AUSTRALIAN EGG
CORPORATION LIMITED

Update of layer housing survey

A report for the Australian Egg Corporation Limited

by G A Runge

August 2005

AECL Publication No 05/10
AECL Project No QAG-1A

ISSN 1448-1316

Update of layer housing survey
Publication No. 05/10
Project No. QAG-1A

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Published in August 2005
Published only on the web.

Foreword

In August 2000 ARMCANZ (Agriculture and Resource Management Council of Australia and New Zealand) made important decisions on layer cage housing that will have a long term impact on the Australian egg industry. The main thrust of the decisions is that all cage systems that do not meet 1995 standards are to be scrapped on or before 1 January 2008 unless they are modified by then to meet the contemporary standards at that time. All new cages commissioned after 1 January 2001 must meet the 1995 standards and provide a floor space, including the area under the baffle, of 550cm^2 per bird for three or more birds per cage, 675cm^2 for cages holding two birds and 1,000cm^2 for one bird per cage. The new standards applying are published in the Model Code of Practice for the Welfare of Animals – Domestic Poultry, Fourth Edition.

An initial survey of the Australian egg industry was undertaken from November 2001 to July 2002 to ascertain the type and capacity of laying facilities available for egg production in Australia, the effect of the August 2000 ARMCANZ decision on the current egg production facilities, the future intentions of egg farmers and to assist egg farmers to determine if their cages will meet the Model Code of Practice for the Welfare of Animals – Domestic Poultry, Fourth Edition 2001 at 1 January 2008. The results of this initial survey were published by AECL in October 2003 in a report titled "Modifying egg production systems to meet changing consumer needs".

The current report presents the results of a second survey conducted from November 2003 to January 2004 to track changes in the type and capacity of laying facilities since the initial survey. This report presents updated information on the structure of the Australian egg industry, the effect of the ARMCANZ decision on cage facilities, farmers future intentions and how these will impact on the ability of the industry to meet the ARMCANZ requirements at 2008 and maintain egg production at current levels.

This project was funded from industry revenue that is matched by funds provided by the Federal Government.

This report, a new addition to AECL's range of research publications, forms part of our R&D program, which aims to support improved efficiency, sustainability, product quality, education and technology transfer in the Australian egg industry.

For information on the AECL R&D Program visit our web site at www.aecl.org

James Kellaway
Managing Director
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Acknowledgements

My sincere thanks to the members of the Australian Egg Corporation Limited and the State Egg Industry organisations for their assistance in implementing the survey and valued discussion during the design of the questionnaire.

To all the egg farmers who completed the questionnaire and for their full and frank discussion regarding the issues treated in the survey form, thank you. It was through this discussion that I gained a better insight into the issues that the industry is facing.

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Executive Summary

In August 2000 ARMCANZ (Agriculture and Resource Management Council of Australia and New Zealand) made decisions on layer cage housing. These were embodied in the Model Code of Practice for the Welfare of Animals – Domestic Poultry 4th Edition (Poultry Welfare Code 2001).

The Australian egg industry is presently valued at $320 million with production of 226 million dozen eggs per annum.

The future intentions of cage egg farmers towards implementing the Poultry Welfare Code 2001 on their farm will have a significant impact on the industry's ability to meet the market demand for eggs at 2008.

An initial survey of the Australian egg industry was undertaken in 2001/02 to ascertain the type and capacity of laying facilities available for egg production in Australia, the effect of the August 2000 ARMCANZ decision on the current egg production facilities, the future intentions of egg farmers and to assist egg farmers to determine if their cages will meet the Poultry Welfare Code 2001 at 1 January 2008. The results were published by AECL in October 2003 in a report titled "Modifying egg production systems to meet changing consumer needs".

The current report presents the results of a second survey conducted in 2003/04 to track changes in the type and capacity of laying facilities since the initial survey. This report presents updated information on the structure of the Australian egg industry, the effect of the ARMCANZ decision on cage facilities, farmers future intentions and how these will impact on the ability of the industry to meet the ARMCANZ requirements at 2008 and maintain egg production at current levels.

Four hundred and fifty two survey forms, representing 99.6 percent of known farms, were returned from egg farms currently farming. Of these, 301 forms were received from farms with cage facilities and 151 from non-cage farms with barn and/or free range facilities. Some cage farms also had non-cage facilities.

This survey indicates that there are facilities for 14.19 million laying hens in Australia. The cage system, with a capacity of 12.30 million hens, accounts for 84.4 percent of the facilities. Total free range capacity is 1.36 million hens (9.4 percent) and barn capacity is 0.90 million hens (6.2 percent). There are 0.40 million free range hens and 0.59 million barn hens housed on layer cage farms. At least 27 non-cage farms with 0.58 million hens are either owned by, leased by or contracted to cage farm operators.

The data collected provides a detailed profile of the structure of the production sector of the Australian egg industry. Forty-five percent of the layer capacity (6.54 million hens) is on 6.7 percent of farms that are greater than 100,000 hens in size. These and other operators may own or lease multiple farms where their total holdings may amount to more than 100,000 hens.

Comparison with the 2001 survey data suggests that as farmers have left the industry their capacity has been taken up by new facilities being built by other farmers.

At the time of this survey many more farmers were actively thinking about their future intentions compared to the 2001 survey. There was some change in cage farmers' future intentions. The intentions of non-cage farmers was also collected.

Farms with a cage capacity of 6.64 million hens (54 percent) are committed to staying in the industry and replacing all non-complying cages by 2008 with facilities that meet the new standards. Farmers who have indicated that they intend to stay but not yet committed to staying have 0.91 million hen

capacity (7.4 percent). This gives a capacity of 7.55 million hens (61.4 percent) likely to meet the new standards at 1 January 2008.

Farmers unsure about their future intentions in the industry hold a cage capacity of 4.13 million hens or 33.6 percent of current cage capacity. Farmers intending to leave the industry by 2008 have cage capacity of 0.61 million hens (5.0 percent)

Fifty five percent of cage farmers with 37.1 percent of the current cage capacity will reconsider their future options if financial assistance is made available by government.

Many of these undecided farmers, particularly those near retirement, were depending on the sale value of their farm for their retirement package (superannuation). Many layer farms in Australia are not saleable as going concerns because of the ARMCANZ 2000 decision. The cages on these farms do not meet the 1995 Standard. Some farms in urban areas near major cities where the land can be sold for development may have funds sufficient to provide for their retirement or replacement of facilities. Others will not. This will depend on the area of land owned, its locality and its market value. There are also farms with small lots of land of low monetary value that are not in developing urban areas and are not suitable for other agricultural development due to the land type. These people will end up with very little capital and will need support from the social security system when they leave the industry.

The data suggests it is the smaller farmers who wish to leave and mainly the small to medium size farmers who are unsure about what to do in the future. Comments made by farmers also suggest that the small cage farmers feel pressured to leave the industry due to the ARMCANZ decision and the effect of low egg prices.

The insecurity of farmers, particularly on smaller farms, was also high in the non-cage sector of the egg industry. Eighty-three farms (37.9 percent) with facilities for 1.49 million hens in non-cage facilities (65.8 percent) indicated that they would stay in the industry. The rest were unsure about their future.

Farmer comments suggest that the availability of Government assistance will have a significant effect on their decision making process, particularly those who are still considering their future options. Other comments made by farmers unsure about staying in the industry after 2008 indicate that their decision to stay in the industry will be affected by the future prospect for egg prices. Other considerations would be their ability to borrow money and meet repayments, and if local authority rezoning as a result of urbanisation would allow building new facilities on the same site.

Some farmers said that they would keep farming in non-complying cages after 2008 until authorities force them to shut down.

Sixty-two percent of current cage capacity or 7.62 million hens capacity in laying facilities for hens currently housed in non-complying facilities have to be replaced with compliant facilities.

After accounting for farmers intentions there is a potential shortfall in facility capacity meeting the new Standards of 4.75 million hens or 38.6 percent of current capacity. South Australia has a much larger shortfall of 87.9 percent and Queensland the lowest of 25.5 percent. The Northern Territory has a potential shortfall of 100.0 percent. The cages there are unlikely to be replaced because it is cheaper to import eggs from interstate than to produce them locally due to high feed costs.

It is assumed that the farmers staying will replace their current capacity estimated at the current stocking densities. However, there are farms that have indicated that they intend to put in more facilities than they currently have capacity for. The capacity of these additional facilities is 1.83 million hens. This has the potential to reduce the shortfall in facilities to 2.92 million hens (23.7

percent of current cage capacity). Queensland and Victoria will have no shortfall and New South Wales is reduced to 37 percent. There is no effect in the other states.

The impact on a farm business plan for financing the replacement of facilities is significant. Farmers will have to modify plans for replacement of facilities, determine the effect on farm cash flow and perhaps restructure current loans. Their ability to finance the facility replacement and to service a loan is an issue for many farmers.

The scale of investment needed for new facilities is high. The cost to replace the non-complying cages with new cages and shedding is estimated at $264 million exclusive of the cost of land, services, approvals, site preparation etc. New cages and a new controlled environment shed is estimated at $30-34 per hen housed including installation and erection. New barn facilities installed in a new shed are $38-40 per hen housed. Free range facilities are estimated to cost $15-40 per hen housed depending on what equipment is used and the standard of shedding and types of materials used in its construction.

The interest in cage modification has fallen substantially since 2001.

Farmers need to verify that new cages that they intend purchasing do meet the 2001 Standard.

Because there is the potential for a shortfall in new egg production facilities that will meet the new Standards in January 2008 the Australian egg industry in conjunction with Government needs to develop and implement a strategy that will encourage farmers to invest in sufficient upgraded facilities that will enable it to meet expected consumer demand for eggs at 2008.

The strategy must provide outcomes that will enable current farmers to see a future in the industry and that prices will be adequate to reward them for re-investing in the industry. It needs to include financial incentives that will encourage farmers to make a decision about their future in the next few months. There is only just over three years left before all facilities have to comply with the new standards. It can take at least 2 years to build new facilities. This includes the time needed for obtaining local government and environmental approvals.

The strategy must include a means for programming or managing the timing of scrapping old cages and replacing them with facilities that meet the Poultry Welfare Code 2001 to ensure that there is not a shortage or excess supply of eggs to the market in the period up to 2008 and at January 2008.

All State and Territory Governments need to communicate to the industry a commitment to introduce the necessary supporting legislation to ensure that the intentions of the Poultry Welfare Code 2001 are implemented.

If the industry does not meet this requirement it will place itself in the unenviable situation of not being able to meet the consumers needs for eggs. Three options open to Government to ensure that egg supply is adequate are: allow the importation of eggs, delay the deadline for implementation of the August 2000 ARMCANZ decision or provide financial assistance to the egg industry for restructuring.

Importation brings a risk of further destabilising the Australian egg industry. Imported eggs would have to meet Australian importation requirements, that is be free from any disease not present in the Australian poultry industry and from any pathogens harmful to human health.

Extending the deadline for the implementation of the ARMCANZ decision will frustrate animal welfare groups and increase their pressure on Australian Federal and State Governments to improve the welfare of hens housed in cages. This may also affect the public image of the egg industry.

1 Introduction

In August 2000 ARMCANZ (Agriculture and Resource Management Council of Australia and New Zealand) considered the reports on the 'Review of Layer Hen Housing and Labelling of Eggs in Australia' and the 'Layer Hen Housing Conference' and made decisions on layer cage housing. These were included in the Model Code of Practice for the Welfare of Animals – Domestic Poultry 4th Edition (Poultry Welfare Code 2001).

1) All new cage systems commissioned from 1 January 2001 must meet the 1995 Standard and the floor space requirements in the Poultry Welfare Code 2001. This standard states that these cage systems must provide a floor space of 550cm^2 per bird including the baffle area for cages with three or more birds per cage, 675cm^2 for cages with two birds per cage and 1,000cm^2 for cages holding one bird. (2001 Standard).

