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ABARE is a professionally independent government economic research agency.

ABARE project 3352

Contents

Executive summary

Meat and Livestock Australia (MLA) needs to track performance and adoption indicators to evaluate the effectiveness of a host of research and development activities. One invaluable method of obtaining detailed information on producers' awareness and adoption of new practices is to conduct regular surveys. In 2008 ABARE was commissioned to undertake a survey of beef and sheep meat producers to gain insights into their adoption of a range of practices including:

- awareness of production costs
- pasture and grazing management
- farm management and planning
- livestock production, finishing and marketing.

ABARE's survey was conducted in the second half of 2008 and targeted producers with more than 300 sheep or more than 300 beef cattle. Specific questions, mostly associated with farm practices during 2007-08, were asked of 184 specialist sheep producers, 316 specialist beef cattle producers and 521 mixed enterprise producers. Producers in northern Australia were asked a slightly different set of questions to those asked of producers in southern Australia to gain insights into the different management practices used in these distinct production systems.

The detailed findings of the ABARE survey are presented in a series of tables attached to this report. Some of the key comparisons indicate that since 2005-06, when a similar survey was conducted by ABARE, there has been:

- an increase in the proportion of producers who calculate production costs for their livestock
- an increase in the proportion of producers who use estimated breeding values (EBVs) or index values in sire selection or purchase
- an increase in the proportion of sheep specialists who more regularly calculate forage or pasture budgets to manage stocking rates
- a decrease in the proportion of producers who have a documented farm plan
- no significant change in the proportion of producers that regularly weigh their livestock to assess weight gain.

In 2007-08, there were also significant differences between the top one-third of producers ranked by rate of return to capital invested and the bottom one-third of producers in their use of a range of management practices and technologies. In particular, top performing farm businesses were more likely to:

- use on-going consultancies for farm management and planning
- use EBVs or index values in sire selection or purchase
- calculate production costs for their livestock
- have documented farm plans
- pregnancy test cows annually, in southern Australia
- manage first calf heifers separate to the main herd, in southern Australia
- calculate production costs in dollars per kilogram, in southern Australia
- routinely cull breeders that don't become pregnant or raise a calf, in northern Australia.

1 Introduction

To evaluate the adoption of research and to gauge producers' awareness of new practices, Meat and Livestock Australia (MLA) need detailed information about sheep and beef cattle producers' adoption of new management practices. In 2008 MLA commissioned ABARE to conduct a survey of beef and sheep meat producers' adoption of a range of farm and livestock management practices. This survey was conducted as part of ABARE's annual Australian Agricultural and Grazing Industries Survey (AAGIS).

This report contains detailed analysis of the results from the survey and presents a comparison between the 2007-08 survey and the previous management practices survey conducted by ABARE in 2005-06. Where the questions in these two surveys were deemed comparable, the results have been summarised for sheep and beef cattle producers, and statistical differences (at the 95 per cent confidence level) have been indicated in bold.

In this report, results are presented for different enterprise and size groups. The size groups are based on profitability as defined by rate of return excluding capital appreciation (box 1).

2 2008 ABARE survey

Target population

ABARE surveys are designed and samples selected on the basis of a framework drawn from the Business Register maintained by the Australian Bureau of Statistics (ABS). This framework includes agricultural establishments in each statistical local area classified by size and major industry.

The estimates published in this report cover establishments with an estimated value of agricultural operations of $40 000 or more. A farm business's value of agricultural operations is a measure of the total value of all agricultural products in a financial year, whether it has been sold during the year or added to on-farm inventories or, in the case of livestock, retained to boost the farms future production capacity. The formal definition of the estimated value of agricultural operations is given in Australian Standard Industrial Classification (ABS 1983, cat. no. 1201.0).

To be eligible for this supplementary survey, a broadacre producer had to have more than 300 head of beef cattle or more than 300 head of sheep. In 2007-08, it is estimated that there were 36 489 broadacre farms that met this criterion, and ABARE surveyed 1021 of those farms (table 1). The 2005-06 survey targeted broadacre producers with more than 50 beef cattle or more than 200 sheep. However, only farms that met the 2007-08 specifications of more than 300 beef cattle or 300 sheep are included in the 2005-06 results discussed in this report.

1 Target population and sample surveyed, 2007-08

		New South Wales	Victoria	Queensland	South Australia	Western Australia	Tasmania	Northern Territory	Australia
Sheep producers									
Population	no.	2 406	2 561	218	1 401	1 359	330	0	8 275
Sample	no.	48	48	10	30	26	22	0	184
Beef cattle producers									
Population	no.	1 810	997	3 494	301	502	126	162	7 393
Sample	no.	53	16	179	11	20	7	30	316
Sheep-beef producers									
Population	no.	8 236	3 627	967	3 447	4 320	223	0	20 820
Sample	no.	171	108	48	94	88	12	0	521
All farms									
Population	no.	12 452	7 186	4 679	5 150	6 182	679	162	36 489
Sample	no.	272	172	237	135	134	41	30	1 021

During the 2000s, farms with fewer than 300 head of cattle accounted for almost 50 per cent of beef producing farms in northern Australian and around 70 per cent of farms in southern Australia (table 2). Overall, these producers accounted for around 17 per cent of the value of beef cattle produced during this period. By eliminating these producers from the analysis, the physical and financial performance estimates produced in this report are biased toward the larger pastoral companies.

2 Distribution of broadacre beef cattle farms, by number of cattle

at 30 June Average between 2001-02 and 2007-08

	number of farms	share of farms	share of beef cattle	share of value of cattle sales
	no.	%	%	%
Northern Australia				
Less than 100 head	2 628	24.5	1	2
100 - 300 head	2 666	24.9	4	4
300 - 800 head	2 173	20.3	9	9
800 - 1600 head	1 447	13.5	13	13
1600 - 5400 head	1 395	13.0	31	30
More than 5400 head	398	3.7	42	41
Total	10 707	100	100	100
Southern Australia				
Less than 100 head	10 166	33.3	6	6
100 - 300 head	11 486	37.6	23	20
300 - 800 head	6 807	22.3	36	32
800 - 1600 head	1 520	5.0	18	15
1600 - 5400 head	516	1.7	14	13
More than 5400 head	39	0.1	4	14
Total	30 534	100	100	100
Australia				
Less than 100 head	12 794	31.0	3	4
100 - 300 head	14 151	34.3	12	13
300 - 800 head	8 981	21.8	20	21
800 - 1600 head	2 967	7.2	15	14
1600 - 5400 head	1 911	4.6	24	21
More than 5400 head	437	1.1	27	27
Total	41 241	100	100	100

Definition of industries

ABARE's survey targets producers selected from the following Australian and New Zealand Standard Industrial Classifications (ANZSIC). These are:

- 121 – wheat and other crop specialists
- 122 – mixed enterprise cropping and livestock producers
- 123 – mixed sheep-beef producers
- 124 – sheep specialists
- 125 – beef cattle specialists

Information on ANZSIC and the farming activities included in each of these industries is provided in Australian and New Zealand Standard Industrial Classification (ABS 1993, cat. no. 1292.0).

For the purposes of this report, a sheep producing farm is one with an ANZSIC of 124 and having more than 300 head of sheep. A beef cattle producing farm is one with an ANZSIC classification of 125 and having more than 300 head of beef cattle.

A mixed livestock enterprise is one classified in either ANZSIC 121, 122 or 123 and having more than 300 head of cattle or 300 head of sheep, respectively. These producers operate a more diversified farm enterprise, generating income from a mix of cropping, sheep and/or beef cattle.

Results for specialist beef cattle and mixed enterprise producers have been presented for northern and southern Australia. Northern Australia has been defined to include Queensland, the Northern Territory and the Kimberley and Pilbara regions of Western Australia. All other regions have been included in southern Australia.

box 1 **Major financial performance indicators**

Total cash receipts: total revenues received by the business during the financial year.

Total cash costs: payments made by the business for materials and services and for permanent and casual hired labour (excluding owner manager, partner and family labour).

Farm cash income: *total cash receipts – total cash costs*

Farm business profit: *farm cash income + changes in trading stocks – depreciation – imputed labour costs*

Profit at full equity: return produced by all the resources used in the business.
farm business profit + rent + interest + finance lease payments – depreciation on leased items

Rate of return: return to all capital used $\frac{\textit{profit at full equity}}{\textit{total opening capital}} \times 100$

3 Changes since 2005-06 – survey results

Sheep specialists

In 2007-08, the average sheep specialists' farm was around 6000 hectares and had a sheep flock of almost 3000 head (table 3). The sale of sheep and lambs accounted for 33 per cent of farm cash receipts and the sale of wool accounted for 32 per cent. On average, farm cash income was $38 262 and return on capital, excluding capital appreciation, was -0.2 per cent. In 2007-08, those farms that earned the higher rates of return in the sheep industry ran more sheep and generated significantly more revenue (table 3).

The range of management practices adopted by sheep producers as recorded in 2007-08 appears to reflect the growing trend in the past decade to produce more prime lambs. For example, substantially more sheep producers routinely undertook pregnancy scans of their ewes and more regularly calculated a forage or pasture budget for their stock. With respect to pasture and grazing management, a greater proportion of sheep producers in 2007-08 routinely assessed the digestibility of feed and used formal measurement techniques to assess the pasture available to ewes at lambing, compared with 2005-06.

Also possibly associated with the growing emphasis on prime lamb production was a greater use of estimated breeding values (EBVs) or index values in sire selection or purchase in 2007-08. Almost half of the top performing sheep producers (with respect to rate of return excluding capital appreciation) used EBVs or index values in sire selection or purchase, compared with just 28 per cent of the bottom group of sheep producers. Similarly, drench resistance tests were conducted by a higher proportion of top performing sheep producers compared with their industry counterparts.

