MEAT & LIVESTOCK
AUSTRALIA

On farm

Smart Manager

Project number: NAP3.107

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People

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ABSTRACT

Smart Manager was a benchmarking project that aimed to improve the sustainability, productivity and profitability of North Queensland beef herds. The project formed 32 producer groups involving 182 properties and 262 graziers.

The project identified grazier's actual herd performance rather than their perceived performance. The main profit drivers for individual herds were identified and improved. Graziers evaluated both improved management practices and optimal whole property management systems. Many of these practices and systems have been successfully adopted.

Examples of improvement due to Smart Manager were record keeping, supplementation, early weaning, marketing and business management.

An independent evaluation of this project identified substantial financial benefits from the Smart Manager process.

The incorporation of MLA's Grazing Land Management package with Smart Manager groups has been identified as a mechanism for improving both land condition and profitability. This concept will be further evaluated within MLA's Northern Beef Program.

EXECUTIVE SUMMARY

Objectives

The Smart Manager project evolved from the MLA funded Local Best Practice (LBP) project that documented current practice and quantified the financial benefits associated with improved management options. While LBP looked at district average information Smart Manager went to the next step of identifying individual performance and individual improved management options. A key gap in optimizing adoption in LBP was a lack of grazier knowledge of their own production systems. To measure change or to even recognise that they are operating in a sub-optimal manner, graziers need to know what their own current production is. The Smart Manager project objectives were

1. To identify benchmarks for the major land/climatic types within the live export supply zone
2. For graziers to accurately measure their actual herd performance and profitability
3. For graziers to compare their performance relative to a group and region average
4. For graziers to identify the key drivers of their production and profitability
5. For graziers to identify optimal production systems for individual properties, land types and regions
6. For graziers to identify pathways for working towards these optimal systems that were workable in practical, personal and financial terms
7. For graziers to share their knowledge and experience with their peers and for graziers to adopt enhanced production systems

The Smart Manager process involved three stages
1. Benchmarking current performance
2. Comparing benchmarks and identifying improved management options.
3. Support mechanisms to achieve on-property change in management.

General Outcomes & Industry Impacts

The project formed 32 producer groups. Four regions were involved, namely Mareeba, North-west, Bowen/Burdekin and Charters Towers The groups involved 182 properties and 262 graziers. The combined herd size involved was 436,650 head.

- The project highlighted the extremely poor level of record keeping in the industry. This has traditionally made it very difficult for many graziers to accurately determine the true performance of their herds. The project led to an increase in record keeping and in the use of scales to objectively measure cattle performance.
- Graziers identified their actual herd performance rather than their perceived performance. In many cases the "truth serum" was applied.
- Graziers are taking a more business like approach to their operation. Smart Manager gave graziers a better awareness of the key indicators of herd performance. This allowed the main profit drivers for individual herds to be identified and improved.
- Graziers have compared their own performance and profitability against group and district benchmarks. This has enabled them to identify their relative strengths and weaknesses
- Graziers identified both improved management practices and optimal whole property management systems
- Smart Manager identified and quantified the significant variation in productivity and profitability within the industry. This variation highlighted the significant opportunities that exist for many northern graziers.

- The project demonstrated that the key to profitability is not necessarily cutting costs. The most profitable graziers benchmarked spent more per head on supplements and other variable costs than the average.
- Marketing is being better targeted. Many graziers who previously relied on a single market outlet are now selling into a range of markets to improve profitability and spread market risk.
- Improved supplementation strategies are being used to improve the nutrition of the herd resulting in higher branding rates, lower death rates and improved growing rates.
- Smart Manager gave graziers the opportunity to compare off-farm investment with on-farm investment.

For any extension process to bring about change, a follow-up and support mechanism after the initial meetings is essential. The initial meetings only plant the seed for change. The support mechanism is different for all individuals but it remains the vital requirement for the adoption of change. Without a support mechanism in place the amount of change will be minimal. Project staff were not promoting a culture of dependence on DPI extension staff since we were only one part of a complex support network that includes group meetings, links to R&D sites and ongoing contact with group members, grazier peers, agribusiness and R&D personnel. We do however believe that the majority of individuals involved in group processes do require a level of one-on-one support for the adoption of improved management techniques.

The other issue of concern was the number of properties who were in herd build-up. In the early years of the project this was often in response to the severe droughts experienced through north Queensland in the early to mid 1990's. However in a large number of cases, properties with poor records and a poor understanding of their herd dynamics were unaware that their herds were in fact significantly increasing. In these cases Smart Manager benchmarking was able to demonstrate this herd build-up and determine the optimum selling strategy of females to maintain herd numbers at the safe carrying capacity for the property.

Recommendations

Group members in both Smart Manager and Local Best Practice repeatedly commented on declining land condition and in particular tree and shrub thickening. The widespread woody thickening is leading to a reduction in carrying capacity across much of the north. Graziers are trying to maintain viability by running increasing numbers with a declining resource base. This vicious cycle needs to be broken. The industry is already under considerable community pressure to improve land condition and in particular to reduce sediment and nutrient impact on the Great Barrier Reef.

The problem of declining land condition is the highest priority issue facing the grazing industry. The Grazing Land Management (GLM) package provides the tools to address this issue. Graziers attending a GLM workshop will gain an excellent understanding of the key elements of land condition and management. Our project team wants to take this to the next step where properties would have their paddocks assessed using the A,B,C,D land condition classes. Smart Manager modeling would then be used to quantify the financial gains associated with improvements in land condition.

The first benefit would be the mapping of the land condition class of properties and identifying "hot spots" of actual soil and nutrient loss. Secondly and more importantly, the actual losses and gains associated with changes in land condition could be objectively determined providing a powerful mechanism for bringing about the necessary changes in land condition. Previously the benefits of improved land condition could only be hypothesised.

ACKNOWLEDGEMENTS

I would like to sincerely thank all members of the project team for their dedication and commitment to the Smart Manager project

Special thanks also to the following

The regional team leaders for their leadership and support.

- The DPI for their continual support of the project and to John Lapworth as Program Leader responsible for the project.
- The DPI administrative support staff at all the regional centres.
- The MLA for their financial support.
- Bill Holmes whose Breedcow and Dynama model was the cornerstone of the Smart Manager project. Bill developed a customised Smart Manager model for the project and spent many hours modifying and improving the model to meet the on going challenges the project raised.
- Bernie English, who more than anyone else was responsible for the success of the project. Bernie's outstanding dedication and endeavour ensured the project achieved its objectives.
- Finally to the graziers who preservered with us as we developed a process that we believe greatly benefited the industry.

Project Team Members

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Marni McCullough
Don Cowan

BACKGROUND TO PROJECT

The Smart Manager project evolved from the MLA funded Local Best Practice (LBP) project. In the LBP project graziers identified current management systems for a range of land types in North Queensland. Group members then identified a range of improved management systems currently operating in these regions. The *Breedcow* herd model was then used to compare the profitability of these systems with traditional current practice. This quantified the financial benefits associated with improved management options. This proved to be a powerful process due to the fact that the figures came from producers actually using this technology.

The key information gap in optimizing adoption was a lack of grazier knowledge of their own production systems. To measure change or to even know if they were operating in a sub-optimal manner graziers needed to know what their current production was. The LBP project and the Smart Manager project both highlighted the extremely poor level of record keeping in the industry. In many cases this was a function of having large extensive cattle properties with few paddocks and mustering practices that were unable to yard all the cattle on hand. But even on smaller more intensively managed properties often the only records kept were the number of calves branded and the number of cattle sold. Many times throughout the Smart Manager process these were the only figures we had to work with and these were usually retrieved from the trusty Elders notebook.

Of more concern was the industry wide malaise of inaccurate representation of herd performance. SM analysis repeatedly showed that branding rates and death rates are the critical factors for optimizing herd production and profitability. Unfortunately few graziers could give accurate figures for these key benchmarks but all would give estimates that were invariably significantly over-inflated.

The challenge therefore was to benchmark the actual herd performance rather than the perceived performance and to identify the key production drivers for each individual grazier. Once this had been achieved improved production systems could be identified and the associated costs and benefits quantified.

The major problem was clearly the lack of accurate records and in many cases a lack of grazier interest. Benchmarking systems existed but without exception these relied on graziers providing subjective information that had not been validated. The *Breedcow* herd model devised by Bill Holmes from the QDPI was the tool used to attempt to capture the true herd production dynamics. While *Breedcow* was actually designed as a conceptual tool for ‘what if’ option analysis and not strictly as a benchmarking tool, it did allow the project team, in most cases, to get a workable representation of what was actually occurring on individual properties.

PROJECT OBJECTIVES

The objectives of the project were

By December 2000,

1. To identify ‘Smart Manager’ systems (and associated benchmarks) for the major land/climatic types within the live export supply zone.
2. To identify adoption programs for working toward ‘Smart Manager’ systems that are workable in practical, personal and financial terms.
3. To produce a comprehensive information package, ‘Excellence in Live Export’, suitable for use in adult learning programs such as the north Queensland ‘Future Profit’ project ‘Planning a Future in Beef’.
4. To achieve 50% of producers in the live export supply zone identifying with ‘Smart Manager’ systems (and associated benchmarks) for their ‘area’ and either operating at ‘Smart Manager’ or following a program of adoption.
5. To have 70% of those producers targeting the live export market clearly understanding the market specifications and consistently supplying cattle to meet specifications.

While the above were the contractual objectives, the emphasis of the project changed as the project evolved. These changes were discussed with MLA staff. By the completion of the project the focus of activities was directed towards the following

1. To identify benchmarks for the major land/climatic types within the live export supply zone
2. For producers to accurately measure their actual herd performance and profitability rather than their perceived performance
3. For producers to compare their performance relative to a regional group average enabling them to identify their relative strengths and weaknesses
4. For producers to identify the key drivers of their production and profitability
5. For producers to identify optimal production systems for individual properties, land types and regions
6. For producers to identify pathways for working towards these optimal systems that were workable in practical, personal and financial terms
7. For producers to share their knowledge and experience with their peers
8. For producers to adopt enhanced production systems

METHODOLOGY

The Smart Manager project provided an extension process to northern producers based on adult learning principles and incorporating group workshops and a follow-up support network. The process evolved considerably throughout the four and a half years of the project. Methodologies were continually reviewed by the project team and if not appropriate were deleted while if successful were upgraded and expanded.

Initial project activities involved team building (developing project ownership), selecting regional project leaders, developing and reinforcing skills (particularly in small group facilitation), using herd models and sharing of networking skills/methodologies. Linkages to other key activities such as "Future Profit" were also developed.

The methodology of Smart Manager was based on the following extension skills:

- The ability to use the computer herd models, *Breedcow* and *Dynama*, to simulate management systems either in steady state or in dynamic situations.
- Group facilitation skills, particularly interactive situations using computer models.
- Networking skills particularly supporting adult learning programs associated with 'whole system' management changes.
- Knowledge of the range of beef cattle production systems in North Queensland to enable individuals and groups to incorporate this into their modelling and planning exercises.

Four regional project teams were formed, each with a regional leader. The team set a target of completing 32 Smart Manager groups. Wherever possible, the groups were land type based to enhance the value of comparing benchmarks but in extensive areas some groups inevitably encompassed a range of land types. The initial target and the final number of groups was as follows

- Mareeba target 11 groups completed 14 groups, team leader Bernie English
- Charters Towers target 8 groups completed 6 groups, team leader Peter Smith
- Bowen / Ayr target 7 groups completed 7, team leader Reg Andison/Alan Laing
- Cloncurry target 6 groups completed 5, team leader Felicity Hill

Where possible, existing groups that had completed the Local Best Practice and Futureprofit group processes were targeted. In some cases landcare groups or existing social groups were used however the Smart Manager process was successfully used as a stand alone package on groups formed for SM. Group size varied from 3-8 properties with most groups being between 4-6. A group size of 6-8 properties was seen as ideal to maximize both group interaction and the exchange of experience and knowledge. Both the husband and wife or the owner and manager of properties were actively encouraged to attend.

The Smart Manager process involved three stages.

1. Benchmarking current performance

2. Comparing individual performance against group and district benchmark averages. Identifying opportunities, strengths and weaknesses then examining a range of improved management options. Finally identifying an optimal management system and adoption pathways that were workable in practical, personal and financial terms.

3. Achieving on-property change in management. This included re-benchmarking, group networking and one-on-one facilitation.

Stage 1

The first stage involved benchmarking the current performance of all individual properties in the group. The process used initially was to have a group meeting with each property using a laptop computer to input their data into the *Breedcow* computer herd model. Laptops were provided if producers did not have their own. The majority of groups followed this procedure but toward the end of the project it was considered that gathering individual benchmarks was more effectively carried out by means of one-on-one property visits.

The process used in the group meetings was as follows. The meetings would run for a full day starting at 9.00 am running through till 5.00 pm. The meetings were held on the property of one of the group members where possible but in some cases a local hall in the most central town was used.

The first hour of the meeting was spent explaining the Smart Manager process and setting the scene for the subsequent meetings. Key information covered in this first hour included

- The DPI's group extension strategy in North Queensland. The link between Local Best Practice, Futureprofit and Smart Manager was detailed.
- The all-important distinction between benchmarks and benchmarking. It was explained that benchmarks are simply performance indicators, and used by themselves are of interest but of little value in bringing about change. Benchmarking however is a process of continuous improvement that uses benchmarks to measure success.
- The Smart Manager philosophy and a future strategy for ongoing group development and personal improvement. The SM process involves measuring current production and profitability, exploring options for change and identifying improved management systems. Group support is used to encourage change and this change is measured at subsequent benchmarking meetings. At this meeting the process of measuring performance and investigating new options is repeated. The ongoing use of this cycle leads to a culture of continuous improvement.
- The mechanics of the steady state *Breedcow* herd model.

Each property then started entering their herd data in to the *Breedcow* herd model. The project member facilitating the meeting used a data projector to demonstrate each step of the model using estimated average herd figures for the area. The group worked through each section of the model together and there was considerable discussion over each and every aspect. With all groups there was a considerable range in computer skills. Several graziers had never even started a computer so with most groups we had to go through basic skills such as using a mouse, up and down keys and number pads. Despite some computer phobia all graziers managed to enter their data although often with considerable help from project staff. We ensured that there was always at least one project member for every three properties. Some graziers had a high level of computing skill and in some cases had already purchased the *Breedcow* herd model. In many cases it was the wives who adapted best to the modeling. The rest of the day was spent inputting property data.

With the *Breedcow* model graziers used the best available information of prices and key productivity measures to represent herd structure and profitability for herds in a stable state. Stable state modeling was used to derive an accurate estimate of underlying herd output and profitability, free of errors deriving from the need to value inventory change when using actual trading accounts. Comparisons between properties with increasing cattle numbers versus those with stable or declining numbers (e.g. due to drought) would have come out differently depending on whether the inventory values used turned out to be high (favouring those with increasing numbers) or low (favouring those selling down). Values can be recognized as "high" or "low" only with the benefit of hindsight, hence the potential error and bias in having to calculate profit measures in situations requiring allowance for changing year on year cattle numbers.

For a few producers, the relevance of “stable state” modeling was not understood. This caused some angst, especially for those with accurate records who were trying to match stable state representations against their known herd structures. For them a more acceptable starting point was to model actual numbers in the multi year Dynama model. However very few properties had detailed records of their herd structure.

