure 5). Moreover, the consumption of most of these proteins is increasing while turkey meat consumption is flat.

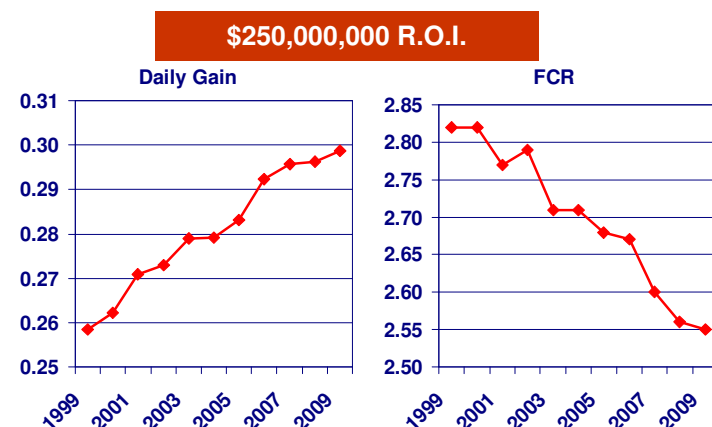
Figure 5. Consumption



Competition / substitution within the turkey industry:

Genetic and management advances are significantly improving weight, yield, and feed conversion to the extent that fewer birds are needed to meet the tonnage of meat required. In the last decade alone we have seen average daily gains (ADG) increase from about 0.26 lbs to 0.30 lbs and feed conversion improved by 27 to 30 points during the same time frame (Figure 6).

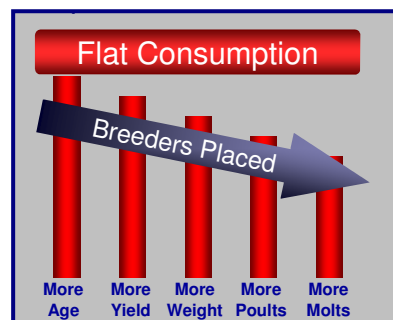
Figure 6. Decade of Improvement



The exciting news in 2010 is that we have seen flocks of over 0.34 lbs. ADG with an average weight of 50 plus lbs for the flock average. Nicholas annual genetic improvements are delivering over \$25 million USD return on investment for toms alone to our customers bottom-line on a yearly basis for the last 10 years based on 1999 prices.

Furthermore, extending lay, molting, better poult output, and the ability to grow the birds to even heavier weights has reduced the number of breeders necessary to produce the meat requirements (Figure 7). This means as primary breeders we are in a sense creating our own

Figure 7. Breeder Requirement



substitute product because as we continually improve them, fewer breeders are needed to supply a shrinking market. This is a strong indication that as a primary breeder we have to adjust our business strategies and action plans.

Consolidation of customers and suppliers

It is not surprising that the flat per capita consumption of turkey meat and the competition from other animal proteins resulted in the significant consolidation at the primary

breeder, multiplier and integration of our industry over the last several years. Significant consolidation took place at the multiplier level. Years ago there were perhaps 100 hatcheries that supplied Nicholas turkeys and today there are five hatcheries of disproportionate size.

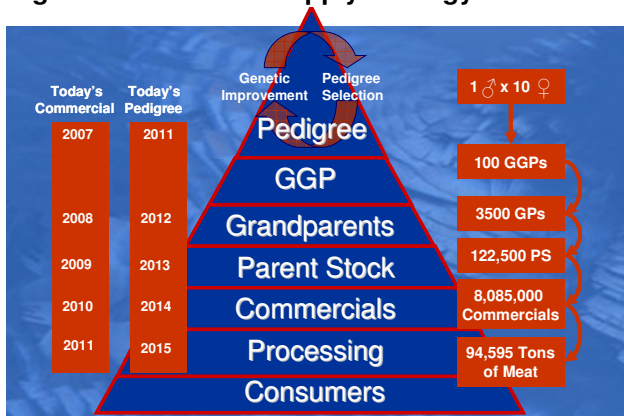
Consolidation was not limited to multipliers. Many integrations were able to acquire smaller companies and now we have three major companies that make up 50% of the US turkey industry.