The 2007-08 survey revealed that just 20 per cent of sheep producers calculated production costs for their livestock on a dollar per kilogram basis, although 75 per cent of sheep producers calculated production costs on any basis, compared with 42 per cent in 2005-06. The large increase in the proportion of farms calculating their cost of production may reflect the inclusion of producers using informal as well as formal methods of calculation. The top performing sheep producers were more likely to calculate production costs than the bottom performing group in 2007-08. Calculating costs in dollars per head was the preferred method on average (56 per cent of producers) followed by dollars per hectare (34 per cent).

Between the two surveys there was a change in producers' reported grazing management practices. For example, in 2007-08 the most common practice was rotational grazing, while in 2005-06 stock movement was predominantly based on prevailing circumstances. In 2007-08, the top one-third of producers with respect to rate of return to capital were more likely to move livestock based on prevailing circumstances, while the bottom one-third were more likely to graze their stock on a rotational basis. Time controlled grazing gained in popularity, rising from less than 1 per cent of producers in 2005-06 to 5 per cent in 2007-08.

Operators of the top performing farms were more likely to seek specialist advice on an ongoing consultancy basis, while operators of farms in the bottom one-third were more likely to have received advice once only.

For those farms that had developed a farm management plan there were notable differences in the content of their plan. For example, the plans of the bottom performing farms were more likely to incorporate information about the types of land and carrying capacity in each paddock and to have a weed management plan than their better performing counterparts.

Beef and mixed enterprise producers in northern Australia

Specialist beef cattle producers in northern Australia typically operate very large properties, averaging more than 50 000 hectares and running, on average, almost 3000 head of cattle (table 4). On average, producers generated the majority of cash receipts from the sale of cattle in 2007-08. Average farm cash receipts for northern beef producers in 2007-08 was $881 418, significantly higher than in 2005-06, and the average return on capital (excluding capital appreciation) was 1.3 per cent. When the northern beef producers are ranked according to rate of return, it is apparent that larger herd size is associated with better financial performance. However, this relationship is not as apparent between area operated and rate of return, as the bottom one-third of producers includes a small number of very large farms with relatively low beef cattle stocking rates (possibly as a result of these properties having been de-stocked in recent years because of drought).

Relative to the specialist producers, mixed enterprise producers in northern Australia operate highly diversified but smaller farms (table 5). On average, in 2007-08 northern mixed enterprise producers operated around 17 000 hectares, ran 835 head of beef cattle and 2637 head of sheep, and had almost 800 hectares sown to crops. On average, receipts from the sale of grain and hay crops accounted for almost half of the mixed enterprise producers' farm cash receipts in 2007-08. The sale of beef cattle generated around 27 per cent of total cash receipts, while the sale of sheep and lambs accounted for just 4 per cent.

There was considerable variability in financial performance among mixed enterprise farms in northern Australia. While most producers recorded positive cash flows during the financial year, on average only the top one-third of farms recorded positive farm business profits (table 5). Debt levels more than doubled from 2005-06 to average $1.3 million dollars a farm in 2007-08.

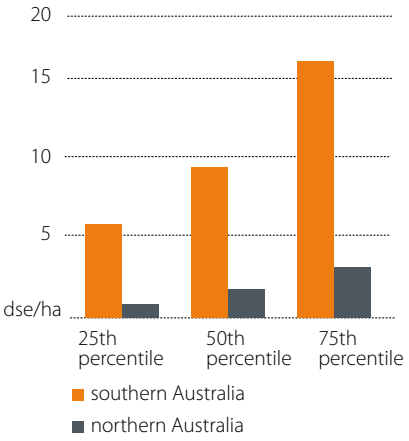
The survey suggests significant changes in farm and livestock management practices for specialist producers in 2007-08 compared with 2005-06. For example, more producers calculated production costs for their cattle and there was an increase in the proportion of northern beef specialists who perceived their ability to change their management practices to reduce costs as very high.

There was also a greater awareness and use of a number of livestock production management practices. For example, a higher proportion of specialist producers in 2007-08 included semen

A note on stocking rates

Farms with large areas of operation, which are mainly in the pastoral zone, are highly influential in the calculation of average stocking rates, either on a per hectare basis or on a per farm basis (tables 4 and 6). The majority of farms in southern Australia have markedly higher stocking rates than their northern counterparts (figure a).

a Distribution of stocking rate for beef specialists, 2007-08



The 25th percentile shows 25 per cent of the population have an estimate less than that value. Similarly, the 75th percentile shows that 25 per cent of the population have an estimate greater than that value. The 50th percentile, also known as the median, is the middle of the distribution, with half of the population having an estimate lower than that value and half above.

morphology in the Bull Breeding Soundness Examination (BBSE) before mating and before purchase of bulls.

On average, the 2007-08 results indicated that calves are kept in the yard after weaning for fewer days than was observed in the 2005-06 survey.

There has been a significant reduction in the proportion of producers who never calculated forage or pasture budgets and more producers routinely assessed the digestibility of their available feed (table 4). However, the survey indicates that fewer beef cattle specialists were aware of and used the ABCD land condition assessment framework (a framework that classes all pastoral lands into one of four classes based on the proportion of its forage production potential that is being realised) compared with the 2005-06 survey. In 2007-08, fewer producers used controlled burns to manage their woody weeds and on those farms where burning took place, less area was burned in 2007-08 compared with 2005-06.

While on average the survey recorded fewer producers who sought specialist advice in 2007-08 compared with 2005-06, those producers seeking advice were mainly in the top performing group. The top one-third of specialist producers was also more likely to have a documented farm plan. Among those specialist farms that did have a farm plan, the bottom performing farms were more likely to have included a weed management plan than their industry counterparts.

The survey results indicate that adoption of some practices was higher among specialist producers than among mixed enterprise farmers. Specifically, a greater proportion of specialist producers routinely assessed the digestibility of available feed, set pasture utilisation targets and calculated production costs for their cattle. However, among the mixed enterprise producers, the top performing group was more likely to calculate the costs of cattle production than their industry counterparts. The higher adoption among specialists is not

surprising given that specialists would stand to benefit most from any improvements made to the management of their beef cattle enterprise and that mixed enterprise producers potentially have conflicting land management issues between their various enterprises.

Weighing livestock to monitor weight gain was more common among mixed enterprise producers in the top performing group, although on average, there was no significant improvement in this practice between the two surveys.

Beef and mixed enterprise producers in southern Australia

On average, specialist beef cattle producers in southern Australia operated almost 18 000 hectares and had 923 head of beef cattle at 30 June 2008 (table 6). The average farm cash income for specialist beef cattle producers in southern Australia was $20 975 in 2007-08, and they received an average rate of return of 0.3 per cent on farm capital, excluding capital appreciation. Specialist beef cattle producers with the highest rates of return generated more revenue and had larger beef cattle herds, but not necessarily larger farm areas. While producers in the middle one-third of producers operated the smallest farms, on average they ran more sheep and generated significantly more income from sheep and lamb sales.

In contrast, mixed enterprise producers in southern Australia typically operate relatively small but diversified farms (table 7). The average farm size was almost 3000 hectares in 2007-08 with 850 hectares sown to crops and an estimated 2594 head of sheep and 163 head of cattle. Almost half of the farm cash receipts generated in 2007-08 came from the sales of grain and hay, reflecting the relatively large amount of land sown to crops. Sales of beef cattle and sheep and lambs accounted for a further 11 per cent and 16 per cent of revenues, respectively. Sales of wool were the only other major source of revenue, accounting for 12 per cent of farm cash receipts.

In 2007-08, improved farm financial performance was associated with a general increase in farm size and a greater focus on cropping activities, with the top one-third of mixed enterprise producers recording significantly more revenue from the sale of grain than their industry counterparts. The top performing producers had larger cash margins, generating a receipts to costs ratio of 1.5 in 2007-08 (or $1.50 in receipts per dollar of costs), compared with 1.04 and 0.77 for the middle one-third and bottom one-third of producers, respectively (table 7).

The 2007-08 survey suggests there has been an increase in the adoption of some pasture and grazing management, and farm management and planning practices (table 6). For example, in 2007-08 the proportion of beef specialists who calculate production costs for their cattle increased significantly from 2005-06. Similarly, among the mixed enterprise producers, calculating the costs of production for their sheep and lambs was more common in 2007-08, compared with 2005-06, with dollars per head being the preferred method.

Between the two surveys, there were some key improvements in the adoption of livestock production management practices. For example, the assessment of cattle using fat or

condition scoring was a practice adopted by around one-half of beef specialists in southern Australia, regardless of how well they performed based on rate of return, excluding capital appreciation. Top performing producers had a slightly higher calf weaning percentage and were more likely to pregnancy test their cows annually, compared with their industry counterparts. In addition, there appeared to be an increase in the proportion of southern producers who use estimated breeding values or indices for sire selection, particularly among mixed enterprise producers.

A greater proportion of mixed enterprise producers calculated a forage or pasture budget for their stock on a weekly or monthly basis in 2007-08 than in 2005-06. There also was a corresponding large fall in the proportion of producers who never calculated a forage or pasture budget. However, among the southern specialist producers, there was no significant change in the frequency with which they calculated forage or pasture budgets between the two surveys.

The 2007-08 results indicate a drop in the proportion of producers who sought specialist advice, although the top performing farms in southern Australia were more likely to do so than the remaining producers.

