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AGRICULTURAL OUTLOOK CONFERENCE 1986

**AGROCON
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'86

LANDBOUVOORUITSKOUINGSKONFERENSIE 1986

PRESENTED BY —

- Agricultural Economics Association of South Africa
- Co-ordinating Committee of Agricultural Marketing Boards
- Department of Agricultural Economics and Marketing
- Department of Agriculture and Water Supply
- National Marketing Council
- SA Agricultural Union

**CSIR CONFERENCE CENTRE
Pretoria**

10 AND 11 FEBRUARY 1986

AGROCON 1986 : THE BROILER INDUSTRY IN SOUTH AFRICA

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1.0 INTRODUCTION

This paper will commence with a description of the structural and operating characteristics of the industry, which will then be followed by a brief review of 1985 and a preview of 1986. As has been stated previously, broilers are one of the few agricultural products in South Africa which are free of the dubious benefits of having a Control Board. However, freedom from such control does have some disadvantages, including the lack of centralised reliable statistics, and these in consequence will not feature strongly in this paper.

2.0 STRUCTURE

The substantial trade in live chickens (broilers, male rejects of laying breeds, and depleted breeders and laying hens) continue, but this trade will be disregarded in this paper. The formal and significant part of the industry consists of the production and processing of oven ready broiler meat, and in its relatively short history of perhaps 25 years, it has been concentrated into relatively few hands. The number of abattoirs of various sizes has varied in number over the last four years, as is shown in Table 1. The increase in the largest A abattoirs is significant, as is the reduction in the very smallest "kitchen" E abattoirs, the latter change being as a result of the firm control over hygiene standards exercised by the Meat Hygiene Offices of the Department of Agriculture.

Table 1 : Poultry Abattoir Classification

Grade	Broilers per day	March 1982	October 1983	October 1984	October 1985
A	10 000 +	13	13	16	16
B	501 - 10 000	20	23	22	23
C	201 - 500	44	45	43	40
D	51 - 200	29	29	25	27
E	50 -	115	55	43	40
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	TOTAL	221	165	149	145
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SOURCE : Meat Hygiene Office, Department of Agriculture, Pretoria

The Egg Control Board also collects compulsory statistics of day old broiler placements, which, after allowances for mortality, give an indication of production numbers for both processed and live broilers. These figures are summarised in Table 2.

Table 2 : Quantity Chicken Meat Available

Source	1983/84 Actual				1984/85 Actual				1985/86 Estimate			
	Day-old 000	Mort %	Carcass Kg	Meat t	Day-old 000	Mort %	Carcass Kg	Meat t	Day-old 000	Mort %	Carcass Kg	Meat t
Layer Pullets	14 608	15	1,75	21 729	14 378	15	1,75	21 387	15 000	15	1,75	22 312
Broiler/Breeders Pullets	3 341	20	2,50	6 682	3 290	20	2,5	6 579	4 000	20	2,5	6 400
Cockerels	11 964	11	2,00	21 295	11 234	10	2,0	20 220	15 000	11	2,0	26 700
Commercial Broilers	261 403	10	1,35	317 605	264 750	10	1,35	321 671	270 000	8	1,35	335 340
TOTAL				367 311				369 857				390 752
Growth %				5,6%				0,14%				5,6%

According to increasing size of operation, vertical integration by individual producers tends to follow the sequential steps of broiler growing, processing, hatchery and then parent breeding, and in South Africa the eight largest producers have integrated to this degree. There are three primary breeding operations based on imported stock, and these are controlled by the four largest broiler producers. However, in contrast to patterns common in the USA and Europe, direct integration into feed milling is less common, and another contrast is that overseas producers tend to make substantial use of contract private farmers for their flock production, whereas South African producers generally prefer to own their own farms.

3.0 TECHNOLOGY

The broiler industry's very substantial advances over the last few decades have been as a result of the technological gains that have been achieved, and there is no reason to doubt that they will continue and that new problems and challenges will arise as the total system is placed under increasing stress of higher levels of production. These gains give broilers an ever increasing competitive advantage over other types of meat.

A rule of thumb measure of the rate of annual advance is that each successive year broilers will grow 40 grams heavier to a given age, or, alternatively, that a producer is able to process to a given liveweight at one day younger each year, which is approximately an annual 2% gain in productivity.