The program estimated gross margin rather than the net profit. This meant that it ignored income other than from the cattle and counted only the direct husbandry costs of the enterprise. This enabled graziers to directly compare one way of running the herd versus another, without the unnecessary additional effort required to recreate a full profit and loss representation.

For the vast majority of properties the only accurate records they had were the number of calves branded and the number of cattle sold. The power of the *Breedcow* model meant that once we entered estimated branding and death rates into the model we were then able to say to graziers that if their projections were accurate why weren’t they selling more female cattle or branding more calves. This was the crucial “truth serum” step of the process. The next step was invariably reducing branding rates and increasing death rates to enable the herd numbers, branding and death rates to balance with the known figures for sales and brandings. **The importance of this single step cannot be overstated**. In virtually all cases actual branding and death rates failed to match perceived rates. Subsequent modeling of options highlighted the overwhelming importance of branding rate and death rate in productivity and profitability. The need for accurate figures was therefore essential to convince graziers of their true herd situation and what their key profit and production drivers were. So despite the limitations of the model for benchmarking and the fact that most herds were in buildup, *Breedcow* enabled us to accurately benchmark the herd dynamics of extensive properties.

After the meeting, group members were sent a report with their individual benchmarks, the group average and the highest and lowest figures for each individual benchmark within the group (as in Attachment 3 but with their own benchmarks added). They also received the complete *Breedcow* herd model printout for their property (attachment 7).

Other issues associated with the first stage of the process were

1. The issue of confidentiality. The level of sharing within groups was remarkable. Graziers were invariably happy to share their herd information and gross margins per adult equivalent with group members. There were concerns however about this information going outside the groups. No individual information has been released and the only data published from the project has been group averages. The credibility of DPI project staff hinges on this confidentiality being respected and the issue is not negotiable.

2. The need for computer skills of graziers. The initial emphasis of the project was for the herd model to be used solely as a tool for measuring herd dynamics, profitability and optimal management options. It was not considered necessary for participants to understand the model nor how to drive it, only that they trust the outputs. While a number of the original groups were run along these lines the opinion of the project team changed as the project progressed.

   Several of the western SM groups were formed after first doing a 2 day “Better Decisions in the Business of Beef” (BDIBB) workshop conducted by Bill Holmes. This covered both the Breedcow and Dynama model as well as other modeling packages. It was considered that this background was advantageous when these groups went on to Smart Manager. Some SM participants have subsequently attended BDIBB workshops and purchased the computer package for themselves.

   The exposure to computers in Smart Manager also overcame some of the fears of computers held by some of the more traditional producers. That is not to say that all SM members are now regular computer users but the project played a role in increasing computer ownership and the functional use

of computers by graziers.

3. Problems with the group meeting concept. By the end of the project it was felt that capturing benchmarks was better achieved through one-on-one contact. The main limitations with the group meetings were the time taken to enter data and the need for individual project staff input in the vital 'truth serum' stage of matching actual herd performance to perceived. There were also cases where graziers would falsify information so that they would not appear inferior in front of their peers. The last few SM groups formed had data individually gathered before they met as a group and the process appeared more effective.

Stage 2

The second meeting was again a full day and was usually held within a month of the first meeting. Graziers had been previously mailed their individual benchmarks, the group average and the group high and low figures for each benchmark. The meetings commenced at 9 a.m.

After a brief welcome and introduction graziers were given the opportunity to make any changes to their herd as modeled at the first meeting. Having previously received the model printout provided the opportunity to check some of the costs and prices used at the first meeting as well as number of key herd factors. In several cases this also allowed the partner that had been unable to attend the first meeting to have input into the model. This step ensured that everyone was confident that the model was an accurate representation of their own current situation.

The next step was to discuss the group average benchmarks. The key benchmark used as a focus of all discussions was the gross margin per adult equivalent (GM/AE). This was because it reflected the combined interaction of costs, prices and herd performance on overall profitability. While the group average always generated considerable discussion the point was made that it only reflected the conditions that prevailed for that particular year. The two key external factors influencing the gross margin per adult equivalent were average prices and seasonal factors. The importance of these factors was clearly demonstrated by the surge in all the major cattle price indicators during 2001 and the corresponding rise in gross margins. Equally the severe drought of 2002-2003 dramatically reduced branding rates and growth rates.

To overcome the importance of these external factors we stressed the point that the main consideration was not the individual's actual gross margin but their relative performance against the group average for a particular year. The relationship of the group average with the average from other areas was also discussed, although changes in the inherent fertility of the various land types were reflected in the benchmarks.

While the overall group average and an individual's relative performance against the average was of great importance of greater interest was the group high and group low figures for each benchmark. After the first meeting every participant was sent a benchmark sheet that had their own benchmark figures, the group average and both the high and low figures for each benchmark. The project team faced two choices on presenting the high and low figures. The first option was to present all the individual benchmarks from the property with the highest GM/AE and the same for the property with the lowest GM/AE. The second option was that the highest and lowest figure for each individual benchmark be listed which invariably involved a range of strengths and weaknesses from most group members. This second option was chosen.

The choice of the second option demonstrated the massive variation in performance within groups. Variations in branding rates within groups were typically 20-30% with one extreme group having a range of 50%. Similar variations were recorded in all the key benchmarks and were reflected in the range of

GM/AE figures for group members. The implication of this observation was the tremendous potential within the industry for improvements in productivity and profitability.

The most powerful part of the day's proceedings was the next step in which we invited all group members to share their six key benchmarks with the group. These were branding rate, death rate, annual liveweight gain, variable herd costs, female sales percentage of total sales and GM/AE. This was only done after receiving the approval of the group members. In most groups all members were happy to share their benchmarks but a handful of individuals did choose not to be involved. The property benchmarks were displayed side by side using whiteboards or overhead transparencies. This generated extremely useful discussion about individual's relative strengths and weaknesses. Graziers could see that their neighbour had for example a branding rate 10% better than their own or was spending $10 less per head and still had a branding rate comparable to their own. This led to searching questions with graziers being asked to explain why. The grazier with the highest GM/AE often did not have the most expensive bulls or the best liveweight gain or in some cases even the best branding rate but it was the combination of herd performance with the costs and prices received that was the key.

Group members clearly valued being able to compare a range of management scenarios from neighbouring properties and being able to see the subsequent impact on their GM/AE.

The main benefit of this process for individual graziers was the exchange of information and experience that graziers trusted as being highly relevant and validated by the Smart Manager process. From a group perspective there were three key outcomes from this step and they were constant across virtually all groups

1. The importance of branding rates and death rates in maximizing profitability
2. The huge variation in all the main production and financial benchmarks within groups.
3. The observation that reducing costs did not necessarily maximize profit. The highest gross margins typically came from properties that had above average variable herd costs. These costs included supplementation, vaccines, growth promotants etc. See table 1 below that compares the GM/AE with variable herd costs using 1999 cattle prices for 25 smart manager groups across north Queensland.

Table 1.

	Variable herd costs/AE	GM/AE
Top 10% of properties	$28	$93
Bottom 10% of properties	$5	$45

The steps detailed above normally took between 1.5- 2 hours and was followed by a break for smoko.

The benchmarking process would have been fatally flawed if no allowance was made for stocking rates and the implication of cattle numbers on land condition. Clearly GM/AE could be maximized in the short term by running high numbers that would not be sustainable in the long term. The aim of the next step of the process was to determine the sustainable carrying capacity of the properties involved.

The approach used was to first get properties to determine their total area in hectares, then using the number of adult equivalents (from their herd model) calculate the current stocking rate.

A series of powerpoints was then used to facilitate the subsequent discussion. The powerpoints used were

1. A graph relating animal production per beast to increasing stocking rate
2. A graph relating animal production per hectare to increasing stocking rate
3. The same graph as number 2 with the addition of the costs associated with increasing stocking rate

4. A graph combining the above graphs to show the hypothetical point at which maximum return is achieved

The powerpoints were supported by actual figures from the MLA funded stocking rate demonstration sites. The figures from Namuel Station near Georgetown compared the district average stocking rate with a sustainable stocking rate. Data had been collected from 1995-97 detailing branding rates, weight gains, costs and prices to determine gross margins of the different stocking rates. The demonstration showed that in a dry year the safe rate was more profitable but in a better season the higher stocking rate was slightly more profitable.

A large number of properties stated that they were not fully stocked and were undergoing herd build-up. To accommodate these properties they were asked to nominate their numbers when fully stocked. The resulting stocking rate figures from these properties and those already fully stocked were compared and used in a group discussion on determining the optimal, safe, long term carrying capacity for their properties.

The aim of the group discussion was to use peer pressure to break the paradigm that numbers equals profitability. Once carrying capacity was determined, individuals were then able to use the fully stocked herd size in the model to project herd profitability when fully stocked.

The only tool available at this time to discuss the concept of different land condition was the state and transition model. The Grazing Land Management (GLM) package subsequently developed by Mick Quirk from DPI would have been invaluable at this step. GLM would have enabled individual properties to determine their land condition class (A-D), the associated carrying capacity and the GM/AE associated with their actual land condition class. This process has been identified by the project team as our priority action for any future activity.

In the 45 minutes prior to lunch we invited a guest speaker to address the group. Group members had been asked at the end of the first meeting what topic they would like covered. Topics covered included

1. Climate and weather information, including SOI and El Nino/La Nina
2. Financial management, including off farm investments and the value of retiring debt
3. Breeder herd management

After lunch the group explored a range of different management options. This continued for the rest of the afternoon with the meeting usually finishing by 5 pm after a brief summary and feedback session.

The option analysis was carried out using the projected fully stocked, stable herd. The group initially ran through the four options outlined below and then had the opportunity to explore any further management options of their choice. The four options were

1. **Reducing the cull cow age.**

   Graziers were able to see the impact on herd structure and GM/AE of reducing the cull cow age. The computer model maintained a stable herd for the given total adult equivalent carrying capacity of the property as the cull cow age was varied. Cull cow ages from 6-11 were analysed and the optimum identified. A range of different surplus female selling strategies was also examined, including spaying heifers and cows.

2. **The impact of a package involving early weaning and supplementation giving reduced death rates and increased branding rates.**

   This package invariably had the greatest impact on GM/AE. While a general improvement in branding rates and decrease in death rates was the key for many properties the poor performance of first calf

heifers was an obvious target for improvement. Properties giving special treatment to heifers from weaning until their second calf was weaned were invariably best placed provided the costs involved were not excessive.

3. **Different male turn-off strategies.**

   This step compared live export sales to bullock turn-off. The profitability of male age of turn-off was closely linked to branding rate. For properties with low branding rates older turn-off was often more profitable, but GM/AE was primarily limited by the poor branding rate rather than the age of male sales.

   Another issue raised was the benefit of having a spread of sale ages and markets to minimise income exposure to risk. Graziers were prepared to accept a lower GM/AE to overcome the risk associated with having all their sales targeting one market.

4. **A range of bull percentages, prices paid for bulls and the option of breeding your own bulls.**

   The issue of bull rates, prices and the use of homebred bulls invariably resulted in the most discussion. The irony of this was that although it generated the most interest and passion it was the least important in terms of GM/AE. Options tested included reducing bull rates from 5% to 3% and the impact of homebred bulls. The model was able to predict the extra revenue required from sale cattle to meet the extra cost associated with an extra $1000 dollars spent per head on bulls.

The option analysis allowed a cumulative best bet option that incorporated all the four options detailed above. Each of the four options was also compared individually against their current situation. This allowed the relative importance of the various options to be determined without the confounding influence of the combined impact.

Graziers also evaluated options specific to their own situation. By the end of the process each individual had an optimal management package incorporating a range of initiatives as well as a range of single issue options to improve their GM/AE based on a sustainable carrying capacity for their property.

For those later groups that had their initial benchmarks determined by one-on-one visits this second stage represented their first group meeting. The fact that they had not previously had a group meeting did not significantly affect the outcomes of the process. Group members were still mostly prepared to share information and experience.

Stage 3

The third stage of the process evolved considerably through the life of the project. The initial thinking was that we would offer groups the option of a third meeting using the Dynama herd model to look at the production and financial pathways of moving from their current situation to the optimal management systems that they had identified. The Dynama model incorporates fixed and variable costs and can accommodate herd build up.

The Dynama model however had two limitations that prevented its use in a group context. The first problem was again the lack of good records. Dynama required an even better level of records than Breedcow and in the absence of reliable records time consuming projections were required. The level of project staff input required for this process meant there would have been only limited group interaction. The second problem was the issue of confidentiality. While Breedcow operated on a gross margin basis Dynama required a detailed financial position including loan details and all sources of income. It was not considered appropriate to share this information in a group context.

Graziers were offered an individual one on one extension visit to analyse their herd using Dynama and some members took advantage of the offer.

In the initial project discussions the team intended for groups to go through an annual re-benchmarking. It soon became apparent that this was neither logistically possible nor desired by the groups. The first two meetings allowed producers to benchmark their current performance and identify improved management options but the adoption of new technology was dependent on having a mechanism to reinforce new ideas and support graziers through the change process. In many cases the improved management strategies identified involved significant whole property changes. What was important was the provision of support networks. These included group meetings to facilitate ongoing grazier exchange of information and experience, linkages to producer group demonstrations such as PDS/PIRD, links to the range of other beef related projects and ongoing contact with group members, grazier peers, agribusiness and R&D personnel.

DPI project staff made themselves available to individual group members to discuss the options identified in the meetings. Alternative scenarios were analysed as prices and markets changed and the impacts discussed. Similarly new ideas generated by group members were analysed, discussed and the ideas spread through the group. The importance of these support networks cannot be underestimated.

Some examples of support network activities are detailed below.

1. Combined benchmark information day

A combined meeting was held with four northern Smart Manager groups in March 1999 at the Undara Lodge. The benchmarks of the four groups were averaged and each participant was given a sheet with their own benchmarks compared with the highest, lowest and average benchmark from the four combined groups. After consulting with the four groups a program of guest speakers was developed for the day.

David Steele from Burlington Station was keynote speaker and spoke on the success he had achieved through breeder management and supplementation. When Dave purchased the station in 1972 branding rates were 40-50%. He identified nutrition as the major problem and commenced feeding dry season licks. These kept his cows alive but had little impact on branding rates. In the late 70's he started feeding wet season phosphorus and while it was very expensive he had confidence in the long term benefits. His faith has since been rewarded but as he said, the journey was difficult and required a high level of commitment. Dave's speech delivered a powerful message to the group. His benchmarks, on inherently infertile country, were superior to all adjoining benchmarking groups including those on basalt soil. David was able to demonstrate that benchmarking is more than a reflection of land type and that good management can lead to profitability on even the poorest country.
The results from the breeder herd management PDS trial at Mt Aberdeen were then discussed. The role of controlled mating was of particular interest. The final speaker was Eugene Matthews from Blue Range station who spoke on the MLA funded land monitoring project and the need to match stocking rates to land capability.

The day concluded with a final open group discussion where many of the issues raised during the day were debated at length. Feedback from the 26 graziers who attended was very positive. The goal of bringing the groups together to share knowledge and experience was achieved

2. Bullpower meetings

A series of three one-day Bullpower meetings were held as a result of interest generated at Smart Manager meetings. The meetings were held at Georgetown, Sugarbag and Clothes Peg from 5/10/99-7/10/99

Issues covered included bull fertility, breeder fertility and nutritional management. Many of the questions

and concerns raised at Smart Manager meetings were addressed by the Bullpower days.

3. Meadowbank Field Day

A field day was held at Meadowbank Station on 23/3/2000 to look at molasses production feeding and the role of leucaena. The performance of steers grazing leucaena and a high-energy molasses based supplement was monitored and the cost benefit assessed.