For those southern producers with a documented farm plan in 2007-08, 70 per cent included a weed management strategy, and this was more likely to be incorporated in the plans of the better performing farms. This result is in contrast to the northern producers.

4 Survey methodology

Survey design and sample weighting

ABARE's survey sample is selected to provide data that are representative of the broadacre industries. This is done by ensuring the sample is drawn from different size classes, based on the farm's estimated value of agricultural operations (EVAO), within each industry within the broadacre sector. That is, the population is stratified by industry first, then each stratum is stratified by operation size using EVAO. The sample allocation to each stratum is done using a mixture of Neyman allocation, which takes into account the variability within strata of the auxiliary variable, in this case EVAO, and proportional allocation, which considers the population in each stratum. Neyman allocation allocates large proportions of sample to strata with large variability.

The ABARE estimates presented in this report are calculated by weighting the data collected from each sample farm and then using these data to calculate population estimates. Generally, larger farms have small weights and smaller farms have larger weights, reflecting the strategy of sampling a higher fraction of the large farms than small farms (the former having a wider range of variability of key characteristics).

Reliability of estimates

Sampling errors

Only a small number of farms out of the total number of farms in a particular industry are surveyed. The data collected from each sample farm are weighted to calculate population estimates. Estimates derived from these farms are likely to be different from those that would have been obtained if information had been collected from a census of all farms. Any such differences are called 'sampling errors'.

The size of the sampling error is most influenced by the survey design and the estimation procedures, as well as the sample size and the variability of farms in the population. The larger the sample size, the lower the sampling error is likely to be. Hence, sub-industry estimates are likely to have greater sampling errors than industry estimates.

To give a guide to the reliability of the survey estimates, standard errors have been calculated for all estimates in this report. These estimated errors, expressed as percentages of the survey estimates and termed 'relative standard errors', are given next to each estimate inside parentheses.

Comparing estimates

When comparing estimates between two groups, it is important to recognise that some of the differences are subject to sampling error. As a rough rule of thumb, a conservative estimate of the standard error of the difference can be constructed by adding the squares of the estimated standard errors of the component estimates and taking the square root of the result. An example is given below.

The estimates of farm cash income are $133 747 for northern beef producers and $20 975 for southern beef producers — a difference of $112 772 — and the relative standard errors are given as 33 and 114 per cent, respectively. The standard error of the difference can be estimated as:

$$\sqrt{(33 \times \$133\,747/100)^2 + (114 \times \$20\,975/100)^2} = \$50\,198$$

A 95 per cent confidence interval for the difference is:

$$\$112\,772 \pm 1.96 * \$50\,198 = (\$14\,385, \$211\,159)$$

Hence, if 100 different samples are taken, in 95 of them, the difference between these two estimates is between $14 385 and $211 159. Also, since zero is not in this confidence interval, it is possible to say that the difference between the estimates is statistically significantly different from zero at the 95 per cent confidence level.

3 Summary of the key management practices, sheep producers

farms ranked by rate of return, excluding capital appreciation

		2007-08								2005-06 [a]	
		bottom third		middle third		top third		average		average	
Estimated population	no.	2 686		2 658		2 892		8 236		11 481	
Sample	no.	50		63		114		227		218	
Physical characteristics											
Total area operated at 30 June	ha	7 577	(21)	3 046	(31)	7 243	(51)	5 997	(24)	4 486	(37)
Sheep at 30 June	no.	1 650	(11)	2 576	(21)	4 539	(8)	2 963	(7)	2 926	(8)
Beef cattle at 30 June	no.	23	(22)	40	(110)	62	(16)	42	(35)	60	(16)
Total area cropped	ha	65	(55)	140	(39)	161	(10)	123	(18)	127	(16)
Percentage of farm area sown to improved perennial pasture	%	51	(6)	27	(18)	46	(31)	41	(14)	34	(12)
Financial characteristics											
Total cash receipts	$	133 299	(15)	242 355	(22)	411 072	(6)	**266 026**	**(8)**	200 616	(6)
Beef cattle sales	$	10 642	(88)	19 823	(67)	15 049	(17)	15 152	(35)	13 311	(15)
Crop sales	$	11 816	(57)	23 580	(103)	65 034	(14)	34 299	(25)	33 725	(21)
Sheep and lamb sales	$	46 471	(12)	90 428	(18)	122 208	(6)	87 250	(7)	71 065	(8)
Wool sales	$	50 149	(8)	66 745	(19)	136 640	(10)	**85 874**	**(8)**	59 595	(9)
Total cash costs	$	155 578	(14)	222 267	(25)	299 871	(7)	**227 765**	**(9)**	164 879	(8)
Farm cash income	$	–22 279	(47)	20 087	(75)	111 200	(11)	38 262	(19)	35 737	(20)
Farm business profit	$	–107 704	(13)	–68 015	(20)	47 368	(23)	–40 446	(18)	–25 613	(26)
Farm debt at 30 June [b]	$	218 494	(25)	394 201	(20)	380 835	(11)	**331 135**	**(10)**	230 117	(15)
Liquid assets (including FMDs) at 30 June	$	80 561	(38)	128 019	(44)	141 596	(20)	117 276	(20)	100 288	(18)
Rate of return											
– excl. capital appreciation	%	–4.2	(8)	–1.1	(17)	2.6	(9)	–0.2	(127)	–0.1	(141)
– incl. capital appreciation	%	–2.8	(37)	1.8	(89)	8.2	(12)	3.6	(20)	3.6	(46)
Return to farm business [c]											
– excl. capital appreciation	%	–5.6	(4)	–2.4	(21)	1.3	(21)	–1.5	(15)	–1.1	(23)
– incl. capital appreciation	%	–4.2	(24)	0.5	(382)	6.9	(14)	2.3	(32)	2.6	(62)
Equity ratio	%	89	(2)	86	(3)	90	(1)	88	(1)	90	(1)
Ability to change management practices to reduce costs											
Very low	%	5	(40)	12	(53)	4	(35)	7	(32)	5	(40)
Low	%	6	(70)	15	(39)	15	(33)	12	(24)	11	(42)
Some	%	43	(27)	22	(47)	30	(17)	32	(17)	26	(20)
High	%	33	(38)	40	(24)	36	(15)	36	(15)	49	(12)
Very high	%	13	(32)	12	(51)	15	(31)	14	(21)	9	(31)
Ability to improve management of the environment											
Very low	%	5	(40)	6	(62)	4	(39)	4.7	(29)	2	(100)
Low	%	6	(60)	13	(48)	11	(18)	10	(24)	7	(50)
Some	%	27	(20)	29	(36)	29	(22)	28	(15)	19	(24)
High	%	54	(9)	42	(18)	43	(14)	**46**	**(8)**	62	(10)
Very high	%	9	(47)	11	(53)	14	(33)	12	(25)	9	(26)

continued...

3 Summary of the key management practices, sheep producers

farms ranked by rate of return, excluding capital appreciation

		2007-08								2005-06 a	
		bottom third		middle third		top third		average		average	
Farm management and planning											
Sought specialist advice	%	18	(63)	37	(33)	20	(13)	25	(22)	31	(15)
– through ongoing consultancy	%	40	(112)	89	(10)	83	(13)	76	(15)	ns	–
– through one–time consultancy	%	60	(74)	11	(82)	17	(62)	24	(48)	ns	–
Have a documented farm plan	%	15	(31)	32	(28)	22	(22)	23	(16)	22	(21)
Increased the amount of land dedicated to shelterbelts in the past three years	%	34	(35)	39	(20)	43	(8)	39	(12)	52	(12
Property management plan includes											
Land types for each paddock	%	100	–	55	(35)	69	(14)	69	(13)	79	(13)
Carrying capacity for each paddock	%	100	–	50	(44)	53	(24)	61	(17)	50	(25)
Weed management plan	%	97	(6)	42	(25)	55	(24)	58	(11)	50	(28)
Livestock finishing and marketing											
Weigh livestock to monitor weight gain	%	42	(28)	37	(25)	47	(16)	42	(13)	29	(15)
Livestock production management											
Use EBVs or index values in sire selection or purchase	%	28	(24)	38	(24)	50	(11)	**39**	**(11)**	20	(24)
Use fat or condition scoring to assess sheep/lambs	%	66	(11)	63	(15)	63	(8)	64	(7)	53	(9)
Manage feed availability to ensure ewes are at minimum condition score 3 at joining	%	78	(9)	82	(7)	66	(7)	75	(4)	72	(7)
Routinely pregnancy scan ewes	%	25	(23)	44	(19)	33	(19)	**34**	**(12)**	17	(26)
Proportion of lambs born in 2007-08 that did not survive to marking	%	11	(24)	7	(17)	13	(21)	10	(13)	ns	
Lamb weaning percentage	%	64	(16)	75	(7)	76	(6)	72	(6)	78	(4)
Age at which lambs are castrated	months	1.9	(8)	1.9	(12)	1.8	(4)	1.8	(5)	1.7	(5)
Forage or pasture budget for stock calculated											
Weekly	%	30	(38)	40	(19)	23	(21)	31	(15)	25	(17)
Monthly	%	19	(62)	14	(28)	28	(13)	**20**	**(20)**	9	(35)
Quarterly or bi-annually	%	8	(58)	5	(139)	14	(28)	9	(32)	11	(36)
Annually	%	23	(24)	9	(70)	8	(16)	13	(21)	10	(28)
Never	%	20	(15)	33	(35)	28	(11)	**27**	**(14)**	46	(13)
Grazing management described as											
Set or fixed stocking rate	%	26	(23)	29	(32)	12	(29)	22	(17)	16	(24)
Rotational grazing, regular movement of stock	%	43	(13)	30	(31)	38	(17)	**37**	**(11)**	18	(20)
Time controlled grazing	%	1	(93)	7	(68)	6	(59)	**4.9**	**(43)**	1	(83)
Moves are based on prevailing circumstances	%	27	(21)	33	(30)	37	(17)	33	(13)	41	(15)
Other	%	3	(114)	0	(121)	7	(15)	**3.5**	**(33)**	25	(22)

continued...