The need for this significant consolidation is driven by the need for better efficiencies and the elimination of surplus production from our industry. As the industry continues to consolidate, it is important for every company to adjust their business strategy and account for this dynamic environment.

Traditional Supply Chain

Primary breeders develop better genetics by implementing high selection pressure and statistical techniques at the pedigree level to enhance the next pedigree generation. The process is costly, intensive and takes about 4 years before our customers capture the benefits of this intensive selection pressure from the pedigree generation to the commercial progeny (Figure 8).

Figure 8. Traditional Supply Strategy



The pedigree and the GGP levels are the main cost centers for a primary breeder. The Grandparent (GP) level is a multiplication process to generate the parent stock. The multiplication at the GP level is a costly process as primary breeders must produce the best quality products on specialized breeder farms.

However, this level of GP multiplication is also the only real profit center for the primary breeder, unless they are subsidized by another entity. Therefore, customers that demand to purchase grandparents rather than parent stock eat into the margins of the primary breeder.

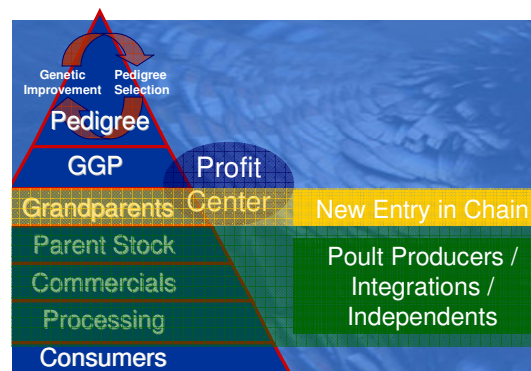
Supply chain and change

As mentioned previously the entry barrier to the primary breeder business is high due to a long list of very justified reasons. However, not many people from the turkey industry noticed that the traditional supply chain really changed about 10 years ago due to a new entrant into the grandparent segment of the supply chain. The implications of what happened 10 years ago is hitting home for the only U.S. turkey primary breeder and many of its non-integrated customers and independent turkey growers.

Nicholas was approached 10 years ago to sell grandparents and after careful analysis the request was refused. Selling grandparents would have eliminated a significant portion of Nicholas' margins, which would have put the company at risk and would have created an unfair economic advantage for the grandparent buyer versus all of our customers. The risk of selling grandparents would have limited Nicholas R&D investment and reduced the genetic gain which is essential for the success of all our industry.

Hybrid, with limited US market share at that time, and with the income from the Canadian subsidized meat quota (again a factual statement rather than a complaint) and significant tax credit, was willing to sell grandparents (Figure 9). I appreciate the success of this strategy by the new entrant into the grandparent segment of the supply chain and have a lot of respect for this spirit of capitalism, innovation and willingness to take a risk for better returns.

Figure 9. Evolving Supply Strategy



However, it is expected that the new entrant will do all they could to utilize their grandparent production at the expense of Nicholas product demand. Therefore the new supply chain not only impacted the margins of the primary breeder business but also limited the breed options for many of our customers.

Valley of the Moon Commercial Poults

Aviagen takes this market barrier very seriously and that is why Valley of the Moon Commercial Poults has been established - to provide a strong and viable option for the industry and our customers. It is important to note that this new company will be able to match the currently unbalanced selection pressure that is currently being used to help Hybrid products stay competitive in the market. It will also produce quality poults from a new state of the art single stage hatchery in southern Iowa.

Figure 10. New Commercial Hatchery to be Built in Iowa



Summary

At Aviagen Turkey Inc, our core business is to continuously build on our genetic competitive advantage and sell parent stock. It is clear that our customers are implementing strategies to get them closer to their customers and end users. Our strategy too is to serve the real needs of our customers by developing a plan of action that will enhance our competitive advantage and compound it by recognizing the supply chain changes, recognizing where we are and what have to offer.

The change in the supply chain that took place about 10 years ago requires a response that gives our customers a real and viable option for quality Nicholas poults and eggs and that is why we are establishing Valley of the Moon Commercial Poults. I am confident that everyone will agree that healthy competition is good for the industry. There has been a need for a viable option for some time and we look forward to your support.

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