

VERTICALLY INTEGRATED ALLIANCES - CHICKEN MEAT

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SUMMARY

The chicken meat industry in Australia is controlled by only a handful of vertically integrated companies. They have control over each stage in the process of producing chicken meat, this allows the companies to produce a consistent quality product year round at a stable price that is acceptable to the customer.

The vertically integrated companies own the breeding stock and are continually developing new strains of birds that have improved feed conversion efficiency and growth rates. Control over each step in the production chain allows the companies to react quickly to the needs of the customer and it is this aspect that will see chicken meat as the most popular meat consumed in Australia in the near future.

Keywords: Customer requirements, product variation, efficiency, selection.

INTRODUCTION

The chicken meat industry has focused on meeting the needs of the customer and it may be said to be leading the customer. It is interesting to review the thoughts of one of Australia's leading fresh poultry meat retailers, Leonards, who states "I am a retailer and our company operates from the retail fact that we offer what the customer wants. Every industry should develop backwards from the customer. Every business is consumer driven and consumers tell us that they want prepared meals and consistency of product."

For this retailer the chicken meat industry can supply a year round consistent quality product at a competitive price. There is a limited demand for meat within the consumers budget so if poultry receives a greater share of that market then another sector must loose. Can meat be marketed so that total meat consumption is increased so all industry sectors gain? This question may be important to some industry sectors, but the chicken meat industry is concerned with taking a greater share of the pie. Chicken meat will be the most popular meat eaten by Australians by the year 2000, but this may even occur sooner. What are you as individuals or as an industry going to do about this loss of market share?

Don't blame the chicken meat industry for declining red meat sales, you must look at your own industry and decide why customer preferences have changed. Are you ready to accept the challenge that the chicken meat industry is throwing at you?

WHY DID THE CHICKEN MEAT INDUSTRY DEVELOP?

Australia has followed the American trend towards pre cooked take away food, food requiring less preparation time and a wide variety of products. The chicken meat industry in conjunction with large corporations such as KFC, McDonalds and Red Rooster have worked together to dominate the take away food market. The chicken meat industry is proud of the strategic alliances that have been formed.

VERTICAL INTEGRATION

Two large companies dominate the chicken meat industry in Australia, these being Inghams Enterprises and Steggles Ltd. Between them they control 68% of the Australian market and process birds in each State of Australia. The other 32% of sales are divided between about 9 other chicken meat processors, mainly in Victoria, New South Wales and Queensland. Almost all of these companies are vertically integrated. That is, the processor owns or has control over each sector of chicken meat production.

Most of the processors do not grow their own birds, but contract private growers to rear the birds from day old through to about 6 weeks of age. The contract details the responsibilities of each party, with the processor supplying the specifications required for each grown bird and the grower abiding by the demands of the processor. The grower must supply a quality flock of birds to the processor at a set weight in a set number of days.

The vertical integration of the companies and the use of the broiler growing contracts make it easy to control the product quality and have control over production costs. The processors can therefore increase efficiency throughout the total organisation. Total quality management is now an integral part of each step in the chicken meat production process. Total control over each step involved leads to efficiencies in production and the ability to rapidly apply technically advanced equipment to relevant sectors of the company.

A precis of the contract between the grower and the processor is set out below:

<u>GROWER</u>	<u>PROCESSOR</u>
Shedding	Day Old Chickens
Equipment	Feed
Gas	Delivery and Pick Up
Labour	Sanitation Chemicals
Litter	Serviceman
Repairs	Veterinarian
Electricity	Processing
Maintenance	Marketing of Chicken Meat

In 1985 very little chicken meat was value added. The whole fresh bird and chicken pieces dominated the market. McDonalds requested that a chicken nugget be supplied to enhance their

product range. This product was the start of the further processing sector of the industry. The following figures show the projected percentage increase in demand to the year 2000 of value added products.

	Whole Bird Frozen	Whole Bird Fresh	Pieces Fresh	Boned Out Fresh	Value Added
1995	12	35	22	14	17
2000	8	30	20	18	24

Most of the products available to the customer have been prepared and packaged by the processor. Little chicken meat preparation is done by the supermarkets. Demand for boned out and value added products is expanding. 53% of sales are now in the pieces market with most of the whole bird market with the ROTO trade.

Chicken meat processors contact their customers on a regular basis. The aim is that all orders will be obtained by phoning the customer and using the personal sales approach. The processors have previous sales history of each customer which allows the sales staff to predict each of their customers requirements. This also helps the store managers of, say KFC and Red Rooster, to anticipate periods when sales will increase and to have extra product on hand. Customers are also thanked if their purchase orders have increased and are informed of new products that have been developed. This personal approach is required to keep in touch with the consumer requirements.

REDUCING PRODUCT VARIATION

Age is a major determinant in the tenderness of a product. The chicken meat industry can predict the weight of the bird in a given number of days, so the faster the bird can be grown the more tender the meat. If all the birds in the flock can reach predicted weight in a set number of days then tenderness of the meat will be consistent between the birds. Removing the variation between birds being sent to the processor allows for consistent quality product to be distributed to the market place. The same cannot be said for the other red meat industries, as the quality of meat that enters the market place can vary to a marked extent. In these industries product quality is predominantly in the hands of the producer who determines what breed is grown, the nutrition regime of the animal, the age when marketed and the weight the animal should be sold at. Today any Tom, Dick or Harry can produce inferior animals send them to market where someone will buy them, at a price, process them and send the meat to the customer at a quality standard that is less than expected.

