CHAPTER 2

THE DEVELOPMENT AND IMPORTANCE OF INTENSIVE LIVESTOCK INDUSTRIES IN AUSTRALIA

Production and Consumption

2.1 The intensive pig and poultry industries in this country are dynamic and adaptive industries which contribute significantly to the economy and to the daily diets of most Australians. As with the farm sector generally these industries also generate activity in:

- the manufacture, transport, handling, wholesaling, retailing and financing of farm inputs;
- the provision of contract services;
- the handling, financing, transporting and merchandising of farm products, along with
- the supply of inputs to these downstream activities.

2.2 The following table provides an establishments profile of these industries which provide food, employment, and generate economic activity in the millions.

Table 2.1: Agricultural Establishments (a),
31 March 1989

Description	NSW	Vic.	Qld	SA	WA	Tas.	NT	ACT	Aust. (b)
Poultry for meat	374	123	89	57	50	12	-	-	705
Poultry for eggs	225	150	146	55	93	18	3	1	691
Pigs	570	252	554	270	139	58	1	-	1,844

(a) Establishments with an estimated value of agricultural operations of $20,000 or more.

SOURCE: Australian Bureau of Statistics, Agricultural Industries, Structure of Operating Units, Australia, 31 March 1989 (7102.0)

2.3 In 1988-89 for example the pig, poultry meat and egg industries had a gross value of production of $1,673.5 million[1].

2.4 Tables 2.2, 2.3 and 2.4 provide comparative details over eight years of the gross value of agricultural commodities produced in Australia, production of meat by type and numbers of livestock slaughtered for human consumption.

2.5 Governments around Australia assist these industries to produce optimum levels of production at a competitive price. This goal is addressed by conducting research, providing advisory and diagnostic services, encouraging improvement in technology applied and, where necessary, implementing regulatory procedures to maintain standards and protect resources.[2]

Table 2.2: Production of Meat by Type (a)
('000 tonnes)

	Carcass weight						Dress weight (b)	
Year	Beef	Veal	Mutton	Lamb	Pig meat	Total Meat	Chickens	Total all poultry (c)
1983-84	1,303	42	169	296	253	2,064	272	298
1984-85	1,271	39	215	301	260	2,086	315	345
1985-86	1,344	41	258	320	269	2,232	334	367
1986-87	1,481	40	288	296	283	2,388	345	384
1987-88	1,549	39	293	293	297	2,471	362	-
1988-89	1,459	32	254	290	308	2,343	368	-

(a) Excludes offal. (b) Dressed weight of whole birds, pieces and giblets. (c) Includes other fowls, turkeys, ducks and drakes.[3]

SOURCE: Australian Bureau of Statistics, Livestock Products, Australia, April 1990, (7215.0).

Table 2.3: Numbers of Livestock and Poultry Slaughtered for Human Consumption
(million head)

Year	Cattle	Calves	Sheep	Lambs	Pigs	Chickens (a)	Other fowls (b) & turkeys	ducks and drakes
1983-84	6.0	1.3	8.4	17.1	4.4	216.2	10.2	1.7
1984-85	5.8	1.2	10.5	17.5	4.5	244.2	10.7	2.1
1985-86	6.2	1.2	12.9	19.1	4.5	258.4	11.8	2.3
1986-87	6.8	1.2	14.7	17.7	4.7	269.3	11.2	2.1
1987-88	6.9	1.2	15.0	17.2	4.9	273.6	-	-
1988-89	6.3	1.0	12.4	16.5	5.0	274.1	-	-

(a) Comprises broilers, fryers and roasters. (b) Comprises hens, roosters, etc.[4]

SOURCE: Australian Bureau of Statistics, Livestock Products, Australia, April 1990, (7215.0).