2) All cage systems that do not meet the 1995 Standard are to be scrapped on or before 1 January 2008 unless they are modified by then to meet these standards. (2001 Standard).

3) At 2008 all cages commissioned prior to 1 January 2001 and which meet the 1995 Standard or modified to meet the 1995 Standard must provide a floor space of 450cm^2 per bird, including the baffle area, for cages with three or more birds per cage, 675cm^2 for cages with two birds per cage and 1,000cm^2 for cages holding one bird. (2001 Standard). This continues for the life of the cage.

4) All cages meeting the 1995 Standard have a life of 20 years from the date of commissioning or until 1 January 2008 whichever is the later when they must be decommissioned or modified to meet the standards applying at the time. (Cage Life Standard).

5) ARMCANZ agrees any decision to further revise standards for conventional cages should await the outcome of research and development results indicating that furnished cages, a barn laid system and/or a free range system can support a commercially viable egg production industry.

The requirements above are for poultry less than 2.4kg live weight. All the commercial laying stock placed in cages in Australia are less than 2.4kg in weight.

These decisions are subject to endorsement and the implementation of supporting legislation by each State and Territory Government to ensure the Poultry Welfare Code 2001 is adopted by industry throughout Australia. These decisions aim to achieve improved hen welfare outcomes in Australia.

An initial survey of the Australian egg industry was undertaken from November 2001 to July 2002 to ascertain the type and capacity of laying facilities available for egg production in Australia, the effect of the August 2000 ARMCANZ decision on the current egg production facilities, the future intentions of egg farmers and to assist egg farmers to determine if their cages will meet the Model Code of Practice for the Welfare of Animals – Domestic Poultry, Fourth Edition 2001 at 1 January 2008. The results of this initial survey were published by AECL in October 2003 in a report titled "Modifying egg production systems to meet changing consumer needs".

The current report presents the results of a second survey conducted from November 2003 to January 2004 to track changes in the type and capacity of laying facilities since the initial survey. This report presents updated information on the structure of the Australian egg industry, the effect of the ARMCANZ decision on cage facilities, farmers future intentions and how these will impact on the ability of the industry to meet the ARMCANZ requirements at 2008 and maintain egg production at current levels.
It is important to establish if the industry is adopting these changes and likely to meet the 2008 deadline. This will assist planning for the future.

The Australian egg industry is presently valued at $320 million with production of 226 million dozen eggs per annum.

2 Objectives

This survey of the Australian egg industry was undertaken to:

- Ascertain the facilities presently available for egg production in Australia.
- Determine the effect of the August 2000 ARMCANZ decision on the current egg production facilities.
- Determine the future intentions of egg farmers.
- Assist egg farmers to determine if their cages will meet the Model Code of Practice for the Welfare of Animals – Domestic Poultry, Fourth Edition 2001 at 1 January 2008.

3 Methodology

The questionnaire was a modification of the questionnaire used in the 2001 survey and was designed to provide information to egg farmers about the Poultry Welfare Code 2001 including the 1995 Standards on cage specifications, to assist egg farmers in making decisions about their future and to collect information on the following items –

- Type of production system and size (hens)
- Farm size (number of hens)
- Farm changes made since the 2001 survey
- Dimensions, number and age of cages
- Future intentions
- Cage modification

Information on the Poultry Welfare Code 2001 for cages and how to apply it was attached to the questionnaire. See Sections 9.02, 9.03 and 9.04.

Both the AECL and PISC (Primary Industries Standing Committee) working groups were consulted to ensure that the survey form design would collect information these bodies required. Both groups are considering possible assistance that may help the industry to overcome the impact of the 2000 ARMCANZ decision on labelling and cage welfare requirements.

A total of 562 Australian farmers were surveyed during the period November 2003 to January 2004. Due to a poor response to the first mail out, two further mail outs were made approximately three weeks apart. Farmers who had not responded were then contacted by telephone and encouraged to complete the survey forms. Up to three telephone contacts were made. Farmers were also encouraged to complete the questionnaire over the telephone.

The address list compiled from farmers who responded to the 2001 survey was cross-checked with a list held by AECL to provide the mailing list.

All free range and barn egg farmers were asked to complete the first section only of the questionnaire.

The information from the questionnaires was entered into an electronic database, collated and analysed. Cage capacity was calculated as the potential capacity when stocked at 450cm^2 of floor space per hen for pre 1 January 2001 cages and 550 cm^2 for post 1 January 2001 cages. For two-bird cages it was calculated at 675cm^2 per hen and 1,000cm^2 for one-bird cages. The capacity for non-cage systems was reported as the actual hen numbers housed in these systems at the time of the survey.

4 Results

4.1 Survey return rate

Survey forms were sent to 561 farms and replies were received by mail, fax or telephone. Of these, 18 farmers indicated they had left the industry before November 2003 and had not been included in the 2001 survey. Twenty-one farmers included in the 2001 survey had left before 2002 and 57 had left before 2004. Three hundred and one forms were received from farms with cage facilities and 151 from non-cage farms with barn and/or free range facilities. One known farm did not respond to phone calls or letters.

Of the 301 returns from farms with cages, 67 farms did not supply complete information. Three of these refused to participate and farm capacity was estimated at 26,900 hens. The others indicated whether they are staying in or leaving the industry and the type of facilities and numbers of hen housed in each system on their farm. They were not prepared to provide details on their cages because of the time involved in collecting it. This left 234 fully completed cage returns. Sixty-eight cage farms also had non-cage egg production systems. Some questionnaires contained data for two or more farms because the lessee and not the owner supplied the data. Two non-cage farms refused to complete the forms. Their farm capacity was estimated to be 10,500 hens.

Seventy-three farms (1.50 million hens) operating prior to August 2000 and not recorded in the 2001 survey responded. This included 42 cage farms with a capacity of 1.21 million hens currently in the industry and 11 farms with a capacity of 0.12 million hens that left the industry between 2001 and 2004. They were missed because they were not on any list of farms available to the project team at the time or known to any of the industry contacts that were used.

Thirteen new farms with a capacity of 0.44 million hens built since 2001 responded.

4.2 Treatment of and confidentiality of farm data

The data from the fully completed cage returns (234 farms) only was used in sections 4.07 (facility and management changes since 2001 survey), 4.09 (cage farmers' future intentions), 4.11 (cage modification), 4.12 (layer cage occupancy) and 4.13 (comments by layer cage farmers). In other sections the data from the partially and fully completed cage returns was combined.

Due to the small number of farms and hens in the Northern Territory and Tasmania the figures for these States are not disaggregated in all tables. This has been done to preserve confidentiality of information. Farms in the Australian Capital Territory are included with the New South Wales data.

4.3 Cage farms surveyed

Information according to farm size on the number and percentage of farms and hens for all the cage layer farms that were contacted and still in the industry at January 2004 is presented in Table 1(a) and on cage capacity at the current stocking density in Tables 1(b) and 1(c). It includes the estimated hen capacity for the one farm that refused to complete the questionnaire.

In total 301 layer cage farms with capacity for 12.30 million hens currently in the industry responded. Of these 234 farms provided fully completed survey forms.

Table 1(a) Number and percent of cage farms by farm size for all cage layer farms surveyed. (Percent bracketed)

State	1-999	1,000-9,999	10,000-24,999	25,000 - 49,999	50,000 - 99,999	100,000 plus	Total
NSW	0 (0%)	15 (15%)	31 (32%)	20 (21%)	18 (19%)	13 (13%)	97 (100%)
QLD	0 (0)	18 (32)	19 (33)	12 (21)	4 (7)	4 (7)	57 (100)
SA	2 (8)	5 (20)	11 (44)	2 (8)	4 (16)	1 (4)	25 (100)
VIC	0 (0)	11 (18)	20 (33)	10 (17)	9 (15)	10 (17)	60 (100)
WA	0 (0)	15 (28)	22 (41)	16 (30)	0 (0)	1 (2)	54 (100)
Sub Total	2 (1)	64 (22)	103 (35)	60 (20)	35 (12)	29 (10)	293 (100)
NT							1 (100)
TAS							7 (100)
Australia							301 (100)

Table 1(b) Cage capacity at current stocking density on cage farms by farm size for all cage layer farms surveyed

State	1-999	1,000-9,999	10,000-24,999	25,000-49,999	50,000-99,999	100,000 plus	Total
NSW	0	100,906	464,964	643,225	1,174,008	2,439,372	4,822,475
QLD	0	112,423	283,672	427,290	199,384	1,660,148	2,683,439
SA	1,386	23,420	161,417	61,201	223,702	151,650	622,776
VIC	0	52,464	308,180	327,714	654,763	1,313,302	2,656,423
WA	0	82,733	267,677	502,449	0	368,640	1,221,499
Sub Total	1,386	371,946	1,485,910	1,962,401	2,251,857	5,933,112	12,006,612
NT							143,616
TAS							151,760
Australia							12,301,988

Table 1(c) Cage capacity at current stocking density on cage farms by farm size for all cage layer farms surveyed as a percentage

State	1-999	1,000-9,999	10,000-24,999	25,000-49,999	50,000-99,999	100,000 plus	Total
NSW	0.0	2.1	9.6	13.3	24.3	50.6	100.0
QLD	0.0	4.2	10.6	15.9	7.4	61.9	100.0
SA	0.2	3.8	25.9	9.8	35.9	24.4	100.0
VIC	0.0	2.0	11.6	12.3	24.6	49.4	100.0
WA	0.0	6.8	21.9	41.1	0.0	30.2	100.0
Sub Total	0.0	3.0	12.1	16.0	18.3	48.2	97.6
NT							100.0
TAS							100.0
Australia							100.0

4.4 Cage farms with fully completed forms only

Two hundred and thirty four of the 301 cage farms returned fully completed survey forms. Information on the number of farms and cage capacity at the current stocking density for these farms is presented in Tables 2(a) and 2(b) as a percentage of all the participating cage farms. The cage capacity represented by the fully completed forms is 10.72 million hens.

Table 2(a) Number of cage farms with full data as percentage of all cage farms surveyed by farm size

State	1-999	1,000-9,999	10,000-24,999	25,000-49,999	50,000-99,999	100,000 plus	All Farms
NSW	0	80	77	80	67	92	78
QLD	0	78	84	100	50	100	84
SA	100	60	91	100	100	100	88
VIC	0	36	75	100	100	90	78
WA	0	40	64	88	0	100	65
Sub Total	100	61	77	90	77	93	78
NT							100
TAS							71
Australia							78

Table 2(b) Cage capacity at current stocking density on farms with full data as percentage of all cage farms surveyed by farm size

State	1- 999	1,000-9,999	10,000-24,999	25,000-49,999	50,000-99,999	100,000 plus	All Farms
NSW	0	72	83	83	66	88	81
QLD	0	80	86	100	32	100	93
SA	100	77	91	100	100	100	97
VIC	0	45	80	100	100	89	91
WA	0	50	66	89	0	100	85
Sub Total	100	66	81	91	76	93	87
NT							100
TAS							77
Australia							87

4.5 Farms with non-cage production systems only

Information on the number and percentage of farms and hens housed that participated in the survey with hens housed in non-cage production facilities on non-cage farms is presented in Tables 3(a), 3(b) and 3(c). Non-cage systems are those with either free range and/or barn production facilities. This table does not include the 1.00 million hens housed in free range or barn facilities on cage farms. The number of hens in non-cage facilities is for the number of hens housed at the time. It may not be the actual hen capacity of the facilities.