3.1 Breeding

The South African broiler breeder is dependant, because of scale and quarantine factors, on periodic importation of elite stock from overseas primary breeders, and the breeds available, with approximate chronology, have been :

- up to 1982 - Ross, Hybro
- 1983 - Ross, Hubbard
- 1984 - 1985 - Ross, Hubbard, Cobb
- from 1986 - Ross, Hubbard, Improved Hybro

The decision to import a new breed is never easy, since overseas comparative results cannot be transposed automatically to South African conditions. At elite level locally, the above breeds consist of three or four pure strains that are continually selected for weight gain and other

phenotypic characteristics, and then crossed to produce the hybrid broiler. New importations must compete with those that have had several years of acclimatisation to, or natural selection for, local conditions, and this has recently become very relevant for altitude disease.

The extraordinary growth rate of the broiler, from 40 to 2 000 grams in forty nine days (a 3kg human baby growing at the same relative rate would weigh 150kg at seven weeks) places substantial stress on the bird. Apart from other effects, this has recently been resulting, to a serious degree, in mortality due to heart failure and ascites (fluid in the abdominal cavity) which become particularly serious at high altitude (low oxygen availability). Low temperatures and with other stress factors such as excess salt in the rations. Efforts are being made to reduce the incidence of ascites through good management to reduce stress and even by measures to reduce the growth rate, even though the latter is a direct negation of the primary reason for the broiler's financial success. The long term solution will be through pedigree selection of resistant stock, and South Africa must pioneer in this work, since it is the only country that has a sophisticated broiler industry at high altitude.

The success achieved in selecting for fast growth rate has created its own problems. Genetically, growth rate is negatively correlated with egg production by parent birds, which has deteriorated to a substantial degree, even to the extent of resulting in shortages of day old broiler chicks. New breeder management methods are being actively pursued to maximise hatching egg production.

3.2 Diseases

Although it is the most serious cause of mortality on the highveld, ascites is a physiological (non-communicable) condition. Of infectious diseases, considerable concern is being expressed at the incidence of respiratory problems. Individually and interactively, the Mycoplasmas (gallisepticum and synoviae), bronchitis and light Newcastle infections are leading to secondary coli septicaemia with severe loss of growth and mortality. There has also been a recent increase in the incidence of lung oedema, the cause of which is unknown.

Disease transmission is particularly hazardous for those producers who, for historical or inadequate management reasons, are not able to apply stringent isolation practices to their individual flocks.

3.3 Nutrition

Broiler feed is of great significance, due both to its effect on growth rate and to the fact that it constitutes more than 65% of total cost. Importation of inferior quality maize appears to be unnecessary for some time to come, and broilers will benefit from the quality of the home product. The same cannot be said for protein sources where shortages will persist. The weak rand has seriously inflated the cost of imports. Some of the first importations of fishmeal cost the broiler industry additional millions of rands, because of toxins due to overprocessing of the fishmeal to which broilers are particularly susceptible causing gizzard erosion, slow growth and mortality. However, in conjunction with the Animal Feed Manufacturers Association, this hazard has been reduced by careful selection of overseas fishmeal sources and by the planned dilution of overseas with local supplies in the formulation of rations.

3.4 Environment and Management

Broiler flocks are placed under considerable pressure for maximum performance, and systems of environment control (ventilation, temperature, humidity and litter condition) continue to be improved. The final performance of a flock reflects the sum of all the factors to which that flock has been exposed, and it is doubted whether there is any other branch of agriculture where the need for excellence of management and attention to detail regarding the livestock or crops is more critical. A minor change in any of a number of single factors can have substantial impact, due to the numbers involved.

4.0 PRODUCTION COSTS

Insofar as broilers (especially in frozen form) are largely a commodity product, the individual producer must seek his competitive advantage over other producers and over other meats through productivity and low cost. Within the industry, this depends on the farmer's management ability,

since the available inputs are much the same for all producers. However, the industry as a whole is faced by factors over which it has little control, and there is considerable concern over the uncertainty regarding the principles to be applied in the determination of the maize price. Broilers stand at the forefront of noncontrolled agriculture, and support the reduction of control in other sectors. However, this must not be precipitate, but planned to allow the economic order to adapt to the new freedoms, and relaxations of restrictions must be even-handed with regard to the interests of both consumers and producers. With regard to yellow maize, if a single channel single price system is to remain, so must final government price approval. Although no response has been received, the poultry industry has felt sufficiently concerned to make several representations regarding methods for attracting only sufficient maize into production to satisfy local demand, so avoiding perilous price escalations.

The difficult economic times have forced broiler producers to cut all possible costs, and these have included staffing levels with mechanisation and efficiency of operating systems. Industrial relations are coming under increasing pressure, and trade union activity is mounting with inevitable cost effects, but also with opportunities for producers to improve their staff relationships.

