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BEEF MANAGER - Improving the productivity of beef production in Southern Australia

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Preamble

Project DAV 079 is a three year project to develop, implement and review a particular approach to technology transfer within the beef industry in southern Australia.

The project involved the formation, resourcing and operation of 12 discussion groups for beef producers in Victoria, and monitoring their operation over three years in terms of their inputs, activities, outputs and effectiveness in achieving management changes on farms and improvements in profitability, as measured by gross margins per DSE.

Acknowledgments

The author wishes to acknowledge the contribution to the project of Officers of Agriculture Victoria, and the contribution of leaders and members of Beef Manager groups who have collected physical and financial data about their herds and enabled the publication of this report.

Summary

The Beef Manager Program has formed and run 12 groups in Victoria involving about 170 beef herds, with technical input and leadership from Department officers. The experience of running Beef Manager Groups for commercial beef producers over three years indicate that discussion groups are an effective way of achieving management changes within beef herds and on farms, which result in improvements to profitability for those herds.

The project achieved the goal of improving the profitability of participating beef herds by an average of 54% (based on gross margin per DSE), through the adoption of improved herd management practices.

The Beef Manager Program could now be expanded with farmer members forming and running groups, with assistance and technical input from Department officers and agribusiness.

Recommendations

Recommendations have been made to assist the future development and expansion of the Beef Manager Program in southern Australia, and are listed below.

- 1. The formation and operation of Beef Manager groups in New South Wales, Victoria, South Australia and Tasmania be expanded to about 30 to 40 groups, so that the Beef Manager Program has an impact on the productivity of the beef industry in southern Australia.
- 2. The Beef Improvement Association of Australia be invited to encourage the formation of new Beef Manager groups, with farmers from within their own membership, plus other farmers interested in productivity improvement.
- 3. The ideas canvassed from group members about the management of the Beef Manager Program should be considered when planning the expansion of the Beef Manager Program.
- 4. Beef Manager groups should be led by farmer members trained in the techniques and skills of group management and leadership.

- 5. The Meat Research Corporation should continue to fund the training of farmer leaders for new groups as they form.
- 6. The Meat Research Corporation should provide funding to the Working Party to assist their deliberations, and provide funding to establish and maintain an effective structure and communication for the Beef Manager Program.
- 7. Agriculture Victoria provide a commitment for Department officers to provide technical advice, information and support to Beef Manager groups in the future.
- 8. Other individuals and organisations, such as the Beef Improvement Association of Australia, consultants, banks and agribusiness be invited to provide technical information and advice to Beef Manager groups.
- Agriculture Victoria should provide information and direction to groups about the collection, analysis, reporting and interpretation of financial information about beef herds.
- 10. The Meat Research Corporation should fund the collation of financial information from Beef Manager groups, and reporting of that information to the beef industry.

1. Background

In June 1988, the A.M.L.R.D.C. and the Victorian Farmers Federation initiated a Review Workshop of on-farm factors that limit the profitability of beef and sheep meat production in the high winter rainfall areas of southern Australia. A major finding of the review was that "failure to adopt known technology is the major factor limiting farm productivity in southern Australia." Further it was considered that to increase the rate of adoption of new technology on farms, a more thorough evaluation of the expected profitability of an innovation on a whole-farm basis, within the context of individual family farm businesses, using spread-sheet or bio-economic model (AMLRDC 1988).

The process of technology transfer within the beef industry is complex, and involves many players, as there are potentially many sources of information, and information of varying types and quality. The farmer faces the considerable task of evaluating and interpreting information, from their own perspective, and may decide to adopt the particular technology if it promotes their own gaols and objectives. Clearly the focus of technology transfer should be on the needs of the beef producer for technical and financial information, and support.

In 1989, an interstate committee comprised of staff from South Australia, New South Wales and Victoria met to develop a interstate framework for developing and implementing a beef production management program to increase the profitability of beef production in southern Australia through improved herd management.

Over a period of two years that committee met and reviewed the various methods of providing information to beef producers in an integrated manner. The programs that were reviewed included; McKinnon Project, Farm Facts (Clark N. 1994), Productive Management Program for Beef Herds (Stafford R.W. and Sykes W.E. 1984), Beefo (Spath et al 1984), Farm Cheque (NSW Agriculture 1988) and Beef-n-Omics (Dobos 1991). It was concluded that none of these programs provided a complete system, although components of them could be usefully incorporated into the project. From these discussions the framework was developed for an interstate project, later given the title "Beef Manager".

Significance

.1 Industry significance

The annual productivity growth in the beef industry between 1977-78 and 1988-89 was 0.1 %, and is lower than for all broadacre, cropping and sheep properties (ABARE 1990). The significance of this low rate of productivity resulting from improvements to management, and the use of new technology. improvements period, and thus farm profitability has also declined. growth is that as the farmers' terms of trade have declined 23% over the same to profitability is only possible through productivity growth In the long term,

flexible in the use a range of management strategies to achieve the market requires cattle to be produced to specifications for both slaughter and as stores beef to the Pacific basin markets. These changes in market demand for beef to the United States, it now exports a wide range of grades and qualities of in the past Australia exported predominately manufacturing grade grass-fed beef production in Australia. The nature of beef production is also changing. While leading to higher demand for beef cattle, higher prices and an expansion in beef The increase in demand for beef imports in Japan and Korea in recent years is specifications required. for later grain finishing, requires beef producers to be more productive, and

3. Objectives

- (i) To develop, implement and review, by June 1994, a new approach to technology transfer within the southern beef industry (the "Beef Manager" service which will:
 - (a) Provide a supportive framework to make management changes on farms by the formation of "Beef Manager" groups;
 - (b) provide the participating producers with meaningful herd and financial data on which to make management decisions;
 - (c) provide an interactive and efficient consultancy service at a fee to participating producers;
 - (d) contribute to the collection of meaningful statistics of herd production and the financial returns of beef herds in southern Australia.
- ii) To improve, by June 1994, the productivity of at least 150 participating beef herds in Victoria by an average of at least 25% (based on gross margin /DSE), through the integrated adoption of improved management practices.

4. Location

is predominately in spring, with feed shortages in autumn and winter. Victoria. The area is predominately the high rainfall zone of Victoria (annual rainfall 580-1044 mm), with pastures predominately perennial. Pasture growth The Project was conducted in the three major beef producing regions of Victoria. Groups were formed at Hamilton, Warrnambool, Ballarat, Colac in South West Victoria, Warragul, Leongatha and Maffra in Gippsland, and Seymour/Yea, Alexandra, Mansfield, Benalla and Albury/Wodonga in North East

5. Methodology

The project has taken the form of a discussion group and consulting service offered to individual beef producers organised into localised groups of 12-15 farmers. Each group has been led by specifically trained Department beef officers. The focus of the group work is on the farmers' own herds and properties. The aim for each farmer is to improve herd productivity and profitability.

The Project had three major components:

- (a) Teaching farmers technical and management techniques likely to improve herd productivity. Aspects such as Reproductive Management, Breeding, Nutrition, Marketing, Grazing Management was discussed with groups of farmers led by trained Department officers. Where appropriate, teaching involved visits by farmers to abattoirs or feedlots to develop a better understanding of the specifications required.
- (b) To aid farmers' decision making, farmers were asked to collect meaningful herd data and financial records which were analysed and provided to the farmers to stimulate thought, discussion and learning. The analysis was used to suggest ways for the farmers to change herd and property management and decision making resulting in improvements to herd productivity and profitability.

Initially, the analysis took the form of simple gross margin analysis, but as on the basis of demand by farmers, a more comprehensive whole-farm analysis was provided for some groups.

Results of the analyses were used by the individual farmer and for comparative analysis within and between groups.

To fully utilise the benefits from the project, the broad results of the comparative analysis were communicated to the wider beef industry by publication of a report each year. Several rural papers and publications published articles based on these reports.

(c) To assist farmers to implement the desired management changes on their own farms, a one-to-one consulting service using trained Department beef officers was offered to farmers for a fee of \$200 per day.

6. Significant results

A total of 12 groups involving about 170 beef producers formed and operated in Victoria with the support of Department officers. In NSW, one group at Wodonga involving beef producers from Victoria and NSW was jointly run by beef officers from Victoria and NSW. In South Australia, two groups were formed with leadership from a beef producer, and supported by a beef officer. In Tasmania, a group was formed with support from a beef officer.

6.1 Group formation and membership

Groups were formed by the beef officer at each location inviting farmers a meeting to discuss the formation of a Beef Manager Group in an area. At the meeting, an outline of the aims of the Beef Manager Program was presented and discussed, together with the nature of the group, the method of operation and the costs of membership were discussed Farmers were invited to join the Beef Manager Group for a period of one year, with the expectation that they would continue for the full period of three years.

Table 1 The membership of the Beef Manager Groups in Victoria 1991 to 1994.