The two Mt Garnet Smart Manager groups had identified production feeding as a potentially attractive opportunity in their area. The trial provided the groups with a practical demonstration of a theoretical option.

4. Better Decisions in the Business of Beef

The Smart Manager project inspired further improvement of Breedcow and Dynama software. The project also led to the development of the Better Decisions in the Business of Beef (BDIBB) workshops. This was largely a result of software and comprehension needs revealed by Smart Manager. Involvement in SM has also led a number of producers to purchase Breedcow and Dynama software and to undertake Better Decisions training.

The BDIBB workshop involves a suite of twelve decision support packages based around the key Breedcow and Dynama models. The aim of the workshop is to give producers the skills to use computer decision support packages to evaluate management options and to be able to better respond to changing market opportunities.

5. Producer Study Tours

Bernie English organized two producer study tours for Smart Manager participants. Improved management technologies identified at the SM workshops were investigated on the tours.

- Twelve members from a range of northern Smart Manager groups took part in a three-day producer study tour of the Dalrymple Shire in August 2000. The group visited DPI research sites at Wambiana and Swans Lagoon. At Wambiana the group looked at the impact of stocking rate on cattle performance and land condition, while at Swans Lagoon there were presentations on supplementation and breeder herd management.

  The visit provided the group with the opportunity to see demonstrations of a number of the improved management options discussed during the Smart Manager meetings. Participants were also able to discuss their findings both with research staff and other group members.

- Eight Smart Manager participants attended an open day at Swans Lagoon research station in June 2001 to attend presentations on nutrition and supplementation, herd reproduction and management. Grazing management strategies were also discussed.

6. Morganbury Meats Alliance

Eight participants from the two Atherton Tablelands Smart Manager groups were the core producers of the Morganbury Meats Alliance that supplies top quality domestic beef into the Cairns-Townsville region. The alliance between Morganbury Meats and the local producers was formed in June 2001. This group has now expanded to 19 producers to meet the rapidly increasing demand.

The Alliance has had training days on cattle handling, live cattle assessment for market suitability, a meatworks inspection to improve knowledge of feedback sheets, a benchmarking day and a butcher day to hear their requirements from the Alliance. Several supply planning field days have been held to co-ordinate fat cattle supply during the dry second half of the year and information presented on reducing "dark cutters" in cattle supplied to the Alliance.

7. PIRD's

Members from the Mount Surprise/Georgetown and Mt Garnet groups successfully applied for PIRD funding to investigate the cost/benefit of feeding molasses/urea mixtures to breeders and growing cattle. The trial commenced in May 2003 with cattle being tagged and weighed.

Stage 3 – Re-benchmarking

After the first three years of the project MLA funded a twelve month extension to the project to re-benchmark the group figures. Our initial optimism that we could reform all the groups for benchmarking after, in some cases, a two or three year break proved to be misplaced.

The first year of the project extension (2001) coincided with the start of a record drought in North Queensland that extended through until February 2003 with many areas still drought declared today. This has placed producers and rural communities under severe emotional and financial stress. The commitment on peoples time due to the drought made it very difficult to reform the groups to re-benchmark their herd figures.

During the first three years of the projects four groups were re-benchmarked. The two Mt Garnet groups had a combined meeting nearly 18 months after their first benchmarking meetings, the Croydon group met for a second time after14 months and the Mt Surprise/Georgetown group met again after 12 months. At the revised benchmarking meetings producers were encouraged to talk about any changes they had made since the last meeting and whether the changes had been successful. While participants found the meetings valuable and there was considerable sharing of information, knowledge and experience within the group it was obvious that the graziers involved were not that interested in sitting in front of computers and crunching their own numbers again.

The first meetings achieved the desired outcome of helping producers determine their actual herd performance, identifying their strengths, weaknesses and key production and profitability drivers as well as identifying improved management options. The meetings provided both a "truth serum" and "turning on the light of opportunity" for many participants. However the dynamics of extensive herds involve a long lag time for benefits to be seen. Financial benefits from changes in breeder herd management, for example, will not be reflected until the improved numbers of calves branded are sold 3-4 years down the track. The effect of changing cattle prices and seasonal climatic variation also limit the applicability of regular benchmarking.

The project team decided to take an alternative approach to re-benchmarking the groups and individually contacted as many graziers as possible that were involved in the first meetings and offered to re-benchmark their figures. Some graziers had since left the industry, several had moved to a different area and some were not interested in re-benchmarking but many participants found the exercise worthwhile and a useful means of measuring their progress. Many of the graziers contacted used the opportunity to again evaluate different management strategies given the significant changes in costs and prices since the first modeling exercise.

All the producers contacted were subsequently invited to combined group meetings. These followed the same format as the stage 2 meetings detailed above except that after lunch, regional options were examined instead of individual property analysis. Five combined meetings were held, these were at

Lakeland Downs, Mt Garnet, Atherton Tablelands, Hughenden and Charters Towers. The meetings were well attended and very well received.

The benchmarks generated at all the subsequent meetings are detailed in Appendix 2.

General methodology comments

Producer feedback through the SM process included the following observations:

The strengths of the process as seen by producers were
- Participants valued the determination of their current situation
- They enjoyed the group interaction and exchange of experience
- The comparison of their own performance in relation to their neighbours was challenging.
- They found Breedcow a powerful way to look at a range of management options.

Weaknesses with the process were
- The time taken to determine the current situation.
- Problems in using the stable herd model Breedcow in herd build up situations.

As the project progressed each region developed the SM process in a way that best suited their needs and reflected their local circumstances. All groups however used a minimum standard set of common benchmarks.

The benchmarks used in Smart Manager were complementary with those used in the Future Profit project that was running concurrently. Discussions were held between staff of the two projects to ensure that producers were not receiving conflicting messages from the respective processes.

Results and Discussion

Regional Groups

Thirty-two producer groups completed the Smart Manager project.

Mareeba Region

1. Mt Garnet Basalt
2. Mt Garnet Red earth
3. Chillagoe
4. Croydon
5. Mt Surprise/Georgetown
6. Cooktown
7. Lakeland Downs 1
8. Lakeland Downs 2
9. Clothes Peg
10. Greenvale
11. Atherton Tablelands 1
12. Atherton Tablelands 2
13. Einasleigh
14. Coen

North West Region

15. Hughenden 1
16. Hughenden 2
17. Julia Creek 1
18. Julia Creek 2
19. Cloncurry

Bowen/Burdekin Region

20. Bowen
21. Strathalbyn
22. Ayr/Burdekin
23. Gumlu
24. Bowen River
25. Townsville
26. Ingham

Charters Towers Region

27. Prairie
28. Belyando
29. Ewan (3 Rivers)
30. Torrens Creek
31. Pentland
32. Mingela / Ravenswood

Group Statistics

- The project formed 32 producer groups
- The groups involved 182 properties and 262 graziers
- The combined herd size involved was 436,650

Group benchmarks and Group details

- Group average benchmarks for the 32 Smart Manager groups are in Appendix 1
- Benchmarks for the groups that were re-benchmarked are in Appendix 2
- Group average, high and low benchmarks for the 32 groups are in Appendix 3
- Grazier members of the 32 Smart Manager groups are in Appendix 4
- Individual property impacts from the 4 regions are detailed in Appendix 5

General Outcomes & Industry Impacts

- The project highlighted the extremely poor level of record keeping in the industry. This has traditionally made it very difficult for many graziers to accurately determine the true performance of their herds. The project has led to an increase in record keeping and in the use of scales to objectively measure cattle performance.
- Graziers identified their actual herd performance rather than their perceived performance. In many cases the "truth serum" was applied. Smart Manager gave graziers a better awareness of the key indicators of herd performance.
- Graziers are taking a more business like approach to their operation. The main profit drivers for individual herds have been identified.
- Graziers have benchmarked their own performance and profitability and have been able to compare themselves against group and district benchmarks.
- Graziers identified both improved management practices and optimal whole property management systems.
- Smart Manager identified and quantified the significant variation in productivity and profitability within the industry. This highlights the significant opportunities that exist for many northern graziers.
- The project demonstrated that the key to profitability is not necessarily cutting costs. The most profitable graziers benchmarked spent more per head on supplements and other variable costs than the average.
- Marketing is being better targeted. Many graziers who previously relied on a single market outlet are now selling into a range of markets to improve profitability and spread market risk.
- Improved supplementation strategies are being used to improve the nutrition of the herd resulting in higher branding rates, lower death rates and improved growing rates. They have also improved market suitability. Previous supplementation was often on an ad-hoc basis and not cost effective.
- Smart Manager gave graziers the opportunity to compare off-farm investment with on-farm investment.

Regional comments on outcomes

North-West Region

- Participants may recognise the terminology Breedcow & Dynama before Smart Manager as the Julia Creek and Hughenden groups initially attended Breedcow & Dynama training prior to SM.
- SM highlighted the value of keeping good records and initiated better record keeping in the following areas: cattle numbers and classes, branding and weaning rates, sales distributions and values and growth rates
- The benchmarks showed where the strengths and weaknesses were in individual enterprises (and between enterprises with the one owner.)
- SM stimulated a broader recognition of management options to improve gross margins. Smart Manager forced people to look at management options.
- SM provided a deeper understanding of how sales decisions (male and female) can impact on gross margins.
- SM option analysis (workshop 2) provided confirmation that certain management strategies were more profitable than others, which in some cases gave people the confidence to progress on property change.
- More on property change would have been evident if more follow up visits had been integrated in the SM process in NWQ.

Charters Towers Region

- Smart Manager forced people to look at herd records and management options.
- Highlighted the value of keeping good records and initiated better record keeping.
- Follow up visits to develop individual plans were desirable
- Smart Manager together with Future Profit was the catalyst for things to happen.
- Should have been more post workshop follow up on property (one-on-one) but could not happen in Charters Towers due to demands of other projects.

Individual property outcomes

As with any industry, there is great variation in the learning styles of individuals within the grazing industry. There are some individuals who find group learning highly beneficial while others are not comfortable within a group framework. Some individuals simply want a recipe while others will source information from a range of sources, trial different options and make considered decisions.

No extension process will completely satisfy the needs of all graziers. Accordingly, Smart Manager did not necessarily have a huge impact on some participants. Many graziers did however find the process highly beneficial. The beneficial impacts varied from the adoption of whole property improved management systems through to a simple change in marketing or an improved supplementary feeding regime. The individual impacts of the Smart Manager project are detailed in Appendix 5.

Two case studies have been documented in Appendix 6. These are the Burtenshaw family at Coolgarra and the Blennerhassett family at Goshen Station.

Conclusions

The general industry outcomes of the Smart Manager project have been detailed above but from the project team perspective the following issues are of paramount importance.

For any extension process to bring about change, a follow-up and support mechanism after the initial meetings is essential. Whether it be the Local Best practice, Futureprofit, the various Edge network modules or any training package, the initial meetings only plant the seed for change. Before the new practice is adopted graziers will do some or all of the following

- discuss it repeatedly with their family, neighbours, agribusiness and government advisors
- read available literature in rural press or agency/agribusiness sources
- visit areas where the new practice is being used
- attend field days or demonstrations
- trial the practice on a small scale on their place
- continue to analyse the financial costs/benefits of the practice

The support mechanism is different for all individuals but it remains the vital requirement for the adoption of change. Without a support mechanism in place the amount of change will be minimal. Project staff are not promoting a culture of dependence on DPI extension staff as we are only one part of a complex support mechanism. We do however believe that the majority of individuals involved in group processes do require a level of one-on-one support for the adoption of improved management techniques.

The other issue of concern was the number of properties who were in herd build-up. In the early years of the project this was often in response to the severe droughts experienced through north Queensland in the early to mid 1990's. However in a large number of cases, properties with poor records and a poor understanding of their herd dynamics were unaware that their herds were in fact significantly increasing. In these cases Smart Manager benchmarking was able to demonstrate this herd build-up and determine the optimum selling strategy of females to maintain herd numbers at the carrying capacity of the property.

Group members in both Smart Manager and Local Best Practice repeatedly commented on declining land condition and in particular tree and shrub thickening.

Our interpretation of all the above factors is that the widespread woody thickening is leading to a reduction in carrying capacity across much of the north. Graziers are trying to maintain viability by running increasing numbers with a declining resource base. This vicious cycle needs to be broken. The industry is already under considerable community pressure to improve land condition and in particular to reduce sediment and nutrient impact on the Great Barrier Reef.

Recommendations

The problem of declining land condition is the highest priority issue facing the grazing industry. The Grazing Land Management (GLM) package provides the tools to address this issue. Graziers attending the GLM workshop will gain an excellent understanding of the key elements of land condition and management. Our project team wants to take this to the next step where properties would have their paddocks assessed using the A,B,C,D land condition classes and Smart Manager modeling would then used to quantify benefits associated with improvements in land condition.

The missing link in our Smart Manager modeling was not knowing the carrying capacity of land under different condition classes and with different timber densities. With this knowledge the Breedcow herd modeling used in Smart Manager could be extended to actually measure the impact that declining land condition was having if land had declined from say condition class B to C or conversely the financial and production benefits associated with improving from condition class C to B.

The benefits would be first the mapping of the land condition class of properties and identifying “hot spots” of possible soil and nutrient loss. Secondly and more importantly, the actual losses and gains associated with changes in land condition could be objectively determined providing a powerful mechanism for bringing about the necessary changes in land condition. Previously the benefits of improved land condition could only be hypothesised.