Table 3(a) Number and percent of non-cage farms by size (percent bracketed)

State	1- 999	1,000-9,999	10,000-24,999	25,000-49,999	50,000-99,999	100,000 plus	Total
NSW	5 (15%)	11 (32%)	9 (26%)	6 (18%)	3 (9%)	0 (0%)	34 (100%)
QLD	5 (20)	17 (68)	3 (12)	0 (0)	0 (0)	0 (0)	25 (100)
SA	8 (38)	10 (48)	3 (14)	0 (0)	0 (0)	0 (0)	21 (100)
VIC	7 (15)	36 (75)	2 (4)	3 (6)	0 (0)	0 (0)	48 (100)
WA	3 (20)	9 (60)	1 (7)	1 (7)	1 (7)	0 (0)	15 (100)
Sub Total	28 (19)	83 (55)	18 (12)	10 (7)	4 (3)	0 (0)	143 (95)
NT							1 (100)
TAS							7 (100)
Australia							151 (100)

Table 3(b) Number of hens housed on non-cage farms by size

State	1-999	1,000-9,999	10,000-24,999	25,000-49,999	50,000-99,999	100,000 plus	Total
NSW	1,855	44,500	144,500	179,000	222,000	0	591,855
QLD	2,500	60,850	37,000	0	0	0	100,350
SA	2,903	41,000	54,600	0	0	0	78,503
VIC	3,230	145,300	26,000	97,000	0	0	271,530
WA	1,330	28,200	10,000	30,000	55,000	0	124,530
Sub Total	11,818	319,850	272,100	306,000	277,000	0	1,186,768
NT							8,000
TAS							75,300
Australia							1,270,068

Table 3(c) Percentage of hens housed on non-cage farms by size

State	1- 999	1,000-9,999	10,000-24,999	25,000-49,999	50,000-99,999	100,000 plus	Total
NSW	0	8	24	30	38	0	100
QLD	2	61	37	0	0	0	100
SA	3	42	55	0	0	0	100
VIC	1	54	10	36	0	0	100
WA	1	23	8	24	44	0	100
subtotal	1	25	21	24	22	0	93
NT							100
TAS							100
Australia							100

4.6 Structure of the egg industry

The survey indicates that there are facilities for 14.19 million laying hens in Australia. The cage system accounts for 84.4 percent of the facilities. Total free range capacity is 1.36 million hens (9.4 percent) and barn production is 0.90 million hens (6.2 percent). There are 0.40 million free range hens and 0.59 million barn hens housed on cage farms. At least 27 non-cage farms with 0.58 million hens are either owned by, leased by or contracted to cage farm operators.

Information on the number and percent of hens in each production system for each State is presented in Tables 4(a) and 4(b).

Table 4(a) Cage capacity for the cage system and the number of hens housed in the free range and barn systems

State	Cages	Free range	Barn	Total All systems	Total Non-cage
NSW	4,810,675	632,705	305,500	5.748,880	938,205
QLD	2,683,439	197,500	124.909	3,005,029	321,590
SA	622,776	77,253	62,750	762,779	140,003
VIC	2,656,423	287,730	245,500	3,189,653	533,230
WA	1,221,499	128,140	83,550	1,433,189	211,690
Subtotal	11,994,812	1,323,328	821,390	14,139,530	2,144,718
NT					18,000
TAS					106,500
Australia	12,290,188	1,365,628	903,590	14,559,406	2,269,218

Table 4(b) Cage capacity for the cage system and the number of hens housed in the free range and barn systems as a percentage

State	Cages	Free range	Barn	Total	Total Non-cage
NSW	33.0	4.3	2.1	39.5	6.4
QLD	18.4	1.4	0.9	20.6	2.2
SA	4.3	0.5	0.4	5.2	1.0

VIC	18.2	2.0	1.7	21.9	3.7
WA	8.4	0.9	0.6	9.8	1.5
Subtotal	82.4	9.1	5.6	97.1	14.7
NT					0.1
TAS					0.7
Australia	84.4	9.4	6.2	100.0	15.6

Information on the number and percent of farms in each production system as combined on farms for each State is presented in Tables 5(a) and 5(b). Each State's percentage share of farms in each production system is presented in Table 5(c). There were 452 farms recorded in the survey of which 301 produce eggs in cages.

Table 5(a) Number of farms in each combination of production systems used

State	Cage farms				Non-cage farms			Total
	Cages only	& free range only	& barn only	& free range & barn	Free range only	Barn only	Free range & barn	
NSW	80	12	2	3	30	4	0	131
QLD	44	5	6	2	21	4	0	82
SA	19	2	1	3	13	7	1	46
VIC	47	8	4	1	44	4	0	108
WA	40	4	8	2	13	1	1	69
Subtotal	230	31	21	11	121	20	2	436
NT								2
TAS								14
Australia								452

Table 5(b) Percentage of farms in each production combination of systems on a State basis

State	Cage farms				Non-cage farms			Total
	Cages only	& free range only	& barn only	& free range & barn	Free range only	Barn only	Free range & barn	
NSW	61.1	9.2	1.5	2.3	22.9	3.1	0.0	100
QLD	53.7	6.1	7.3	2.4	25.6	4.9	0.0	100
SA	41.3	4.3	2.2	6.5	28.3	15.2	2.2	100
VIC	43.5	7.4	3.7	0.9	40.7	3.7	0.0	100
WA	58.0	5.8	11.6	2.9	18.8	1.4	1.4	100
Subtotal	50.9	6.9	4.6	2.4	26.8	4.4	0.4	96
NT								100
TAS								100
Australia								100

Table 5(c) Percentage of farms in each State on a combination of production system basis

State	Cage farms				Non-cage farms			Total
	Cages only	& free range only	& barn only	& free range & barn	Free range only	Barn only	Free range & barn	
NSW	34.3	36.4	8.7	25.0	23.8	19.0	0.0	29.0
QLD	19.0	15.2	26.1	16.7	16.7	19.0	0.0	18.1
SA	8.2	6.1	4.3	25.0	10.3	33.3	25.0	10.2
VIC	20.3	24.2	17.4	8.3	34.9	19.0	0.0	23.9
WA	17.2	12.1	34.8	16.7	10.3	4.8	25.0	15.3
Subtotal	98.7	93.9	91.3	91.7	96.0	95.2	50.0	96.5
NT								0.4
TAS								3.1
Australia								100

The number of hens and percent of hens in each production system is presented in Tables 6(a) and 6(b) on a State basis. Each State's percentage share of hens in Australia as farm capacity in each production system is presented in Table 6(c). The number of hens is estimated as cage capacity at the current stocking density and as hens housed at the time of the survey for non-cage systems.

Table 6(a) Number of hens in each combination of production systems used

State	Cage farms				Non-cage farms			Total
	Cages only	& free range only	& barn only	& free range & barn	Free range only	Barn only	Free range & barn	
NSW	4,489,275	339,050	141,200	199,300	486,855	105,000	0	5,760,680
QLD	2,428,639	189,500	221,840	64,700	89,500	10,850	0	3,005,029
SA	505,176	41,700	22,600	94,800	60,353	33,650	4,500	762,779
VIC	2,401,623	231,800	254,900	29,800	208,030	63,500	0	3,189,653
WA	947,099	101,010	191,350	69,200	59,530	10,000	55,000	1,433,189
Subtotal	10,771,812	903,060	831,890	457,800	904,268	223,000	59,500	14,151,330
NT								161,616
TAS								258,260
Aust								14,571,206

Table 6(b) Percentage of hens in each combination of production systems on a State basis

State	Cage farms				Non-cage farms			Total
	Cages only	& free range only	& barn only	& free range & barn	Free range only	Barn only	Free range & barn	
NSW	77.9	5.9	2.5	3.5	8.5	1.8	0.0	100
QLD	80.8	7.3	7.4	2.2	3.0	0.4	0.0	100
SA	66.2	5.5	3.0	12.4	7.9	4.4	0.6	100
VIC	75.3	7.3	8.0	0.9	6.5	2.0	0.0	100
WA	66.1	7.0	13.4	4.8	4.2	0.7	3.8	100
Subtotal	73.9	6.2	5.7	3.1	6.2	1.5	0.4	97
NT								100
TAS								100
Australia								100

Table 6(c) Percentage of hens in each State on a combination of production system basis

State	Cage farms				Non-cage farms			Total
	Cages only	& free range only	& barn only	& free range & barn	Free range only	Barn only	Free range & barn	
NSW	40.9	35.5	15.9	40.5	52.7	43.6	0.0	39.5
QLD	22.1	19.9	25.1	13.1	9.7	4.5	0.0	20.6
SA	4.6	4.4	2.6	19.3	6.5	14.0	4.3	5.2
VIC	21.9	24.3	28.8	6.1	22.5	26.3	0.0	21.9
WA	8.6	10.6	21.6	14.1	6.4	4.1	52.2	9.8
Subtotal	98.2	94.6	94.0	93.0	97.9	92.5	56.5	97.1
NT								1.1
TAS								1.8
Australia								100

Information on the number of farms and capacity for cage systems combined with the hens housed in the non-cage systems is presented in Tables 7(a), 7(b) and 7(c).

Table 7(a) Number and percent of egg farms (all systems) by farm size (percentage in brackets)

State	1-999	1,000-9,999	10,000-24,999	25,000-49,999	50,000-99,999	100,000 plus	Totals
NSW	5 (4%)	26 (20%)	40 (31%)	26 (20%)	21 (16%)	13 (10%)	131 (100%)
QLD	5 (6)	35 (43)	27 (27)	12 (15)	4 (5)	4 (5)	82 (100)
SA	10 (22)	15 (33)	14 (30)	2 4)	4 (9)	1 (2)	46 (100)
VIC	7 (6)	47 (44)	22 (20)	13 (12)	9 (8)	10 (9)	108 (100)
WA	3 (4)	24 (35)	23 (33)	17 (25)	1 (1)	1 (1)	69 (100)
Subtotal	30 (7)	147 (33)	121 (27)	70 (15)	39 (9)	29 (6)	436 (96)
NT							2 (100)
TAS							14 (100)
Australia							452 (100)

Table 7(b) Total number of hens (all systems) as cage capacity at current stocking density for cage systems and number of hens housed for non-cage systems by farm size

State	1-999	1,000-9,999	10,000-24,999	25,000-49,999	50,000-99,999	100,000 plus	Totals
NSW	1,855	146.206	620,514	841,225	1,409,008	2,741,872	5,760,680
QLD	2,500	174,273	335,412	439,290	279,384	1,773,648	3,005,029
SA	4,289	64,920	221,017	61,201	243,702	167,650	762,779
VIC	3,230	198,564	338,680	476,714	685,963	1,486,502	3,189,653
WA	1,330	118,933	319,337	569,949	55,000	368,640	1,433,189
Subtotal	13,204	702,896	1,834,960	2,388,901	2,673,057	6,538,312	14,151,330
NT							161,616
TAS							258,260
Aust							14,571,206

Table 7(c) Percentage of hens (all systems) as cage capacity at current stocking density and number of hens housed in non-cage systems by farm size

State	1-999	1,000-9,999	10,000-24,999	25,000-49,999	50,000-99,999	100,000 plus	Total
NSW	0.0	2.5	10.8	14.6	24.5	47.6	100.0
QLD	0.1	5.8	11.2	14.6	9.3	59.0	100.0
SA	0.6	8.5	29.0	8.0	31.9	22.0	100.0
VIC	0.1	6.2	10.6	14.9	21.5	46.6	100.0
WA	0.1	8.3	22.3	39.8	3.8	26.7	100.0
Subtotal	0.1	4.8	12.6	16.4	18.4	44.9	97.1
NT							100.0
TAS							100.0
Australia							100.0

The number of farms and hens housed in non-cage facilities is presented in Tables 8(a), 8(b) and 8(c). This is broken down into free range and barn facilities in Tables 9(a), 9(b) and 9(c) and 10(a), 10(b) and 10(c), respectively. Note that because some farms have both free range and barn production facilities the number of farms in Table 8(a) will not agree with the number of farms in Tables 9(a) and 10(a).