GROUP	1991 NUMBERS	NUMBERS WITHDRAW N	NUMBERS JOINED	1994 NUMBERS
Ballarat	11 (1992)**	3	3	11
Benalla	13 (1992)	0	2	15
Colac	13 (1992)	6	4	11
Hamilton	11	2	3	12
Leongatha	13 (1992)	4	8	17
Maffra	19	3	7	23
Mansfield	13	9	6	10
Seymour	10	5	9	14
Warragul	13	5	5	13
Warrnambool	11	2	5	14
Wodonga	11 (1992)	2	5	14
Yea/Alexandra	12 (1992)	4	6	14
TOTAL	150	45	63	168

^{**} Note: Some groups started in 1992

6.2 Leadership

In 10 of the 12 groups, a farmer was appointed to be chairman by the group members and they have assisted in the operation of the group. Groups were invited to nominate one or more people to receive training in group management and leadership. The Meat Research Corporation commissioned Mr Kevin Balm to provide training in group management and leadership for Beef Manager group leaders. The training activities consisted of three two-day workshops in a period from July to November 1994, and was attended by 16 farmers from 11 Beef Manager groups, and also attended by six Department officers, including two from interstate.

6.3 Activities

In many groups the form and range of activities undertaken has been determined by the farmer members during planning sessions, using the Nominal Group Technique, and group discussion. Examples of activities of groups are listed below.

Nominal Group Technique for Planning Programs Live animal & Carcass Assessment Pasture & Grazing Management Appropriate Fertiliser Use Reports of the Financial Analysis in each year Reproduction and Bull Testing Bull Selection & Breedplan Veterinary Disease & Herd Health Quiz Time of Calving Debate Heifer Management & Condition Scoring Calving Analysis **Breeding Systems** Pasture Management Silage & Grain Feeding Marketing of Cattle Lot-feeding Beef Alternative Beef Enterprises Record Keeping & Computers Yard Design Pastures & Fodder Conservation **Pregnancy Testing** Summer Fodder Crops Management Consultancy on Members Properties

The majority of activities are held on the properties of Group members, and other activities include visits to other areas, visits to feedlots, abattoirs, and Research Institutes.

Groups have been encouraged to develop a Group Project in addition to their

monthly program to explore some aspect of the management of beef cattle, or develop some learning activity which will result in productivity improvement.

Some examples of these undertaken by Groups include:

Feedlot Trial
Grass Fed Trial
Herd Health Program
Selenium Trial
Seasonal Pasture Management Trial
Pasture Renovation Trial
Improved Pasture Utilisation Demonstration
Grazing Management & Cross Breeding Tour
Measuring the Pelvic Area & Critical Mating Weight in Heifers
Mineral Supplementation Trial
Autumn and Winter Management of Steers

6.4 Financial Analysis

The financial analysis was carried out for each of the following financial years; 1990-91 (67 herds in 7 Groups), 1991-92 (108 herds in 11 Groups), 1992-93 (80 herds in 11 Groups), and 1993-94 (69 herds in 10 Groups).

For each herd, the farmer was asked to complete a written questionnaire detailing cattle numbers and categories of stock, stock sold and purchased, receipts from sales and expenditure for purchases, cattle requirements and contract services, fertiliser, cattle feed purchased, grown and used, and the costs of marketing cattle.

Standardised stock values were used to value the inventory of cattle held on the property, and changes to the value of the cattle inventory were added to the cash receipts from trading of cattle resulting in the total cattle income for the property.

On mixed farms where sheep and cattle graze, the pasture costs, such as annual fertiliser expenditure, were allocated to each enterprise based on the proportion of grazing pressure exerted by that enterprise, and measured in terms of dry sheep equivalents (DSE).

Gross Margin is a measure of herd profitability, and is defined as the gross income from livestock trading (and changes to cattle inventory), minus the beef enterprise costs. To compare properties and between years, the gross margin was also expressed on a per dry sheep equivalent (DSE) basis.

Farmers who provided the relevant information about their herds and farms, received a report about the profitability of their herd, and the trends in profitability for the period the herd had been recorded. This information was collated for each group of properties, and a comparative analysis report for the

group was provided to the group, together with an interpretation of the meaning of financial and production ratios.

In addition, the information about individual herds has been compiled to provide a series of reports about the productivity and profitability of herds in the Beef Manager Program. (An example of the reports about the profitability of herds in the Beef Manager Program are in Appendix 1.)

6.4.1 Beef enterprise gross income

The average beef enterprise gross income increased from \$16.71 per DSE in 1990-91 to \$22.02 per DSE in 1993-94, and are presented in Table 2.

A considerable emphasis of technical information provided to farmers in the Beef Manager Program was the concept of "adding value" to sale cattle by improved management. An improvement in average sale prices was recommended to groups as an effective way of improving the profitability of beef herds. The strategies recommended included the following;

- * Management of the breeding herd to achieve a confined calving.
- * Feeding cattle to achieve target weights for sale.
- * Selling cull cows and surplus heifers pregnancy tested in-calf rather than empty of unknown status to achieve higher prices.
- * Direct marketing of slaughter stock to meat works. Cattle meeting the specifications for markets achieve higher prices, and marketed at lower cost.
- * Use of Aus-Meat Feedback information to better match the breeding and fattening program to meet the carcass specifications required by the targeted market.

Table 2. Summary of the financial performance of herds in the Beef Manager Program. Data for four years.

Financial Year	Number of Herds	Average Gross Beef Income (\$/DSE)	Average Enterprise Costs (\$/DSE)	Average Gross Margin (\$/DSE)	Range in Gross Margin (\$/DSE)	Change i Margin 1990 (\$/DSE	from -91
1990-91	67	16.71	6.73	9.98	-1.50 to 21.46	- A	\
1991-92	108	16.82	7.58	9.24	-9.12 to 24.07	-0.74	-7.5
1992-93	80	19.59	6.53	13.06	0.63 to 23.35	+3.08	30.9
1993-94	69	22.02	6.56	15.46	2.56 to 33.90	+5.48	54.9

6.4.2 Beef enterprise costs

The beef enterprise costs are the direct costs associated with the beef herd. They include the actual expenditure on veterinary and herd health procedures,

the cost of feed supplements and agistment for the herd, the share of the total fertiliser and pasture costs for the property, based on the proportion of beef DSE to the total DSE on the property, the freight costs not included as a marketing cost, and marketing costs.

The average beef enterprise costs for herds in four financial years is presented in Table 3.

Table 3. The average beef enterprise costs for herds in the Beef Manager Program in four years.

Beef enterprise costs	1990-91 (\$/DSE)	1991-92 (\$/DSE)	1992-93 (\$/DSE)	1993-94 (\$/DSE)	CHA 1991 T (\$/DSE	0 1994
Herd health	0.70	0.89	0.80	0.72	+0.02	2.8
Supplementary feed & agistment	3.16	2.96	2.12	2.20	-0.96	-30.6
Pasture & fertiliser	1.78	2.03	1.87	2.06	+0.28	+15.7
Freight	0.20	0.26	0.26	0.21	+0.01	+5.0
Marketing	1.09	1.25	1.12	1.10	+0.01	+1.0
Other costs	0.85	0.42	0.22	0.30	-0.55	-64.7
Total beef enterprise cost	7.08	7.58	6.53	6.56	-0.52	-7.3

The total beef enterprise costs have declined only slightly during the four years of the program. However there has been a 30% reduction in the cost of feed supplements and agistment, and a 15% increase in expenditure on pastures. It is significant that groups discussed the feeding of supplements to the breeding herd in conjunction with increased use of fertiliser and improved grazing management as a more efficient management system.

6.4.3 Beef enterprise gross margin

On many properties, a financial analysis of the herd was calculated for the 1990-91 financial year, to obtain a base line of performance for the year before the start of the Beef Manager Program. In 1990-91, the average gross margin for beef herds was calculated at \$9.98 per DSE, and the range was from -\$1.50 to \$21.40 per DSE.

Over the period of the next three years of the Beef Manager Program, the financial performance of many herds was measured in the same way, and the changes in the profitability for each herd and group noted and recorded.

The average gross beef returns, average enterprise costs and average and range in gross margin for four years, together with the change in gross margin is presented in Table 2.

To check for bias in the sample of herds with financial records, the gross margin for herds in the program and recorded in 1990-91 and 1993-94 were collated. The results for 1990-91 and 1993-94 for those herds with four years records is presented in Table 4.

Table 4. Gross Margin per DSE for herds in the Beef Manager Program continuously. Data for 1990-91 and 1993-94.

Financial Year	Number of Herds	Average Gross Margin (\$/DSE)	Range in Gross Margin (\$/DSE)	Change in Margin 1990 (\$/DSE	from -91
1990-91	35	10.22	-0.20 to 21.46		
1993-94	35	15.93	7.02 to 24.09	+5.71	55.9

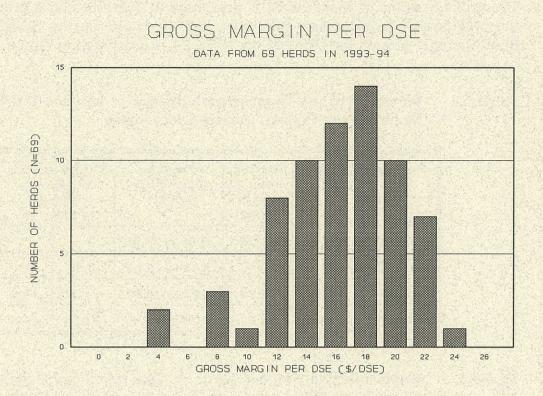
The average gross margin in each year and the change in gross margin over the period was similar for this sample to the average gross margins of all herds for which there are records.