5.0 REALISATIONS

For broiler producers, the cost of production has little bearing on realisation, except in the long term when survival is at stake. The market is volatile and unpredictable, and production set-up times too long for the producer to be able to adjust production sufficiently to have an effect on the price per kilogram that he receives. As a result, broiler producers generally continue at all times to produce at the maximum levels of which their facilities are capable.

In last year's paper for AGROCON, the writer reported on the firming in the broiler market that had occurred from October 1984, and continued that "it is anticipated that these increased prices will be maintained through 1985". In practice, the wish was not farther from the fact, and the market weakened early in the year, with a crash in prices to the region of R1-50 per kilogram in June. This condition persisted until a strong correction occurred at the end of November, with wholesale frozen bird prices in December exceeding R2-50 to the trade.

While all broiler producers must follow general price trends, a positive margin over competitors can be created by niche marketing. The greater the value that can be added to commodity chicken, the greater the price margin and price stability benefits. There continues to be an active development of fresh broilers, portions, further processed and portion control chicken meat products.

Broiler producers have long been concerned at the concentration of the South African retail food market into only a few groups, giving their buyers disproportionate negotiating power. However, the recent strengthening of "cash and carry" wholesale operators and of fast food and catering chains is resulting in the improved servicing of these market sectors.

6.0 PROFITABILITY

Since he has little control over prices in the short to medium term, the broiler producer has little control over profitability. His long term survival through the cycles of the industry depend on his competitive efficiency. 1985 unhappily saw the conjunction of the troughs of five macro-economic cycles, namely :

- 6.1 post new year consumer purchasing drop, extended through mid year
- 6.2 the long term broiler cycles of supply/demand imbalance
- 6.3 the long term red meat cycle of supply/demand imbalance
- 6.4 the national economy, inflation and unemployment
- 6.5 political upheaval and consumer boycotts.

The past experience of broiler price trends increasing at a lower rate than inflation, due to productivity, can be expected to continue, but satisfactory profitability will only return when several or all of the above five cycles have changed for the better.

7.0 LOOKING BACK

Escalating costs, mortality increases and very low broiler prices for most of the year have made 1985 a year of distress for the broiler industry. These difficulties coincided with, and were compounded by, increases in production flowing from expansion decisions made in previous years when there was greater optimism regarding the future of the industry. These increases included a large new unit in the Transvaal and substantial expansions in the Orange Free State and elsewhere. The insolvencies of several smaller producers did not counter-balance the expansion.

1985 was also the year in which all production was sold on the local market, with those producers who had previously been exporting having ceased to do so in 1984, because of high input costs, low returns and the export market's inflexibility as a safety buffer for local market movements. The year has forced all producers to consolidate on all fronts, and it has also seen for the first time generic advertising for chicken meat, with a number of Transvaal producers mounting a substantial campaign in the PWV consumer areas, based on the cost, health and use versatility of their product. It will be interesting to see whether the perceived benefits will result in repeated campaigns.

8.0 LOOKING FORWARD

Although Christmas 1985 prices for broilers, in sympathy with red meat, have been good, it may be anticipated that all broiler producers will enter 1986 with their top priority being consolidation for survival. This will, in itself, result in increased offerings to the market place, as the consolidation and attention to detail result in improved productivity. If volume increases are substantial and the economy fails to improve, another early price collapse will follow.

Investment in new facilities will generally be postponed until producers are more confident regarding the turnabout in restraining factors mentioned above. Broiler production is a particularly capital intensive industry, and expansion restraint can be well understood when the capital cost of a new 100 000 broiler per week operation is in the region of R25m to R30m or more, depending on specifications.

The last several years has seen the establishment of the co-operatives as a very significant presence with control of 20% to 25% of broiler production, despite the concern of many private and corporate producers that there is no direct involvement of the co-operative's individual farmer members. Even greater concern has now been expressed in some quarters at the plans announced by an independent government to establish a large new broiler operation, presumably for reasons of general decentralisation and job creation rather than for straightforward reasons of projected broiler profitability.

9.0 CONCLUSION

The rapid growth of the broiler industry has been the result of the exploitation of commercial opportunities by strongly entrepreneurial farmers unfettered by centralised control. Along with the strengths that this has, and will continue to have, go the weakness that the industry lacks the cohesiveness necessary for fully effective negotiations as a body with such groups as feed millers, the maize board, government departments, etc. Some progress has been made, but more is required if broilers are to take their rightful place in South African agriculture. It has been described as one of the few agricultural industries that is a real growth sector for the future. 1986 may concentrate on consolidation, but resumed growth cannot be far away.