Table 8(a) Number and percentage of farms with non-cage egg production facilities by farm size (percent bracketed)

State	1-999	1,000-9,999	10,000-24,999	25,000-49,999	50,000-99,999	100,000 plus	Total
NSW	9 (18%)	17 (33%)	12 (24%)	8 (16%)	5 (10%)	0 (0%)	51 (100%)
QLD	7 (18)	21 (55)	8 (21)	0 (0)	2 (5)	0 (0)	38 (100)
SA	9 (33)	13 (48)	5 (19)	0 (0)	0 (0)	0 (0)	27 (100)
VIC	10 (16)	38 (62)	7 (11)	4 (7)	2 (3)	0 (0)	61 (100)
WA	3 (10)	22 (76)	2 (7)	1 (3)	1 (3)	0 (0)	29 (100)
Subtotal	38 (17)	111 (51)	34 (16)	13 (6)	10 (5)	0 (0)	206 (94)
NT							2 (100)
TAS							11 (100)
Australia							219 (100)

Table 8(b) Number of hens housed in non-cage egg production facilities by farm size

State	1-999	1,000-9,999	10,000-24,999	25,000-49,999	50,000-99,999	100,000 plus	Total
NSW	3,705	71,500	189,500	258,500	415,000	0	938,205
QLD	3,240	70,850	108,500	0	139,000	0	321,590
SA	3,403	49,000	87,600	0	0	0	140,003
VIC	4,230	152,800	107,200	128,000	141,000	0	533,230
WA	1,330	93,360	32,000	30,000	55,000	0	211,690
Subtotal	15,908	437,510	524,800	416,500	750,000	0	2,144,718
NT							18,000
TAS							106,500
Australia							2,269,218

Table 8(c) Percentage of hens housed in non-cage egg production facilities by farm size

State	1-999	1,000-9,999	10,000-24,999	25,000-49,999	50,000-99,999	100,000 plus	Total
NSW	0.4	7.6	20.2	27.6	44.2	0.0	100
QLD	1.0	22.0	33.7	0.0	44.4	0.0	100
SA	2.4	35.0	62.6	0.0	0.0	0.0	100
VIC	0.8	28.7	20.1	24.0	26.4	0.0	100
WA	0.6	44.1	15.1	14.2	26.0	0.0	100
Subtotal	0.7	19.3	23.1	18.4	33.1	0.0	95
NT							100
TAS							100
Australia							100

Table 9(a) Number and percentage of farms with free range facilities by farm size (percent bracketed)

State	1-999	1,000-9,999	10,000-24,999	25,000-49,999	50,000-99,999	100,000 plus	Total
NSW	9 (20%)	17 (38%)	11 (24%)	6 (13%)	2 (4%)	0 (0%)	45 (100%)
QLD	6 (21)	16 (57)	5 (18)	0 (0)	1 (4)	0 (0)	28 (100)
SA	8 (42)	9 (47)	2 (11)	0 (0)	0 (0)	0 (0)	19 (100)
VIC	10 (19)	36 (68)	5 (9)	2 (4)	0 (0)	0 (0)	53 (100)
WA	3 (15)	14 (70)	1 (5)	2 (10)	0 (0)	0 (0)	20 (100)
Subtotal	36 (21)	92 (53)	24 (14)	10 (6)	3 (2)	0 (0)	165 (94)
NT							2 (100)
TAS							8 (100)
Australia							175 (100)

Table 9(b) Number of hens housed in free range facilities by farm size

State	1-999	1,000-9,999	10,000-24,999	25,000-49,999	50,000-99,999	100,000 plus	Total
NSW	3,705	71,500	194,500	199,000	164,000	0	632,705
QLD	3,000	57,500	62,000	0	75,000	0	197,500
SA	3,253	34,000	40,000	0	0	0	77,253
VIC	4,230	136,500	82,000	65,000	0	0	287,730
WA	1,330	54,810	12,000	60,000	0	0	128,140
Subtotal	15,518	354,310	390,500	324,000	239,000	0	1,323,328
NT							18,000
TAS							24,300
Australia							1,365,628

Table 9(c) Percentage of hens housed in free range facilities by farm size

State	1-999	1,000-9,999	10,000-24,999	25,000-49,999	50,000-99,999	100,000 plus	Total
NSW	0.6	11.3	30.7	31.5	25.9	0.0	100
QLD	1.5	29.1	31.4	0.0	38.0	0.0	100
SA	4.2	44.0	51.8	0.0	0.0	0.0	100
VIC	1.5	47.4	28.5	22.6	0.0	0.0	100
WA	1.0	42.8	9.4	46.8	0.0	0.0	100
Subtotal	1.1	25.9	28.6	23.7	17.5	0.0	97
NT							100
TAS							100
Australia							100

Table 10(a) Number and percentage of farms with barn facilities by farm size (percent bracketed)

State	1-999	1,000-9,999	10,000-24,999	25,000-49,999	50,000-99,999	100,000 plus	Total
NSW	0 (0%)	2 (6%)	3 (9%)	1 (3%)	3 (9%)	0 (0%)	9 (26%)
QLD	2 (17)	6 (24)	3 (12)	0 (0)	0 (4)	0 (0)	12 (57)
SA	2 (17)	7 (33)	3 (14)	0 (0)	0 (0)	0 (0)	12 (64)
VIC	0 (0)	4 (8)	1 (2)	2 (4)	2 (4)	0 (0)	9 (19)
WA	0 (0)	9 (60)	2 (13)	1 (7)	0 (0)	0 (0)	12 (80)
Subtotal	4 (7)	28 (47)	12 (20)	4 (7)	6 (10)	0 (0)	54 (90)
NT							0 (0)
TAS							6 (100)
Australia							60 (100)

Table 10(b) Number of hens housed in barn facilities by farm size

State	1-999	1,000-9,999	10,000-24,999	25,000-49,999	50,000-99,999	100,000 plus	Total
NSW	0	10,000	35,500	25,000	235,000	0	305,500
QLD	740	21,350	38,000	0	64,000	0	124,909
SA	550	27,600	34,600	0	0	0	62,750
VIC	0	26,500	15,000	63,000	141,000	0	245,500
WA	0	38,550	20,000	25,000	0	0	83,550
Subtotal	1,290	124,000	143,100	113,000	440,000	0	821,390
NT							0
TAS							82,200
Australia							903,590

Table 10(c) Percentage of hens housed in barn facilities by farm size

State	1-999	1,000-9,999	10,000-24,999	25,000-49,999	50,000-99,999	100,000 plus	Total
NSW	0.0	3.3	11.6	8.2	76.9	0.0	100
QLD	0.6	17.2	30.6	0.0	51.6	0.0	100
SA	0.9	44.0	55.1	0.0	0.0	0.0	100
VIC	0.0	10.8	6.1	25.7	57.4	0.0	100
WA	0.0	46.1	23.9	29.9	0.0	0.0	100
Subtotal	0.1	13.7	15.8	12.5	48.7	0.0	91
NT							0
TAS							100
Australia							100

4.7 Facility and management changes since 2001 survey

Farmers with cage facilities who had provided fully completed questionnaires were asked if they had made changes to their flock management or egg enterprise facilities since 2000. Production facility changes resulted in a net increase of 0.39 million hens. See Table 11.

Two cage farms (20,112 hen capacity) reduced their egg production business in favour of investing in other enterprises.

Five cage farms (114,421 hen capacity) made changes to their egg enterprise other than these above or in Table 11. They did not elaborate as to what these changes were.

Table 11 Facility changes made by cage farmers since 2001 survey

Management Procedure	Number of farms	Farm capacity (hens)
Scrapped cages	17	908,336
Increased number of caged layers	8	637,688
Increased free range hens	7	92,900
Increased barn hens	2	48,000
Decreased number of cage layers	22	-346,506
Decreased free range hens	3	-7,650
Decreased barn hens	2	-36,500
Net effect on cage hens		291,182
Net effect on free range hens		85,250
Net effect on barn hens		11,500
Net effect on hen numbers	--	387,932

Sixty farmers with facilities for 1.94 million hens indicated that they had changed their intentions since the 2001 survey.

Sixteen cage farms indicated that they intended to build new facilities that would hold 1.83 million hens in excess of their 2001 survey capacity.

4.8 Farms and cages meeting the 1995 Standard

Six percent of layer farms (19 farms) in Australia with a cage capacity of 1.78 million hens (14.5 percent) are equipped only with cages that meet the 1995 Standard. Eighty percent or 240 farms have only cages that do not meet this Standard and 14.0 percent have a mixture of cages that either meet or do not meet the new Standards. See Tables 12(a), 12(b) and 12(c). A total of 7.62 million hens (62 percent of the caged flock) are housed in cages that do not meet the 1995 Standard.

Table 12(a) Number and percent of farms with cages meeting or not meeting 1995 Standard by State

State	Number of Farms			
	Not meeting 1995 Standard only	Meeting 1995 Standard only	Meeting & not meeting 1995 Standard	Total
NSW	82 (27.2%)	6 (2.0%)	9 (3.0%)	97 (32.2%)
QLD	45 (15.0)	4 (1.3)	8 (2.7)	57 (18.9)
SA	22 (7.3)	0 (0.0)	3 (1.0)	25 (8.3)
VIC	41 (13.6)	5 (1.7)	14 (4.7)	60 (19.9)
WA	44 (14.6)	3 (1.0)	7 (2.3)	54 (17.9)
Subtotal	234 (77.7)	18 (6.0)	41 (13.6)	293 (97.3)
NT				1 (0.3)
TAS				7 (2.3)
Australia	240 (79.7)	19 (6.3)	42 (14.0)	301(100.0)

Table 12(b) Cage capacity of farms meeting or not meeting 1995 Standard by State

State	Cage capacity (hens)				
	Not meeting 1995 Standard only	Meeting 1995 Standard only	Combined Farms		Total
			Not meeting 1995 Standard	Meeting 1995 Standard	
NSW	2,578,496	907,900	643,231	692,848	4,822,475
QLD	852,402	90,448	544,801	1,195,788	2,683,439
SA	399,762	0	154,566	68,448	622,776
VIC	1,124,642	295,080	443,573	793,128	2,656,423
WA	584,118	446,120	112,021	79,240	1,221,499
Subtotal	5,539,420	1,739,548	1,898,192	2,829,452	12,006,612
NT					143,616
TAS					151,760
Australia	5,645,676	1,785,052	1,978,832	2,892,428	12,301,988

Table 12(c) Percent of cage capacity of farms meeting or not meeting the 1995 Standard by State

State	Cage capacity (hens)				
	Not meeting 1995 Standard only	Meeting 1995 Standard only	Combined farms		Total
			Not meeting 1995 Standard	Meeting 1995 Standard	
NSW	21.0	7.4	5.2	5.6	39.2
QLD	6.9	0.7	4.4	9.7	21.8
SA	3.2	0.0	1.3	0.6	5.1
VIC	9.1	2.4	3.6	6.4	21.6
WA	4.7	3.6	0.9	0.6	9.9
Subtotal	45.0	14.1	15.4	23.0	97.6
NT					1.2
TAS					1.2
Australia	45.9	14.5	16.1	23.5	100.0

4.9 Cage farmers future intentions

Farmers with cage facilities who returned fully completed forms were asked to indicate:

- What their future intentions were.
- What their intentions were if they intended to stay in the egg industry after 2008 and had cages that did not meet the 1995 Standard.
- What changes they would make to their future intentions if financial assistance were available from Government.

The data for cage farmers who returned fully completed questionnaires is summarised below in Tables 13(a), 13(b) and 13(c).

Some cage farmers that did not fully complete the questionnaire did indicate if they intended to stay in the industry or leave by 2008. The future intentions of the remainder were taken as "Farms that have made no decision about their future intentions."

Of these, 13 farms with cage capacity for 0.54 million hens indicated that they intended to stay. Twenty farmers indicated that they intended to leave the industry by the end of 2002. These farms had a cage capacity of 0.19 million hens. Thirty four farms with a cage capacity of 0.85 million hens were unsure about their future intentions.