6.4.4 Distribution of gross margin per DSE

The large range in profitability of beef herds in the program is a measure also of the range in productivity underlying the range in profitability, as all farmers face similar price schedules for their cattle in a competitive and open market. The distribution of gross margin of herds for the 1993-94 financial year is presented in Figure 1. The distribution of gross beef income per DSE, beef enterprise costs per DSE and beef gross margin per DSE for each year of the analysis are appended in Appendix 2.

The distribution of gross beef income (from livestock trading and inventory change), distribution of beef enterprise costs, and distribution of beef gross margins, all indicate a large range in the financial performance of beef herds, and imply a range in productivity in those herds.

Figure 1 Distribution of beef enterprise gross margin of herds in 1993-94.



6.4.5 Change in beef enterprise gross margin

Over the three years of the program, the average profitability of beef herds in the program improved 54.9%, from \$9.98 per DSE in 1990-91 to \$15.46 per DSE in 1993-94. Over the period, the gross beef income has increased 32%, and beef costs declined 2.5%. It is interesting to note that the improvement in average profitability was derived 97% from an improvement in gross income from cattle trading (and inventory change), and only 3% from a reduction in average beef enterprise costs.

6.4.6 Gross margins of SWMFP herds.

During the period 1990-91 to 1993-94, the gross margins for about 28 beef herds have been calculated each year as part of the South West Monitor Farm Project (SWMFP). All the herds are drawn from the south west region of Victoria, and are in the same area as three of the Beef Manager groups. The change in gross margin of the SWMFP herds is a measure of the underlying change in the profitability of beef herds not receiving the technology transfer within Beef Manager groups, and due to changes in market prices, seasonal

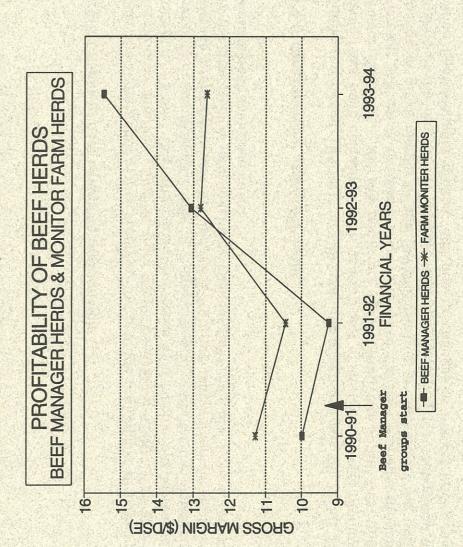
conditions and general changes in the industry.

The gross margins of these herds is presented in Table 5, and a graph showing the change in average gross margin per DSE for herds in the SWMFP and the Beef Manager groups for 1990-91 to 1993-94 is presented in Figure 2.

Summary of the financial performance of herds in the South West Monitor Farm Project. Data for four years. 2 Table

Financial	Number of Herds	Average Gross Margin (\$/DSE)	Range in Gross Margin (\$/DSE)	Change in Gross Margin from 1990-91 (\$/DSE) %	from from -91
1990-91	19	11.28	-0.36 to 17.49		
1991-92	24	10.45	0.99 to 19.02	-0.83	-7.4
1992-93	22	12.80	3.27 to 20.80	+1.52	13.5
1993-94	28	12.61	-6.39 to 20.47	+1.33	11.8

margins of beef herds in Beef Manager Program and the South West Monitor Farm Project 1990-91 to 1993-94. Gross Figure 2



Significant conclusions reached by the Research Organisation

in improvements to profitability for those herds. of achieving management changes within beef herds and on farms, which result producers over three years indicate that discussion groups are an effective way about 170 beef herds, with technical input and leadership from Department The Beef Manager Program has formed and run 12 groups in Victoria involving The experience of running Beef Manager Groups for commercial beef

some management changes will profitability is much greater than the goal set for the project, and was achieved The project achieved the goal of improving the profitability of participating beef herds by an average of 54% (based on gross margin per DSE), through the in the relatively short period of three years, and it is likely that the benefits from adoption of improved herd management practices. This improvement in herd t fully influence gross margins for several

a fee of \$200.00 per day. There was no demand for the consultancy service to participating producers at

8. Guidelines for the successful operation of groups

There is an opportunity to expand the Beef Manager Program and run more groups for beef producers in the high winter rainfall zone of southern Australia.

The following points are provided as guidance for the successful operation of groups which are designed to bring about management changes that contribute to increased profitability of farms.

8.1 Formation of groups

Groups should be formed where their is sufficient farmer interest to form the core of a group. In the past, where a core of interested and motivated farmers wish to form a discussion group, they will encourage more farmers to join.

The benefits to the individual farmer from membership in a group are more obvious where farmers in the group have similar enterprises, and are producing cattle for the same market. The distance farmers have to travel is an issue, but is less of an impediment if they have similar production and marketing goals.

8.2 Size of groups

Ideally groups should be about 12 to 20 farmers. Larger groups are less successful because not all members are able to contribute to ideas and discussion. Groups of smaller size than about 12 are also less successful, because unless most members attend each activity, small group numbers contributing to a discussion limits the number of differing views and ideas.

8.3 Responsibilities of members of groups

Much of the success of discussion groups rests with the membership as individuals, and so it is important that their responsibilities of individuals within the group are made clear. These responsibilities can be summarised.

- * Members should control a commercial sized beef herd of at least 100 mature cattle, so that they have the capacity to benefit from management changes.
- * Individual members are interested in understanding herd and farm management, and are willing to learn individually and in a group.
- * Members are willing to consider their own herd management critically, and willing to monitor the physical performance of their herd.
- * Members are willing to keep financial records about their herds, and provide them for analysis each financial year.
- * Members are willing to contribute to discussion and activities of the group.

8.4 Group activities

Group activities must be commercially relevant to farmers, and may require direction from a technical specialist, or from the results of a financial analysis, and from ideas canvassed from group members.

Initially the program of group activities is directed by the beef officer leading the group, and based on the management of the beef herd that was known from research to have a strong influence on herd profitability and productivity. Topics such as monitoring and control of the breeding cycle, breeding herd management, selection and breeding, supplementary feeding, and marketing of slaughter cattle.

In later years, the groups can be encouraged to develop their own program, and particularly focus on those topics that the financial analysis had shown was important to herd profitability.

Groups should be encouraged to interact together rather than passively listen to a presentation. Each activity should be staged to include both the theory and practical application, and many activities were run on the properties of the group members, and used the herd or property management as a basis for discussion.

Groups can also identify important issues of herd management which are either specific to their locality, or require several months to evaluate. Groups should be encouraged to undertake farm trials, and special projects as additional activities to their monthly meetings.

8.5 Financial analysis

The analysis of the financial performance of herds is an important annual activity for each farmer and group. The collection and analysis of the information about individual herds reinforces the need for financial and herd records, and provides a measure of the performance of each herd for each year. Individual farmers used the information about their herd to diagnose problems or deficiencies with their herd management, and set goals for performance in the following years.

The comparative analysis between herds in the groups can be used to identify issues important to the group, and monitor the performance of the group over successive years. Progress in the measures of herd productivity and profitability is linked to particular activities or issues, e.g. stocking rate, cost of feed supplements, cost of marketing, application of superphosphate, average price of sale cattle.

The annual financial analysis of herd performance, and farm performance is an important part of the Beef Manager program, and the results provide the measure of change, and the incentive to adopt improved management practices on farms.

8.6 Management of groups

Initially groups were directed and led by the Department officers assigned to each group, but as the groups developed over the period of three years, groups gradually changed their management and operation. Members of each group were encouraged to select a group chairman or leader, who could help lead group discussions and activities.

Later in the program the Meat Research Corporation commissioned a consultant to provide training for one or more farmer leaders from each group in Group Management and Leadership Skills.

Groups have identified that leadership of groups by a farmer member is important to the success of Beef Manager groups.

8.7 Linking between groups

Quarterly newsletters about group activities and reports of the financial analysis for each year were published and sent to all group members, as well as other interested people. Feedback from these publications was that they were considered to be valuable by individual farmers and groups in linking the 12 Beef Manager Groups together, and discovering what activities each group was doing and how each group was functioning. This cross-linking between groups resulted in some groups undertaking bus tours and visits to other groups, and visits to research institutes, and feedlots.

On several occasions, group leaders and group members met together at conferences, and training workshops to hear from each other, to discuss the operation of the Beef Manger Program, and to plan the future. These meeting have been valuable to link Beef Manager Groups together formally and informally.

8.8 Role of the Coordinator

The tasks of linking groups through publication of the newsletters, and reports, arranging of meetings, conferences and workshops was undertaken by the Coordinator. The Coordinator also generated publicity about the activities of Beef Manager groups through radio, agricultural newspapers, conferences and seminars.

The Coordinator provided training activities for staff leading Beef Manager groups in Victoria, South Australia, New South Wales, and Tasmania. A list of training activities is listed in Appendix 3.

The Coordinator also visited groups in South Australia and Tasmania, and discussed the Beef Manager Program with Department staff in New South Wales.

The Coordinator has encouraged links between Beef Manager groups through

Department officers and directly through group leaders, organised conferences, seminars for group members and training workshops for farmer leaders.

supporters of Beef Manager groups. results to the wider beef industry, and provide training for new leaders and link groups together, There is a continuing need for a Coordinator for the Beef Manager Program to to collate the results of the financial analysis, publish

9. Future development of the project

To have a significant impact on the beef industry in southern Australia it would be necessary to expand the Beef Manager Program. There are 5,300 herds in Victoria , 702 in South Australia, 2,820 in southern New South Wales, and 378 in Tasmania with over 200 beef cattle (ABS 1993). This total population of 9,200 herds with more than 200 cattle can be considered the target group for the expanded Beef Manager Program. The following recommendations are made for the commercial development of the project to involve 10% of these herds over a 5 year period.