3 Summary of the key management practices, sheep producers

farms ranked by rate of return, excluding capital appreciation *continued*

		2007-08								2005-06 a	
		bottom third		middle third		top third		average		average	
Pasture and grazing management											
Have a set pasture utilisation target when adjusting stocking rates	%	41	(28)	24	(29)	28	(14)	31	(15)	33	(16)
Routinely assess the digestibility of feed	%	75	(10)	62	(11)	74	(4)	**71**	**(5)**	34	(17)
Use formal measurement technique to assess pasture available to ewes at lambing	%	31	(35)	50	(20)	42	(17)	**41**	**(13)**	17	(24)
Production costs for sheep/lambs calculated in											
$/kg	%	12	(49)	28	(42)	23	(17)	21	(21)	ns	–
$/head	%	25	(22)	75	(13)	67	(6)	56	(7)	ns	–
$/ha	%	34	(35)	30	(33)	39	(12)	34	(15)	ns	–
Any of the above	%	53	(23)	84	(10)	86	(5)	**75**	**(7)**	42	(13)
Drench resistance awareness											
Conducted a drench resistance test in the past 5 years	%	25	(9)	21	(40)	42	(10)	30	(11)	32	(16)
Monitor worm egg counts when deciding when to drench	%	24	(20)	24	(34)	38	(15)	29	(12)	34	(15)

a The 2005-06 survey targeted broadacre farms with more than 50 beef cattle or 200 sheep, however, only farms that met the 2007-08 specifications of more than 300 beef cattle or 300 sheep are included in the 2005-06 results. **b** Restricted to farms that responded to debt questions in the survey. **c** Defined as the ratio of farm business profit to opening capital. **ns** Not supplied.

Note: Figures in parentheses (RSEs) are standard errors expressed as percentages of the estimates. To compare estimates within columns refer to notes in survey methods.

4 Summary of the key management practices, northern beef industry

farms ranked by rate of return, excluding capital appreciation

		2007-08				2005-06 a
		bottom third	middle third	top third	average	average
Estimated population	no.	1 214	1 187	1 315	3 715	5 888
Sample	no.	70	87	104	261	263
Physical characteristics						
Total area operated at 30 June	ha	49 637 (26)	29 977 (19)	70 055 (12)	50 581 (11)	36 001 (51)
Beef cattle at 30 June	no.	1 902 (33)	2 496 (10)	4 350 (8)	2 958 (8)	1 989 (38)
Beef cattle sold	no.	778 (33)	688 (13)	943 (13)	808 (12)	567 (16)
Sheep at 30 June	no.	85 (49)	160 (70)	212 (59)	154 (38)	37 (56)
Stocking rate at 30 June	dse/ha	0.5 (22)	1.0 (16)	0.7 (9)	0.7 (8)	0.7 (22)
Percentage of farm area sown to improved perennial pasture	%	45 (16)	41 (11)	30 (13)	38 (8)	29 (17)
Financial characteristics						
Total cash receipts	$	681 403 (29)	653 804 (11)	1 271 525 (14)	**881 418 (11)**	556 169 (14)
Beef cattle sales	$	462 606 (34)	490 243 (11)	716 659 (18)	561 340 (13)	434 735 (18)
Crop sales	$	2 798 (59)	10 796 (51)	36 635 (55)	17 328 (42)	5 125 (50)
Sheep and lamb sales	$	834 (59)	1 844 (76)	16 (77)	867 (55)	558 (55)
Total cash costs	$	600 561 (43)	525 285 (9)	1 084 228 (17)	**747 671 (14)**	394 192 (37)
Farm cash income	$	80 842 (127)	128 519 (27)	187 297 (39)	133 747 (33)	161 977 (47)
Farm business profit	$	– 339 723 (27)	– 16 989 (92)	426 419 (13)	34 510 (104)	60 843 (41)
Farm debt at 30 June b	$	633 112 (49)	1 213 042 (16)	1 857 130 (18)	1 257 859 (13)	552 088 (95)
Liquid assets (including FMDs) at 30 June	$	246 014 (137)	171 519 (25)	242 266 (44)	220 052 (52)	126 130 (25)
Rate of return						
- excl. capital appreciation	%	–3.9 (15)	0.7 (15)	5.1 (8)	1.3 (26)	1.9 (12)
– incl. capital appreciation	%	0.4 (410)	0.6 (161)	9.0 (16)	3.8 (21)	10.3 (41)
Return to farm business c						
– excl. capital appreciation	%	–4.6 (12)	–0.1 (92)	3.8 (13)	**0.3 (108)**	1.1 (18)
– incl. capital appreciation	%	–0.3 (579)	–0.3 (337)	7.6 (19)	2.8 (29)	9.5 (45)
Equity ratio	%	89 (4)	89 (1)	83 (3)	87 (2)	91 (7)
Ability to change management practices to reduce costs						
Very low	%	2 (179)	1 (119)	0 –	0.7 (133)	1 (101)
Low	%	2 (164)	1 (225)	10 (66)	4.5 (60)	7 (60)
Some	%	37 (25)	17 (33)	23 (26)	25 (16)	24 (19)
High	%	46 (21)	59 (15)	53 (14)	53 (9)	66 (9)
Very high	%	14 (50)	23 (38)	14 (33)	**17 (23)**	3 (45)
Ability to improve management of the environment						
Very low	%	1 (270)	1 (119)	0 (206)	1 (144)	0 –
Low	%	6 (8)	2 (73)	12 (60)	7 (39)	1 (134)
Some	%	36 (24)	19 (32)	13 (35)	22 (17)	18 (18)
High	%	47 (19)	58 (15)	66 (12)	**58 (8)**	75 (5)
Very high	%	9 (66)	21 (40)	10 (32)	13 (26)	7 (36)

continued...

4 Summary of the key management practices, northern beef industry

farms ranked by rate of return, excluding capital appreciation *continued*

		2007-08								2005-06 a	
		bottom third		middle third		top third		average		average	
Farm management and planning											
Sought specialist advice	%	22	(43)	24	(30)	29	(24)	25	(18)	38	(16)
– through ongoing consultancy	%	59	(24)	61	(25)	35	(35)	49	(16)	ns	-
– through one-time consultancy	%	41	(35)	39	(40)	65	(19)	51	(16)	ns	-
Increased the amount of land dedicated to shelterbelts in the past three years	%	18	(41)	16	(33)	13	(28)	15	(20)	13	(38)
Aware of ABCD land condition assessments d	%	12	(112)	18	(93)	20	(44)	18	(38)	32	(28)
ABCD framework has been used d	%	31	(81)	50	()	30	(101)	**35**	**(58)**	83	(6)
Use controlled burns to manage woody weeds	%	36	(14)	47	(15)	41	(14)	**41**	**(8)**	63	(8)
Proportion of farm area burned each year	%	14	(15)	18	(13)	16	(12)	**16**	**(8)**	22	(9)
Have a documented farm plan	%	17	(63)	22	(31)	36	(21)	26	(19)	32	(16)
Property management plan includes											
Land types for each paddock	%	58	(43)	74	(14)	69	(13)	68	(11)	81	(7)
Carrying capacity for each paddock	%	93	(12)	62	(23)	77	(12)	76	(9)	88	(5)
Weed management plan	%	95	(7)	69	(17)	56	(25)	67	(12)	65	(21)
Livestock finishing and marketing											
Weigh livestock to monitor weight gain	%	32	(23)	47	(16)	35	(16)	38	(10)	49	(10)
Livestock production management											
Use EBVs or index values in sire selection or purchase	%	32	(23)	47	(16)	35	(16)	38	(10)	49	(10)
Use controlled joining season	%	40	(19)	47	(18)	44	(16)	**44**	**(10)**	27	(17)
Joining percentage (bulls to cows)	%	35	(22)	58	(15)	46	(12)	**47**	**(9)**	64	(8)
Underwent a bull breeding soundness examination (BBSE) before mating	%	3	(11)	3	(3)	3	(2)	**3.1**	**(3)**	6	(20)
BBSE included semen morphology before mating	%	12	(44)	26	(24)	31	(21)	**24**	**(15)**	11	(24)
Purchased bulls in the last 3 years	%	80	(23)	76	(12)	52	(29)	65	(13)	76	(17)
Underwent a bull breeding soundness examination (BBSE) before purchase	%	73	(14)	95	(6)	84	(8)	85	(5)	92	(3)
BBSE included semen morphology before purchase	%	86	(15)	85	(5)	83	(5)	**84**	**(5)**	66	(8)
Routinely cull breeders that don't fall pregnant or fail to raise a calf	%	75	(14)	86	(5)	77	(10)	80	(5)	91	(5)
Criteria used for culling breeders		80	(13)	84	(10)	96	(2)	87	(5)	88	(5)
– Temperament	%	81	(12)	98	()	95	(2)	92	(3)	84	(6)
– Conformation	%	77	(15)	84	(10)	87	(5)	83	(6)	77	(7)
– Other criteria for culling breeders	%	27	(28)	30	(22)	28	(24)	28	(14)	0	–
Number of days calves are kept in the yards after weaning	no.	8	(17)	8	(9)	7	(9)	**8**	**(7)**	12	(10)
Vaccinate against tick fever	%	27	(33)	34	(19)	10	(31)	**22**	**(16)**	37	(18)
Vaccinate against botulism	%	35	(23)	36	(15)	57	(13)	44	(9)	41	(11)

continued...