4.9.1 Farmers initial intentions

Fifty-seven percent of farmers (133 farms) with 33.9 percent of layer cage capacity (3.64 million hens) indicated that they were unsure about their future intentions. They had not decided whether to stay or leave the industry. Twenty-six farmers (11.1 percent of farmers) indicated that they would leave the industry by 2008 and 32.1 percent said they intended to stay. The data suggests it is the smaller farmers who wish to leave and mainly the small to medium size farmers who are unsure about what to do in the future. See Table 13(a). Comments made by farmers also suggest that the small cage farmers feel pressured to leave the industry due to the ARMCANZ decision and the effect of low egg prices. See Table 16 also.

Table 13(a) Summary of Australian farmers future intentions

Farmers future intentions	% Farms	% Cage capacity
Leave the industry by 2008	11.1	4.0
Stay in the industry	32.1	62.1
Farmers still considering their future options	56.8	33.9
Includes farmers:		
- still considering future options and unsure if and when to leave the industry	(5.6)	(3.8)
- still considering future options and may stay in the industry	(15.8)	(10.6)
- still considering future options and have made no choices about their future intentions	(35.5)	(19.6)
Total participants	100.0	100.0

4.9.2 Farmers intentions if staying in the industry

Almost all of the cage layer farmers who indicated that they would stay in the industry indicated they had definite plans for upgrading their layer facilities. The intention is to replace the majority of facilities with cages that meet the standards applying at the time and the remainder with non-cage facilities.

Table 13(b) Summary of the intentions of Australian cage egg farmers staying in the egg industry after 2008

Farmers intentions if staying in industry	% Farms	% Cage capacity
Farmers with firm intentions on updating facilities	26.9	52.5
Includes farmers who intend to:		
- replace or modify the cages	(23.5)	(51.3)
- replace the cages by investing in barn facilities	(0.4)	(0.0)
- replace the cages by investing in free range facilities	(1.3)	(0.2)
- replace the cages and/or invest in barn and/or free range facilities	(1.7)	(1.1)
Farmers still considering future options available for updating facilities	15.4	11.1
Total participants	42.3	63.6

4.9.3 Farmers intentions if financial assistance was offered

When asked if they would change their future intentions if financial assistance were offered, some farmers indicated that they would retire earlier or commence or expand another business enterprise. Others, already intending to stay would put new cages, barn or free range equipment in new sheds rather than use current shedding. For some still considering their options in Table 13(a) a financial assistance offer may make it viable for them to update their facilities. The offer of financial assistance increased the number of farms still considering the options available for updating facilities (that is staying) when compared to farmers in Table 13(a) who were considering their future options about staying in the industry. See Table 13(c).

Comments made by farmers unsure about staying in the industry after 2008 (still considering their options) indicate that their decision to stay in the industry will be affected by the future prospect for

egg prices. Other considerations would be their ability to borrow money and meet repayments, and if local authority re-zoning as a result of urbanisation would allow building new facilities on the same site.

Table 13(c) The future intentions of Australian cage layer farmers if financial assistance was offered

Farmers intentions if financial assistance is offered	% Farms	% Cage capacity
Farmers intending to retire earlier or commence/expand another enterprise	9.8	2.7
Farmers intending to update facilities	17.9	14.9
Includes farmers who intend to:		
- replace or modify the cages	(11.5)	(12.2)
- replace the cages by investing in barn facilities	(0.9)	(0.6)
- replace the cages by investing in free range facilities	(1.3)	(0.2)
- replace the cages and/or invest in barn and/or free range facilities	(4.3)	(2.0)
Farmers still considering the options available for updating facilities	27.4	19.5
Total farmers reconsidering their intentions if financial assistance was offered	55.1	37.1
Farmers making no changes to their future intentions	22.6	51.1
Total participants	77.8	88.1

4.10 Non-cage farmers future intentions

Farmers with non-cage facilities were asked to indicate what their future intentions were. The intentions of cage farmers with non-cage facilities are included. Eighty-three farms (37.9 percent) with facilities for 1.49 million hens in non-cage facilities (65.8 percent) indicated that they would stay in the industry. Further information is present in Table 14.

Table 14 Farmers with non-cage facilities future intention

Intentions	No farms	% farms	Non-cage capacity hens	% non-cage capacity
Leave the industry by 2008	18	8.2	38,295	1.7
Stay in the industry	83	37.9	1,493,510	65.8
Farmers still considering future options	68	31.1	420,563	18.5
Includes				
Still considering future options – unsure when and if leaving the industry	1	0.5	8,000	0.4
Still considering future options – may stay in the industry	12	5.5	74,040	3.3
Still considering future options – made no choices at all about future	55	25.1	338,523	14.9
No comment	50	22.8	316,850	14.0
Total participants	219	100.0	2,269,218	100.0

4.11 Cage modifications – farmers intentions

Layer farmers with cages that did not meet the 1995 Standard were asked if they had considered the feasibility of modifying these cages and if they planned to modify the cages.

Twelve farms (5.1 percent) with 0.33 million hens indicated that they had considered how to modify their cages. Of these one farm indicated that they planned to modify cages. Another six farms (2.6 percent) with a capacity of 0.16 million hens were undecided about what to do.

4.12 Layer facility occupancy

Cage farmers were asked how many hens were housed in their cages at January 2004. This was 9.53 million or 91.1 percent of the cage capacity at the current stocking density for the layer cage farms that provided fully completed questionnaires. (Table 15)

Capacity of non-cage facilities was reported as actual hens housed at the time of the survey. It was 2,269,218 hens. The number of hens housed in cages, including those in cages on incomplete returns, is estimated at 11,184,071 which, when added with the non-cage hens, gives an Australian flock size of 13,453,289 hens. This is 0.247 million hens more than the figure for 2003 in the AECL Annual Statistical Publication of 13.206 million hens.

Table 15 The occupancy rate of cages for farms supplying full data

	Hens housed	Cage capacity	Percent occupancy
NSW	3,584,689	3,911,975	91.63
Qld	2,197,793	2,486,501	88.39
SA	580,368	603,476	96.17
Vic	2,290,226	2,426,523	94.38
WA	873,115	1,035,259	84,34
Subtotal	9,526,192	10,463,734	91.04
NT			27.85
Tas			84.15
Aust	9,664,446	10,724,110	90.12

4.13 Comments by layer cage farmers

At the end of the questionnaire cage and non-cage farmers who completed the full survey form were asked if they had any additional comments to make on the subject of the survey. These comments were categorised into common themes. Comments were made by 47 farms (15.6 percent of farms) with a cage capacity of 0.87 million hens (7.1 percent of cage capacity). Most of the farms that made comments had a layer capacity of less than 50,000 hens. In some cases, farmers made two or more comments. Six non-cage farms (21,000 hens) made comments. These are presented in Table 16 and are expressed as a percent of either the total farmers who commented or their facility capacity.

The need for government assistance to update facilities to comply with the ARMCANZ decision was expressed by 30 percent of cage farmers who made comments. Seventeen percent of farmers said that they would keep farming in non-complying cages after 2008 until authorities force them to shut down.

Table 16 Concerns expressed by layer farmers about the issues associated with the implementation of the ARCANZ decision (as % of farmers that commented)

Issue	Cage capacity %	Number of farms %
Cage Farms		
Need government assistance for updating facilities to comply with ARMCANZ decision.	42.0	29.8
Will keep farming until they force me off.	29.4	17.0
Purchased farm after 1995 and may go bankrupt or will not get my money back.	26.7	12.8
Would like more certainty in cage tenure and floor area per hen.	17.8	2.1
Farm size is unable to generate sufficient income to service a loan needed to replace cages.	13.3	8.5
Low egg prices and the ARMCANZ decision provide no secure future for re-investment in the poultry industry.	12.5	10.6
Land rezoning makes it impossible to update or build new facilities on current or other sites in the general locality.	12.0	4.3
Is there any proof that the hens will be better off welfare wise in the new cages?	11.4	4.3
Would rather a viable industry maintaining egg prices than a handout from Government.	9.2	2.1
Government did not consider or it does not understand the implications of the ARMCANZ decision on the industry. It is unfair and wrong.	7.7	4.3
Government assistance to leave will help.	4.5	2.1
I am young and will have no farm or job in 2008.	2.6	2.1
Non-cage farms		
If I have already spent money replacing cage facilities with non-cage will I get assistance?	1.7	4.3
When will farmers abide by laws concerning labelling according to production system?	0.8	4.3
Do not agree with handouts to cage farmers to enable them to compete with free range farmers.	0.1	4.3

5 Discussion

5.1 Industry structure

The data collected provides a detailed profile of the structure of the production sector of the Australian egg industry over the period of the survey. Forty-five percent of the layer capacity (6.54 million hens) is on 6.7 percent of farms that are greater than 100,000 hens in size. These and other operators may own or lease multiple farms where their total holdings may amount to more than 100,000 hens.

Where some cage farmer's customers have indicated a desire for non-cage eggs, the cage farmers have put in barn or free range systems to meet this need. Forty-four percent of non-cage production capacity is on cage farms. Others are sourcing their requirements from independent free range or barn operators representing 25.8 percent of non-cage capacity.

Analysis of the data on farmers' future intentions suggests that the cage farmers with less than 20,000 hens are most likely to leave the industry.

Production controls in the form of quotas on hens 26 weeks and older still operate in Western Australia. This has not restricted changes in farm size. Because of the decreasing returns and economic gains through controlled environment housing more than 25 farmers combined their resources and invested in farms with capacity of about 400,000 hens with new facilities meeting the new Standard.

There are indications that a similar pooling of resources by egg farmers may happen in other States. This is also being driven by urban spread. Farms on the fringes of large cities are unable to rebuild on their present farm sites due to local authority zoning changes. By pooling resources a group of farmers can purchase a large block of land that will meet likely future zoning requirements and be well removed from urbanisation. They also gain the economics of scale.

5.2 Farm changes since 2001

Since the 2001 survey, changes have occurred in the number of farms and the capacity and type of laying facilities on farms. These are presented in Table 17(a) and 17(b). After allowing for these changes and including the pre-2001 survey farms not recorded in the 2001 survey, the laying facility capacity at December 2001 was 14.3 million hens. The non-cage capacity at 2001 may be overestimated as the current survey did not ask these producers when they built these facilities.

Comparison with the 2001 survey data after adjustment for the farms missed in 2001 suggests that as farmers have left the industry their capacity has been taken up by new facilities.

Table 17(a) Farm and layer facility changes made since 2001 as capacity

Change	Cage hens	Barn hens	Free range hens	Total capacity hens
Facility capacity at January 2004	12,301,988	903,590	1,365,628	14,571,206
Includes				
Farms & facilities destocked since December 2001	154,114	0	0	154,114
Farms existing pre December 2001 survey and added since	1,205,551	83,800	213,093	1,502,444
Plus				
Farms left between August 2000 and December 2001	305,260	500	30,000	335,760
Farms left between December 2001 and January 2004	336,278	110,900	155,900	603,078
Farms facilities scrapped since December 2001 to be replaced	74,768	0	5,500	80,268
Farms not recorded on 2001 survey and left since	120,000	0	10,000	130,000
Total	836,306	111,400	201,400	1,149,106
Less				
New farms built since December 2001	93,000	204,600	146,200	443,800
New facilities installed on existing farms since December 2001	965,268	0	0	965,268
Total	1,058,268	204,600	146,200	1,409,068
Leaving facility capacity at 2001	12,080,026	810,390	1,420,828	14,311,244

Table 17(b) Farm and layer facility changes made since 2001 as number of farms

Change	Cage farm	Non-cage farms	Total farms
Number of farms at January 2004	301	151	452
Includes			
Farms & facilities destocked since December 2001	6	0	6
Farms existing pre December 2001 survey and added since	42	31	73
Plus			
Farms left between August 2000 and December 2001	19	2	21
Farms left between December 2001 and January 2004	36	21	57
Farms facilities scrapped since December 2001 to be replaced	2	1	3
Farms not recorded on 2001 survey and left since	11	7	18
Total	68	31	99
Less			
New farms built since December 2001	1	12	13
New facilities installed on existing farms since December 2001	11	0	11
Total	1	12	13
Leaving number of farms at 2001	368	170	538

Note: The number of farms with new facilities installed on existing farms since December 2001 is included in the current number of farms at January 2004.