9.1 Formation of Beef Manager groups

- 9.1.1 The formation and operation of Beef Manager groups in New South Wales, Victoria, South Australia and Tasmania be expanded to about 30 to 40 groups, so that the Beef Manager Program has an impact on the productivity of the beef industry in southern Australia.
- 9.1.2 The Beef Improvement Association of Australia be invited to encourage the formation of new Beef Manager groups, with farmers from within their own membership, plus other farmers interested in productivity improvement.

Initial discussions with the executive of the B.I.A.A. has indicated that both the BIAA and the Beef Manager program have similar aims of improving the productivity of beef herds, and their operation is complimentary. The B.I.A.A. have indicated that they are willing to help facilitate the extension of the Beef Manager Program in southern Australia provided the program is shown to be worthwhile.

9.2 Operation of groups

In the latter stages of the project, farmers from the various groups have met together to consider the goals and the essential features of the Beef Manager Program in the future at the level of farmers as individuals, farmer groups, and the Beef Manager Program.

A summary of these goals are;

Goal A	Improve business management and planning skills of producers.
Goal B	Better understanding of marketing systems and options.
Goal C	Sustainable gains in productivity and profitability.
Goal D	Effective implementation of technology.
Goal E	Comfortable environment for interchange of ideas.
Goal F	Develop sustainable groups as a basis to the program.
Goal G	Sustainable Beef Manager Program.

The essential features of Beef Manager groups are;

- * Groups are self-directed, and develop their own program of activities.
- * Groups are led by a farmer or farmers who are selected by the group and trained.
- * Groups meet regularly, and organise interesting and topical programs.
- * Groups have access to technical expertise about beef production, farm management, marketing, and financial information.
- * Groups provide a comfortable environment to members for the interchange of ideas, and support the adoption of successful management changes.
- * Groups develop their own goals, plan their activities, and evaluate their progress.
- * Groups interact with other groups, directly by visiting other groups and indirectly by reading about activities of other groups.
 - 9.2.1 The ideas canvassed from group members about the management of the Beef Manager Program should be considered when planning the expansion of the Beef Manager Program.

9.3 Leadership of groups

In April 1994, The Beef Manager Conference discussed the future development of the Beef Manager Program, deciding on goals for Beef Manager groups, the roles of farmers, groups, Agriculture Victoria, Meat Research Corporation, Beef Improvement Association of Australia and agribusiness in the delivery of the Beef Manager Program.

Members of groups believe that groups should be self-managing, with farmer leaders organising their group activities and facilitating the group discussion. They believe that farmer leaders require specialised training to lead groups successfully.

The Meat Research Corporation provided three training workshops in "Group Management and Leadership Skills" during 1994.

- 9.3.1 Beef Manager groups should be led by farmer members trained in the techniques and skills of group management and leadership.
- 9.3.2 The Meat Research Corporation should continue to fund the training of farmer leaders of new groups as they form.

9.4 Coordination of groups

Member of groups have discussed the need for coordination between groups, and most groups believe that it is essential to have a bridging structure to provide direction and support to group and leaders, and provide services such as publication of newsletters and reports, compilation of financial information from groups, and publicity for the Beef Manager Program in the industry. At the conclusion of the training workshop for farmer leaders, a Working Party consisting of a farmer leader representing the major regions of Victoria was formed to make recommendations about the coordination of Beef Manager groups in Victoria and southern Australia.

9.4.1 The Meat Research Corporation should provide funding to the Working Party to assist their deliberations, and provide funding to establish and maintain an effective structure and communication for the Beef Manager Program.

9.5 Technical support to groups

Beef Manager groups require competent technical support to provide relevant and accurate information about all aspects of herd management and farm management. Beef Manager groups will need to source this information from organisations such as Agriculture Victoria, the Beef Improvement Association of Australia, veterinary practices, banks, and agribusiness.

- 9.5.1 Agriculture Victoria provide a commitment for Department officers to provide technical advice, information and support to Beef Manager groups in the future.
- 9.5.2 Other individuals and organisations, such as the Beef Improvement Association of Australia, consultants, banks and agribusiness be invited to provide technical information and advice to Beef Manager groups.

9.6 Financial analysis and information

A key component of the success of the Beef Manager Program is the linking of beef herd management to the financial performance of the herd and farm, and monitoring the changes in performance on individual properties over time.

Beef Manager groups are seeking the services of Department officers and independent consultants to conduct the financial analysis for the farmer members, and to provide financial reports to individual farmers and groups in 1995.

There is a clear need to make recommendations to Beef Manager groups about the collection, analysis, reporting and interpretation of financial information provided to farmers by consultants. The information collected, analysed and reported needs to be consistent, valid and meaningful, and so that comparisons can be made within groups, between groups and over time.

Agriculture Victoria has funded a project over three years starting in 1994 to produce key physical and financial performance benchmarks with a high degree of statistical integrity for the beef industry (and sheep and dairy industries) in Victoria. The information derived from this study should identify the key drivers affecting financial performance of beef herds, and provide direction to groups about the collection, analysis, reporting and interpretation of financial information about beef herds.

There is also a need to collate the financial information about herds from Beef Manager groups, and provide timely and authoritative reports to the wider beef industry about the productivity and profitability of herds in southern Australia. The provision of this service will require coordination and funding, which may be off-set by revenue generated by selling the information to agribusiness.

- 9.6.1 Agriculture Victoria should provide information and direction to groups about the collection, analysis, reporting and interpretation of financial information about beef herds.
- 9.6.3 The Meat Research Corporation should fund the collation of financial information from Beef Manager groups, and reporting of that information to the beef industry.

10. Impact on the meat and livestock industry

This project was undertaken to increase the improvement in productivity in the beef industry by transfer of technology about herd management to individual farmers. Beef Manager groups were formed to provide a forum for discussion and learning, and farmers were provided with technical information, and information about the profitability of their herds and farms. Over a three year period, the average gross margin per DSE of those herds improved 54.9%. The improvement in profitability is due mainly to an improvement in productivity, as price changes account for only 12 to 14% improvement in profitability.

These results show that Beef Manager groups can be successfully run in the beef industry, and it is believed that with training and appropriate support, Beef Manager groups can be run by farmer members, and expanded in number to reach 10% of 8,367 beef herds with greater than 200 cattle in the high rainfall zone of southern Australia. It is likely that this would result in improvements in the productivity of those herds by 10% annually. If all these assumptions were achieved, the annual improvement in the productivity in the beef industry due to the beef industry would be 1% valued at \$8-10 m annually.

The Beef Manager Program has been independently evaluated by Mr Jim Lees of the Rural Development Centre, Armidale.

- Commitment of Agriculture Victoria to the future of the project
- <u>--</u> in Victoria in the future. Agriculture Victoria has provided a commitment for Department officers provide technical advice and information and to Beef Manager groups
- 11.2 leadership and management. Agriculture Victoria will assist in the groups, and support existing groups during the transition to farmer formation of new Beef Manager
- 11.3 the financial analysis provided to Beef Manager groups. affecting the profitability of beef herds, which will be incorporated into integrity for the beef industry (and sheep and dairy industries) in Victoria. financial performance benchmarks with a high degree of statistical Industries" over three years starting in 1994 to produce key physical and Agriculture Victoria has funded a project "Benchmarking for the Grazing information generated bγ this project will identify key

2. Media coverage

and newspapers including the Weekly Times, Stock and Land, Farm Journal, Prime Beef, Beef Improvement News and on rural radio (ABC). Examples of The progress of the Beef Manager Program has been reported in rural magazines articles are attached at the end of this report. Some of these articles have been written by journalists and indicates the interest generated by this project in the rural media and the beef industry.

13. Publications arising from the project

Franklin P. (1991) Beef Manager Diary.

Halls M. (1991) Beef Manager Manual, First Edition. Ed. M.A. Halls. (Victoria. Dept of Agriculture) ISBN:0 7306 1564 2

Halls M. (1992) The Beef Manager Program, Animal Health and Production Conference, Victorian Institute of Animal Science. pp 5E 1-6.

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Clark N. (1994) Farm Management 500 (Personal communication).

Dobos R., Sangsari E., Carberry P. and Johnston B. (1991) Beef-n-Omics User's Manual, NSW Agriculture.

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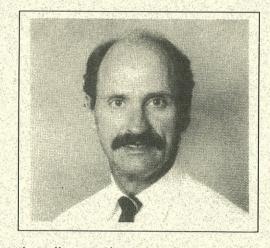
NSW Agriculture & Fisheries (1989) Farm Cheque, Annual Report 1988-1989, NSW Agriculture & Fisheries.

Stafford R.W. and Sykes W.E. (1984) A productive management program to improve reproductive performance in Autumn calving beef herds. Aust. Soc. Anim. Prod. 15:202-206.

APPENDIX 1. THE PRODUCTIVITY AND PROFITABILITY OF BEEF HERDS IN THE BEEF MANAGER PROGRAM IN 1992-1993. REPORT NUMBER 4.



The Productivity and Profitability of Beef Herds in the Beef Manager Program in 1992 - 1993.