EFFICIENCY OF PRODUCTION

A major factor that has helped the chicken meat industry increase market share is its efficiency in adapting to new technology and utilising heritable genetic traits. Reducing labour costs and increasing the number of birds processed per hour has lead to major production cost savings for chicken meat. Feed conversion efficiency and growth rated have improved markedly over the past

7 years, at the chicken meat production unit at Longerenong College the production efficiency has changed from:

1988	2.1 kg. in 52 days	FCR 2.10 : 1.
1995	2.1 kg. in 41 days	FCR 1.78 : 1.

Consumption figures for the four mainstream meats on the market indicate that the market place is starting to eat less meat, will this trend continue?

Consumption per person (kg)

Year	Beef	Sheep	Pig	Chicken	TOTAL
1960	38.7	46.0	8.3	4.4	97.4
1975	65.9	24.3	11.6	13.5	115.3
1980	45.1	20.0	15.5	21.1	101.7
1990	39.3	21.6	18.5	25.0	104.4
1993/4	37.6	20.5	18.3	27.5	103.8
1994/5	36.8	17.1	19.4	27.2	100.5
1995/6	34.5	16.0	18.1	27.1	95.7
1996/7 ^f	36.7	16.1	18.6	27.4	98.8

(ABARE, 1996)

The consumption of chicken meat has risen at a steady rate over the past 20 years, and this has been at the expense of beef and lamb consumption. These industries are currently battling against each other for a share of the pie that may become even smaller in the future. Products such as pasta, rice, grain proteins and vegetables are already having an impact on our traditional diets of meat and three veg. Also do not discount the effect that fish, emu and ostrich will have in attracting customers to their product.

One of the interesting comparisons that can be made between the industries is the yield of saleable meat from a whole animal:

	Yield (%)
Chicken	75
Pig	60
Beef	48-56
Lamb	45-56

Chicken also gains an advantage over most other meats as at least 25% of the carcass can be sold at a premium price. In comparison to a 230 kg beef carcass which yields about 11% premium cuts. A prime lamb is an interesting comparison in that a traditional premium is gained from loin chops of 9%, but if a lamb leg is boned out a premium price for 31% of the carcass can be gained.

The real price of chicken in the market place has decreased over the last 10 years due to vertical integration of the companies. Some of the factors that have contributed to the reduction in price include:

- high degree of automation
- high density feeds
- housing improvement
- sanitation and quarantine
- management procedures
- genetic advancement

GENETIC IMPROVEMENT

Chicken meat production originated from the male birds of the commercial egg hen, reared on high energy feed and sold as spatchcocks. Specific pure breeds of birds were selected and crossed to produce lines which exhibited better feed conversion and increased growth rate compared to their parents. Geneticists selected cross breed birds over many generations until, in only 30 years the industry has been able to develop a distinctly different breed of bird for the chicken meat industry. The early breeders found that objective instead of subjective measurements were necessary. The important traits for chicken meat production were feed conversion, body weight and egg production. Objective measurement was a far better method of breed superiority than trying to assess a birds potential performance by observing its appearance. An interesting improvement in testing of a birds progeny to assess its breeding potential was to actually use the *progeny* as the next generation of breeders.

Poultry breeders have used three breeding systems:- mass mating, family selection and a combination of family and individual selection. For traits with low heritability such as fertility and embryo viability, family selection is necessary. When heritability is high, such as body weight gain, then an individuals performance is an excellent indicator of its breeding value. Family lines are established, not based on pure breed birds, but on those lines of birds that exhibit superior performance to certain traits. For rapid advancement of selected traits mass matings may be used where superior family lines are randomly mated and the progeny individually caged and objective measurements taken. Those birds which exhibit rapid improvement in specific traits are used as F1 breeding stock.

Amazingly it is only in the last 6 years that new genetic strains of birds from overseas have been imported to increase the genetic diversity of the broiler population. The Australian birds continue to perform at standards among the best in the world even when crossed with imported bird. Using heritability estimates (or h^2) can give a direction to the industry as to which trait to select for. In chicken meat production the h^2 of body weight gain is 40%. In sheep meat production the h^2 for weight of retail cuts is 50% and loin eye muscle area is 55%. These traits have a much greater heritability potential than chicken meat, so why isn't the sheep meat industry exploiting these traits? In general terms, most of the beneficial traits for red meat production have moderate to high heritability estimates.

The chicken meat industry is focused on costs of production and so the breeders are continually experimenting with different genetic lines to improve the important traits of feed conversion ratio and growth rate. The beef and sheep meat industries have a different view to animal breeding and one important aspect of this is the role the breed societies play. Using the best producing animals in a breeding program is the basis of genetic improvement. However this work can be hampered by pure breed societies. By setting up breed standards, these societies have formed a barrier to cross bred animals being accepted in the market place as these animals do not meet the standards of looks and shape. By maintaining this perception, the breeders of stud animals are guaranteed price stabilisation for their stock. In some cases the width of the show ribbon is more important than the eating quality of the meat.

CONCLUSION

There are thousands of sheep meat and beef producers in Australia all with their own ideas of stock selection, feed regimes and interpretations of how their product meets the needs of the market place. Most of these producers would not be able to guarantee consistency of the meat produced on a year round basis. Many producers have not seen their animals over the hooks and many more may not even care what happens to their animals after they leave the farm. The red meat industry must be able to supply quality meat into the market place at a price and consistency of quality and year round supply that will encourage the customer to consistently purchase red meat products. The chicken meat industry has already met that challenge.