Appendix 1. Smart Manager Benchmarks

	Mt Garnet Basalt 3/98	Mt Garnet Red Earth 7/98	Chillagoe 11/98	Croydon 11/98	Mt Surprise Georgetown 11/98	Cooktown 6/99	Lakeland Downs 1 11/99	Lakeland Downs 2 11/99	Clothes Peg 3/99	Greenvale 2/2000
Total adult equivalents (AE's)	2234	3880	4082	1316	2565	444	357	5437	6994	7409
Bull replacement cost/calf branded	$13	$8	$3	$6	$6	$6	$9	$9	$8	$9
Husbandry costs as % of net sales*	15%	15%	19%	25%	21%	21%	23%	18%	22%	3%
Branding/cows mated	73%	65%	63%	59%	66%	73%	69%	60%	65%	60%
Female turnoff/ total turnoff*	49%	47%	44%	43%	46%	47%	48%	46%	46%	46%
Breeder deaths %	2%	4%	6%	5%	5%	3%	3%	3%	5%	3%
Turnoff ratio, sales/total carried*	30%	28%	27%	30%	28%	32%	26%	23%	29%	30%
Kg LW turnoff/AE carried	115	85	53	64	67	112	129	95	83	126
Male liveweight gain per 12 months	143	NA	126	108	131	139	159	118	135	159
Average male sale price	$410	$342	$294	$219	$350	$383	$452	$402	$334	$341
Average female sale price*	$218	$151	$117	$200	$181	$257	$275	$221	$223	$303
Net sales/AE*	$89	$68	$49	$54	$73	$111	$127	$85	$76	$108
Husbandry costs/AE	$13	$10	$11	$14	$16	$23	$29	$15	$17	$4
Gross Margin/AE*	**$72**	**$57**	**$38**	**$38**	**$55**	**$85**	**$94**	**$68**	**$57**	**$100**

SMART MANAGER BENCHMARKS

	Atherton Tablelands 1 5/2000	Atherton Tablelands 2 8/2000	Einasleigh 10/2000	Coen 11/2001	Hughenden 1 06/99	Hughenden 2 11/99	Julia Ck 1 06/99	Julia Ck 2 11/00	Cloncurry 11/00	Bowen 04/99	Strathalbyn 4/2000
Total adult equivalents (AE's)	237	342	2985	2398	1538	1337	1860	2050	7280	1683	5430
Bull replacement cost/calf branded	$8	$8	$6	$8	$12	$24	$10	$12	$28	$9	$9
Husbandry costs as % of net sales*	24%	22%	10%	17%	5%	9%	7%	4%	6%	11%	14%
Branding/cows mated	72%	75%	64%	47%	71%	65%	77%	76%	75%	70%	65%
Female turnoff/ total turnoff*	47%	48%	48%	35%	48%	49%	48%	48%	48%	49%	48%
Breeder deaths %	2%	3%	3%	9%	2.5%	1%	3%	2%	2%	1.4%	3%
Turnoff ratio, sales/total carried*	36%	33%	25%	17%	34%	30%	33%	32%	28%	27%	23%
Kg LW turnoff/AE carried	133	158	124	68	154	192	156	163	139	142	102
Male liveweight gain per 12 months	217	213	147	109	192	176	162	183	147	143	149
Average male sale price	$522	$597	$520	$431	$428	$579	$502	$448	$552	$464	$485
Average female sale price*	$380	$366	$336	$234	$362	$395	$297	$345	$351	$306	$353
Net sales/AE*	$146	$179	$133	$74	$138	$209	$138	$152	$152	$126	$102
Husbandry costs/AE	$36	$41	$14	$13	$6	$18	$10	$6	$10	$14	$15
Gross Margin/AE*	**$107**	**$135**	**$117**	**$58**	**$127**	**$179**	**$124**	**$142**	**$133**	**$109**	**$85**

SMART MANAGER BENCHMARKS

	Ayr/Burdekin 4/2000	Gumlu 4/2000	Bowen River 4/2000	Townsville 09/99	Ingham 02/99	Prairie 3/98	Belyando 9/98	Ewan 08/99	Torrens Creek 10/99	Pentland 10/2000	Mingela 10/2000
Total adult equivalents (AE's)	447	2233	4271	1090	1021	1190	2400	3441	1330	2194	1912
Bull replacement cost/calf branded	$6	$3	$4	$6	$20		$12	$10	$6	$8	$7
Husbandry costs as % of net sales*	16%	9%	9%	12%	20%		1%	5%	13%	11%	7%
Branding/cows mated	62%	65%	53%	55%	63%	72%	70%	66%	67%	60%	61%
Female turnoff/ total turnoff*	48%	49%	46%	45%	47%	44%	48%	49%	48%	44%	47%
Breeder deaths %	3%	2%	3%	4%	3%	7%	3%	2%	2%	5%	3%
Turnoff ratio, sales/total carried*	22%	25%	30%	28%	25%		31%	26%	29%	26%	21%
Kg LW turnoff/AE carried	111	111	110	102	78		149	144	147	120	118
Male liveweight gain per 12 months	126	146	173	139	133		171	130	161	149	134
Average male sale price	$471	$418	$301	$322	$510	$352	$551	$615	$439	$491	$618
Average female sale price*	$378	$318	$404	$291	$315	$247	$277	$344	$339	$369	$420
Net sales/AE*	$113	$107	$115	$90	$107	$85	$122	$144	$138	$126	$130
Husbandry costs/AE	$18	$9	$10	$11	$21		$2	$7	$18	$14	$9
Gross Margin/AE*	**$93**	**$97**	**$102**	**$77**	**$80**	**$65**	**$117**	**$133**	**$118**	**$109**	**$119**

Appendix 2. Revisited Group Benchmarks

	Mt Garnet Basalt & Red Earth combined December 1999	Mt Surprise Georgetown December 1999	Croydon January 2000	Combined Lakeland Downs November 2001	Comb Mt Garnet Basalt & Red Earth & Mt Surprise November 2001	Combined Atherton Tableland May 2002	Hughenden 2002	Charters Towers 2002
Total adult equivalents (AE's)	2768	2615	2000	1458	2718	283	1286	2440
Bull replacement cost/calf branded	$7	$8	$5	$17	$8	$12	$18	$6
Husbandry costs as % of net sales*	14%	22%	21%	19%	17%	31%	4%	8%
Branding/cows mated	69%	59%	63%	62%	64%	71%	76%	65%
Female turnoff/ total turnoff*	48%	47%	43%	48%	46%	47%	50%	48%
Breeder deaths %	2%	3%	5%	2%	3%	3%	1%	2%
Turnoff ratio, sales/total carried*	27%	26%	28%	26%	26%	31%	40%	31%
Kg LW turnoff/AE carried	122	111	83	147	124	154	184	139
Male liveweight gain per 12 months	144	162	160	217	165	211	180	173
Average male sale price	$384	$347	$240	$743	$607	$764	$644	$572
Average female sale price*	$270	$298	$212	$484	$459	$499	$394	$420
Net sales/AE*	$104	$102	$67	$201	$164	$192	$208	$171
Husbandry costs/AE	$16	$23	$15	$41	$28	$59	$9	$13
Gross Margin/AE*	**$85**	**$76**	**$50**	**$152**	**$132**	**$141**	**$192**	**$156**

Appendix 3: Group average, high and low benchmarks

MT GARNET BASALT
25-3-98
SMART MANAGER GROUP BENCHMARKS

	High **	Low **	Average
Total adult equivalents (AE's)	5500	685	2234
Bull replacement cost/calf branded	$37	$4	$13
Husbandry costs as % of net sales*	22%	10%	15%
Branding/cows mated	78%	59%	73%
Female turnoff/total turnoff*	50%	47%	49%
Breeder deaths %	1%	5%	2%
Turnoff ratio, sales/total carried*	43%	21%	30%
Kg LW turnoff/AE carried	134	94	115
Male liveweight gain per 12 months	168	133	143
Average male sale price	$565	$315	$410
Average female sale price*	$305	$111	$218
Cents kg LW male	$0.98	$0.77	$0.87
Cents kg LW female*	$0.70	$0.38	$0.62
Cents kg LW all*	$0.89	$0.73	$0.79
Net sales/AE*	$98	$81	$89
Husbandry costs/AE	$19	$10	$13
Bull replacement/AE	$10	$1	$4
Gross Margin/AE*	**$85**	**$54**	**$72**
Total GM for herd*			$162,500

Note: * The figures assume all properties are fully stocked. Some of the above figures (*) are inflated due to properties undergoing herd build up.

**** The High and Low benchmarks relate to the range of individual benchmarks (Branding/Cows mated) rather than the best and worst performing properties.**

MT GARNET RED EARTH
31/7/98
SMART MANAGER GROUP BENCHMARKS

	High **	Low **	Average
Total adult equivalents (AE's)	6776	2092	3880
Bull replacement cost/calf branded	$16	$0.21	$7
Husbandry costs as % of net sales*	23%	11%	15%
Branding/cows mated	71%	50%	65%
Female turnoff/total turnoff*	49%	41%	47%
Breeder deaths %	7%	2%	4%
Turnoff ratio, sales/total carried*	31%	20%	28%
Kg LW turnoff/AE carried	108	74	85
Male liveweight gain per 12 months	-	-	-
Average male sale price	$445	$250	$342
Average female sale price*	$326	$132	$151
Cents kg LW male	$1.01	$0.85	$0.90
Cents kg LW female*	-	-	-
Cents kg LW all*	$0.82	$0.38	0.67
Net sales/AE*	$83	$57	$68
Husbandry costs/AE	$13	$7	$10
Bull replacement/AE	$4	$0.07	$2
Gross Margin/AE*	**$71**	**$40**	**$57**
Total GM for herd*			$221,000

Note: * The figures assume all properties are fully stocked. Some of the above figures (*) are inflated due to properties undergoing herd build up.

**** The High and Low benchmarks relate to the range of individual benchmarks (Branding/Cows mated) rather than the best and worst performing properties.**

CHILLAGOE
16/11/98
SMART MANAGER GROUP BENCHMARKS

	High **	**Low ****	**Average**
Total adult equivalents (AE's)	15,623	125	4082
Bull replacement cost/calf branded	$6	$0.08	$3
Husbandry costs as % of net sales*	32%	9%	19%
Branding/cows mated	76%	50%	63%
Female turnoff/total turnoff*	50%	35%	44%
Breeder deaths %	12%	1%	6%
Turnoff ratio, sales/total carried*	50%	11%	27%
Kg LW turnoff/AE carried	78	36	53
Male liveweight gain per 12 months	150	83	126
Average male sale price	$365	$190	$294
Average female sale price*	$200	$105	$117
Cents kg LW male	$1.19	$0.80	$0.89
Cents kg LW female*	$0.71	$0.44	$0.57
Cents kg LW all*	$1.32	$0.86	$0.99
Net sales/AE*	$68	$29	$49
Husbandry costs/AE	$21	$3	$11
Bull replacement/AE	$1.88	$0.02	$1.39
Gross Margin/AE*	**$47**	**$24**	**$38**
Total GM for herd*			$155,000

Note: * The figures assume all properties are fully stocked. Some of the above figures (*) are inflated due to properties undergoing herd build up.

**** The High and Low benchmarks relate to the range of individual benchmarks (Branding/Cows mated) rather than the best and worst performing properties.**

CROYDON
26-11-98
SMART MANAGER GROUP BENCHMARKS

	High **	Low **	Average
Total adult equivalents (AE's)	2000	700	1316
Bull replacement cost/calf branded	$12	$2	$6
Husbandry costs as % of net sales*	36%	15%	25%
Branding/cows mated	75%	50%	59%
Female turnoff/total turnoff*	47%	35%	43%
Breeder deaths %	10%	3%	5%
Turnoff ratio, sales/total carried*	42%	19%	30%
Kg LW turnoff/AE carried	85	43	64
Male liveweight gain per 12 months	115	96	108
Average male sale price	$379	$100	$219
Average female sale price*	$230	$135	$200
Cents kg LW male	$1.00	$0.89	$0.94
Cents kg LW female*	$0.94	$0.61	$0.77
Cents kg LW all*	$1.33	$0.83	$0.99
Net sales/AE*	$65	$47	$54
Husbandry costs/AE	$19	$7	$14
Bull replacement/AE	$4.58	$0.66	$2
Gross Margin/AE*	**$48**	**$33**	**$38**
Total GM for herd*			$50,000

Note: * The figures assume all properties are fully stocked. Some of the above figures (*) are inflated due to properties undergoing herd build up.

**** The High and Low benchmarks relate to the range of individual benchmarks (Branding/Cows mated) rather than the best and worst performing properties.**

MT SURPRISE / GEORGETOWN
24/11/98
SMART MANAGER GROUP BENCHMARKS

	High **	Low **	Average
Total adult equivalents (AE's)	3385	1369	2565
Bull replacement cost/calf branded	$10	$3	$6
Husbandry costs as % of net sales*	48%	7%	21%
Branding/cows mated	73%	56%	66%
Female turnoff/total turnoff*	48%	43%	46%
Breeder deaths %	7%	3%	5%
Turnoff ratio, sales/total carried*	35%	21%	28%
Kg LW turnoff/AE carried	113	55	67
Male liveweight gain per 12 months	155	98	131
Average male sale price	$449	$221	$350
Average female sale price*	$275	$148	$181
Cents kg LW male	$1.00	$0.76	$0.93
Cents kg LW female*	$0.88	$0.53	$0.71
Cents kg LW all*	$0.78	$0.66	$0.76
Net sales/AE*	$93	$54	$73
Husbandry costs/AE	$35	$4	$16
Bull replacement/AE	$3	$0.83	$2
Gross Margin/AE*	**$71**	**$35**	**$55**
Total GM for herd*			$141,000

Note: * The figures assume all properties are fully stocked. Some of the above figures (*) are inflated due to properties undergoing herd build up.

**** The High and Low benchmarks relate to the range of individual benchmarks (Branding/Cows mated) rather than the best and worst performing properties.**

COOKTOWN
16-6-99
SMART MANAGER GROUP BENCHMARKS

	High **	Low **	Average
Total adult equivalents (AE's)	1004	121	444
Bull replacement cost/calf branded	$9	$1	$6
Husbandry costs as % of net sales*	25%	14%	21%
Branding/cows mated	85%	48%	73%
Female turnoff/total turnoff*	50%	41%	47%
Breeder deaths %	6%	1%	3%
Turnoff ratio, sales/total carried*	53%	21%	32%
Kg LW turnoff/AE carried	157	81	112
Male liveweight gain per 12 months	170	106	139
Average male sale price	$580	$246	$383
Average female sale price*	$347	$167	$257
Cents kg LW male	$1.06	0.90c	0.96c
Cents kg LW female*	0.96c	0.68c	0.78c
Cents kg LW all*	$1.02	0.81c	0.90c
Net sales/AE*	$132	$86	$111
Husbandry costs/AE	$26	$12	$23
Bull replacement/AE	$5.21	0.42c	$2.27
Gross Margin/AE*	**$99**	**$72**	**$85**
Total GM for herd*			$38,514

Note: * The figures assume all properties are fully stocked. Some of the above figures (*) are inflated due to properties undergoing herd build up.

**** The High and Low benchmarks relate to the range of individual benchmarks (Branding/Cows mated) rather than the best and worst performing properties.**

LAKELAND DOWNS 1
4-11-99
SMART MANAGER GROUP BENCHMARKS

	High **	Low **	Average
Total adult equivalents (AE's)	900	80	357
Bull replacement cost/calf branded	$21	-$4.50	$9
Husbandry costs as % of net sales*	33 %	6%	23%
Branding/cows mated	80%	42%	69%
Female turnoff/total turnoff*	51%	47%	48 %
Breeder deaths %	5 %	1%	3%
Turnoff ratio, sales/total carried*	28%	23%	26%
Kg LW turnoff/AE carried	206	93	129
Male liveweight gain per 12 months	271	86	159
Average male sale price	$717	$291	$452
Average female sale price*	$454	$122	$275
Cents kg LW male	$1.16	$0.83	$1.00
Cents kg LW female*	$1.00	$0.72	$0.90
Cents kg LW all*	$1.08	$0.87	$0.97
Net sales/AE*	$209	$80	$127
Husbandry costs/AE	$69	$9	$29
Bull replacement/AE	$9.04	-$1.37	$3.64
Gross Margin/AE*	$135	$52	$94
Total GM for herd*			$32,330

Note: * The figures assume all properties are fully stocked. Some of the above figures (*) are inflated due to properties undergoing herd build up.

**** The High and Low benchmarks relate to the range of individual benchmarks (Branding/Cows mated) rather than the best and worst performing properties.**

LAKELAND DOWNS 2
18-11-99
SMART MANAGER GROUP BENCHMARKS

	High **	Low **	Average
Total adult equivalents (AE's)	8200	2650	5437
Bull replacement cost/calf branded	$11	$4	$9
Husbandry costs as % of net sales*	27%	9%	18%
Branding/cows mated	63%	57%	60%
Female turnoff/total turnoff*	48%	43%	46%
Breeder deaths %	7%	2%	3%
Turnoff ratio, sales/total carried*	26%	20%	23%
Kg LW turnoff/AE carried	102	78	95
Male liveweight gain per 12 months	161	88	118
Average male sale price	$543	$318	$402
Average female sale price*	$298	$165	$221
Cents kg LW male	$1.01	0.93c	0.97c
Cents kg LW female*	0.84c	0.73c	0.76c
Cents kg LW all*	0.93c	0.84c	0.89c
Net sales/AE*	$95	$68	$85
Husbandry costs/AE	$19	$8	$15
Bull replacement/AE	$3.54	$1.25	$3
Gross Margin/AE*	**$83**	**$46**	**$68**
Total GM for herd*			$370,000

Note: * The figures assume all properties are fully stocked. Some of the above figures (*) are inflated due to properties undergoing herd build up.