Mike Halls, - Coordinator, Beef Manager Program.

The Beef Manager Program in 1992 - 93 has involved the formation of 12 groups in Victoria, plus groups in South Australia and Tasmania.

The Beef Manager Program has the objective of providing to farmers advice and information about beef herd management in an integrated way.

The program was planned and developed with the clear view that the farm managers are the most important people involved with the farm, needing to be informed about all the many factors which affect the productivity and profitability of their beef herds, so they can evaluate management options, and make sound decisions about the herd and the farm.

Beef Manager Groups have been formed to enable a number of interested producers to come together to interact and discuss herd and farm management with other farmers, and so gain information, insight and encouragement to make management changes on their farms.

What measures of productivity do we have for the beef industry.

Contrast the beef industry with the dairy industry. The dairy farmer has a production of the dairy herd measured twice each day in terms of milk produced, and receives a financial report about the value of the month's production in the factory statement and cheque.

The beef producer on the other hand may only have an estimate of the production of beef turned off the property each year, in terms of numbers and values of cattle sold. As measures of herd and farm performance the information is incomplete, and influenced by weather and market prices as well as the managerial ability of the farm manager.

Financial Analysis of Herds

For this reason, a detailed financial analysis of herd profitability is prepared each financial year for farms involved in the Beef Manager Program. Each farmer is asked to complete a questionnaire, detailing returns from livestock sales, expenditure on livestock purchases, all costs related to the herd management, fertiliser and pasture costs, purchased and home-grown feed supplements, and herd costs. From this information, and the schedule of opening and closing numbers for the year, a number of measures of profitability can be derived in terms of Gross Margin, and expressed in per hectare and per Dry Sheep Equivalent (DSE) basis.

A comprehensive report based of the financial analysis, plus other herd information such as the calving spread analysis and Feedback Sheets, is provided to each

individual farmer by the Department Officer leading each group. It is this information about the individual herd and farm that is most useful to the farm manager in assessing the performance of the herd and farm.

Trends in performance over several years can be investigated, and the effect of changes to management monitored over time to keep the farm manager informed about key aspects of herd performance.

In addition to the analysis for an individual herd, the information about each herd and property represented in each Beef Manager Group can be compiled to provide a comparative analysis for the group. The information generated in this way is likely to stimulate lively discussion about the wide range in performance, and the possible reasons for these ranges. Often issues will be raised as topics for later discussion.

Herd Productivity in 1992 - 93

For each year since the start of the project, I have compiled and aggregated the information from Beef Manager Groups in Victoria, and attempted to draw some conclusions about the management of herds, and which factors measured may be important in determining profitability and productivity.

Figure 1.

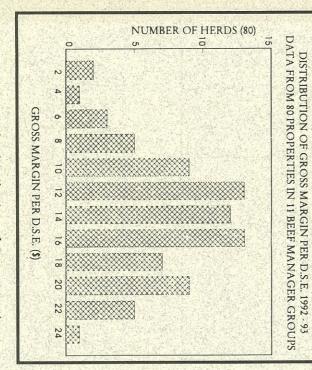


Figure 1. shows the distribution of Gross Margins. The Gross Margin for a herd is defined as the Gross Returns form the sale of cattle from the herd, minus the beef enterprise costs incurred in producing those cattle.

The Gross Margin per DSE is the simplest measure of profitability, and can be compared across properties with differing carrying capacity. The majority of herds in the 1992-93 financial year show Gross Margins of \$10 to \$16

per DSE with an average of \$13 per DSE, which is an increase of \$3 per DSE since the previous year. (See Table 1.)

Table 1.

The average and range in Gross Margin for herds in three years.

1992-93	1991-92	1990-91	Year
80	108	67	Number of Herds
13.06	9.24	9.98	Average Gross Margin (\$/DSE)
0.63 to 23.35	-9.12 to 24.07	-1.50 to 21.4	Range in Gross Margin (\$/DSE)

There is a very wide range in Gross Margin for herds in the Beef Manager Program, which reflects a wide range in the productivity of herds. Those herds with a Gross Margin of \$18 per DSE or more are performing well, and achieving high returns from livestock sales. This will probably be the result of calving the breeding herd in a confined period, and selling cattle during times of premium markets, or selling valuable breeding stock at premium prices. In addition these herds are probably incurring only moderate beef enterprise costs.

Those herds with Gross Margins of between \$10 and \$16 per DSE, may be receiving a lower price for sale cattle, because they are less well grown or sold onto an over-supplied market. Alternatively, these herds may have excessive costs, including feeding costs.

Those herds with Gross Margins of \$8 or less per DSE, probably have some structural problem resulting in unproductive stock such as late-calving cows being retained on the property, or from low prices received for cattle sold, or may have been the result of the need to purchase replacement stock to maintain productive numbers. In a few cases, the low returns may have been the result of excessive beef enterprise costs, particularly feed and veterinary costs.

Figure 2.

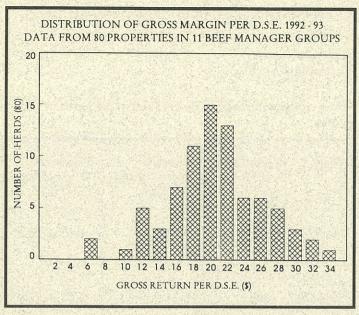
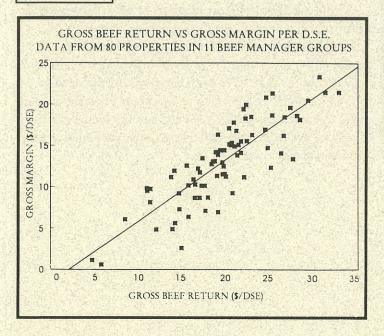


Figure 2. shows the distribution of Gross Return from cattle sales again expressed on a per DSE basis, and it also shows a wide range in performance across herds. It is logical that the range in Gross Returns from sales is contributing most to the range in Gross Margins.

This emphasises how important the value of livestock sales is to beef herd productivity. The strong relationship between Gross Margin and Gross Beef Return from livestock sales is also apparent when one measure of production is plotted against the other, as in Figure 3. This graph demonstrates that to achieve a Gross Margin of at least \$15 per DSE, the herd needs to achieve a Gross Return from livestock sales of at least \$20 per DSE.

Obviously a major focus for each Beef Manager Group is to consider management strategies that will increase returns from cattle sales, and thus improved Gross Margins.

Figure 3.



The aim of the Beef Manager Program is to encourage beef producers with lower levels of profitability to look critically at their herd performance, and consider ways of increasing returns, or perhaps reducing costs that will not reduce productivity.

Beef Cattle Costs

The major beef enterprise costs are related to the direct costs of providing feed, either as feed supplements and agistment, or as fertiliser to encourage pasture growth. Fertiliser and pasture costs are split between beef cattle and other enterprises based on the grazing pressure on the property from each enterprise, as estimated by the proportion of DSE which are cattle. Other Beef Enterprise costs include Animal Health, and Marketing. (See Table 2.)

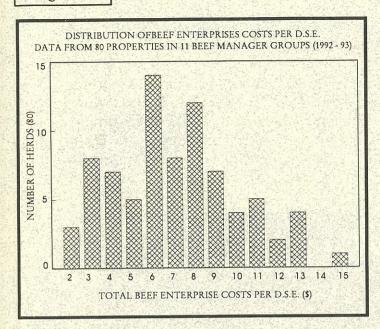
Table 2.

Beef Enterprise Costs					
	Lowest (\$/DSE)	Highest (\$/DSE)	Average (\$/DSE)		
Animal Health	0.04	4.98	0.80		
Supplementary Feed	0.00	6.65	2.12		
Pasture & Fertiliser	0.00	7,29	1.87		
Marketing	0.00	3.06	1.12		
Total	1.01	14.20	6,53		
Total Beef Costs as % of Gross Beef Return	9.3	88.9	34.4		

Table 2. presents the beef enterprise costs, the average and range in 1992-93.

The distribution of Beef Enterprise Costs per DSE are presented on Figure 4. There is a very wide spread of total costs, with most herds having costs of \$8 per DSE or less. A few herds have very low costs (below \$5 per DSE), which may not be sustainable in the long-term, if this also means that required fertiliser has not been applied to pastures.

Figure 4.



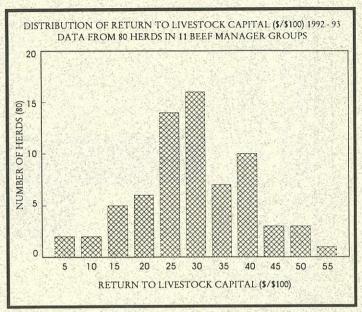
Return to Livestock Capital

The return to capital invested in livestock capital is a measure of efficiency of the herd management, as it compares the \$ value of production of beef cattle to the investment in cattle on the property. Generally herds that buy and fatten steers to sell will have a higher return to livestock capital. A well-managed breeding herd which calves first at two years, has a confined calving period, and good nutrition of cows and calves, and retains only productive females in the herd will achieve

a return of 30% to 40%, while less productive herds will achieve lower returns.

In the future, additional productivity measurers will be developed to assist the beef producer monitor the herd performance. For example, the weight of beef produced per hectare could be recorded for each herd, which will enable beef producers to calculate the return per kilogram of beef produced, and compare that with the costs of producing a kilogram of beef. Such information may be more easily understood than Gross Margin per DSE or Gross Margin per hectare.