5.3 Impact of ARMCANZ decision on egg laying facility capacity at 2008

Sixty-two percent of capacity or 7.62 million hens capacity in laying facilities for hens currently housed in non-complying cages at the current stocking densities have to be replaced with compliant facilities.

To measure the effect of the ARMCANZ decision on facility capacity, farms that have commenced replacing non-complying cages are taken as committed to staying in the industry. Farms that have indicated that their intention is to stay and have not commenced replacing facilities are taken as intending to stay.

There is cage facility capacity of 3.86 million hens (31.4 percent) meeting the new Standards on farms committed to staying in the industry. This has increased by approximately 1.0 million hens since the 2001 survey. Another 0.20 million hens capacity (1.6 percent) is housed on farms that have indicated that they intend to stay in the industry. Capacity for 0.54 million hens (4.4 percent) meeting the 1995 Standard is on farms that are unsure about staying or have made no decision about their future intentions. Another 0.07 million hen capacity of cages meeting the new Standard is on farms intending to leave by 2008. See Table 18.

Farms with a cage capacity of 6.64 million hens (54 percent) are committed to staying in the industry and replacing all non-complying cages by 2008 with facilities that meet the new standards. Farmers who have indicated that they intend to stay have 0.71 million hen capacity (5.8 percent) that has to be replaced.

Farmers unsure about their future intentions have 0.54 million hen capacity that meets the new Standards and 3.59 million hen capacity (29.2 percent) that does not. This group has to be encouraged to make a decision about their future in 2005 to give them sufficient time to replace their facilities by 2008. South Australia has a much larger percentage of capacity of 73.4 percent owned by farmers who are unsure about future intentions. See Appendix 1.

It is assumed that the farmers staying will replace their current capacity estimated at the current stocking densities. However, there are farms, which have indicated that they intend to put in more facilities than they currently have capacity for. The capacity of these additional facilities is 1.83 million hens. This has the potential to reduce the shortfall in facilities to 2.92 million hens (23.7 percent of current cage capacity). Queensland and Victoria will have no shortfall and New South Wales is reduced to 37 percent. There is no change in the other states. See Appendix 8.1.

There are several factors that will influence the capacity of layer facilities required at 2008 to meet market demand. These factors are gains in layer performance through genetic selection, improved nutrition and new management techniques, population growth and potential increases in egg consumption through consumer promotion of eggs and egg products.

The impact on a farm business plan for financing the replacement of facilities is significant. Farmers will have to modify plans for replacement of facilities, determine the effect on farm cash flow and perhaps restructure current loans. Their ability to finance the facility replacement and to service a loan is an issue for many farmers.

Table 18 Cage facilities complying with 1995 Standard – current situation (includes farms that did not supply full cage data)

Item	Cage Capacity Hens	%
Current cage capacity		
Cages meeting 2001 Standard	4,677,480	38.0
Cages not meeting 2001 Standard	7,624,508	62.0
Total	12,301,988	100.0
Farmers intentions		
Farms committed to staying		
Cages meeting 2001 Standard	3,859,736	31.4
Cages not meeting 2001 Standard	2,780,319	22.6
Total	6,640,055	54.0
Farms intending to stay		
Cages meeting 2001 Standard	198,900	1.6
Cages not meeting 2001 Standard	714,826	5.8
Total	913,726	7.4
Total capacity likely to meet 2001 Standard at 2008	7,553,781	61.4
Potential shortfall in layer capacity at 2008	4,748,207	38.6
New facilities needed to replace non-complying cages by 2008	8,243,352	67.0
Farms unsure about their future intentions		
Cages meeting 2001 Standard	542,524	4.4
Cages not meeting 2001 Standard	3,591,459	29.2
Includes -		
(a) *Farms unsure about staying in the industry*		
Cages meeting 2001 Standard	152,280	1.2
Cages not meeting 2001 Standard	812,874	6.6
(b) *Farms unsure about leaving the industry*		
Cages meeting 2001 Standard	0	0.0
Cages not meeting 2001 Standard	402,825	3.3
(c) *Farms made no decision about future intentions*		
Cages meeting 2001 Standard	390,244	3.2
Cages not meeting 2001 Standard	2,375,760	19.3
Total	4,133,283	33.6
Farms intending to leave by 2008		
Farms intending to leave by 2008, meeting 2001 Standard	76,320	0.6
Farms intending to leave by 2008, not meet 2001 Standard	537,904	4.4
Total	614,224	5.0
Intended extra facilities in addition to farms current capacity (cage, barn, free range)	1,832,634	14.9

Final potential shortfall (Potential shortfall in layer capacity at 2008 less intended extra facilities in addition to farms current capacity)	2,915,573	23.7

The scale of investment needed for new facilities is high. New cages and a new controlled environment shed are estimated to cost $30-34 per hen housed including installation and erection. The replacement cost for new cages and shedding is approximately $264 million. For new cages installed in an existing shed it is estimated as $16-18 per hen housed. To replace the entire cage capacity with new cages meeting the 2001 Standard it would cost approximately $140 million.

New barn facilities installed in an existing shed are estimated at $16 per hen housed. It may be more depending on what improvements are required to bring the shed up to current standards. New barn facilities installed in a new shed are $38-40 per hen housed.

Free range facilities are estimated to cost $15-40 per hen housed depending on what equipment is used and the standard of shedding and types of materials used in its construction.

These costs do not include the cost of land, provision of services (internal roads, water supply and electricity), local authority and environmental approvals, site preparation, staff residences and standby electrical generation equipment. These costs will vary depending on State, local authority area, topography and other local factors.

5.4 Farmers future intentions

At the time of this survey many more farmers were actively thinking about their future intentions compared to the 2001 survey. There was some change in cage farmers' future intentions. The intentions of non-cage farmers was also collected.

The future intentions of cage egg farmers will have a significant impact on the industry's ability to meet the market demand for eggs at 2008. Farmers who have been in the industry more than 15 years find that the culture of the industry has changed and some are having difficulty coping with this. The changes that have occurred are:

- Quotas, which managed the number of hens over 26 weeks of age, have been removed in all States except Western Australia. They will be removed in 2004/05 in Western Australia.
- Demand supply management linked to the quota system was removed with quotas (except in Western Australia). This system matched egg production to market demand by controlling the number of laying hens.
- Egg Marketing Boards have been dismantled. These Boards gave farmers more say in the price they received for eggs and an assured market for their eggs.
- In some States, the retailers' margin on eggs had been controlled through legislation and this has been removed.
- Significant changes were made to the Welfare Code of Practice in 1995 and 2000 that have imposed significant financial, structural and social impact on the industry.
- The development of a sophisticated refrigerated transport system that makes it possible to economically ship eggs anywhere in Australia.

These factors have changed the business and marketing environment in which egg farms now operate. The market now determines the price of eggs and market disruption now appears to be a permanent feature of the market. Farmers and marketers have to be very aware of and responsive to what is happening in the market to ensure that they maintain their market share.

5.4.1 Changes in cage farmers future intentions

Eleven percent of farms carrying 4.0 percent of the hens (0.48 million hens) have indicated that they will leave the industry by 2008. This has fallen from 17 percent of farms reported in the 2001 survey and reflects the farms that have left the industry since then.

The number of farmers intending to stay in the industry has increased by 7.9 percent to 32.1 percent and cage capacity by 5.6 percent to 62.1 percent.

The number of farms still considering their future options fell by 1.2 percent to 56.8 and cage capacity by 4.8 percent to 33.9 percent.

There was a small increase from 20.8 to 23.5 percent of farms (48.2 to 51.3 percent of cage capacity) that were intending to stay that indicated that they would install new cages.

If government financial assistance was offered the number of farmers who would reconsider their future intentions fell from 63.1 to 55.1 percent and the cage capacity fell from 56.4 to 37.1 percent. There was a corresponding increase in the number of farmers who would make no changes to their future intentions from 17.5 to 22.6 percent and cage capacity from 33.9 to 51.1 percent.

There are still a significant number of farmers (56.8 percent, with a cage capacity of 33.9 percent or 3.64 million hens) who are still considering their future options. A clear indication from State and Territory governments about their intention to support the 2000 ARMCANZ decision and a decision on financial assistance will help this group to make a timely decision about their future. There is only just over three years left before all facilities have to comply with the new standards. It can take at least 2 years to build new facilities. This includes the time needed for obtaining local government and environmental approvals. These decisions are required by 2005.

Farmer comments suggest that the availability of Government assistance will have a significant effect on their decision making process, particularly those who are still considering their future options.

Many of these undecided farmers, particularly those near retirement, were depending on the sale value of their farm for their retirement package (superannuation). Many layer farms in Australia are not saleable as going concerns because of the ARMCANZ 2000 decision. The cages on these farms do not meet the 1995 Standard. Some farms in urban areas near major cities where the land can be sold for development may have funds sufficient to provide for their retirement or replacement of facilities. Others will not. This will depend on the area of land owned, its locality and its market value. There are also farms with small lots of land of low monetary value that are not in developing urban areas and are not suitable for other agricultural development due to the land type. These people will end up with very little capital and will need support from the social security system when they leave the industry.

5.4.2 Changes in non-cage farmers future intentions

The insecurity of farmers particularly the smaller farms was also high in the non-cage sector of the egg industry. This is will be partly due to the downward pressure that has occurred on the farm gate price for non-cage eggs in the last two years due to the increased volume of non-cage eggs now available to meet market demand.

5.5 Cage modification

The interest in cage modification as an alternative to purchasing new cages has fallen from 81 farms with a capacity of 2.54 million hens in the 2001 survey to twelve farms (0.33 million hens). As reported in the previous survey report, modification is not a viable option for most cages.

Those that plan to modify has fallen from 11 farms (0.22 million capacity) in 2001 to one farm.

5.6 Comparison of layer facilities with population

Layer facility capacity compared with Australian resident population on a percentage basis per state reveals that New South Wales and Queensland have a higher capacity than required to supply eggs to their state population of 4.3 and 1.4 percent, respectively. Victoria, South Australia and Tasmania have less than required. Western Australia is equal to requirements and is a reflection of the demand supply management system applying in that State.

It is assumed that egg consumption per head of population and rate of egg production per hen is the same in all states.

Table 19 Layer facility capacity compared to the Australian population

	Resident population		Facility capacity	
State	People	%	Hens	%
NSW	7,038,856	35.2	5,760,680	39.5
NT	198,700	1.0	161,616	1.1
Qld	3,840,111	19.2	3,005,029	20.6
SA	1,531,375	7.7	762,779	5.2
TAS	479,958	2.4	258,260	1.8
Vic	4,947,985	24.7	3,189,653	21.9
WA	1.969,046	9.8	1.433,189	9.8
Aust	20,006,031	100.0	14,571,206	100.0

5.7 Theoretical egg consumption

The theoretical egg consumption per head of population was estimated at 185.8 eggs from the total layer facility capacity of 14.57 million hens and facility occupancy of 91.0 percent. This is higher than the 157 eggs per person published in the Australian Egg Industry Statistics (AECL).

An egg production model using the following assumption was developed to calculate the estimation.

Australian egg facility capacity	14.57 million hens
Facility occupancy	91%
Length of lay from first egg	
Non-rested	50 weeks
Rested	86 weeks
30 percent of Australian flock is rested	
Eggs per hen for nominated lay of lay	
Non-rested	331
Rested	438

Egg production from free range flocks is assumed to be five percent less than cage hens and barn flocks three percent less.

The number of chickens and pullets required to supply the numbers of hens above is 11.1 million chickens and 10.5 million pullets respectively. These requirements are slightly higher than reported in the actual hatchings in reports compiled by AECL.