**** The High and Low benchmarks relate to the range of individual benchmarks (Branding/Cows mated) rather than the best and worst performing properties.**

CLOTHES PEG
18-3-99
SMART MANAGER GROUP BENCHMARKS

	High *	Low *	Average
Total adult equivalents (AE's)	14000	4050	6994
Bull replacement cost/calf branded	$12	$1	$8
Husbandry costs as % of net sales*	44%	12%	22%
Branding/cows mated	78%	56%	65%
Female turnoff/total turnoff*	49%	38%	46%
Breeder deaths %	9%	2%	5%
Turnoff ratio, sales/total carried*	46%	22%	29%
Kg LW turnoff/AE carried	107	68	83
Male liveweight gain per 12 months	168	107	135
Average male sale price	$450	$152	$334
Average female sale price*	$254	$180	$223
Cents kg LW male	$1.14	$0.85	$1.00
Cents kg LW female*	$0.87	$0.65	$0.74
Cents kg LW all*	$0.99	$0.78	$0.86
Net sales/AE*	$94	$64	$76
Husbandry costs/AE	$35	$8	$17
Bull replacement/AE	$4	$0.30	$2
Gross Margin/AE*	$72	$42	$57
Total GM for herd*			$386,000

Note: * The figures assume all properties are fully stocked. Some of the above figures (*) are inflated due to properties undergoing herd build up.

*** The High and Low benchmarks relate to the range of individual benchmarks (Branding/Cows mated) rather than the best and worst performing properties.**

GREENVALE
9-2-2000
SMART MANAGER GROUP BENCHMARKS

	High **	Low **	Average
Total adult equivalents (AE's)	11700	3300	7409
Bull replacement cost/calf branded	$16	$2	$9
Husbandry costs as % of net sales*	6%	2%	3%
Branding/cows mated	73%	47%	60%
Female turnoff/total turnoff*	48%	46%	46%
Breeder deaths %	4%	2%	3%
Turnoff ratio, sales/total carried*	47%	21%	30%
Kg LW turnoff/AE carried	149	98	126
Male liveweight gain per 12 months	215	114	159
Average male sale price	$466	$200	$341
Average female sale price*	$377	$185	$303
Cents kg LW male	$1.05	77c	93c
Cents kg LW female*	$1.06	57c	79c
Cents kg LW all*	$1.03	86c	87c
Net sales/AE*	$127	$96	$108
Husbandry costs/AE	$6	$2	$4
Bull replacement/AE	$6	74c	$4
Gross Margin/AE*	**$116**	**$93**	**$100**
Total GM for herd*			$740,900

Note: * The figures assume all properties are fully stocked. Some of the above figures (*) are inflated due to properties undergoing herd build up.

**** The High and Low benchmarks relate to the range of individual benchmarks (Branding/Cows mated) rather than the best and worst performing properties.**

ATHERTON TABLELANDS 1
23/05/00
SMART MANAGER GROUP BENCHMARKS

	High **	Low **	Average
Total adult equivalents (AE's)	530	115	237
Bull replacement cost/calf branded	$24	$2	$8
Husbandry costs as % of net sales*	36%	17%	24%
Branding/cows mated	80%	65%	72%
Female turnoff/total turnoff*	49%	42%	47%
Breeder deaths %	7%	1%	2%
Turnoff ratio, sales/total carried*	50%	25%	36%
Kg LW turnoff/AE carried	159	110	133
Male liveweight gain per 12 months	265	159	217
Average male sale price	$641	$275	$522
Average female sale price*	$442	$257	$380
Cents kg LW male	$1.35	$1.07	$1.16
Cents kg LW female*	$1.16	$0.93	$1.00
Cents kg LW all*	$1.26	$1.02	$1.09
Net sales/AE*	$179	$112	$146
Husbandry costs/AE	$54	$22	$36
Bull replacement/AE	$9	0.67c	$3
Gross Margin/AE*	**$133**	**$85**	**$107**
Total GM for herd*			$25,350

Note: * The figures assume all properties are fully stocked. Some of the above figures (*) are inflated due to properties undergoing herd build up.

**** The High and Low benchmarks relate to the range of individual benchmarks (Branding/Cows mated) rather than the best and worst performing properties.**

ATHERTON TABLELANDS 2
10/8/2000
SMART MANAGER GROUP BENCHMARKS

	High **	Low **	Average
Total adult equivalents (AE's)	579	180	342
Bull replacement cost/calf branded	$18	$2	$8
Husbandry costs as % of net sales*	33%	12%	22%
Branding/cows mated	78%	70%	75%
Female turnoff/total turnoff*	49%	46%	48%
Breeder deaths %	4%	2%	3%
Turnoff ratio, sales/total carried*	40%	28%	33%
Kg LW turnoff/AE carried	216	123	158
Male liveweight gain per 12 months	263	165	213
Average male sale price	$679	$474	$597
Average female sale price*	$439	$201	$366
Cents kg LW male	$1.24	$1.13	$1.19
Cents kg LW female*	$1.09	$1.01	$1.03
Cents kg LW all*	$1.18	$1.08	$1.13
Net sales/AE*	$240	$132	$179
Husbandry costs/AE	$58	$17	$41
Bull replacement/AE	$9	$1	$4
Gross Margin/AE*	**$184**	**$91**	**$135**
Total GM for herd*			$46,170

Note: * The figures assume all properties are fully stocked. Some of the above figures (*) are inflated due to properties undergoing herd build up.

**** The High and Low benchmarks relate to the range of individual benchmarks (Branding/Cows mated) rather than the best and worst performing properties.**

EINASLEIGH
20/10/2000
SMART MANAGER GROUP BENCHMARKS

	High **	Low **	Average
Total adult equivalents (AE's)	4980	720	2985
Bull replacement cost/calf branded	$13	$3	$6
Husbandry costs as % of net sales*	23%	4%	10%
Branding/cows mated	72%	51%	64%
Female turnoff/total turnoff*	49%	47%	48%
Breeder deaths %	5%	2%	3%
Turnoff ratio, sales/total carried*	35%	20%	25%
Kg LW turnoff/AE carried	155	99	124
Male liveweight gain per 12 months	205	109	147
Average male sale price	$681	$411	$520
Average female sale price*	$411	$285	$336
Cents kg LW male	$1.21	$1.05	$1.15
Cents kg LW female*	$1.03	$0.80	$0.95
Cents kg LW all*	$1.12	$1	$1.07
Net sales/AE*	$169	$99	$133
Husbandry costs/AE	$32	$5	$14
Bull replacement/AE	$4.25	$0.86	$1.78
Gross Margin/AE*	**$147**	**$92**	**$117**
Total GM for herd*			$350,000

Note: * The figures assume all properties are fully stocked. Some of the above figures (*) are inflated due to properties undergoing herd build up.

**** The High and Low benchmarks relate to the range of individual benchmarks (Branding/Cows mated) rather than the best and worst performing properties.**

COEN
29/11/2001
SMART MANAGER GROUP BENCHMARKS

	High **	Low **	Average
Total adult equivalents (AE's)	4408	395	2398
Bull replacement cost/calf branded	$32	-$0.62	$8
Husbandry costs as % of net sales*	24%	5%	17%
Branding/cows mated	52%	32%	47%
Female turnoff/total turnoff*	46%	16%	35%
Breeder deaths %	17%	3%	9%
Turnoff ratio, sales/total carried*	25%	10%	17%
Kg LW turnoff/AE carried	108	42	68
Male liveweight gain per 12 months	157	78	109
Average male sale price	$609	$364	$431
Average female sale price*	$371	$97	$234
Cents kg LW male	$1.42	$0.93	$1.18
Cents kg LW female*	$1.19	$0.38	$0.79
Cents kg LW all*	$1.28	$0.83	$1.08
Net sales/AE*	$111	$41	$74
Husbandry costs/AE	$24	$3	$13
Bull replacement/AE	$10	-$0.18	$2.45
Gross Margin/AE*	**$85**	**$35**	**$58**
Total GM for herd*			$140,000

Note: * The figures assume all properties are fully stocked. Some of the above figures (*) are inflated due to properties undergoing herd build up.

**** The High and Low benchmarks relate to the range of individual benchmarks (Branding/Cows mated) rather than the best and worst performing properties.**

- JULIA CREEK 1

24-6-99

SMART MANAGER GROUP BENCHMARKS

	High **	Low **	Average
Total adult equivalents (AE's)	3881	800	1860
Bull replacement cost/calf branded	$13	$5	$10
Husbandry costs as % of net sales*	8%	7%	7%
Branding/cows mated	83%	71%	77%
Female turnoff/total turnoff*	50%	45%	48%
Breeder deaths %	5%	1%	3%
Turnoff ratio, sales/total carried*	38%	28%	33%
Kg LW turnoff/AE carried	183	131	156
Male liveweight gain per 12 months	172	148	162
Average male sale price	$555	$448	$502
Average female sale price*	$365	$239	$297
Cents kg LW male	0.97c	0.82c	0.91c
Cents kg LW female*	0.90c	0.79c	0.85c
Cents kg LW all*	0.93c	0.83c	0.89c
Net sales/AE*	$152	$122	$138
Husbandry costs/AE	$11	$9.60	$10
Bull replacement/AE	$4.85	$2.22	$3.65
Gross Margin/AE*	**$136**	**$109**	**$124**
Total GM for herd*			$232,000

Note: * The figures assume all properties are fully stocked. Some of the above figures (*) are inflated due to properties undergoing herd build up.

**** The High and Low benchmarks relate to the range of individual benchmarks (Branding/Cows mated) rather than the best and worst performing properties.**

JULIA CREEK 2
11/2000
SMART MANAGER GROUP BENCHMARKS

	High **	Low **	Average
Total adult equivalents (AE's)	3750	1000	2050
Bull replacement cost/calf branded	$18	$8	$12
Husbandry costs as % of net sales*	5%	3%	4%
Branding/cows mated	81%	72%	76%
Female turnoff/total turnoff*	49%	47%	48%
Breeder deaths %	3%	1%	2%
Turnoff ratio, sales/total carried*	40%	28%	32%
Kg LW turnoff/AE carried	169	156	163
Male liveweight gain per 12 months	203	157	183
Average male sale price	$505	$386	$448
Average female sale price*	$461	$278	$345
Cents kg LW male	$1.12	$0.96	$1.03
Cents kg LW female*	$1.00	$0.72	$0.83
Cents kg LW all*	$0.99	$0.85	$0.93
Net sales/AE*	$157	$144	$152
Husbandry costs/AE	$8	$4	$6
Bull replacement/AE	$9	$3	$5
Gross Margin/AE*	**$147**	**$138**	**$142**
Total GM for herd*			$291,000

Note: * The figures assume all properties are fully stocked. Some of the above figures (*) are inflated due to properties undergoing herd build up.

**** The High and Low benchmarks relate to the range of individual benchmarks (Branding/Cows mated) rather than the best and worst performing properties.**

- HUGHENDEN 1

22-6-99

SMART MANAGER GROUP BENCHMARKS

	High **	Low **	Average
Total adult equivalents (AE's)	3350	640	1538
Bull replacement cost/calf branded	$26	$1	$12
Husbandry costs as % of net sales*	14%	0%	5%
Branding/cows mated	84%	51%	71%
Female turnoff/total turnoff*	50%	47%	48%
Breeder deaths %	4%	0.4%	2.5%
Turnoff ratio, sales/total carried*	42%	25%	34%
Kg LW turnoff/AE carried	178	137	154
Male liveweight gain per 12 months	228	164	192
Average male sale price	$514	$289	$428
Average female sale price*	$434	$302	$362
Cents kg LW male	$1	$0.82	$0.93
Cents kg LW female*	$1.04	$0.85	$0.94
Cents kg LW all*	$1.02	$0.83	$0.94
Net sales/AE*	$166	$115	$138
Husbandry costs/AE	$16	$0	$6
Bull replacement/AE	$11	$0.30	$5
Gross Margin/AE*	**$160**	**$89**	**$127**
Total GM for herd*			$187 000

Note: * The figures assume all properties are fully stocked. Some of the above figures (*) are inflated due to properties undergoing herd build up.

**** The High and Low benchmarks relate to the range of individual benchmarks (Branding/Cows mated) rather than the best and worst performing properties.**

HUGHENDEN 2
10-11-99
SMART MANAGER GROUP BENCHMARKS

	High **	**Low ****	**Average**
Total adult equivalents (AE's)	3000	650	1337
Bull replacement cost/calf branded	$62	$6	$24
Husbandry costs as % of net sales*	18%	3%	9%
Branding/cows mated	81%	53%	65%
Female turnoff/total turnoff*	49%	48%	49%
Breeder deaths %	2%	1%	1%
Turnoff ratio, sales/total carried*	33%	28%	30%
Kg LW turnoff/AE carried	215	158	192
Male liveweight gain per 12 months	208	135	176
Average male sale price	$1000	$384	$579
Average female sale price*	$595	$296	$395
Cents kg LW male	$1.79	$0.86	$1.19
Cents kg LW female*	$1.32	$0.69	$0.93
Cents kg LW all*	$1.58	$0.78	$1.07
Net sales/AE*	$340	$153	$209
Husbandry costs/AE	$28	$6	$18
Bull replacement/AE	$28	$3	$11
Gross Margin/AE*	**$289**	**$116**	**$179**
Total GM for herd*			$239,000

Note: * The figures assume all properties are fully stocked. Some of the above figures (*) are inflated due to properties undergoing herd build up.

**** The High and Low benchmarks relate to the range of individual benchmarks (Branding/Cows mated) rather than the best and worst performing properties.**

CLONCURRY
11-2000
SMART MANAGER GROUP BENCHMARKS

	High **	Low **	Average
Total adult equivalents (AE's)	21,650	270	7280
Bull replacement cost/calf branded	$45	$9	$28
Husbandry costs as % of net sales*	7%	4%	6%
Branding/cows mated	79%	69%	75%
Female turnoff/total turnoff*	49%	48%	48%
Breeder deaths %	2%	2%	2%
Turnoff ratio, sales/total carried*	32%	26%	28%
Kg LW turnoff/AE carried	150	124	139
Male liveweight gain per 12 months	158	140	147
Average male sale price	$732	$373	$552
Average female sale price*	$443	$198	$351
Cents kg LW male	$1.44	$1.08	$1.23
Cents kg LW female*	$1.11	$0.52	$0.92
Cents kg LW all*	$1.29	$0.85	$0.93
Net sales/AE*	$194	$109	$152
Husbandry costs/AE	$13	$5	$10
Bull replacement/AE	$15	$4	$10
Gross Margin/AE*	**$165**	**$97**	**$133**
Total GM for herd*			$966,000

Note: * The figures assume all properties are fully stocked. Some of the above figures (*) are inflated due to properties undergoing herd build up.