Figure 5.



Beef Manager Groups

For further information about the Beef Manager group in your area, contact the beef officer listed below:

South West Region

Phil Franklin

Department of Agriculture State Public Offices Corner Mair and Doveton Streets BALLARAT 3350

(053) 336784

North East Region

Dianne Scopel Department of Agriculture State Public Offices BENALLA WEST 3672

(057) 622588

Gippsland Region

Peter Dundon Department of Agriculture State Public Offices 32 Pyke Street BAIRNSDALE 3875 (051)524138

Michael Halls

Department of Agriculture 78 Henna Street WARRNAMBOOL 3280

(055) 624277

Jenny Lawless

Department of Agriculture 1 McKoy Steet PO Box 551 **WEST WODONGA 3690**

(060) 556222

Jenny O'Sullivan

Department of Agriculture 51 McCartin Street LEONGATHA 3953 (056)622204

Michael Jefferies

Department of Agriculture State Public Offices 85 Gellibrand Street COLAC 3250

(052) 335500

Cheryl Wallis

Department of Agriculture 28 High Street PO Box 215 SEYMOUR 3660

Chris Haplin

(057) 922699

Department of Agriculture State Public Offices 117 Johnson Street MAFFRA 3680 (051) 471533

Bruce Knee

Department of Agriculture Pastoral and Veterinary Institute Ballarat Road HAMILTON 3300 (055) 730700

Steve Walsh

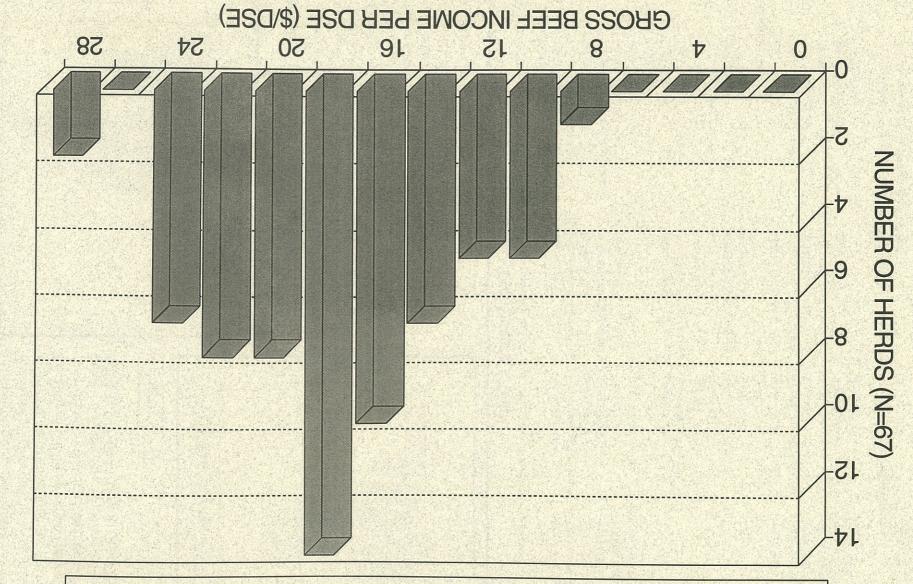
Department of Agriculture RMB 2460 Hazeldean Road WARRAGUL 3820 (056) 242222

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MEAT RESEARCH CORPORATION

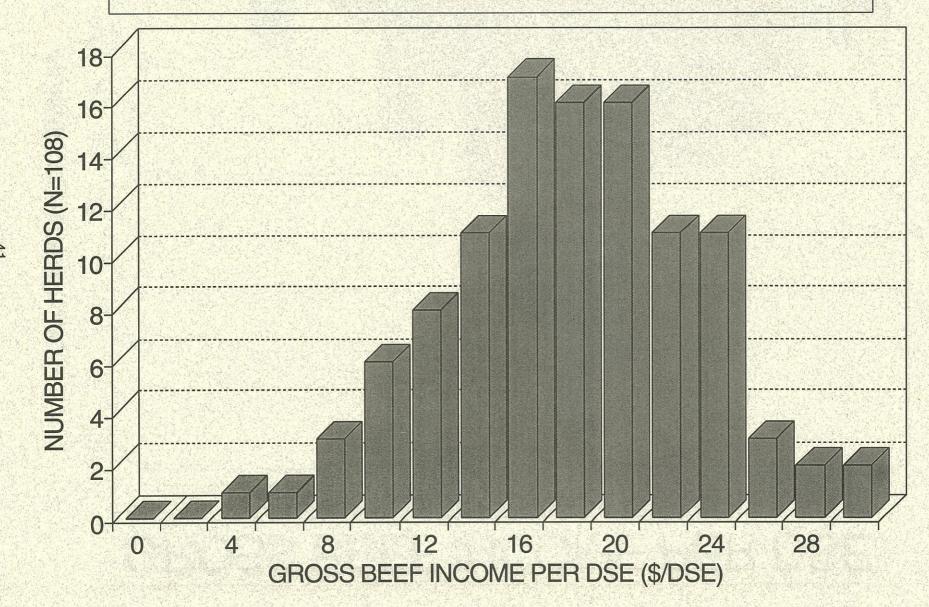
National Australia A Bank

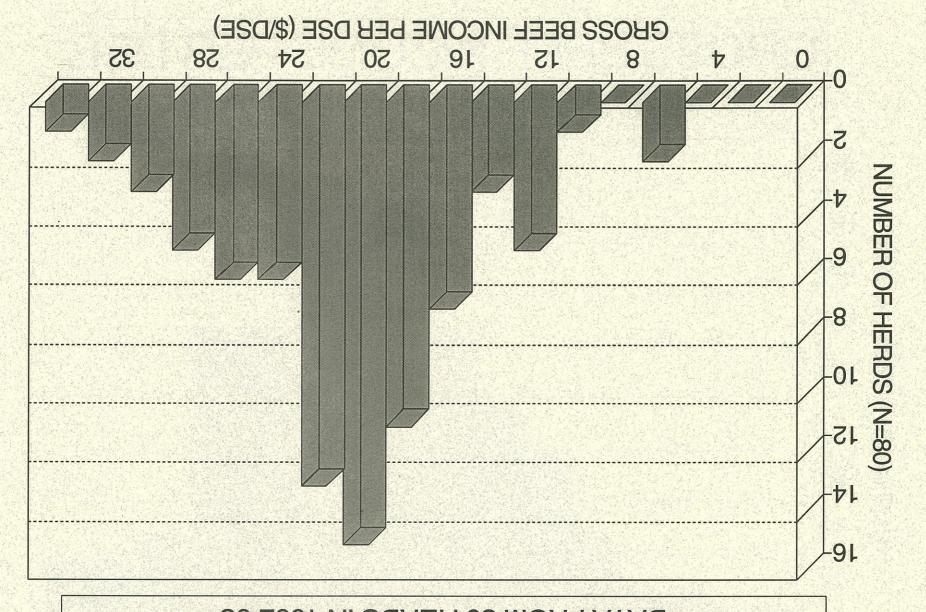
GROSS BEEF INCOME PER DSE 6-091 Fe-0861 NI 1990-91