5.8 Summary

A second survey of Australian egg farmers was conducted to determine the impact of the August 2000 ARMCANZ decision on the egg industry and changes that have occurred in facilities and farmers future intentions. The survey results received represent 99 percent of the known layer farms in Australia.

- New cage, barn or free range facilities that will meet the 2001 Standard at 2008 are needed to replace 62.0 percent (7.62 million hens) of the hens housed in cages that will not comply at January 2008.

- The cost to replace the non-complying cages with new cages and shedding is estimated at $264 million exclusive of the cost of land, services, approvals, site preparation etc.

- Farmers unsure about their future intentions or who intend to leave the industry hold a cage capacity of 3.64 million hens or 33.9 percent of current cage capacity.

- Fifty five percent of cage farmers with 37.1 percent of the current cage capacity will reconsider their future options if financial assistance is made available by government.

- The interest in cage modification has fallen from 81 farms in 2001 to 12 farms. Farms planning to modify has also fallen from 11 to 1 farm.

- Farmers need to verify that new cages that they intend purchasing do meet the 1995 Standard.

6. Implications

There is the potential for a shortfall in new egg production facilities that will meet the 2001 Standard in January 2008. To ensure that there are sufficient egg production facilities that meet the new Standards at 2008 the Australian egg industry, in conjunction with Government, needs to develop and implement a strategy that will encourage farmers to invest in sufficient upgraded facilities that will enable it to meet expected consumer demand for eggs at 2008.

The strategy must provide outcomes that will enable current farmers to see a future in the industry and that prices will be adequate to reward them for re-investing in the industry. It needs to include financial incentives that will encourage farmers to make a decision about their future in the next few months. There is only just over three years left before all facilities have to comply with the new standards. It can take at least 2 years to build new facilities. This includes the time needed for obtaining local government and environmental approvals.

The strategy must include a means for programming or managing the timing of scrapping old cages and replacing them with facilities that meet the new Standards to ensure that there is not a shortage or excess supply of eggs to the market in the period up to 2008 and at January 2008.

All state and territory governments need to communicate to the industry a commitment to introduce the necessary supporting legislation to ensure that the intentions of the Poultry Welfare Code 2001 are implemented.

If the industry does not meet the requirements for compliant hen housing it will place itself in the unenviable situation of not being able to meet the consumers needs for eggs. Three options open to Government to ensure that egg supply is adequate are: allow the importation of eggs, delay the

deadline for implementation of the August 2000 ARMCANZ decision or provide financial assistance to the egg industry for re-structuring.

Importation brings a risk of further destabilising the Australian egg industry. Imported eggs would have to meet Australian importation requirements, that is be free from any disease not present in the Australian poultry industry and from any pathogens harmful to human health.

Extending the deadline for the implementation of the ARMCANZ decision will frustrate animal welfare groups and increase their pressure on Australian Federal and State Governments to improve the welfare of hens housed in cages. This may also affect the public image of the egg industry.

7. Recommendations for Further Work

The following recommendations for further work that will assist the Australian egg industry to meet the requirements of the ARMCANZ 2000 decision in 2008 are:

- That the results of the survey be communicated to industry to give farmers an understanding of the implications of ARMCANZ 2000 decision on the industry, to provide information that will assist farmers to make decisions about their future, whether their cages meet the 1995 Standard and if cage modification is a viable option.

- That further surveys of current egg farmers be made to ascertain the current situation in terms of new facilities that have been or are planned to be built and if there is a change in farmers' future intentions. This will provide the industry with current information to assist in monitoring progress towards meeting the 2008 deadline for facilities to meet the 2001 Standard.

- That an estimate of cost using the survey data be made of various compensation options that industry may wish to propose to government.

8. Appendices

8.1 The impact of the ARMCANZ decision on cage capacity

(a) as hens (includes farms that did not supply full cage data)

State	Cage capacities (hens)					Total committed to or intending to stay		Potential shortfall in capacity		Planned facility capacity in addition to farms current capacity	Final potential shortfall in capacity	
	Total capacity at 2004	Committed to staying		Intending to stay								
		Meet 2001 Standard	Not meet 1995 Standard	Meet 2001 Standard	Not meet 1995 Standard	Hens	%	Hens	%	Hens	Hens	%
NSW	4,822,475	1,362,248	1,199,026	56,000	232,044	2,849,318	59.1	1,973,157	40.9	1,973,157	190,548	37.0
Qld	2,683,439	1,217,888	644,755	32,700	104,397	1,999,740	74.5	683,699	25.5	683,699	704,569	-0.8
SA	622,776	0	0	0	75,061	75,061	12.1	547,715	87.9	547,715	0	87.9
VIC	2,656,423	796,168	711,203	85,600	132,054	1,725,025	64.9	931,398	35.1	931,398	937,517	-0.2
WA	1,221,499	437,928	164,447	24,600	160,902	785,877	64.5	433,622	35.5	433,622	0	35.5
Sub Total	12,006,612	3,814,232	2,719,431	198,900	704,458	7,437,021	61.9	4,569,591	38.1	4,569,591	1,832,634	22.8
NT	143,616	0	0	0	0	0	0.0	143,616	100.0	143,616	0	100.0
TAS	151,760	45,504	60,888	0	10,368	116,760	76.9	35,000	23.1	35,000	0	23.1
Australia	12,301,988	3,859,736	2,780,319	198,900	714,826	7,553,781	61.4	4,748,207	38.6	4,748,207	1,832,634	23.7

(b) as cage capacity (includes farms that did not supply full cage data)

State	Capacities (hens)						Total unsure about future intentions			
	Unsure about staying		Unsure about retiring		Made no decision about future		Meet 2001 Standard		Not meet 1995 Standard	
	Meet 2001 Standard	Not meet 1995 Standard	Meet 2001 Standard	Not meet 1995 Standard	Meet 2001 Standard	Not meet 1995 Standard	Hens	%	Hens	%
NSW	30,000	216,384	0	208,092	94,900	1,067,607	124,900	2.6	1,492,083	30.9
Qld	0	108,662	0	0	28,448	497,779	36,448	1.1	546,441	20.4
SA	36,000	194,235	0	86,916	32,448	176,004	68,448	11.0	457,155	73.4
VIC	31,800	214,072	0	89,340	163,120	371,626	194,920	7.3	675,038	25.4
WA	54,480	79,521	0	18,477	8.352	207,104	62,832	5.1	307,102	25.0
Sub Total	152,280	812,874	0	402,825	327,268	2,260,120	479,548	4.0	3,475,819	28.9
NT	0	0	0	0	62,976	80,640	62,976	43.9	80,640	56.1
TAS	0	0	0	0	0	35,000	0	0.0	35,000	23.1
Australia	152,280	812,874	0	402,825	390,244	2,375,560	542,524	4.4	3,591,459	29.2

(c) as cage capacity (includes farms that did not supply full cage data)

State	Intending to leave the industry				New facilities needed to be built by 2008		New facility capacity planned above farms current cage capacity	
	Meet 2001 Standard	Not meet 1995 Standard	Total					
			Hens	%	Hens	%	Hens	%
NSW	57,600	298,574	356,174	7.4	3,404,227	70.6	190,548	4.0
Qld	7,200	101,610	108,810	4.1	1,432,851	53.7	704,569	26.3
SA	0	22,112	22,112	3.6	622,776	100.0	0	0.0
VIC	11,520	49,920	61,440	2.3	1,774,655	66.8	937,517	35.3
WA	0	65,688	65,688	5.4	758,971	62.1	0	0.0
Sub Total	76,320	537,904	614,224	5.1	7,993,480	66.6	1,832,634	15.3
NT	0	0	0	0.0	143,616	100.0	0	0.0
TAS	0	0	0	0.0	106,256	70.0	0	0.0
Australia	76,320	537,904	614,224	5.0	8,243,352	67.0	1,832,634	14.9

8.2 Layer facility update survey questionnaire 2003

(If you own or lease more than one farm please copy the questionnaire and complete a questionnaire for each farm.)

Q1. What type of production system/s do you currently operate on this farm?

No of caged layers	_____		
No of barn housed layers	_____	housed in _____	number of barn sheds
No of free range layers	_____	housed in _____	number of units (ie shed with outdoor run)

If you do not have layers in cages go to Question 2.

If you do have cages fill in your contact details below then go to Question 3 on the next page.

Q2. If you have layers in non cage systems only what are your future intentions?

(a)	Retire from or leave the industry in the next 3 years.	Yes / No
(b)	Retire from or leave the industry by January 2008.	Yes / No
(c)	Retire from or leave the industry when equipment needs replacing.	Yes / No
(d)	No intention to leave, will upgrade housing and equipment as required.	Yes / No
(e)	Retire and pass the business to my children by January 2008.	Yes / No
(f)	Still considering the options.	Yes / No

If you do not have cages you have completed this survey. Please fill in your contact details below and return this page to Geof Runge (see page 6 for details).

Contact details

Your Name: ..... Phone No: .....

Address: ..... Fax No: .....

..... Mobile No: .....

..... p/c ..... Email: .....

(Your contact details will make it easier for me to contact you if I have further questions.)

Farm Location (if different from above): .....

Q3. Cage facility changes
What changes have you made to your cage facilities since the last survey in November 2001
(Enter number of hens and/or circle answers)

(a) Scrapped cages housing the following number of hens. _____ hens
(b) Increased the number of caged layers by. _____ hens
(c) Increased the number of free range layers by. _____ hens
(d) Increased the number of barn housed layers by. _____ hens
(e) Decreased the number of caged layers by. _____ hens
(f) Decreased the number of free range layers by _____ hens
(g) Decreased the number of barn housed layers by _____ hens
(h) Have you reduced your egg production business in favour of investment in other enterprises Yes / No
(i) Other .....Yes / No

Q4. Scrapped cage details
If you have scrapped cages since the last survey in November 2001 what are the details of those cages?

Question	**Cage A**	**Cage B**	**Cage C**	**Cage D**
Cage front width? (cm / inches)				
Cage depth? (cm / inches)				
Number of cages?				
How many hens were housed in these cages?				
What style were the cages installed in?	Flatdeck A frame Multi-tier	Flatdeck A frame Multi-tier	Flatdeck A frame Multi-tier	Flatdeck A frame Multi-tier
Date when cages were scrapped?				

Q5. Details about the layer cages on your farm.
Please answer the questions below for each type of cage you have on your farm.
(Either write in or circle the appropriate answer)

	Question	*	Cage A	Cage B	Cage C	Cage D	Cage E
a	Cage front width? (cm / inches)	A					
b	Cage depth? (cm / inches)	B					
c	Height at cage front? (cm / inches)	C					
d	Height at the back of cage? (cm / inches)	D					
e	What is the distance from the cage front to the point at which the vertical distance between the cage floor and roof is equal to 40cm (15.75")? (cm / inches)	H					
f	Express (e) as a percent of (b) (ie e/b x 100)	I					
g	What is the width of the cage door opening when the door is fully open? (cm / inches)	G					
h	What is the distance between the cage floor support wires that are spaced the widest apart? That is the spacing between the wires that run parallel to the feed trough. (cm / inches)	J					
i	Number of cages?						
j	How many hens in total are housed in these cages?						
k	What is the cage floor area? – (multiply a x b) (cm^2 / $inches^2$)						
l	What was the date when the cages were installed?						
m	How many hens can be housed per cage at 550cm^2 per hen?[3] (Consider the feeder and drinker space also)						

See Explanatory diagrams for cage dimensions A-J, floor wires and summary of 1995 Code and 2008 Floor Space Allowance for Laying Cages on pages 7 & 8.

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Q6. Check list for whether or not cages meet the new standards.