4 Summary of the key management practices, northern beef industry

farms ranked by rate of return, excluding capital appreciation *continued*

		2007-08								2005-06 a	
		bottom third		middle third		top third		average		average	
Vaccinate against three-day sickness	%	18	(42)	30	(21)	13	(35)	20	(18)	25	(20)
– annually	%	100	()	87	(8)	90	(11)	91	(5)	85	(16)
– in high risk years	%	0	–	13	(56)	0	–	6	(56)	14	(94)
Forage or pasture budget for stock calculated											
Weekly	%	5	(84)	37	(16)	11	(43)	18	(17)	26	(21)
Monthly	%	25	(35)	19	(29)	33	(23)	**26**	**(16)**	11	(43)
Quarterly or bi-annually	%	46	(20)	8	(85)	41	(18)	**32**	**(14)**	16	(34)
Annually	%	6	(56)	15	(54)	4	(43)	8	(36)	9	(30)
Never	%	17	(29)	21	(22)	11	(32)	**16**	**(15)**	38	(14)
Pasture and grazing management											
Have a set pasture utilisation target when adjusting stocking rates	%	66	(14)	53	(14)	76	(7)	66	(6)	53	(11)
Outinely assess the digestibility of feed	%	85	(5)	86	(5)	88	(4)	**87**	**(3)**	74	(7)
Proportion of property spelled every wet season	%	17	(20)	17	(16)	20	(15)	18	(10)	21	(10)
Production costs for cattle calculated in											
$/kg	%	25	(38)	20	(38)	33	(21)	27	(17)	ns	–
$/head	%	73	(14)	64	(13)	72	(9)	70	(7)	ns	–
$/ha	%	25	(23)	7	(56)	36	(20)	24	(15)	ns	–
Any of the above	%	92	(4)	76	(12)	90	(4)	**86**	**(4)**	50	(12)
Ease with which forage quality and quantity can be matched to animal requirements											
Very high ease	%	12	(45)	30	(21)	16	(28)	**20**	**(16)**	52	(12)
High ease	%	38	(30)	53	(15)	51	(13)	48	(10)	34	(18)
Some ease	%	23	(20)	12	(41)	15	(40)	16	(19)	11	(30)
Low ease	%	16	(49)	3	(66)	13	(50)	**11**	**(32)**	0	(98)
Very low ease	%	1	(87)	2	()	2	(88)	1.3	(46)	1	(64)
Ease with which cost effective supplementation strategies can be developed to address nutritional deficiencies											
Very high ease	%	23	(27)	27	(25)	20	(29)	**23**	**(15)**	53	(12)
High ease	%	34	(26)	56	(15)	53	(15)	49	(10)	35	(17)
Some ease	%	28	(18)	13	(43)	24	(27)	**22**	**(16)**	7	(43)
Low ease	%	11	(76)	2	(76)	1	(77)	3.9	(60)	1	(69)
Very low ease	%	1	(87)	2	()	0	(206)	0.8	(42)	2	(61)

a The 2005-06 survey targeted broadacre farms with more than 50 beef cattle or 200 sheep, however, only farms that met the 2007-08 specifications of more than 300 beef cattle or 300 sheep are included in the 2005-06 results. **b** Restricted to farms that responded to debt questions in the survey. **c** Defined as the ratio of farm business profit to opening capital. **d** Farms in pastoral zone. **ns** Not supplied.

Note: Figures in parentheses (RSEs) are standard errors expressed as percentages of the estimates. To compare estimates within columns refer to notes in survey methods.

5 Summary of the key management practices, northern mixed enterprise producers

farms ranked by rate of return, excluding capital appreciation

		2007-08				2005-06 a
		bottom third	middle third	top third	average	average
Estimated population	no.	308	311	348	967	1 755
Sample	no.	15	19	22	56	84
Physical characteristics						
Total area operated at 30 June	ha	10 534 (19)	20 916 (52)	19 371 (18)	17 057 (22)	14 913 (9)
Beef cattle at 30 June	no.	380 (35)	860 (31)	1 214 (15)	835 (14)	662 (15)
Beef cattle sold	no.	124 (39)	322 (33)	330 (9)	262 (15)	261 (14)
Sheep at 30 June	no.	2 066 (28)	2 017 (20)	3 693 (21)	2 637 (14)	2 032 (12)
Total area cropped	ha	605 (23)	737 (21)	991 (25)	**787 (14)**	478 (13)
Percentage of farm area sown to improved perennial pasture	%	25 (24)	116 (86)	32 (11)	53 (52)	15 (26)
Financial characteristics						
Total cash receipts	$	298 335 (29)	671 909 (12)	1 074 973 (15)	**698 354 (10)**	452 025 (9)
Beef cattle sales	$	72 838 (45)	222 442 (41)	267 887 (10)	191 239 (17)	205 201 (17)
Crop sales	$	124 003 (40)	297 588 (9)	535 566 (27)	**328 144 (17)**	127 130 (17)
Sheep and lamb sales	$	13 583 (32)	34 273 (37)	31 923 (48)	26 846 (26)	28 109 (17)
Wool sales	$	35 979 (22)	46 628 (23)	111 937 (27)	**66 777 (17)**	39 371 (15)
Total cash costs	$	513 096 (38)	665 165 (15)	756 663 (13)	**649 775 (12)**	339 996 (9)
Farm cash income	$	– 214 761 (59)	6 744 (558)	318 310 (25)	48 579 (104)	112 029 (15)
Farm business profit	$	– 280 396 (46)	– 122 852 (36)	279 026 (21)	–28 128 (172)	– 35 393 (45)
Farm debt at 30 June b	$	1 154 866 (63)	1 527 061 (33)	1 234 694 (18)	**1303 322 (23)**	634 995 (12)
Liquid assets (including FMDs) at 30 June	$	60 381 (33)	84 853 (67)	179 016 (36)	111 063 (28)	79 234 (28)
Rate of return						
– excl. capital appreciation	%	–3.4 (26)	0.2 (71)	4.4 (13)	1.1 (38)	0.4 (95)
– incl. capital appreciation	%	–6.0 (60)	–0.5 (944)	5.2 (39)	**0.6 (377)**	8.8 (22)
Return to farm business c						
– excl. capital appreciation	%	–5.1 (30)	–1.3 (34)	3.2 (18)	–0.4 (168)	–0.8 (51)
– incl. capital appreciation	%	–7.7 (57)	–2.0 (226)	4.1 (48)	**–0.8 (274)**	7.6 (25)
Equity ratio	%	79 (12)	85 (5)	86 (3)	84 (4)	87 (2)
Ability to change management practices to reduce costs						
Very low	%	0 –	0 –	0 –	0 –	0 (177)
Low	%	0 –	7 ()	0 –	2.0 ()	7 (57)
Some	%	8 (143)	16 (58)	25 (54)	17 (42)	18 (32)
High	%	86 (15)	42 (44)	63 (23)	65 (13)	67 (11)
Very high	%	6 (91)	35 (51)	12 (59)	16 (36)	8 (57)
Ability to improve management of the environment						
Very low	%	0 –	0 –	0 –	0 –	ns –
Low	%	8 (143)	0 –	0 –	3 (143)	ns –
Some	%	0 –	23 (41)	40 (27)	22 (23)	17 (27)
High	%	86 (15)	42 (43)	45 (16)	58 (12)	75 (7)
Very high	%	6 (91)	35 (51)	16 (74)	17 (39)	8 (54)
Farm management and planning						
Sought specialist advice	%	33 (46)	35 (51)	45 (28)	38 (22)	42 (21)
– through ongoing consultancy	%	41 (61)	ns –	56 (25)	63 (15)	ns –
– through one–time consultancy	%	59 (43)	ns –	45 (31)	37 (26)	ns –

continued...