Table 2.4: GROSS VALUE OF AGRICULTURAL COMMODITIES PRODUCED
($ million)

	1983-84	1984-85	1985-86	1986-87	1987-88	1988-89p
Crops-						
Barley for grain	732.6	759.3	586.8	432.6	459.8	570.0
Oats for grain	203.8	129.6	138.3	164.8	195.0	224.5
Wheat for grain	3,605.6	3,202.9	2,719.4	2,530.0	2,015.7	2,866.1
Other cereal grains	408.7	400.8	346.3	322.4	402.3	406.0
Sugar cane cut for crushing	516.6	512.2	494.2	586.4	618.2	770.7
Fruit and nuts	552.5	670.9	678.6	837.2	886.0	936.7
Grapes	217.0	259.4	270.0	272.2	353.7	403.7
Vegetables	738.6	628.8	713.6	885.4	952.9	1,092.8
All other crops (a)	1,451.1	1,303.5	1,430.5	1,706.7	1,928.4	2,155.5
Total crops	8,426.5	7,867.4	7,377.7	7,737.7	7,812.0	9,426.0
Livestock slaughterings and other disposals (b)-						
Cattle and calves (c)	2,118.0	2,253.2	2,367.3	2,819.7	3,057.0	3,144.6
Sheep and lambs	585.0	576.1	531.6	721.2	803.9	712.3
Pigs	375.5	438.1	438.3	468.5	536.1	620.0
Poultry	430.2	512.6	559.1	601.7	671.2	717.0
Total livestock slaughterings and other disposals	3,508.6	3,783.3	3,896.4	4,611.0	5,074.3	5,194.0
Livestock products-						
Wool	2,016.1	2,434.4	2,693.4	3,333.6	5,516.6	5,925.7
Milk	1,153.2	1,035.4	1,106.7	1,257.4	1,390.0	1,606.9
Eggs	295.2	291.2	297.7	291.6	304.4	336.5
Total livestock products (d)	3,489.8	3,792.8	4,125.3	4,915.6	7,256.2	7,916.2
Total value of agricultural commodities produced	15,424.9	15,443.5	15,406.0	17,272.5	20,151.8	22,546.5

(a) Includes pastures and grasses cut for hay and harvested for seed. Excludes crops for green feed or silage.
(b) Includes net exports of livsetock. (c) Includes dairy cattle slaughtered.
(d) Includes goat milk, honey and beeswax.

SOURCE: Australian Bureau of Statistics, Value of Agricultural Commodities Produced, Australia, 1988-89, Preliminary (7502.0).

p - preliminary

Role of Governments

2.6 Broadly speaking the goals of State primary industry portfolio departments around Australia are to benefit the community by maintaining and improving agriculture in keeping with the need for long term sustainability:

- to increase the productivity of agriculture industries;
- to provide market oriented services to maximise opportunities for the development of competitive agricultural enterprises;
- to protect agricultural resources and the environment generally;
- to protect the consumer and benefit the producer by ensuring the marketing of wholesome acceptable produce.[5]

2.7 The Commonwealth Government's objective in agriculture is to foster the development of efficient, low cost, internationally competitive, innovative and adaptable livestock and pastoral industries and so further enhance their contribution to the Australian economy.[6]

2.8 In its industries assistance and development role the Commonwealth assists industry through a variety of measures including direct financial assistance, taxation concessions, guaranteed domestic price and other marketing arrangements, financial guarantees, a degree of selective preference for local industries in Commonwealth sector purchasing policy, the customs tariff, and import quota restrictions.[7]

2.9 Direct financial assistance from the Budget is provided in several forms: bounties and other subsidies, price support and adjustment schemes, development projects primarily in support of industry, disease eradication schemes, contributions to research and promotion, and other outlays to or for the benefit of industry. It includes outlays of some departments and organisations which service industry (eg. the Departments of Industry, Technology and Commerce, Primary Industries and Energy, and the Australian Tourist Commission). Such departments and organisations provide many services either free of charge or for charges which do not recover fully the costs involved.[8]

Economic and social pressures

2.10 As with primary industry generally, producers of food animals are at the end of a long line of economic and social pressures a fact which is highlighted in a major Commonwealth Government primary industries and resources policies for growth statement released in May 1988.