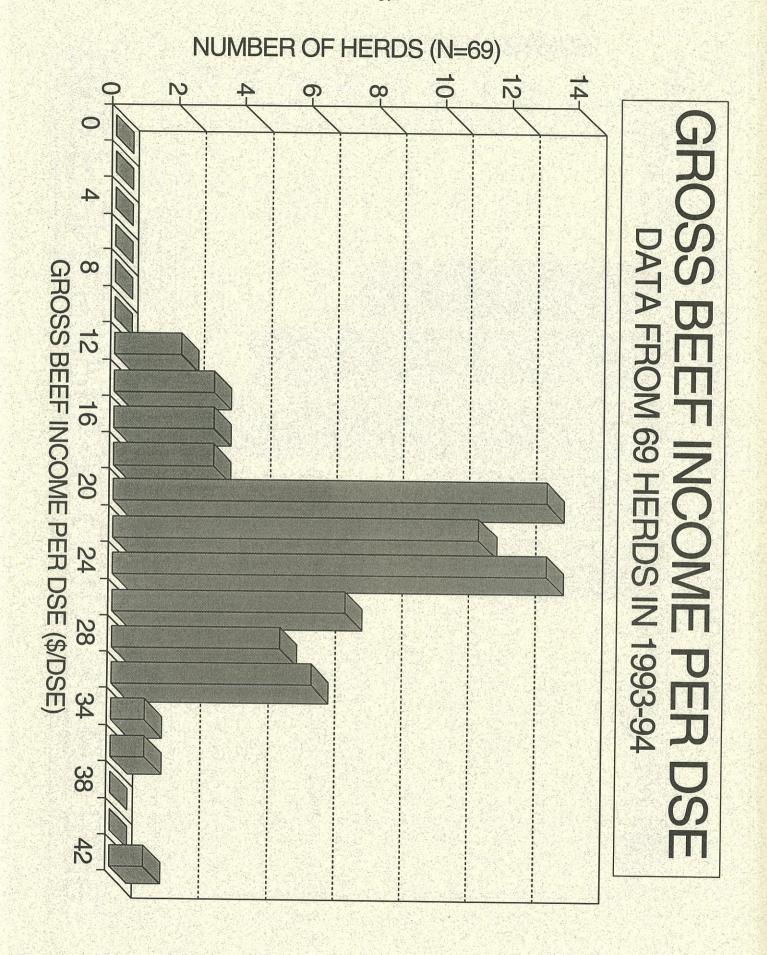


GROSS BEEF INCOME PER DSE

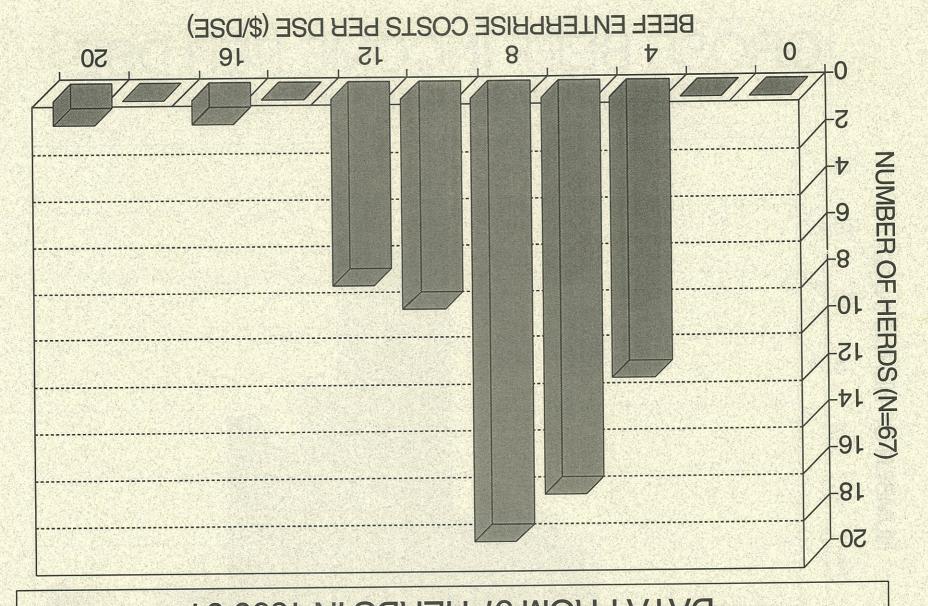
DATA FROM 108 HERDS IN 1991-92





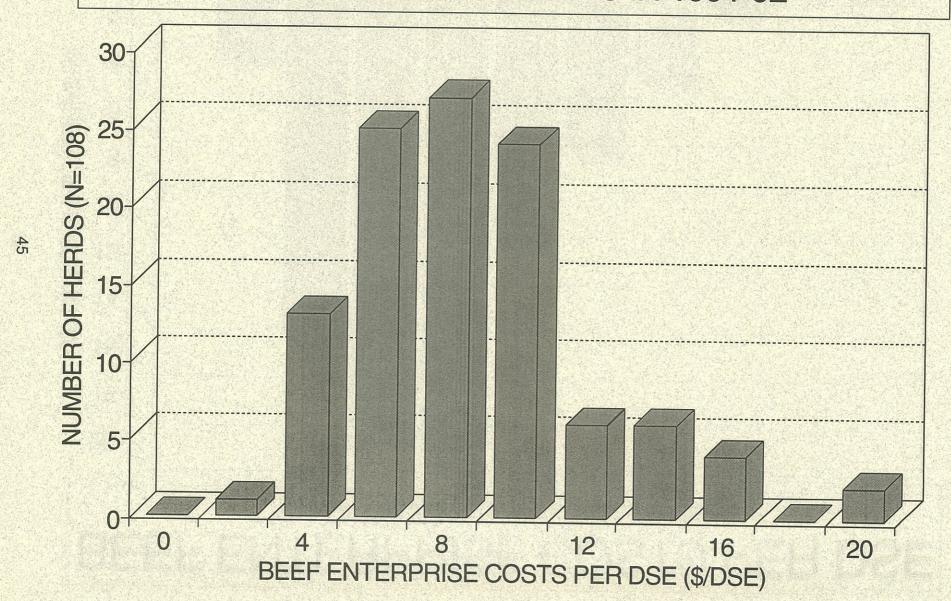


BEEF ENTERPRISE COSTS PER DSE Re-0661 NI 1990-91

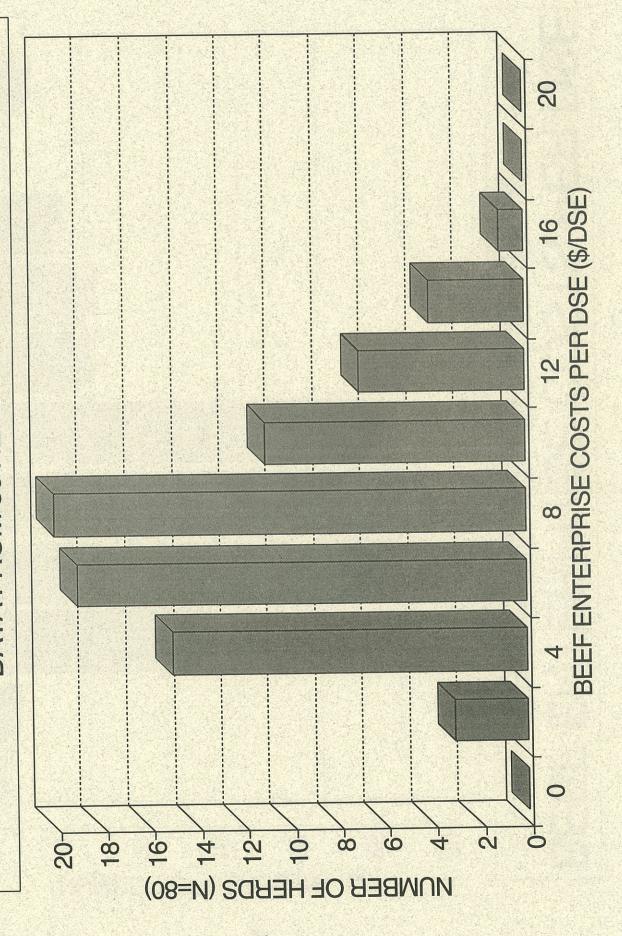


BEEF ENTERPRISE COSTS PER DSE

DATA FROM 108 HERDS IN 1991-92

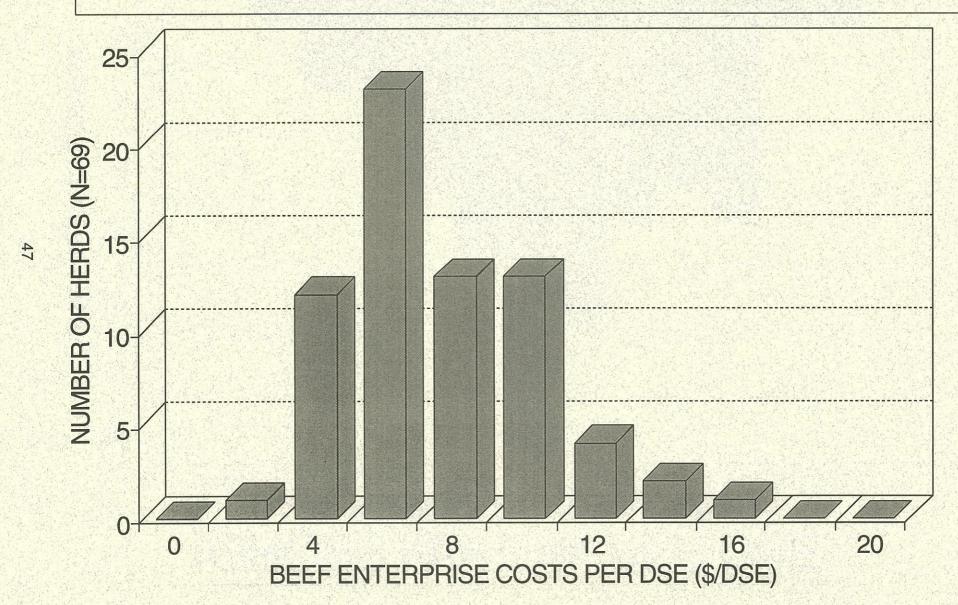


EEF ENTERPRISE COSTS PER DSE DATA FROM 80 HERDS IN 1992-93

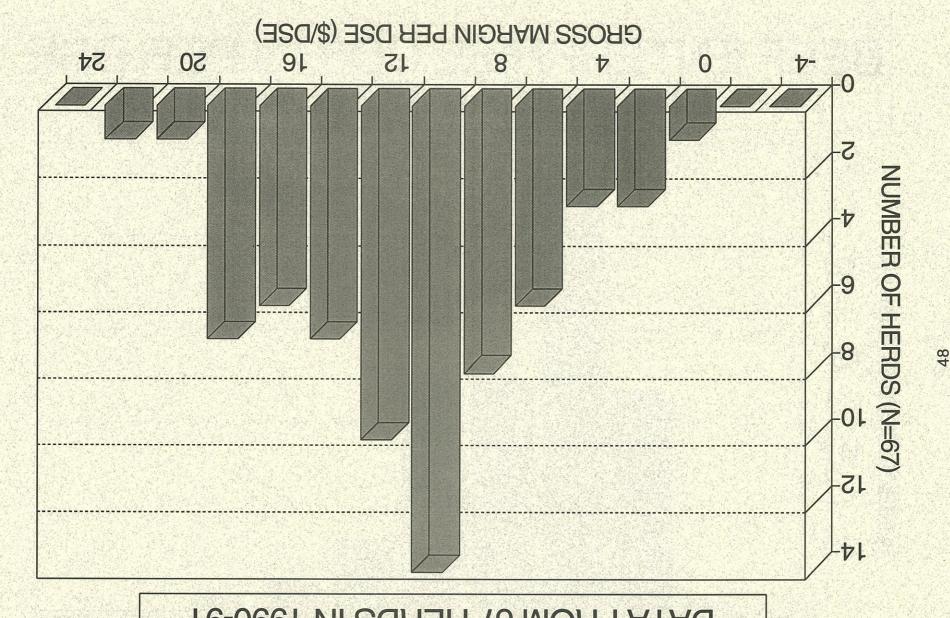


BEEF ENTERPRISE COSTS PER DSE

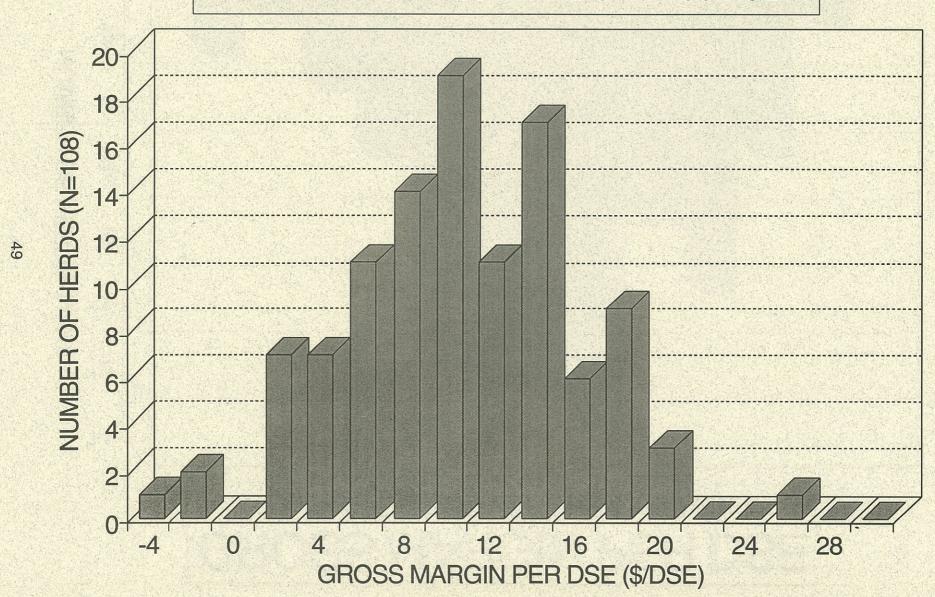
DATA FROM 69 HERDS IN 1993-94



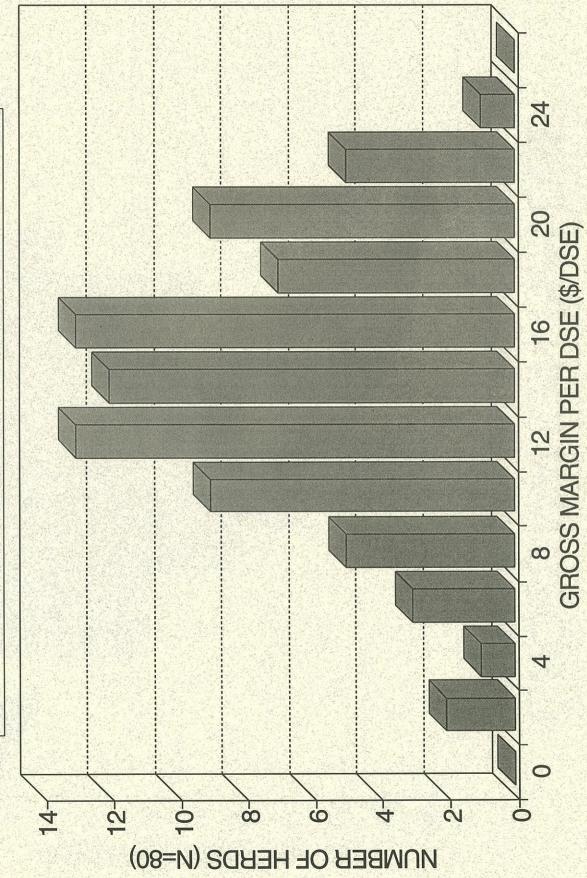
GROSS MARGIN PER DSF 16-0661 NI 2017 ATA TAOM 67 HERDS IN 1990-91



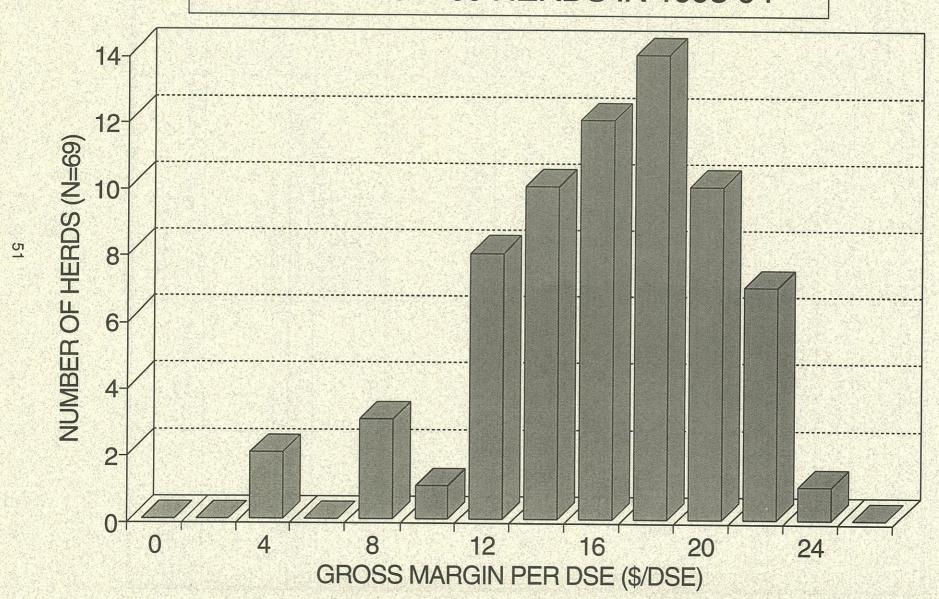
GROSS MARGIN PER DSE DATA FROM 108 HERDS IN 1991-92



GROSS MARGIN PER DSE DATA FROM 80 HERDS IN 1992-93



GROSS MARGIN PER DSE DATA FROM 69 HERDS IN 1993-94



APPENDIX 3. <u>LIST OF BEEF MANAGER TRAINING ACTIVITIES</u>

Date	Location	Subject / Publication			Staff Attending	
26-27 July 1990	Bendigo Vic	Nutrition.	Proceedings of the 1990 Beef Industry Conf.	VIC NSW SA	15 7 5	
24 October 1990	Melbourne Vic	Operation of Beef Manager in Victoria.	Beef Manager Program	VIC	10	
5-7 December 1990	Bordertown SA	Marketing, Production, Breeding, Herd Health, Financial Records, Consultancies.	Various papers.	VIC NSW SA	9 4 11	
19-20 March 1991	Bendigo Vic	Pasture management Comparative Analysis Beef-n-Omics Program.		VIC SA NSW TAS	10 5 1 1	