5 Summary of the key management practices, northern mixed enterprise producers

farms ranked by rate of return, excluding capital appreciation *continued*

		2007-08				2005-06 [a]
		bottom third	middle third	top third	average	average
Increased the amount of land dedicated to shelterbelts in the past three years	%	10 (53)	15 (54)	16 (35)	14 (26)	20 (39)
Aware of ABCD land condition assessments [d]	%	ns –	ns –	0 –	7 ()	7 (119)
ABCD framework has been used [d]	%	ns –	– –	– –	ns –	ns –
Use controlled burns to manage woody weeds	%	15 (96)	0 –	12 (36)	**10 (53)**	26 (22)
Proportion of farm area burned each year	%	ns –	– –	ns –	12 (5)	13 (33)
Have a documented farm plan	%	20 (46)	54 (19)	32 (44)	34 (20)	27 (25)
Property management plan includes						
Land types for each paddock	%	ns –	83 (20)	59 (5)	72 (15)	69 (21)
Carrying capacity for each paddock	%	ns –	81 (22)	70 (18)	75 (15)	93 (8)
Weed management plan	%	ns –	20 (90)	59 (5)	**45 (24)**	73 (12)
Livestock finishing and marketing						
Weigh livestock to monitor weight gain	%	27 (57)	43 (43)	60 (22)	44 (20)	48 (15)
Livestock production management						
Use EBVs or index values in sire selection or purchase	%	24 (49)	19 (57)	39 (36)	29 (26)	41 (18)
Use controlled joining season	%	26 (58)	34 (31)	45 (32)	35 (23)	39 (20)
Joining percentage (bulls to cows)	%	3 (29)	3 (5)	2 (9)	3.0 (12)	4 (19)
Underwent a Bull Breeding Soundness Examination (BBSE) before mating	%	30 (51)	10 (41)	19 (64)	20 (35)	11 (42)
BBSE included semen morphology before mating	%	82 (30)	ns –	ns –	67 (31)	84 (20)
Purchased bulls in the last 3 years	%	43 (32)	50 (12)	81 (9)	60 (9)	60 (12)
Underwent a Bull Breeding Soundness Examination (BBSE) before purchase	%	96 (4)	93 (8)	72 (14)	83 (7)	78 (10)
BBSE included semen morphology before purchase	%	100 ()	61 (34)	78 (24)	80 (13)	90 (5)
Routinely cull breeders that don't fall pregnant or fail to raise a calf	%	43 (32)	35 (32)	78 (9)	**55 (11)**	78 (8)
Criteria used for culling breeders						
– temperament	%	43 (32)	51 (8)	84 (7)	61 (9)	58 (12)
– conformation	%	37 (34)	51 (8)	84 (7)	59 (8)	55 (12)
– other criteria for culling breeders	%	24 (21)	9 (97)	11 (61)	15 (26)	0 –
Number of days calves are kept in the yards after weaning	no.	3.1 (28)	5.4 (28)	6.1 (15)	**4.9 (13)**	8.1 (11)
Vaccinate against tick fever	%	9 (84)	12 (56)	23 (31)	15 (28)	8 (40)
Vaccinate against botulism	%	19 (76)	12 (40)	12 (46)	14 (38)	12 (29)
Vaccinate against three–day sickness	%	8 (56)	10 (41)	21 (28)	14 (22)	14 (41)
– annually	%	ns –	ns –	58 ()	56 ()	68 (29)
– in high risk years	%	ns –	ns –	14 (149)	28 (45)	33 (60)

continued...

5 Summary of the key management practices, northern mixed enterprise producers

farms ranked by rate of return, excluding capital appreciation *continued*

		2007-08				2005-06 a
		bottom third	middle third	top third	average	average
Forage or pasture budget for stock calculated						
Weekly	%	6 (91)	44 (20)	15 (54)	20 (22)	28 (23)
Monthly	%	26 (79)	7 (107)	43 (31)	27 (32)	21 (36)
Quarterly or bi-annually	%	54 (37)	18 (32)	15 (41)	**29 (25)**	8 (39)
Annually	%	0 –	0 –	4 (119)	1.6 (119)	8 (51)
Never	%	14 (49)	31 (33)	24 (57)	23 (29)	35 (20)
Pasture and grazing management						
Have a set pasture utilisation target when adjusting stocking rates	%	60 (38)	49 (38)	65 (17)	59 (17)	53 (12)
Routinely assess the digestibility of feed	%	72 (31)	78 (19)	88 (12)	80 (12)	70 (10)
Proportion of property spelled every wet season	%	6 (13)	9 (41)	22 (29)	13 (21)	15 (21)
Production costs for sheep/lambs calculated in						
$/kg	%	41 (58)	11 (91)	16 (35)	23 (38)	ns –
$/head	%	62 (36)	44 (42)	28 (49)	44 (24)	ns –
$/ha	%	15 (63)	11 (91)	11 (41)	12 (37)	ns –
Any of the above	%	62 (36)	44 (42)	37 (36)	47 (22)	26 (29)
Production costs for cattle calculated in						
$/kg	%	28 (57)	30 (34)	29 (31)	29 (24)	ns –
$/head	%	35 (37)	38 (27)	65 (20)	48 (16)	ns –
$/ha	%	23 (65)	12 (89)	21 (33)	19 (34)	ns –
Any of the above	%	40 (35)	51 (8)	72 (17)	56 (12)	38 (20)
Ease with which forage quality and quantity can be matched to animal requirements						
Very high ease	%	6 (91)	20 (48)	30 (45)	**19 (32)**	39 (18)
High ease	%	38 (33)	32 (33)	52 (26)	42 (17)	34 (19)
Some ease	%	4 (106)	0 –	4 (94)	2.6 (70)	9 (51)
Low ease	%	0 –	0 –	4 (78)	2 (78)	0 –
Very low ease	%	0 –	0 –	0 –	0 –	0 –
Ease with which cost effective supplementation strategies can be developed to address nutritional deficiencies						
Very high ease	%	6 (91)	20 (48)	36 (41)	**22 (31)**	43 (16)
High ease	%	34 (38)	32 (33)	47 (33)	39 (21)	29 (20)
Some ease	%	8 (62)	0 –	7 (64)	5 (45)	9 (52)
Low ease	%	0 –	0 –	0 –	0 –	0 –
Very low ease	%	0 –	0 –	0 –	0 –	0 –

a The 2005-06 survey targeted broadacre farms with more than 50 beef cattle or 200 sheep, however, only farms that met the 2007-08 specifications of more than 300 beef cattle or 300 sheep are included in the 2005-06 results. **b** Restricted to farms that responded to debt questions in the survey. **c** Defined as the ratio of farm business profit to opening capital. **d** Farms in pastoral zone. **ns** Not supplied.

Note: Figures in parentheses (RSEs) are standard errors expressed as percentages of the estimates. To compare estimates within columns refer to notes in survey methods.

6 Summary of the key management practices, southern beef industry

farms ranked by rate of return, excluding capital appreciation

		2007-08				2005-06 [a]
		bottom third	middle third	top third	average	average
Estimated population	no.	1 217	1 227	1 284	3 728	6 389
Sample	no.	31	35	53	119	117
Physical characteristics						
Total area operated at 30 June	ha	36 969 (30)	1 079 (23)	15 545 (84)	17 780 (32)	6 399 (65)
Beef cattle at 30 June	no.	668 (29)	778 (12)	1 305 (23)	**923 (14)**	617 (12)
Beef cattle sold	no.	411 (39)	461 (21)	481 (108)	452 (42)	315 (42)
Sheep at 30 June	no.	214 (59)	340 (36)	248 (63)	267 (30)	204 (38)
Total area cropped	ha	195 (54)	61 (25)	142 (57)	132 (33)	52 (137)
Stocking rate at 30 June	dse/ha	0.2 (40)	9.1 (17)	1.0 (77)	0.6 (32)	1.1 (61)
Percentage of farm area sown to improved perennial pasture	%	36 (20)	54 (13)	57 (6)	49 (8)	55 (24)
Financial characteristics						
Total cash receipts	$	332 301 (41)	387 843 (18)	479 441 (115)	401 248 (49)	284 386 (89)
Beef cattle sales	$	238 755 (52)	327 629 (19)	359 230 (150)	309 489 (62)	245 724 (63)
Crop sales	$	31 622 (70)	6 230 (70)	26 667 (110)	21 559 (58)	12 981 (47)
Sheep and lamb sales	$	2 452 (46)	24 027 (28)	4 723 (52)	10 334 (23)	7 183 (126)
Wool sales	$	7 526 (62)	2 706 (44)	8 001 (65)	6 104 (39)	2 981 (51)
Total cash costs	$	399 628 (49)	378 508 (19)	363 606 (149)	380 273 (52)	229 673 (106)
Farm cash income	$	– 67 328 (99)	9 335 (212)	115 836 (19)	20 975 (114)	54 712 (32)
Farm business profit	$	– 174 412 (18)	– 50 305 (22)	113 631 (17)	–34 380 (37)	– 12 200 (149)
Farm debt at 30 June [b]	$	415 093 (47)	350 927 (20)	582 815 (67)	450 374 (33)	210 045 (67)
Liquid assets (including FMDs) at 30 June	$	179 964 (45)	120 827 (41)	199 263 (33)	166 576 (23)	205 734 (56)
Rate of return						
– excl. capital appreciation	%	–2.8 (16)	0.0 (327)	2.5 (10)	0.3 (106)	0.3 (195)
– incl. capital appreciation	%	–4.4 (38)	2.7 (60)	2.1 (39)	0.7 (135)	11.4 (57)
Return to farm business [c]						
– excl. capital appreciation	%	–3.8 (11)	–0.7 (28)	1.7 (30)	–0.6 (38)	–0.4 (145)
– incl. capital appreciation	%	–5.3 (31)	2.0 (81)	1.3 (48)	–0.1 (763)	10.7 (61)
Equity ratio	%	91 (3)	95 (1)	91 (4)	92 (2)	94 (4)
Ability to change management practices to reduce costs						
Very low	%	6 (75)	10 (70)	9 (55)	**8 (39)**	0 –
Low	%	4 (120)	5 (78)	3 (89)	4.0 (58)	1 (135)
Some	%	29 (56)	43 (26)	34 (24)	35 (20)	48 (16)
High	%	53 (34)	35 (36)	41 (15)	43 (18)	28 (23)
Very high	%	8 (50)	9 (50)	14 (32)	**10 (24)**	23 (24)
Ability to improve management of the environment						
Very low	%	3 (115)	9 (74)	5 (70)	6 (50)	1 (162)
Low	%	10 (53)	16 (15)	6 (67)	**11 (21)**	1 (110)
Some	%	16 (26)	27 (37)	34 (23)	25 (18)	29 (23)
High	%	60 (12)	39 (17)	40 (16)	46 (9)	44 (13)
Very high	%	11 (42)	9 (50)	16 (32)	**12 (23)**	26 (23)
Farm management and planning						
Sought specialist advice during 2007-08	%	8 (65)	14 (56)	21 (32)	**14 (27)**	44 (16)
– ongoing consultancy	%	ns –	86 (15)	72 (18)	82 (9)	ns –
– one–time consultancy	%	ns –	15 (91)	28 (48)	18 (43)	ns –

continued...