**** The High and Low benchmarks relate to the range of individual benchmarks (Branding/Cows mated) rather than the best and worst performing properties.**

BOWEN
4-99
SMART MANAGER GROUP BENCHMARKS

	High **	**Low ****	**Average**
Total adult equivalents (AE's)	3050	550	1683
Bull replacement cost/calf branded	$24	$1	$9
Husbandry costs as % of net sales*	17%	5%	11%
Branding/cows mated	81%	58%	70%
Female turnoff/total turnoff*	50%	47%	49%
Breeder deaths %	3%	0.3%	1%
Turnoff ratio, sales/total carried*	34%	22%	27%
Kg LW turnoff/AE carried	152	116	142
Male liveweight gain per 12 months	180	126	143
Average male sale price	$725	$240	$464
Average female sale price*	$387	$239	$306
Cents kg LW male	$1.20	$0.70	$0.99
Cents kg LW female*	$0.84	$0.71	$0.76
Cents kg LW all*	$1.02	$0.72	$0.88
Net sales/AE*	$151	$99	$126
Husbandry costs/AE	$19	$7	$14
Bull replacement/AE	$9	$0.29	$3
Gross Margin/AE*	**$131**	**$82**	**$109**
Total GM for herd*			$183,000

Note: * The figures assume all properties are fully stocked. Some of the above figures (*) are inflated due to properties undergoing herd build up.

**** The High and Low benchmarks relate to the range of individual benchmarks (Branding/Cows mated) rather than the best and worst performing properties.**

GUMLU GROUP *
18/04/00
SMART MANAGER GROUP BENCHMARKS

	High **	Low **	Average
Total adult equivalents (AE's)	2500	1850	2233
Bull replacement cost/calf branded	$8	-$0.27	$3
Husbandry costs as % of net sales*	13%	6%	9%
Branding/cows mated	79%	58%	65%
Female turnoff/total turnoff*	50%	47%	49%
Breeder deaths %	3%	1%	2%
Turnoff ratio, sales/total carried*	25%	25%	25%
Kg LW turnoff/AE carried	118	95	111
Male liveweight gain per 12 months	179	140	146
Average male sale price	$566	$295	$418
Average female sale price*	$380	$254	$318
Cents kg LW male			
Cents kg LW female*			
Cents kg LW all*			
Net sales/AE*	$129	$88	$107
Husbandry costs/AE	$13	$5	$9
Bull replacement/AE			
Gross Margin/AE*	**$119**	**$80**	**$97**
Total GM for herd*			$216,000

Note: * The figures assume all properties are fully stocked. Some of the above figures (*) are inflated due to properties undergoing herd build up.

**** The High and Low benchmarks relate to the range of individual benchmarks (Branding/Cows mated) rather than the best and worst performing properties.**

STRATHALBYN *
10/4/00
SMART MANAGER GROUP BENCHMARKS

	High **	Low **	Average
Total adult equivalents (AE's)	10330	1390	5430
Bull replacement cost/calf branded	$16	$3	$9
Husbandry costs as % of net sales*	25%	7 %	14%
Branding/cows mated	77%	56%	65%
Female turnoff/total turnoff*	48 %	47%	48%
Breeder deaths %	4%	3%	3%
Turnoff ratio, sales/total carried*	25%	19%	23%
Kg LW turnoff/AE carried	118	82	102
Male liveweight gain per 12 months	160	140	149
Average male sale price	$643	$350	$485
Average female sale price*	$399	$290	$353
Cents kg LW male			
Cents kg LW female*			
Cents kg LW all*			
Net sales/AE*	$112	$97	$102
Husbandry costs/AE	$25	$8	$15
Bull replacement/AE			
Gross Margin/AE*	**$97**	**$69**	**$85**
Total GM for herd*			$463,000

Note: * The figures assume all properties are fully stocked. Some of the above figures (*) are inflated due to properties undergoing herd build up.

**** The High and Low benchmarks relate to the range of individual benchmarks (Branding/Cows mated) rather than the best and worst performing properties.**

INGHAM
25/02/99
SMART MANAGER GROUP BENCHMARKS

	High **	Low **	Average
Total adult equivalents (AE's)	3500	120	1021
Bull replacement cost/calf branded	$35	$4	$20
Husbandry costs as % of net sales*	31%	6%	20%
Branding/cows mated	90%	40%	63%
Female turnoff/total turnoff*	50%	40%	47%
Breeder deaths %	7%	1%	3%
Turnoff ratio, sales/total carried*	37%	14%	25%
Kg LW turnoff/AE carried	115	62	78
Male liveweight gain per 12 months	162	95	133
Average male sale price	$860	$190	$510
Average female sale price*	$387	$272	$315
Cents kg LW male			
Cents kg LW female*			
Cents kg LW all*			
Net sales/AE*	$145	$70	$107
Husbandry costs/AE	$44	$9	$21
Bull replacement/AE	$11	$1	$6
Gross Margin/AE*	**$121**	**$44**	**$80**
Total GM for herd*			$82,000

Note: * The figures assume all properties are fully stocked. Some of the above figures (*) are inflated due to properties undergoing herd build up.

**** The High and Low benchmarks relate to the range of individual benchmarks (Branding/Cows mated) rather than the best and worst performing properties.**

BOWEN RIVER GROUP *
19/04/00
SMART MANAGER GROUP BENCHMARKS

	High **	Low **	Average
Total adult equivalents (AE's)	8500	1125	4271
Bull replacement cost/calf branded	$8	-$0.89	$4
Husbandry costs as % of net sales*	17%	7%	9%
Branding/cows mated	65%	45 %	53 %
Female turnoff/total turnoff*	49%	43%	46%
Breeder deaths %	5 %	1%	3%
Turnoff ratio, sales/total carried*	39%	19 %	30%
Kg LW turnoff/AE carried	118	90	110
Male liveweight gain per 12 months	231	123	173
Average male sale price	$450	$150	$301
Average female sale price*	$500	$370	$404
Cents kg LW male			
Cents kg LW female*			
Cents kg LW all*			
Net sales/AE*	$130	$101	$115
Husbandry costs/AE	$17	$8	$10
Bull replacement/AE			
Gross Margin/AE*	**$117**	**$84**	**$102**
Total GM for herd*			$436,000

Note: * The figures assume all properties are fully stocked. Some of the above figures (*) are inflated due to properties undergoing herd build up.

**** The High and Low benchmarks relate to the range of individual benchmarks (Branding/Cows mated) rather than the best and worst performing properties.**

AYR/BURDEKIN
13/04/00
SMART MANAGER GROUP BENCHMARKS

	High **	Low **	Average
Total adult equivalents (AE's)	750	100	447
Bull replacement cost/calf branded	$10	$1	$6
Husbandry costs as % of net sales*	25%	7%	16%
Branding/cows mated	71%	50%	62%
Female turnoff/total turnoff*	49%	47%	48%
Breeder deaths %	4%	3%	3 %
Turnoff ratio, sales/total carried*	25%	19%	22%
Kg LW turnoff/AE carried	124	103	111
Male liveweight gain per 12 months	147	106	126
Average male sale price	$546	$440	$471
Average female sale price*	$498	$303	$378
Cents kg LW male	$1.18	$0.79	$1.03
Cents kg LW female*	$0.99	$0.74	$0.88
Cents kg LW all*	$1.04	$0.80	$0.92
Net sales/AE*	$140	$95	$113
Husbandry costs/AE	$35	$9	$18
Bull replacement/AE	$11	$1	$7
Gross Margin/AE*	**$116**	**$73**	**$93**
Total GM for herd*			$42,000

Note: * The figures assume all properties are fully stocked. Some of the above figures (*) are inflated due to properties undergoing herd build up.

**** The High and Low benchmarks relate to the range of individual benchmarks (Branding/Cows mated) rather than the best and worst performing properties.**

TOWNSVILLE
20/9/99
SMART MANAGER GROUP BENCHMARKS

	High **	Low **	Average
Total adult equivalents (AE's)	4000	155	1090
Bull replacement cost/calf branded	$17	$2	$6
Husbandry costs as % of net sales*	19%	3%	12%
Branding/cows mated	72%	44%	55%
Female turnoff/total turnoff*	50%	38%	45%
Breeder deaths %	8 %	1%	4%
Turnoff ratio, sales/total carried*	46%	19%	28%
Kg LW turnoff/AE carried	131	73	102
Male liveweight gain per 12 months	144	131	139
Average male sale price	$461	$147	$322
Average female sale price*	$343	$231	$291
Cents kg LW male			
Cents kg LW female*			
Cents kg LW all*			
Net sales/AE*	$110	$68	$90
Husbandry costs/AE	$18	$3	$11
Bull replacement/AE	$5	$0.46	$2
Gross Margin/AE*	**$101**	**$54**	**$77**
Total GM for herd*			$84,000

Note: * The figures assume all properties are fully stocked. Some of the above figures (*) are inflated due to properties undergoing herd build up.

**** The High and Low benchmarks relate to the range of individual benchmarks (Branding/Cows mated) rather than the best and worst performing properties**

PRAIRIE
20-3-98
SMART MANAGER GROUP BENCHMARKS

	High **	Low **	Average
Total adult equivalents (AE's)			1190
Bull replacement cost/calf branded			$15
Husbandry costs as % of net sales*			18%
Branding/cows mated			72%
Female turnoff/total turnoff*			44%
Breeder deaths %			7%
Turnoff ratio, sales/total carried*			27%
Kg LW turnoff/AE carried			N/A
Male liveweight gain per 12 months			N/A
Average male sale price			$352
Average female sale price*			$247
Cents kg LW male			N/A
Cents kg LW female*			N/A
Cents kg LW all*			N/A
Net sales/AE*			$85
Husbandry costs/AE			$15
Bull replacement/AE			$5
Gross Margin/AE*			**$65**
Total GM for herd*			$77,583

Note: * The figures assume all properties are fully stocked. Some of the above figures (*) are inflated due to properties undergoing herd build up.

**** The High and Low benchmarks relate to the range of individual benchmarks (Branding/Cows mated) rather than the best and worst performing properties.**

BELYANDO
25-9-98
SMART MANAGER GROUP BENCHMARKS

	High **	Low **	Average
Total adult equivalents (AE's)	3500	1600	2400
Bull replacement cost/calf branded	$16	$3	$12
Husbandry costs as % of net sales*	3%	1%	2%
Branding/cows mated	74%	65%	70%
Female turnoff/total turnoff*	49%	46%	48%
Breeder deaths %	5%	2%	3%
Turnoff ratio, sales/total carried*	46%	23%	31%
Kg LW turnoff/AE carried	165	137	149
Male liveweight gain per 12 months	189	160	171
Average male sale price	$704	$300	$551
Average female sale price*	$390	$327	$362
Cents kg LW male	$1.06	$0.89	$0.98
Cents kg LW female*	$0.88	$0.79	$0.83
Cents kg LW all*	$0.95	$0.83	$0.91
Net sales/AE*	$140	$127	$134
Husbandry costs/AE	$4	$1	$3
Bull replacement/AE	$6	$1	$4
Gross Margin/AE*	**$133**	**$123**	**$129**
Total GM for herd*			$307,703

Note: * The figures assume all properties are fully stocked. Some of the above figures (*) are inflated due to properties undergoing herd build up.

**** The High and Low benchmarks relate to the range of individual benchmarks (Branding/Cows mated) rather than the best and worst performing properties.**

EWAN (Three Rivers)
9-8-99
SMART MANAGER GROUP BENCHMARKS

	High **	**Low ****	**Average**
Total adult equivalents (AE's)	6000	1850	3441
Bull replacement cost/calf branded	$28	$3	$6
Husbandry costs as % of net sales*	105	2%	5%
Branding/cows mated	75%	62%	66%
Female turnoff/total turnoff*	50%	48%	49%
Breeder deaths %	3%	1%	2%
Turnoff ratio, sales/total carried*	28%	23%	26%
Kg LW turnoff/AE carried	159	117	144
Male liveweight gain per 12 months	161	112	130
Average male sale price	$786	$396	$615
Average female sale price*	$417	$273	$344
Cents kg LW male	$1.28	$0.83	$0.90
Cents kg LW female*	$0.95	$0.83	$0.90
Cents kg LW all*	$1.07	$0.83	$1.00
Net sales/AE*	$162	$119	$144
Husbandry costs/AE	$16	$2	$7
Bull replacement/AE	$9	$0.90	$3
Gross Margin/AE*	**$157**	**$109**	**$133**
Total GM for herd*			$475,855

Note: * The figures assume all properties are fully stocked. Some of the above figures (*) are inflated due to properties undergoing herd build up.

**** The High and Low benchmarks relate to the range of individual benchmarks (Branding/Cows mated) rather than the best and worst performing properties.**

TORRENS CREEK
12-10-99
SMART MANAGER GROUP BENCHMARKS

	High **	Low **	Average
Total adult equivalents (AE's)	2000	770	1330
Bull replacement cost/calf branded	$12	$2	$7
Husbandry costs as % of net sales*	27%	6%	13%
Branding/cows mated	80%	52%	67%
Female turnoff/total turnoff*	50%	44%	48%
Breeder deaths %	5%	1%	2%
Turnoff ratio, sales/total carried*	34%	25%	29%
Kg LW turnoff/AE carried	180	109	147
Male liveweight gain per 12 months	194	123	161
Average male sale price	$564	$329	$439
Average female sale price*	$394	$255	$339
Cents kg LW male	$1.20	$0.78	$1.01
Cents kg LW female*	$1.01	$0.75	$0.87
Cents kg LW all*	$1.01	$0.84	$0.95
Net sales/AE*	$182	$107	$138
Husbandry costs/AE	$40	$7	$18
Bull replacement/AE	$4	$1	$2
Gross Margin/AE*	**$166**	**$83**	**$118**
Total GM for herd*			$151,000

Note: * The figures assume all properties are fully stocked. Some of the above figures (*) are inflated due to properties undergoing herd build up.

**** The High and Low benchmarks relate to the range of individual benchmarks (Branding/Cows mated) rather than the best and worst performing properties.**

PENTLAND
24-10-2000
SMART MANAGER GROUP BENCHMARKS

	High **	Low **	Average
Total adult equivalents (AE's)	5000	500	2194
Bull replacement cost/calf branded	$10	$4	$8
Husbandry costs as % of net sales*	22%	3%	11%
Branding/cows mated	67%	55%	60%
Female turnoff/total turnoff*	48%	41%	44%
Breeder deaths %	7%	3%	5%
Turnoff ratio, sales/total carried*	35%	16%	26%
Kg LW turnoff/AE carried	130	104	120
Male liveweight gain per 12 months	207	106	149
Average male sale price	$842	$300	$491
Average female sale price*	$429	$283	$369
Cents kg LW male	$1.35	$0.86	$1.15
Cents kg LW female*	$104	$0,76	$0.94
Cents kg LW all*	$1.18	$0.82	$1.06
Net sales/AE*	$150	$106	$126
Husbandry costs/AE	$25	$4	$14
Bull replacement/AE	$4	$1	$3
Gross Margin/AE*	**$141**	**$83**	**$109**
Total GM for herd*			$240,613

Note: * The figures assume all properties are fully stocked. Some of the above figures (*) are inflated due to properties undergoing herd build up.