> While the challenge of restructuring industry and improving our competitiveness is clear, the underlying objective is often overlooked. The end result of an improved economic performance is that there are more and better jobs, and people can enjoy higher incomes and living standards and more readily achieve their individual goals and aspirations.
>
> Underpinning the economic policy reforms are the Government's **social goals** of greater and more equal opportunity, substantial improvements in living standards, an enhanced quality of life for all Australians and care for our environment. While objectives for the primary industries and energy sector are expressed in terms of efficient economic and resource management principles, it is progress towards these social goals that is the ultimate outcome of improved economic performance.
>
> Our long-term objectives can be grouped into three important areas:

- Enhancing our productive capacity
- Developing a more responsive and productive industry structure
- Influencing and responding to the external environment.[9]

2.11 The economic pressures on farmers were highlighted in Outlook 90 National Agricultural and Resources Conference. Speaking on the subject of rural debt Dr John Marsden, Director of Research with the Australian Bankers Association, noted that since 1950 the number of farms in Australia has fallen by more than 36,000; an average of almost 1,000 each year. Since the mid 1960s the number of farmers has fallen by 10,000, or around 400 each year. While many farmers leaving the land either retired, or have used their success in the rural sector to pursue other ventures, the majority have left because of loss of financial viability. However, loss of financial viability is usually closely correlated with other evidence that the farm is not a sustainable enterprise. Loss of financial viability means that the debt levels can no longer be serviced from available cash flow. Essential requirements for long term survival are the control of debt levels relative to production size, together with the capacity to modify activities to meet market conditions.[10]

Development of intensification

2.12 Over the past 30 years there have been significant changes to the structure of the pig and poultry industries, changes which have been due to economic pressures, scientific and technological advances and consumer demands. Pigmeat and poultry production are considered to be among the most scientifically based commercial industries in Australia.[11] Confinement housing of pigs and poultry was first implemented in Australia to improve productivity, to produce better working conditions for stockpersons, to reduce labour input per head of livestock and increase efficiency of production. The increasing availability of antimicrobial substances capable of controlling outbreaks of disease of bacterial origin and for the use as a strategic tool for preventive health programs assisted the intensification of these industries.[12]

2.13 The following details are from industry profiles published in the Australian Bureau of Statistics' Year Book Australia 1989.

2.14 Up until the early 1960s pigs were raised as part of a dairying operation where there were abundant supplies of liquid skim milk. With the introduction of factory separation of milk and cream, coupled with the low grain prices of the 1960s, pig raising has become more and more associated with grain production.[13]

2.15 In addition there has been a major move away from the so called extensive method of pig raising to the intensive conditions that apply today. This has meant an increase in the capital investment in the industry and a greater degree of specialisation in pig raising. The average pig production unit today would be based on approximately 300 sows with feeds being almost exclusively grain based. While the number of sows in Australia has remained fairly constant the number of pig farmers has decreased.[14]

2.16 Capital investment and corporate takeovers have seen the emergence of a few large companies producing 30 per cent of all pigs sold in Australia. These moves on top of the trend to more intensive and efficient production techniques have seen pigmeat production rise steadily since 1982 to reach 285,000 tonnes in 1987-88. In addition, there has been an increase in the slaughter weights of pigs reflecting the demands of the fresh pork trade.[15]

2.17 It is believed that about 60 per cent of production is processed into bacon, hams and smallgoods, with the rest sold as fresh pork. Less than 2 per cent of the industry's output is exported. The increasing production of pigmeat therefore reflects a steady increase in per capita domestic consumption over the past three years.[16]

2.18 The commercial poultry industry comprising hatcheryworkers, egg producers and broiler growers is highly specialised, although a proportion of production comes from 'backyard' egg producers. There are also separate research schemes funded jointly by industry and government for the egg and meat chicken industries but close liaison exists. Both sectors are good examples of specialised, large scale, capital-intensive production.[17]

2.19 The poultry meat industry developed rapidly in the 1970s with both output and consumption rising steeply, although in recent years production has exceeded demand and excess production capacity in the industry continues. Genetic and technical improvements and the organisation of the industry into large-scale enterprises have raised efficiency and helped to reduce production costs relative to other meats. The price competitiveness of chicken meat compared with other meats, especially beef, continues to improve, consolidating the position of poultry meat as the second most important meat after beef in Australian diets.[18]

2.20 In a paper to the Outlook 90 Conference entitled 'Australian Meat: A Decade of Opportunity', Michael Blyth from the Australian Bureau of Agricultural Resource Economics (ABARE) forecast a continuation of the expansion of Australia's livestock industries in the short term under the influence of relatively favourable returns for most livestock products.[19]

2.21 He added that new technologies, including genetic engineering techniques and improved management practices are expected to provide the basis for additional gains in efficiency in the intensive livestock industries over the medium term.[20] Table 2.5 summarising forecasts and projections for pigs and poultry are from an ABARE table presented with this paper.