6 Summary of the key management practices, southern beef industry

farms ranked by rate of return, excluding capital appreciation *continued*

		2007-08 bottom third		2007-08 middle third		2007-08 top third		2007-08 average		2005-06 [a] average	
Increased the amount of land dedicated to shelterbelts in the past three years	%	11	(37)	63	(11)	38	(20)	38	(10)	39	(19)
Have a documented farm plan	%	25	(72)	26	(31)	31	(23)	27	(26)	15	(29)
Property management plan includes											
Land types for each paddock	%	57	(40)	50	(26)	66	(10)	58	(15)	51	(20)
Carrying capacity for each paddock	%	62	(37)	68	(17)	62	(20)	64	(14)	47	(23)
Weed management plan	%	58	(28)	70	(21)	80	(17)	70	(12)	47	(20)
Livestock finishing and marketing											
Weigh livestock to monitor weight gain	%	41	(40)	57	(9)	48	(19)	49	(13)	50	(16)
Livestock production management											
Use EBVs or index values in sire selection or purchase	%	20	(46)	37	(33)	50	(19)	35	(17)	30	(22)
Use fat or condition scoring to assess cattle	%	51	(12)	51	(24)	47	(13)	**50**	**(10)**	33	(21)
Pregnancy test cows annually	%	37	(29)	44	(19)	59	(14)	46	(12)	47	(17)
Manage first calf heifers separate from the main breeding herd	%	45	(29)	78	(7)	77	(11)	67	(8)	76	(7)
Calf weaning percentage	%	81	(9)	80	(4)	84	(3)	82	(4)	83	(8)
Age at which bull calves are castrated	months	1.9	(26)	2.3	(7)	2.4	(15)	2.2	(10)	3.0	(17)
Forage or pasture budget for stock calculated											
Weekly	%	6	(83)	32	(32)	20	(29)	19	(23)	24	(21)
Monthly	%	11	(46)	12	(42)	15	(28)	13	(22)	16	(37)
Quarterly or bi-annually	%	25	(70)	21	(21)	12	(47)	20	(32)	16	(35)
Annually	%	26	(66)	5	(64)	6	(67)	13	(48)	4	(66)
Never	%	32	(27)	30	(30)	47	(16)	36	(14)	40	(18)
Pasture and grazing management											
Have a set pasture utilisation target when adjusting stocking rates	%	48	(18)	40	(29)	37	(20)	42	(13)	33	(20)
Routinely assess the digestibility of feed	%	66	(25)	72	(11)	58	(15)	66	(10)	49	(16)
Production costs for cattle calculated in											
$/kg	%	2	(97)	18	(25)	20	(31)	13	(19)	ns	–
$/head	%	35	(58)	39	(21)	36	(28)	36	(22)	ns	–
$/ha	%	21	(50)	21	(48)	38	(26)	26	(22)	ns	–
Any of the above	%	50	(36)	58	(12)	68	(16)	**58**	**(13)**	34	(21)
Main factor considered in choosing when to wean calves											
Cow condition	%	4	(249)	7	(86)	13	(39)	8	(51)	9	(58)
Pasture condition	%	12	(50)	5	(67)	24	(37)	13	(27)	11	(37)
Time of year	%	23	(15)	23	(28)	34	(32)	27	(16)	28	(28)
Weight of calf	%	27	(69)	35	(36)	13	(44)	25	(31)	10	(32)
Chance of breeder calving again next year	%	1	(106)	11	(84)	0	–	4.4	(77)	6	(44)
Other	%	33	(48)	18	(38)	15	(50)	23	(28)	37	(23)
Cattle are dehorned											
Yes	%	44	(24)	49	(26)	39	(26)	44	(15)	44	(16)
No	%	5	(42)	14	(54)	21	(38)	13	(28)	7	(30)
Not applicable (animals are polled)	%	51	(20)	37	(29)	40	(18)	43	(13)	49	(15)

a The 2005-06 survey targeted broadacre farms with more than 50 beef cattle or 200 sheep, however, only farms that met the 2007-08 specifications of more than 300 beef cattle or 300 sheep are included in the 2005-06 results. **b** Restricted to farms that responded to debt questions in the survey. **c** Defined as the ratio of farm business profit to opening capital. **ns** Not supplied.

Note: Figures in parentheses (RSEs) are standard errors expressed as percentages of the estimates. To compare estimates within columns refer to notes in survey methods.

7 Summary of the key management practices, southern mixed enterprise producers

farms ranked by rate of return, excluding capital appreciation

		2007-08				2005-06 a
		bottom third	middle third	top third	average	average
Estimated population	no.	6 513	6 541	6 788	19 842	21 786
Sample	no.	140	202	232	574	566
Physical characteristics						
Total area operated at 30 June	ha	2 854 (19)	1 999 (7)	4 029 (16)	2 974 (10)	2 411 (24)
Beef cattle at 30 June	no.	60 (25)	206 (9)	221 (12)	163 (7)	159 (11)
Beef cattle sold	no.	38 (50)	100 (10)	116 (15)	85 (11)	74 (13)
Sheep at 30 June	no.	1 525 (8)	2 512 (5)	3 699 (7)	**2 594** **(4)**	2 272 (4)
Total area cropped	ha	702 (8)	647 (6)	1 187 (7)	**850** **(4)**	638 (5)
Percentage of farm area sown to improved perennial pasture	%	19 (18)	35 (7)	27 (9)	27 (6)	26 (8)
Financial characteristics						
Total cash receipts	$	254 229 (13)	393 760 (4)	940 159 (5)	**534 890** **(4)**	423 578 (5)
Beef cattle sales	$	26 861 (66)	65 214 (10)	82 367 (15)	58 493 (13)	51 429 (13)
Crop sales	$	85 332 (15)	137 153 (8)	550 899 (8)	261 691 (6)	225 807 (7)
Sheep and lamb sales	$	59 423 (19)	82 186 (8)	112 651 (10)	**85 136** **(7)**	63 757 (4)
Wool sales	$	39 776 (8)	63 122 (6)	96 243 (10)	**66 790** **(5)**	46 109 (5)
Total cash costs	$	331 390 (16)	378 418 (6)	627 361 (7)	**448 148** **(5)**	333 939 (5)
Farm cash income	$	– 77 161 (30)	15 342 (74)	312 799 (8)	86 742 (14)	89 638 (12)
Farm business profit	$	– 194 101 (13)	– 79 995 (13)	224 546 (9)	–13 262 (86)	7 330 (107)
Farm debt at 30 June b	$	488 226 (15)	721 957 (14)	943 335 (14)	**719 321** **(8)**	411 050 (7)
Liquid assets (including FMDs) at 30 June	$	109 544 (14)	145 605 (16)	209 949 (11)	155 538 (8)	144 676 (10)
Rate of return						
– excl. capital appreciation	%	–5.1 (9)	–0.2 (33)	5.5 (7)	1.3 (18)	1.3 (17)
– incl. capital appreciation	%	–2.5 (52)	–0.2 (442)	8.5 (10)	**3.1** **(18)**	5.3 (12)
Return to farm business c						
– excl. capital appreciation	%	–6.8 (9)	–1.6 (10)	3.9 (9)	–0.3 (86)	0.2 (106)
– incl. capital appreciation	%	–4.2 (32)	–1.5 (62)	6.9 (13)	**1.6** **(38)**	4.2 (16)
Equity ratio	%	83 (2)	86 (2)	84 (2)	**84** **(1)**	88 (1)
Ability to change management practices to reduce costs						
Very low	%	11 (25)	9 (41)	5 (32)	**8** **(19)**	1 (48)
Low	%	12 (26)	12 (21)	9 (33)	**11** **(15)**	5 (21)
Some	%	30 (17)	37 (12)	28 (15)	31 (8)	36 (8)
High	%	25 (22)	29 (13)	50 (8)	**36** **(7)**	50 (6)
Very high	%	23 (21)	14 (24)	9 (24)	**15** **(13)**	9 (23)
Ability to improve management of the environment						
Very low	%	10 (28)	5 (44)	7 (29)	**7** **(18)**	1 (71)
Low	%	9 (31)	9 (43)	4 (38)	**7** **(23)**	2 (40)
Some	%	32 (15)	41 (14)	30 (13)	34 (8)	30 (9)
High	%	27 (19)	30 (14)	51 (8)	**37** **(7)**	58 (5)
Very high	%	22 (21)	15 (21)	8 (24)	15 (13)	10 (21)

continued...