**** The High and Low benchmarks relate to the range of individual benchmarks (Branding/Cows mated) rather than the best and worst performing properties.**

MINGELA/RAVENSWOOD
25-10-2000
SMART MANAGER GROUP BENCHMARKS

	High **	Low **	Average
Total adult equivalents (AE's)	4000	516	1912
Bull replacement cost/calf branded	$13	$0.45	$7
Husbandry costs as % of net sales*	15%	2%	7%
Branding/cows mated	67%	58%	61%
Female turnoff/total turnoff*	48%	43%	47%
Breeder deaths %	5%	2%	3%
Turnoff ratio, sales/total carried*	24%	19%	21%
Kg LW turnoff/AE carried	126	102	118
Male liveweight gain per 12 months	167	118	134
Average male sale price	$741	$504	$618
Average female sale price*	$487	$381	$420
Cents kg LW male	$1.21	$1.15	$1.17
Cents kg LW female*	$1.05	$0.98	$1.03
Cents kg LW all*	$1.15	$1.08	41.11
Net sales/AE*	$145	$110	$130
Husbandry costs/AE	$16	$2	$9
Bull replacement/AE	44	$0.13	$2
Gross Margin/AE*	**$137**	**$91**	**$119**
Total GM for herd*			$248,610

Note: * The figures assume all properties are fully stocked. Some of the above figures (*) are inflated due to properties undergoing herd build up.

**** The High and Low benchmarks relate to the range of individual benchmarks (Branding/Cows mated) rather than the best and worst performing properties.**

Appendix 4. Smart Manager Groups

1. Mt Garnet Basalt

Meeting dates: 25/3/98 & 1/12/98 & 8/12/99 & 21/11/2001

Property	Cattle (A.E.)	Attendees
Glen Ruth/Mandalee		Richard Thierle
Meadowbank		Greg & Judy Brown
Weona		Graeme Idstein
Glen Harding		Ken & Fiona Atkinson
Lamonds Lagoon		Mike & Helen Murdoch
Blunder Park		Trevor & Carol Austin
Total Adult equivalents	**13,295**	**6 properties & 10 graziers**

A third combined meeting was held with the Mt Garnet Red earth group on 8/12/99. Members from both groups carried out an annual review of benchmarks. A further review of benchmarks and options was carried out on 21/11/01 with the Mt Garnet Basalt and Georgetown/Mt Surprise groups

2. Mt Garnet Red Earth

Meeting dates: 31/7/98 & 10/12/98 & 8/12/99 & 21/11/2001

Property	Cattle (A.E.)	Attendees
Goshen		Ross & Maxine Blennerhassett
Wombinoo		Warren & Gail Jonsson
Wairuna		Jim & Helen Teitzel
Gunnawarra		Giles & Sally Atkinson
Morecambe		Luke & Wendy Tilse
Sugarbag		Robert & Rebecca Henry
Coolgarra		Garry & Roz Burtenshaw
Tirrabella		Norm Fitchett
Lucey Hill		Phil Condon
Total Adult equivalents	**31,360**	**9 properties & 16 graziers**

3. Chillagoe

Meeting dates: 16/11/98 & 8/12/98

Property	Cattle (A.E.)	Attendees
Spring Valley		Jim & Frank O'Shea
Retire		Kerry McGrath
Pinnacle Springs		Peter & Verna Kruckow, Alan Rodman
Chillagoe		Dale & Steve Crossland
Bolwarra		Peter Pantovic
Total Adult equivalents	**20,410**	**5 properties and 9 graziers**

4. Croydon

Meeting dates: 26/11/98 & 5/1/2000

Property	Cattle (A.E.)	Attendees
Reigate		Jim & Janette Willis
Oakland Park		Cameron MacLean
Hereford		Daryl Hall
Clothilda		Warren & Anita Bethel
Coralie		Chris Thorn
Total Adult equivalents	**6,579**	**5 properties & 7 graziers**

5. Mt Surprise / Georgetown

Meeting dates: 24/11/98 & 23/2/99 & 13/12/99 & 21/11/2001

Property	Cattle (A.E.)	Attendees
Whitewater		Tom Saunders & Patricia Cranwell
Rocky Springs		Doug & Mary Buchanan
Mt Sullivan		Ian Pedracini
Huonfels		John & Yvonne Bethel
Prestwood		Maurice & Beryl Marnane
Forest Home		Malcolm & Mary Buchanan & Trevor Blacklock
Total Adult equivalents	**15,391**	**6 properties & 12 graziers**

The third meeting was an annual review of group benchmarks. Several members attended the Undara Beef production day and the Smart Manager visit to Swans Lagoon and Wambiana. The group combined with the two Mt Garnet groups for a benchmark review on 21/11/2001.

6. Cooktown

Meeting dates: 16/6/99 & 14/7/99 & 20/11/2001

Property	Cattle (A.E.)	Attendees
Mt Louis Pastoral Co.		Rod Hickling
McIvor Pastoral Co.		Bruce Parker
		Paul Clemesha
		Warwick Wakefield
		John Knight
		Judy Irwin
Total Adult equivalents	**2,663**	**6 properties & 6 graziers**

A combined review of benchmarks was held on 20/11/01 with the two Lakeland groups.

7. Lakeland Downs 1

Meeting dates: 4/11/99 & 9/12/99 & 20/11/2001

Property	Cattle (A.E.)	Attendees
D J pastoral		Paul Barry
Mountain View		Joy Marriott
Old Maitland		Mary Inverardi
Golden Tyne		Barry & Carol & Joanne Hosking
Broken Dam		Beth Ward
Bell Earl		Steve & Sue Ahlers
Total Adult equivalents	**2,149**	**6 properties & 8 graziers**

8. Lakeland Downs 2

Meeting dates: 18/11/99 & 9/12/99 & 20/11/2001

Property	Cattle (A.E.)	Attendees
Kings Plains		Elaine Simpson
Springvale		Luke & Leanne Quaid
Olivevale		Peter Nankervis & Richard McDonald
Total Adult equivalents	**13,550**	**3 properties & 5 graziers**

9. Clothes Peg

Meeting dates: 18/3/99 & 3/6/99

Property	Cattle (A.E.)	Attendees
Glenmore		John & Jane Lethbridge
Blackbraes		Carol Ross
Gregory Springs		John, Peter & Geraldine Murphy
Clothes Peg		Tony & Allison & David & Jo Murphy
Werrington		Linlea Lethbridge
Chudleigh		Inga Gibson
Mt Sturgeon		Min Jones
Total Adult equivalents	**48,955**	**7 properties & 13 graziers**

10. Greenvale

Meeting dates: 9/2/2000 & 9/3/2000

Property	Cattle (A.E.)	Attendees
Greenvale		Pete Barr
Jervoise		Kerry, Paul & Shane Jonsson
Carpentaria Downs		Bob Lowe
Lucky Downs		Sue, Tim & Lisa Atkinson
Total Adult equivalents	**29,638**	**4 properties & 8 graziers**

11. Atherton Tablelands 1

Meeting dates: 23/05/2000 & 26/6/2000

Property	Cattle (A.E.)	Attendees
		George & Dawn Bloomfield
		Warren & Lyn Hosie
		Kev & Iris Lambert
		Louie Gallo
		Penny & Dave Shaw
		Marie-Ann Green
		Charlie Innes
		Bill & Narelle Innes
Total Adult equivalents	**1,820**	**8 properties & 13 graziers**

Charlie Innes and Bill & Narelle Innes both run fattening only operations. The other 6 properties in the group breed and fatten. The group benchmarks only include the breeding and fattening properties.

12. Atherton Tablelands 2

Meeting date: 10/8/2000

Property	Cattle (A.E.)	Attendees
		Les Coleman
		Fred Williams
		Alan Booth
		Aldo Pezzelato
		Maurice DeTournouer
		Col Campbell
Total Adult equivalents	**1,710**	**5 properties & 5 graziers**

The properties were visited individually and their benchmarks calculated prior to the group meeting. At the meeting the group average benchmarks were discussed and options examined. Col Campbell is an ex grazier looking to re-enter the industry.

13. Einasleigh

Meeting date: 20/10/2000

Property	Cattle (A.E.)	Attendees
Stockmans Creek		Wayne Toohey
Beverley Hills		Trevor French
Soda Creek		Michael & Tracey Furber
Bagstowe		Thomas Dixon
Ellendale		Laurence Prior
Narrawa		Brian Furber
Red Rock		Les & Glen Mosch
Oak Park		Roland Everingham
Total Adult equivalents	**23,885**	**8 properties & 10 graziers**

Benchmarks were gathered individually prior to the options workshop

14. Coen

Meeting date: 29/11/2001

Property	Cattle (A.E.)	Attendees
Astrea		Tricia Gordon
Artemis		Tom & Sue Shephard
Watson River		Cam & Doreen Quartermaine
Wolverton		Kevin & Debbie Jackson
Crystal Vale		Debbie Gostelow
Lilyvale		Glen & Susan Shephard
Karma Waters		Allan & Karen Pedersen
Kings Plain		Sonia Mc Fadjen
Total Adult equivalents	**19,200**	**8 properties & 13 graziers**

Benchmarks were gathered by individual property visits prior to the workshop. Only the first 5 properties listed above were available for the November meeting

15. Hughenden 1

Meeting dates: 22/6/1999 & 3/8/99

Property	Cattle (A.E.)	Attendees
Rockwood		Colin & John Delahunty
Nottingham Downs		Tracey Terry
Inveresk		Bill Spence
Railview		Dave & Michelle Fryer
Dalkeith		Daniel Kelly
Total Adult equivalents	**7,690**	**5 properties & 7 graziers**

16. Hughenden 2

Meeting date: 10/11/1999

Property	Cattle (A.E.)	Attendees
Vuna		Alan & Julie-Ann Murray
The Plains		Bill & Lesley Bode
Glenmoan		Rowan McClymont
Rosevale		Dave Collyer
Cairnhope		Bruce Westcott
Waihorunga		Frank Leslie
Total Adult equivalents	**5,350**	**6 properties & 8 graziers**

17. Julia Creek 1

Meeting date: 24/6/1999

Property	Cattle (A.E.)	Attendees
Newhaven		Jenny Windus
Moonamarra		Paul Mullins
Phenros		Leanne Eckford
Total Adult equivalents	**5,580**	**3 properties & 3 graziers**

18. Julia Creek 2

Meeting date: 11/2000

Property	Cattle (A.E.)	Attendees
Answer Downs		Steven & Debbie Batt
Keswick		Jim & Jean Haynes
Cannington		Andrew & Sharon Banning
Viola		Robert & Jackie Curley
Valwin		Jack & Mary Scholes
Caiwarra		Noel & Dallas Daly
Caleewa		Phillip & Judy McCowan
Total Adult equivalents	**6,150+?**	**7 properties & 14 graziers**

19. Cloncurry

Meeting date: 11/2000

Property	Cattle (A.E.)	Attendees
Yambungan		Simon Hullock
AA Co.		Jenny White
Gipsy Plains		Jackie Curley
Gipsy (stud)		Robert Curley
Total Adult equivalents	**29,120**	**4 properties & 4 graziers**

20. Bowen Group

Meeting dates: 16/04/99 & 21/05/99

Property	Cattle(A.E.)	Attendees
Mt Dangar		Harold & Cliff Teitzel
Boundary Creek (1)		Jocelyn & Colin Gordon
Boundary Creek (2)		John & Gaye Gillies
Ida Creek		Don Large & Sharon Camm (daughter)
Nyoola		Mark & Wendy Bickhoff
Salisbury Plains		Susan & Terry Vail
Mt Pleasant		James & Garlonn Gordon
Total Adult Equivalents	**11,630**	**7 properties & 14 graziers**

21. Strathalbyn

Meeting dates: 10/4/2000

Property	Cattle(A.E.)	Attendees
Strathalbyn		Jim & Lesley Dunn, Steph Tudehope
Landers Creek		Bill & Elizabeth Tudehope
Woodhouse		John Rapisarda & Peter Hagan
Mt Wickham		John & Margaret Wilson
Total Adult Equivalents	**21,720**	**4 properties & 9 graziers**

22. Ayr/Burdekin

Meeting dates: 13/04/2000 & 5/6/2000

Property	Cattle(A.E.)	Attendees
Starving Steer		Chris Hodder
Groper Creek		Len Hodder
Sheep Camp		Ray Tapiolas
Lardelli		Reg Cody
Shannonvale		Karen & Kevin Wassmuth
Total Adult Equivalents	**2,000**	**5 properties & 6 graziers**

23. Gumlu

Meeting dates: 18/04/2000

Property	Cattle(A.E.)	Attendees
Rangemore		James Berryman
Glenroc		Greg Lee & Athol Nicolaides
Edinburgh Park		Bill & Brian Linton
Woonton Vale		Ian & Anne Barrett
Total Adult Equivalents	**8,700**	**4 properties & 7 graziers**

24. Bowen River

Meeting dates: 19/04/2000

Property	Cattle(A.E.)	Attendees
Strathmore		Edward Cunningham
Panhandle		Barry Vella
Ukalunda		Marion & Robert Whalan
Heidelberg		Tom Murray
Total Adult Equivalents	**17,085**	**4 properties & 5 graziers**

25. Townsville

Meeting dates: 20/9/99 & 22/02/2000

Property	Cattle(A.E.)	Attendees
Granite Vale		Graeme & Carolyn Brabon
Mt Margaret		Steve & Daphne Moncrief
Wongaloo		Bill Meehan
Woodland		Max & Cathy Meehan
Wonderland		Geoff & Vicky Toomby
Artlenn Downs		Peter & Margot Weston
Total Adult Equivalents	**8,085**	**6 properties & 11 graziers**

26. Ingham

Meeting dates: 25/2/99 & 24/2/2000

Property	Cattle(A.E.)	Attendees
Lochlea		Edi & Michael Solari
Miltondale Park		Warren & Jenny Crisp
		John Peebles
		David & Erica Scott
		Gerry & Sue Gordon
		Robert Rutherford
Total Adult Equivalents	**4,228**	**6 properties & 10 graziers**

27. Prairie

Meeting dates: 26/02/98 & 20/03/98

Property	Cattle(A.E.)	Attendees
Charlie Creek		Russell & Lyn Jonsson
Timaru		David Bode
Makana		Bill Alford
Oakley		David & Jenny James
Jereena		John Sealey & son
Railview		David & Michelle Fryer
Total Adult Equivalents	**8400**	**6 properties & 10 producers**

28. Belyando

Meeting dates: 25/09/98

Property	Cattle(A.E.)	Attendees
Mt Douglas		Donald & Wilma Burnett
Llanarth		Claver, Terry & Roslyn Kenny
Nairana		Edgar Burnett
Wilanspey		Ralph Martel
Total Adult Equivalents	**9600**	**4 properties & 7 producers**

29. Ewan (3 Rivers)

Meeting dates: 09/08/99 & 23/11/99

Property	Cattle(A.E.)	Attendees
Blue Range		Duncan, Eugene and Heather Matthews
Lucky Springs		Jacqui & Katherine Heath
Paynes Lagoon		David Nicholas
Lucky Break		Roger & Di Brabon
Camel Creek		Keith & Alma Atkinson
Lassie Creek		Warren Matthews
Kirkland Downs		Tom, Irene & Maree Kirkwood
Total Adult Equivalents	**27530**	**7 properties & 14 producers**

30. Torrens Creek

Meeting dates: 12/10/99 & 24/11/99

Property	Cattle(A.E.)	Attendees
Woura Park		Harry & Adie Bode
Wogadoona		Janice Williams
Redcliffe		John Atherton
Ulva		David Leggett
Cranford		John & Rowena Gilmore
Tumut Vale		Glynis Herrod
Adult Equivalent	**7980**	**6 properties & 7 producers**

31. Pentland

Meeting date: 24/10/00 & 28/11/2000

Property	Cattle(A.E.)	Attendees
Cape River		Julie Lindley
Milray		Shane, Noleen & Jim Meteyard
Glenhoughton		Dominic & Maree Penna
Lyons Creek		Daphne Wilson
Ulva – Torrens Creek		David & Sandra Leggett
Kyong – Winton		Rhonda Forster
Lauderdale		Kay Sullivan
Stonington		Karen Forster
Adult Equivalent	**17550**	**8 properties & 12 producers**

32. Mingela / Ravenswood

Meeting date: 25/10/00 & 22/12/2000

Property	Cattle(A.E.)	Attendees
Silver Valley		Noel & Judy Oats
Square Post		Graham & Jenny Moody
Connolly		Tracey Pratchett
Collopy		Helen Alford
Adult Equivalent	**7650**	**4 properties & 6 producers**

Appendix 5: Individual Property Impacts

Mareeba Region

Mt Garnet Basalt

- After Smart Manager analysis in 2001 he changed from selling through the saleyards to selling direct to the meatworks. He has since averaged nearly $80/head more for his bullocks. He is now regularly weighing cattle and has started selecting male progeny to use as home bred bulls. He was previously a passionate believer in the necessity to pay large sums for stud bulls.