28 August 1991	PVI Hamilton Vic	Reproductive Management Herd Record Keeping.	Cow Cond. Fertility of Beef Herds	VIC SA NSW	15 3 2	
10-11 October 1991	Leongatha Vic	Gross Margin Analysis, Herd Record Keeping, Integrated Resource Management, Implementation of Beef Manager Program in Victoria. Launch Beef Manager Program.	Exploring Beef Breeding Efficiency. Beef Manager Manual and Diary.	VIC WA	12 1	
11 March 1992	Ballarat, Vic	Beef-n-Omics Herd Model Farm Facts Neil Clark National Australia Bank Farm productivity and Cash Flow Analysis	12 copies of Vic 14 enhanced BeefnOmics Program			
20-23 July 1992	Ballarat, Vic	Herd health programs with MSD-AgVet Gross Margin Analysis	Plans to run Vic 11 activities with MSD-AgVet			
16-17 March 1993	Bendigo, Vic	Mid-term review for staff & leaders of Groups	Report of Beef Manager Review	이 보고 있다면 하는데 이번 하는데 하는데 되었다면 되었다면 하는데 하는데 하는데 하는데 이 경우를 받았다.		
16 June 1993	Melbourne, Vic	Project Team Meeting Whole Farm Analysis Group Activities Key Success Factors Future of the Beef Manager Program	Vic 15 NSW 1			
8-9 November 93	Warragul, Vic	Pasture Management for Grass Fed Beef		Vic 15		
11-12 April 1994	Ballarat, Vic	Beef Manager Conference	Proceedings. Report, Shaping the future of the Beef Manager Program Tas dept. 2 Agribus. 13 MRC 2		. 14 3 . 2	
4-6 July 1994 6-8 September 1994 2-4 November 1994	Warrenmang Vineyard, Moonambel Vic	Training in Group Management and Leadership Skills . Led by Mr Kevin Balm.	Workshop notes	Workshop notes Farmers 16 Vic dept. 6 SA dept. 1 Tas dept. 1 MRC 1		