7 Summary of the key management practices, southern mixed enterprise producers

farms ranked by rate of return, excluding capital appreciation *continued*

		2007-08								2005-06 a	
		bottom third		middle third		top third		average		average	
Farm management and planning											
Sought specialist advice during 2007-08	%	20	(27)	33	(13)	47	(9)	**34**	**(8)**	63	(5)
– Ongoing consultancy	%	73	(20)	89	(6)	87	(5)	85	(4)	ns	–
– One–time consultancy	%	27	(55)	11	(53)	13	(31)	15	(26)	ns	–
Increased the amount of land Dedicated to shelterbelts in the past three years	%	33	(19)	43	(12)	39	(10)	38	(8)	37	(8)
Have a documented farm plan	%	18	(25)	26	(17)	37	(11)	27	(9)	24	(11)
Property management plan includes											
Land types for each paddock	%	54	(27)	61	(16)	74	(7)	66	(7)	64	(7)
Carrying capacity for each paddock	%	46	(30)	64	(17)	46	(12)	51	(10)	42	(15)
Weed management plan	%	61	(24)	63	(17)	72	(8)	67	(8)	69	(7)
Livestock finishing and marketing											
Weigh livestock to monitor weight gain	%	26	(16)	43	(11)	31	(13)	33	(7)	33	(9)
Livestock production management											
Use EBVs or index values in sire selection or purchase	%	27	(18)	45	(12)	38	(10)	**37**	**(7)**	30	(8)
Use fat or condition scoring to assess cattle	%	4	(59)	14	(21)	8	(21)	**9**	**(15)**	15	(12)
Pregnancy test cows annually	%	4	(57)	18	(17)	11	(20)	**11**	**(13)**	20	(9)
Manage first calf heifers separate from the main breeding herd	%	3	(63)	22	(15)	15	(16)	**13**	**(11)**	25	(9)
Calf weaning percentage	%	29	(14)	42	(9)	27	(9)	**33**	**(6)**	46	(11)
Age at which bull calves are castrated	%	0	(63)	1	(16)	1	(20)	**0.5**	**(14)**	1	(10)
Forage or pasture budget for stock calculated											
Weekly	%	49	(11)	29	(17)	30	(11)	**35**	**(7)**	24	(12)
Monthly	%	10	(27)	19	(25)	19	(19)	**16**	**(14)**	9	(19)
Quarterly or bi-annually	%	10	(38)	14	(25)	13	(23)	**12**	**(16)**	6	(23)
Annually	%	10	(31)	7	(39)	11	(22)	9	(17)	10	(15)
Never	%	22	(21)	33	(12)	27	(13)	**27**	**(8)**	52	(7)
Pasture and grazing management											
Have a set pasture utilisation target when adjusting stocking rates	%	22	(21)	32	(14)	38	(11)	31	(8)	27	(10)
Routinely assess the digestibility of feed	%	70	(7)	67	(6)	67	(6)	**68**	**(4)**	45	(7)
Production costs for sheep/lambs calculated in											
$/kg	%	25	(21)	24	(12)	22	(16)	24	(10)	ns	–
$/head	%	72	(7)	64	(6)	58	(8)	64	(4)	ns	–
$/ha	%	12	(28)	25	(16)	34	(12)	24	(9)	ns	–
Any of the above	%	80	(5)	75	(5)	74	(5)	**76**	**(3)**	45	(7)

continued...

7 Summary of the key management practices, southern mixed enterprise producers

farms ranked by rate of return, excluding capital appreciation *continued*

		2007-08								2005-06 a	
		bottom third		middle third		top third		average		average	
Production costs for cattle calculated in											
$/kg	%	2	(67)	10	(20)	9	(21)	7	(15)	ns	–
$/head	%	5	(48)	14	(25)	13	(14)	11	(14)	ns	–
$/ha	%	1	(105)	8	(21)	7	(29)	6	(18)	ns	–
Any of the above	%	5	(48)	18	(20)	17	(13)	**14**	**(12)**	24	(11)
Main factor considered in choosing when to wean calves											
Cow condition	%	1	(130)	2	(53)	4	(32)	2.4	(28)	4	(25)
Pasture condition	%	0	(147)	7	(26)	5	(34)	3.8	(21)	6	(25)
Time of year	%	0	(174)	9	(28)	6	(26)	**5**	**(19)**	10	(21)
Weight of calf	%	2	(105)	3	(75)	2	(42)	2.3	(42)	5	(22)
Chance of breeder calving again next year	%	2	(56)	2	(68)	0	–	1.0	(45)	2	(42)
Other	%	96	(2)	78	(4)	83	(3)	**85**	**(2)**	73	(4)
Cattle are dehorned											
Yes	%	1	(39)	9	(24)	9	(22)	**6**	**(16)**	14	(12)
No	%	0	(174)	2	(52)	6	(30)	2.9	(26)	4	(30)
Not applicable (Animals are polled)	%	99	(1)	89	(3)	86	(3)	**91**	**(1)**	81	(3)

a The 2005-06 survey targeted broadacre farms with more than 50 beef cattle or 200 sheep, however, only farms that met the 2007-08 specifications of more than 300 beef cattle or 300 sheep are included in the 2005-06 results. **b** Restricted to farms that responded to debt questions in the survey. **c** Defined as the ratio of farm business profit to opening capital. **ns** Not supplied.

Note: Figures in parentheses (RSEs) are standard errors expressed as percentages of the estimates. To compare estimates within columns refer to notes in survey methods.

appendix A Management practices supplementary survey

1 Beef Cattle Closing

2 Sheep Closing

3 Beef Zone

4 Given a return to normal seasonal conditions, over the next 5 years how would you rate your level of knowledge, skills and/or confidence to:

5 Change your management practices to reduce the costs of production of your livestock enterprises

very low *low* *some* *high* *very high*

6 Improve the management of the environment on your farm

very low *low* *some* *high* *very high*

7 In the last 12 months, have you paid for the services of a farm consultant on any aspect of the management of the farm business (other than speaking with your accountant)?

yes *no*

8 Was this an ongoing consultancy or a one-time consultancy?

continuing *one-time*

9 Do you have a documented property management plan?

yes *no*

10 Does your property management plan include:

11 Land types for each paddock?

yes *no*

12 Carrying capacity for each paddock?

yes *no*

13 A weed management plan?

yes *no*

14 Do you weigh your livestock to monitor weight gain? (this does not include simply weighing livestock immediately prior to sale)

yes *no*

15 Do you use Estimated Breeding Values (EBVs) or Index values in sire selection or purchase? eg the EBVs contained in Lambplan or Beefplan

yes *no*

16 At the 30th of June 2008, what percentage of your farm area was sown to improved perennial pasture?

17 On average, how often do you calculate a forage or pasture budget for your stock?
weekly *monthly* *quarterly or bi-annually* *annually* *never*

18 How would you best describe your grazing management?

set or fixed stocking rate

rotational grazing, regular movement of stock

time controlled grazing

moves are based on prevailing circumstances

other

19 When adjusting your stocking rate numbers, do you have a set pasture utilisation target?
yes *no*

20 Do you routinely assess the digestibility of feed available to your livestock? (includes visual assessment and / or feed testing)
yes *no*

21 In the past three years have you increased the percentage of your property that has shelterbelts for the protection of livestock?
yes *no*

22 Do you calculate your cost of production for sheep / lambs in –

23 $/kg
yes *no*

24 $/head
yes *no*

25 $/ha
yes *no*

26 Do you assess your sheep / lambs using fat or condition scoring?
yes *no*

27 Do you manage the feed available to your ewes to ensure they are at a minimum condition score at joining? eg. condition score 3
yes *no*

28 Do you routinely do pregnancy scanning of your ewes?
yes *no*

29 What proportion of lambs born in 2007-08 did not survive to marking? (%)

30 What was your lamb weaning percentage in 2007-08 (lambs weaned to ewes mated)? (%)

31 Do you use a formal measurement technique to assess the amount of pasture available to your ewes at lambing? (inc. trained visual assessment techniques)

yes *no*

32 Have you conducted a drench resistance test in the past 5 years?

yes *no*

33 Do you monitor worm egg counts when deciding when to drench?

yes *no*

34 At what age do you normally castrate your lambs? (months)

35 Do you calculate your cost of production for cattle in -

36 $/kg

yes *no*

37 $/head

yes *no*

38 $/ha

yes *no*

39 Do you assess your cattle using fat or condition scoring?

yes *no*

40 Do you pregnancy test your cows annually?

yes *no*

41 Do you manage your first calf heifers separate from the main breeding herd?

yes *no*

42 What was your calf weaning percentage in 2007-08 (calves weaned to cows mated)? (%)

43 Given normal seasonal conditions, what is the main factor you consider in choosing when to wean your calves?

cow condition
pasture condition
time of year
weight of calf
chance of breeder calving again next year
other (specify)

44 Do you dehorn your cattle?

yes *no*

45 At what age do you normally castrate your bull calves?

46 Are you aware of the ABCD land condition assessment framework?

yes *no*

47 Do you use it?

yes *no*

48 With how much ease are you able to assess and match forage quality and quantity to animal requirements?

very high *high* *some* *low* *very low*

49 With how much ease are you able to develop cost effective supplementation strategies to address nutritional deficiencies?

very high *high* *some* *low* *very low*

50 On average, what percentage of your property is spelled every wet season?

51 Do you use controlled burns to manage woody weeds?

yes *no*

52 On average, what percentage of your property do you burn each year?

53 Do you use a controlled joining season?

yes *no*

54 What is the joining percentage (bulls to cows)?

55 What percentage of your bulls undergo an annual Bull Breeding Soundness Examination (BBSE) before mating?

56 Does this include assessment of semen morphology?

yes *no*

57 Have you purchased any bulls in the past 3 years?

yes *no*

58 What percentage of the bulls that you bought underwent a Bull Breeding Soundness Examination (BBSE) before purchase?

59 Does this include assessment of semen morphology?

yes *no*

60 Do you routinely cull breeders that don't fall pregnant or fail to raise a calf?

yes *no*

61 Other than age and failure to fall pregnant or failure to raise a calf, what other criteria do you use for culling breeders?

62 Temperament

yes *no*

63 Conformation

yes *no*

64 Other (specify)

yes *no*

65 How long do you keep your calves in the yards following weaning? (number of days)

66 Do you vaccinate for any of the following?

67 tick fever

yes *no*

68 botulism

yes *no*

69 three-day sickness

yes *no*

70 Do you vaccinate annually or only in high risk years?

yes *no*