Table 2.5: **Summary of Australian Statistics and Projections for Meat**

Item	Unit	1988(p)	1989(s)	1990(f)	1991(z)	1992(z)	1993(z)	1994(z)	1995(z)
Nominal Price									
Pigs									
- saleyard	c/kg	201	225	240	250	260	260	250	265
- retail	c/kg	601	670	715	745	775	775	745	790
Poultry, retail	c/kg	296	320	340	350	360	365	365	370
Livestock numbers									
Pigs	'000	2,766	2,765	2,850	2,950	3,050	3,060	3,030	3,040
Production									
Pig meat	kt	304	305	309	319	328	341	354	343
Poultry	kt	406	415	432	447	462	467	472	477
Export value									
Pig meat	$m	33	32	33	31	32	41	56	35
Poultry	$m	3.0	2.5	4.0	5.0	5.5	6.0	5.5	5.5
Export volume									
Pig meat (a)	kt	9.9	7.5	7.0	8.0	8.0	10.0	14.0	9.0
Poultry (a)	kt	1.4	1.5	2.0	2.0	2.0	2.0	2.0	2.0
Consumption per person (b)									
Pig meat	kg	17.7	17.7	17.7	17.9	18.2	18.5	18.7	18.1
Poultry	kg	24.4	24.6	25.1	25.6	26.1	26.0	25.8	25.7

(a) Fresh, chilled or frozen shipped weight. (b) Includes canned and miscellaneous meats. (p) Preliminary. (s) ABARE estimate. (f) ABARE forecast. (z) ABARE projection.
Sources: Australian Bureau of Statistics (1989a, b); Australian meat and Livestock Corporation; ABARE.

SOURCE: 1990 National Agricultural and Resources Outlook Conference Paper, Australian Meat: A Decade of Opportunity, ABARE p. 2 (session 9)

Consumer and Farm Cost Pressures

2.22 It is expected however that farm input costs will rise. Farm inputs are all those goods and services that a farmer needs to carry on the profession of farming. Any changes that affect farmers such as climatic conditions, commodity prices or environmental pressure influence the use of agricultural inputs.

2.23 These issues were also highlighted at the Outlook 90 Conference. In a paper entitled 'Expected Developments in the Use of Agricultural Inputs', Graham Foster, Managing Director of Combined Rural Traders Limited, warned that tight economic conditions in Australia will probably see farmers spending more on inputs than on capital expenditure in the year ahead. He drew attention to the fact that consumer and community pressures on agricultural inputs usage is a dominant theme today and highlighted the input cost implications.[21]

2.24 Consumer concerns about what fertilisers and chemicals are used to produce safe and high quality food will have implications for farmers and input producers alike in the years to come. Foster argues that the rate of food and fibre production needs to be constantly increased to cope with the growth in world population growth. A balanced approach to safety from consumers, the media, farmers, the scientific community, politicians and manufacturers is essential if the benefits of high technology are to be understood and appreciated by future consumers.[22]

2.25 He stressed the point that worldwide interest in food residues by consumer bodies will pressure governments into maintaining strong control through regulation and initiating more environmental research activity as opposed to production research and development activity.[23]

2.26 A further impact on farmers is consumer driven demand. As indicated on page one of this report (in a quote from Mr Keith Lawson, Managing Director of Elders Pastoral) diet consciousness and fashion have important implications for producers. In his paper to the Outlook 90 Conference Keith Lawson said that the entire vertical food system needs to become pro-active in creating what the consumer wants, that is, value. A major implication of this is that we can longer view what we produce in rural industry as a commodity. We must generate extra value for consumers according to their ever-changing needs.[24] Consumer driven demand means the need for marketing and speedy responses throughout the chain in order to meet consumer needs and generate value. The alternative to a marketing led approach is stagnation and a declining position for our rural products.[25]