Answer the questions below for each type of cage on your farm. Note the answer to these questions will determine if the cages meet the standards to apply at 2008. *(Either write in or circle the appropriate answer)*

	Question	*	Cage A	Cage B	Cage C	Cage D	Cage E
a	Is the height at the back of the cage equal to or more than 35 cm? (13.75") See question 8d	D	Yes / No	Yes / No	Yes / No	Yes / No	Yes / No
b	From question 8f is the percentage equal to or greater than 65%? ie does 65% of floor area have a height of 40cm or more?	I	Yes / No	Yes / No	Yes / No	Yes / No	Yes / No
c	Is the floor slope 8 degrees or less (14 mm fall in 100 mm)?		Yes / No	Yes / No	Yes / No	Yes / No	Yes / No
d	Is the cage door opening the full width of the cage front or at least 50cm (19.7")? See question 8g	G	Yes / No	Yes / No	Yes / No	Yes / No	Yes / No
e	Is the cage door opening the full height of the cage front above the feed trough?	F	Yes / No	Yes / No	Yes / No	Yes / No	Yes / No
f	Is the maximum distance between the cage floor support wires equal to or less than 5.1 cm[1] (2")? (See question 8h)	J	Yes / No	Yes / No	Yes / No	Yes / No	Yes / No
g	Are the hens in tiered cages protected from the excreta from the hens above?		Yes / No	Yes / No	Yes / No	Yes / No	Yes / No
l	Is there 10 cm (3.9") or more of feed trough per hen at 550cm^2 of floor space per hen?		Yes / No	Yes / No	Yes / No	Yes / No	Yes / No
m	Is there 10 cm (3.9") or more of water trough per hen at 550cm^2 of floor space per hen or two or more nipples within reach of each cage?		Yes / No	Yes / No	Yes / No	Yes / No	Yes / No
n	Tick which cages meet the new standards. An answer "No" to any question above indicates a cage that does not meet the Code and must be modified or scrapped.						

[1] *Cage floor support wires – The industry policy is that the cage floor support wires should be no more than 5.2 cm apart.*

** See Explanatory diagrams for cage dimensions A-J, floor wires and summary of 1995 Code and 2008 Floor Space Allowance for Laying Cages on pages 7 & 8.*

Q7. If you have cages what are your future intentions?
Keep in mind that all layer cages will have to meet the 1995 Code by 1 January 2008 and that the floor space per hen changes then also when answering the following questions. See details in the summary of the 1995 Code on page 8. *(Please circle one or more answers)*

Do you intend to:

(a)	Retire from or leave the industry in the next 3 years.	Yes / No
(b)	Retire from or leave the industry by January 2008.	Yes / No
(c)	Retire from or leave the industry when equipment needs replacing.	Yes / No
(d)	No intention to leave, will upgrade housing and equipment as required.	Yes / No
(e)	Retire and pass the business to my children by January 2008.	Yes / No
(f)	Still considering the options.	Yes / No

If you are staying in the industry and have cages that do not meet the 1995 Code, do you intend to:

(a)	Modify the affected cages to meet the 1995 Code.	Yes / No
(b)	Replace the affected cages by investing in new cages and use existing shedding.	Yes / No
(c)	Replace the affected cages by investing in new cages and new shedding.	Yes / No
(d)	Replace the affected cages by investing in barn egg production and use existing shedding.	Yes / No
(e)	Replace the affected cages by investing in barn egg production and new shedding.	Yes / No
(f)	Replace the affected cages by investing in free range egg production and use existing shedding.	Yes / No
(g)	Replace the affected cages by investing in free range egg production and new shedding.	Yes / No
(h)	Still considering the options.	Yes / No

If you intend to replace cages that do not meet the 1995 Code do you intend to do so:

In the next 6 months	Yes / No
In the next 12 months	Yes / No
Uncertain	Yes / No

If financial assistance was available from Government to assist in upgrading your layer facilities to compliant cage or non cage systems or to leave the industry, would you change your future intentions by:

(a)	Retiring earlier from the egg industry.	Yes / No
(b)	Commencing or expanding another enterprise / business.	Yes / No
(c)	Modify the cages affected to meet the 1995 Code.	Yes / No
(d)	Replace the affected cages by investing in new cages and use existing shedding.	Yes / No
(e)	Replace the affected cages by investing in new cages and new shedding.	Yes / No
(f)	Replace the affected cages by investing in barn egg production and use existing shedding.	Yes / No
(g)	Replace the affected cages by investing in barn egg production and new shedding.	Yes / No
(h)	Replace the affected cages by investing in free range egg production and	

use existing shedding. Yes / No

(i) Replace the affected cages by investing in free range egg production and new shedding. Yes / No

(j) Or make no changes to my future intentions. Yes / No

(k) Still considering the options. Yes / No

Q8. Cage Modification

(a) If you have cages that do not meet the 1995 Code, have you considered how these cages could be modified to meet that Code? *Please circle your answer.*

Yes go to part (b)

No go to Question 9 below.

(b) Do you plan to apply this modification to the affected cages on your farm? Yes / No / Undecided

(c) If "no" why not?

.....

.....

.....

Q9. Comments

If you have any additional comments in relation to the subject of this survey please make them below.

.....

.....

.....

.....

.....

.....

Thank you for answering the questionnaire. Did you fill in your contact details on page 1? If no, please do so.

Return the Questionnaire to:

Mail: Geof Runge
PO Box 264
Caboolture Q 4510

Fax: Geof Runge
07 5495 2762

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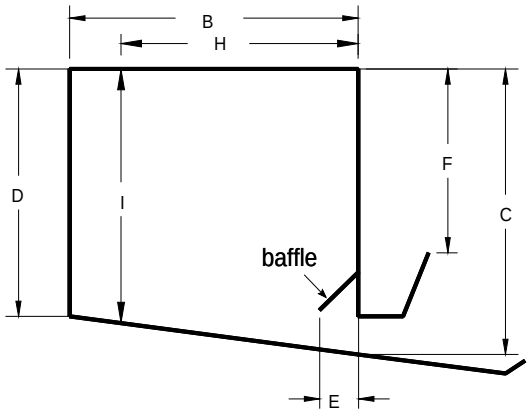
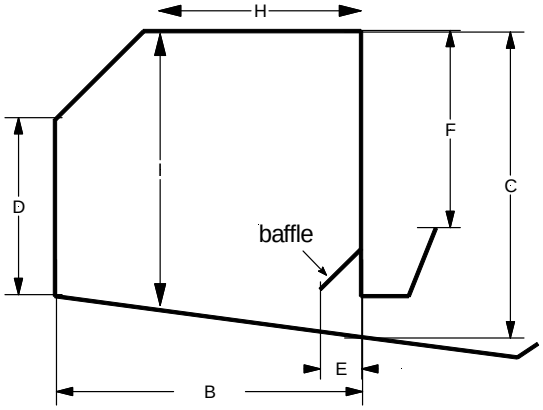
8.3 Explanatory Diagrams for Cage Dimensions and Floor Support Wires



Cage side view



Cage with recessed back side view

A Cage front width.

B Cage depth.

C Height of cage front.

D Height of cage back.

E Distance the baffle extends into the cage.

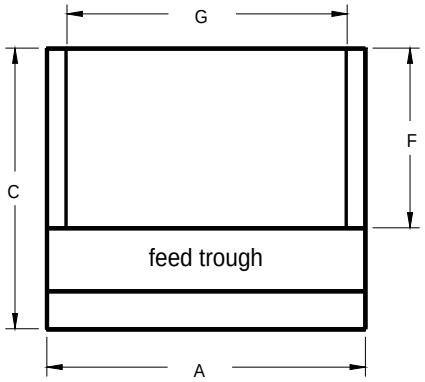
F Cage door opening height.

G Cage door opening width.

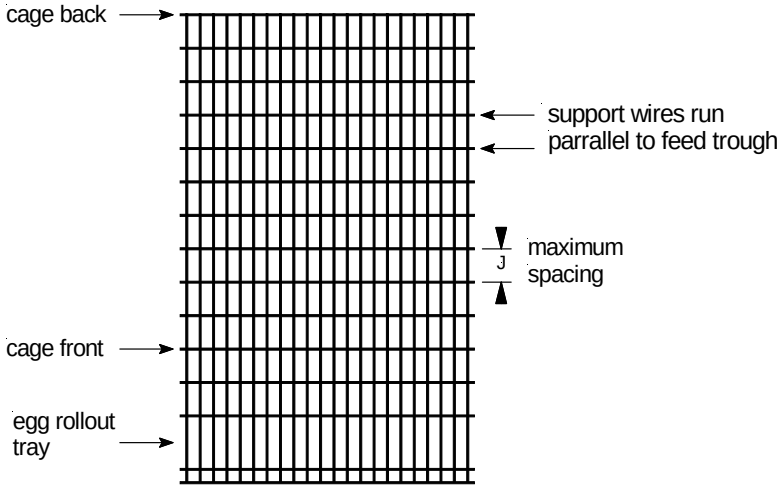
H Distance from cage front to the point where the vertical distance between the cage floor and roof is equal to 40cm.

I Point where the cage height is equal to 40cm.

J Spacing of the cage floor support wires. That is the wires that run parallel to the feed trough.



Cage front view



Cage floor wires

8.4 Summary of 1995 Code and 2008 Floor Space Allowance for Laying Cages

Floor Space Allowance

For laying or breeding fowls weighing up to 4.5 kg live weight

Type of cage	Minimum cage floor area per bird
3 or more fowls (< 2.4kg) per cage	450 cm^2
3 or more fowls (> 2.4 kg) per cage	600 cm^2 *
2 fowls per cage	675 cm^2
Single fowl cages	1,000 cm^2

**These figures are recommended for inclusion into statute law of States and Territories as the minimum space allowance for layer hens in cages.*

Note: For all cages commissioned after the 1 January 2001 or modified a minimum of 550 cm^2 must be provided per hen for three or more hens per cage where hens weigh less than 2.4 kg. At 1 January 2008 for pre 1 January 2001 cages a minimum of 450 cm^2 must be provided per hen for three or more hens per cage where hens weigh less than 2.4 kg and these cages must meet the 1995 Code.

Floor area

Floor area is measured in the horizontal plane and includes the area under the egg / waste baffle except that part of the baffle extending more than 10 cm (3.9") into the cage. Note: The 1995 Code says the area under the baffle is included in the cage floor area however; an industry guideline places a limit of 10 cm (3.9") on baffle protrusion into the cage area.

Floor slope/wire spacing

The floor should be constructed to provide support for each forward pointing toe and the slope of the floor should not exceed 8 degrees (14 mm fall in 100 mm, or 1.7" in 12"). Note: The industry policy is that the cage floor support wires should be no more than 5.1 cm (2") apart. This is considered to be the maximum spacing that will provide adequate support for the forward pointing toe.

Multi tiered or 'A' frame cages

Multi tiered cages should be arranged so that birds in the lower tiers are protected from excreta from above and so that all birds are fully visible for regular inspection and individual birds can be easily removed from cages as required.

Cage height

Cages should be at least higher than the maximum height of the birds standing normally. The height of all cages installed after 1 January 1995 should be at least 40 cm (15.75") over 65 percent of the cage floor area and not less than 35 cm (13.75") at any point.

Cage front

Cage openings should allow placement and removal of birds without causing them injury or unnecessary suffering. All cages for laying fowls installed after 1 January 1995 should have doors the full height and width of the cage front. Note: Since 1995, larger cages have been introduced and their doors must open either to the full width or to a width of 50 cm (19.7").

Feed space

Not less than 10 cm (3.9") of feed trough per bird.

Drinkers
Not less than 10 cm (3.9") water trough per bird OR not less than two nipple or cup drinkers provided within reach of each cage.

Commissioning of cages
Commissioning of cages is defined by industry as the point when the contract to purchase or lease the cages is signed.

9. References

Model Code of Practice for the Welfare of Animals – Domestic Poultry 3rd Edition (1995). CSIRO Publications, Australia.

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Stewart G.D. (1993) *Australian Egg Industry Survey – Cage Layer Housing*. Australian Egg Industry Research and Development Council, Australia.