2.27 Some animal rights activists consider that individual farmers are on the whole too isolationist. They need to become much more involved in consumer concerns. Jim Mason and Peter Singer write, in their book ANIMAL FACTORIES: The mass production of animals for food and how it affects the lives of consumers, farmers, and the animals themselves, published in 1980 that:

> The natural forces of commodity marketing are the primary cause of ... sectarianism and specialization in agriculture. With hard times nearly always in sight for independent farmers, they tend to turn to the one crop or type of livestock operation that provides the most security ... they dare not whisper about the immense power that commodities traders and other agribusiness interests have over them. ... With a truly progressive attitude about food and environmental issues, farmers could gain a fair amount of muscle in coalition with groups working on these issues. Farmers who ignore these trends, or who fight for the narrow goal of making the agricultural status quo more profitable, can expect deepening powerlessness and an increasing trend towards expensive, complicated farming as agribusiness promotes its same old self-serving technology, and government slaps on controls in response to consumer concerns for the environment and food quality.[26]

2.28 Animal welfare is not an issue which is included in the cost equation debates over agricultural productivity, at least not at the national conference level. Clearly it is not yet seen in the agribusiness sector to be a significant consumer pressure issue in Australia.

2.29 The peak bodies associated with intensive pig and poultry industries recognise the implications of activism in this area. Industry bodies and veterinary and government service providers argued in this inquiry that consumers would have to pay higher prices if intensive farming techniques were radically modified or abandoned altogether. However neither they nor the peak animal society bodies have offered any quantifiable information on the question of costs.

Conclusion

2.30 It is time now in Australia for a rigorous discussion of these matters and it is vital that farmers take an active part. Vital because they are close to the animals in their care and to input cost impact and they are at the start of a long agribusiness chain which gets stronger as it moves away from the farm gate.

ENDNOTES

1. Australian Bureau of Statistics Year Book Australia 1989, p. 390, reproduced in this Chapter in Table 4.

2. State Departments of Agriculture/Primary Industries Annual Reports.

3. The ABS collects details of slaughterings and meat production from abattoirs, commercial poultry and other slaughtering establishments and includes estimates of animals slaughtered on farms and by country butchers. The data relate only to slaughterings for human consumption and do not include animals condemned or those killed for boiling down.

4. See Footnote 4.

5. State Departments of Agricultural Primary Industries Annual Reports.

6. Commonwealth Department of Primary Industries and Energy Annual Report 1988-89, p. 21.

7. Budget Paper No. 1, 1989-90, p. 216

8. ibid.

9. Primary Industries and Resources Policy for Growth, A Government Policy Statement by John Kerin, Minister for Primary Industries and Energy and Peter Cook, Minister for Resources, May 1988, AGPS, p. 4.

10. Dr J. Marsden, 'Rural Debt, Mediation and the ABA/NFF Scheme', Outlook 90 National Agricultural and Resources Conference, Canberra, 30 January-1 February 1990, Session 4, p. 1.

11. Australian Encyclopaedia, Fourth Edition, 1983, p. 50.

12. Evidence, Australian Veterinary Association, p. S9022, S9030.

13. Australian Bureau of Statistics Yearbook Australia 1989, p. 424.

14. ibid.

15. ibid., p. 427.

16. ibid.

17. ibid., p. 424.

18. ibid., p. 427.

19. M. Blyth, 'Australian Meat: A Decade of Opportunity', <u>Outlook 90 National Agricultural and Resources Outlook Conference</u>, Canberra, 30 January-1 February 1990, Session 9, p. 7-9.

20. Ibid, p. 7-8.

21. G. Foster, 'Expected Developments in the Use of Agricultural Inputs', <u>Outlook 90 National Agricultural and Resources Outlook Conference</u>, 30 January-1 February 1990, Session 4, p. 1.

22. ibid.

23. ibid, p. 1-2.

24. K. Lawson, <u>Outlook 90 National Agricultural and Resources Outlook Conference</u>, 30 January-1 February 1990, Session 15, p. 6.

25. ibid, p. 11.

26. J. Mason and P. Singer, '<u>Animal Factories: The Mass Production of Animals for Food and How it Affects the Lives of Consumers, Farmers and the Animals Themselves</u>', Crown Publishers, New York, 1980, pp. 141-2.