- Used Smart Manager figures and Breedcow software to evaluate the potential income from purchasing another property at auction. This enabled a ceiling to be put on his bids. He attended the auction but the property was passed in – no bids were high enough

- The owners of one property decided to exit the industry. After carefully exploring their future options via Smart Manager and Futureprofit they decided that their capital could be better used in non-rural pursuits.

Mt Garnet Red-Earth

- In June 2001 they used Smart Manager figures and Breedcow software to do the figures on agisting 1000 head on a neighbour's property. They went ahead with the agistment.
- In May 2002 they evaluated the impact on herd performance and profitability of production feeding using molasses. They used M3U to production feed approximately 400 head during the second half of year. They also looked at clearing country to develop improved pastures.
- In May 2002 they used software and figures generated by Smart Manager to assess the profitability of purchasing another property. An offer was made on the neighbours property

- In May 2002 used Smart Manager figures and Breedcow software to evaluate the possibility of buying another property that they duly purchased.

- In October 2002 used Smart Manager figures and Breedcow software to compare the effectiveness of using M8U and M3U for breeders and growing cattle instead of dry supplement. The cost /benefits and its impact on death rates / branding rates / growth rates was favourable and they have since gone ahead with large scale molasses feeding.

- In August 2001 used Smart Manager figures and Breedcow Software to evaluate herd production and profitability of using M3U with weaners and sale cattle.
- Now using the molasses production feeding to good effect. Property uses 30 tonnes of molasses a week in the dry half of the year.
- They are now selling live export and meatworks ox.

- In 2000 used Smart Manager figures and Breedcow software to improve their marketing strategy. They evaluated the cost effectiveness of feeding M3U to their weaners and selling them at 12 months or 18 months old. Went ahead with M3U feeding and a mixed selling strategy depending on prices and the season.
- In April 2001 they using Smart Manager figures and Breedcow software to look at the profitability of buying more fattening country. They went ahead and purchased a Tableland fattening block.

- In June 2001 evaluated the cost/benefit of using M8U on the breeder herd to improve branding rate, lower death rate, making mustering quicker and cheaper. They have since gone ahead with outstanding success.

- In 2001used Smart Manager figures and Breedcow software to identify management options to improve herd management and husbandry practices to improve calving rates and to improve marketing of sale cattle.
- Since implemented a range of identified management practices to good effect. (Botulism vaccination of all animals, Vibrio vaccine bulls, 3 day vaccine for growing cattle, phosphorus supplementation changed from blocks to loose supplement)

- The option of planting a significant area to leucaena was examined by one producer. This option was the most favourable when compared with other improved pastures. Site selection and soil testing has been carried out but a final decision is subject to developments with the leucaena psyllid. Destocking strategies were also investigated after problems experienced during the drought. A plan of action has been developed in the advent of future droughts to minimise the financial losses.

- On one property the age of turn-off option analysis indicated that there were significant gains associated with younger turn-off. The highest priority need however was for improved weaner growth rate strategies. Several options were discussed including segregating weaners on weight and spelling paddocks.

- Breeder herd and weaner management was the key issue on one property. After discussions on possible feeding strategies a molasses mixer was purchased and the mix fed to weaners and first calf heifers.

Chillagoe

- Smart Manager analysis convinced the owners that they had no future in the beef industry unless they made significant changes to their management. Working in close consultation with DPI staff the traditional management practices were abandoned and a series of new practices adopted.
- The first step was reducing the cow cull age from 11 years and older down to 8 years old. The extra dollars generated by female sales were used to fund a supplementation program involving wet season phosphorus and dry season urea based licks.
- It is anticipated that death rates should decrease from 10% down to 5 % and branding rates should improve by 10% in the near future. The actions taken have significantly improved the future viability of their property

- The problem faced was property size. With their herd already operating at a high level of efficiency their ability to generate a suitable income was limited by not having enough land. Through the Smart Manager process they looked at a range of ways of overcoming this problem and chose to lease additional country and stock the land using natural increase from their herd.
- In May 2002 further analysis was carried out using Smart Manager figures and Breedcow software. The cost/benefit of feeding molasses to sale cattle and cull cows was examined Factors taken into account included the cost of equipment required, the impact on herd performance and profitability and the change in selling strategy involved. They decided to proceed and installed molasses equipment

Mt Surprise/Georgetown

- 500 breeders were sent to agistment during the drought years of the early 90's. When the better seasons returned the owner decided to leave his breeders where they were and took agistment cattle on his own property. The Smart Manager process allowed him to compare three options. The first option was no change, the second was to bring his breeders home and dispense with the agistment cattle on his property and the third option was to leave his breeders, dispense with the agistment and buy in store steers in their place. The analysis revealed that there was little difference financially between the three options, so he decided to continue unchanged.
- In July 2001 Smart Manager figures and Breedcow Software was used to evaluate which group of animals to sell and the subsequent impact on long-term herd performance. The options were to sell cows and calves for $750 or sell heifers pregnancy tested in calf for $600 to reduce numbers. The analysis indicated that the best option for long-term profitability was selling heifers for $600. This advice was followed.
- In December 2001 an evaluation of the costs and benefits of feeding M8U with the breeder herd to improve branding rates and lower death rates was carried out using Smart Manager figures and Breedcow software. Molasses feeding has since been implemented. A PIRD application was submitted to allow the cost-benefit of this system to be fully recorded. The application was accepted but is going ahead on an adjoining property.

- The owner required future cash flow projections to allow him to negotiate with his bank on extending his credit. The Smart Manager projections were able to satisfy the bank that his future herd performance would be able to meet their financial requirements.
- In 2000, Smart Manager figures and Breedcow software were used to look at cattle selling options to reduce debt and the long-term impact on herd performance. Options compared were selling cows and calves vs steers.
- Further analysis looked at improving management of first calf heifers, the impact of spelling paddocks and fencing off Gilbert River frontage and fine tuning the supplementation program

- One group member was looking at buying out a family member from the partnership. The banks preferred option was to sell the herd down to raise the necessary finance. Smart Manager projections were able to show that reducing the herd was not in the long term interests of either the bank or the producer, and alternative financial options were explored. He has since purchased the property.

Cooktown / Lakeland Downs (2)

- Property was purchased in 1999 and they have been in the Smart Manager project for last 3 years.
- They attended the SM producer trip to Swans Lagoon and Wambiana and have used the information gained to alter the breeder herd management practices on the property.
- They have developed an area of improved pasture for their weaners but as a result of Smart Manager they have looked at implementing supplementation as a more cost effective strategy than further large scale pasture developments
- Using Smart Manager figures and Breedcow software they have been able to identify and concentrate on the main profit drivers in their business.
- With improved management and supplementation they have improved calf numbers from 500 to 1200 per year

- Explored marketing strategies and options including male age of turn-off. Where previously he had been locked into one selling option, SM has given him the tools to weigh up several options and decide accordingly.

- The economics of his small feedlot operation were examined and he has now successfully swung into feedlotting store cattle using silage base rations in the last 2 years.
- He has also sown a number of areas to leucaena and has plans to plant a larger area next year.
- Used Smart Manager figures to evaluate the possibility of buying another property but the auction price went too high for the SM modeled potential return.
- Foundation member of Morganbury Alliance.

- Prior to Smart Manager, weaners were sent to a coastal block after weaning. The weaners often suffered in the wet climate and early growth rates were poor.
- Used Smart Manager figures and Breedcow software to identify cost effective options of improving weaner management involving supplementation, improved pastures and leucaena.
- He has since established a paddock of leucaena for the weaners and also feeds them a molasses based supplement.
- Fine tuned supplementation of breeder herd from blocks to loose lick.
- Evaluated marketing options to improve profitability.

- One of the properties identified an opportunity to reduce the cost of their breeder herd supplementation. They are currently feeding blocks year round, but the use of loose licks would significantly reduce costs. The property will need to build a large number of lick sheds to feed loose lick in the wet.

- Another producer has also expanded his marketing options. Where he was previously only supplying a single meatworks he now analyses a range of options to market his produce. He has also explored ways of reducing his numbers without sacrificing his profitability.

- A producer running 420 adult equivalents on agistment saw his gross margin figures at the Smart Manager workshop and decided to sell his cattle and get a job off farm to improve his life style.

Clothes Peg/Greenvale

- The major impediment to breeder performance for one producer was his inability to segregate his heifers. He has commenced establishing paddocks for his weaners.

- Weaner feeding management problems on one property have been overcome with the use of a molasses based weaner mix.

- The project team helped one property with a detailed plan for the future using the Dynama herd model.

- Another property is exploring the use of leucaena for their organic beef operation.

Atherton Tablelands (2)

The majority of Atherton Tableland beef producers rely on alternative income to make ends meet. All however are trying to maximise the profitability and performance of their herds. With molasses currently costing about $46/tonne delivered to the Tableland the option of production feeding attracted considerable interest from the two Smart Manager groups. Cost/benefit analysis of the molasses based production feeding option was very favourable.

- Three members from the two groups have since built their own molasses mixers to allow them to make up the DPI production ration and have commenced feeding. A fourth group member has borrowed a molasses mixer and has commenced a feeding trial to monitor the performance of his cattle. A joint field day with the two Smart Manager groups was held at the completion of the feeding trial.

- Another producer feeding the DPI molasses based ration, recently had some bullocks slaughtered that he had production fed. He received $2.49/kg dressed, which is the top price on the local meatworks grid for local trade cattle and well ahead of any previous returns he had received.

The molasses ration has allowed local cattlemen to access a high price market in a traditionally dry period when there is often a shortage of quality fat cattle.

- A Tableland producer who agists 300 cows on western forest country was using phosphorus and urea feed blocks. Participation in the Smart Manager project highlighted his high supplementation costs. The following wet season he began to use a DPI recommended loose lick that was cheaper and more effective.

- Another producer who fattens 240 AE's on his Tableland block has an agisted block running an additional 450 AE's. The agistment block had a mixture of cattle including 250 cows. Using the Smart Manager option analysis he identified that his best option was to run 450 cows on his agisted block and fatten 240 AE's on his home block and sell surplus male and female cattle as weaners. This improved his gross margin per AE from $70 to $95. He has looked at the economics of taking on a further 900 cows on agistment. The figures generated will be used to present his case to his bank manager.

- Used the Smart Manager option analysis in 2000 to evaluate the profitability of selling domestic type cattle or finishing to Jap bullock weights. Since changed to turning off local trade cattle.
- SM identified cost savings possible by implementing an improved supplementation program of the breeder herd to lift branding rates, with good results.
- Another option examined was the impact on herd performances and profitability of introducing Charbray bulls. He has since gone ahead.
- Foundation member of Morganbury Alliance
- In May 2002 used Smart Manager figures and Breedcow software to evaluate the use of molasses production feeding to fatten cattle during the dry second 6 months of the year. Since built a molasses mixer and setup a large molasses storage. The feeding program has been very successful.

- In 2001 used the Smart Manager option analysis workshop to evaluate production feeding profitability to turnoff fat cattle for premium prices during the dry period of year.
- Has since implemented production feeding system in spring – early summer to increase profitability with good results in the last 3 years.
- Foundation member of Morganbury Alliance

- March 2001 used Smart Manager figures and Breedcow software to identify his best marketing strategy. Was running out of feed every year and forced to sell on falling market. Now selling cattle into live export, meatworks and saleyards with good results
- March 2002 used SM figures and Breedcow software to evaluate buying a new property. The auction price did not reflect the potential return identified for the property.

- In 2000 used Smart Manager figures and Breedcow software to identify management options that would make the most impact on profitability e.g. improving fertility of yearling heifers, lowering death rates. These included using crossbred bulls for increased growth rate and market suitability and fertiliser use on improved pastures.
- In December 2001 used Breedcow figures to assess the viability of agistment on Glen Eagle Station
- Foundation member of Morganbury Alliance.

- In 2000 used Smart Manager figures and Breedcow software to identify the main constraints with their beef business, which resulted in the implementation of a production feeding system and marketing strategy on their fattening property to prevent overstocking.
- Foundation member of Morganbury Alliance.

- In 2000 used the Smart Manager option analysis workshop to evaluate production feeding profitability to turnoff fat cattle for premium prices during the dry period of year.
- Has since implemented production feeding system in spring – early summer to increase profitability with good results in the last 3 years.

- In June 2001 used SM figures and Breedcow software to look at the option of fattening his store steers on the wet coast and or production feeding using a silage based ration.
- Has since gone ahead and fed 350 head in July – November 2001 – made a good profit and put some cattle on agistment on wet coast.

Einasleigh group

- A producer with branding rates of 50% intends to take up early weaning in the coming season. The group average branding rate benchmark is 64% with a group high of 72%. The difference was clearly highlighted during the meeting but group members were able to highlight the importance of having spelled paddocks for the early weaners and having a supplementation program for the early weaners. One group member spoke of his success using stylo pasture for his weaners.

- One producer identified his highest priority as a lack of stock control, requiring fencing and more waters.

- Two producers, both with well performed herds, saw opportunities to streamline their supplementation program. The benefits of using loose lick compared to lick blocks were highlighted. The loose lick will be better able to meet phosphorus requirements than the blocks and do so at a cheaper price.

- One producer is currently sending his male cattle to fatten on Downs country that he is agisting. He examined the option of selling his male cattle as weaners, overcoming the need to agist country. The figures looked promising and were to be evaluated with a trial group in the coming year.

- A group member saw opportunities to improve his profitability by reducing his bull percentage and paying less for his bulls. He also saw that his cow cull price was well below the group average and represented another significant opportunity to improve his situation.

- One producer who uses AI acquired a list of EBV's of Brahman stud bulls after the meeting. The group view at the meeting was that only bulls with high EBV's should be used.

Bowen / Burdekin Region

The Bowen/Burdekin Beef industry group has taken 36 local businesses through the Smart Manager Benchmarking workshop series. These 36 properties control over 72,000 head of cattle, mostly in the coastal strip between Bowen and Ingham.

The project team has found this process very rewarding with changes occurring on the ground almost immediately in some cases.

In 2002, 13 properties were re-visited. The impact of the drought forced a number of producers to withdraw and made group meetings impossible. However, there were, and are, ongoing learnings and change.

Changes noted to date include

1. For one producer the major change to date has been the implementation of a change from store steer production to the production of bullocks. This producer has already sold a large number of breeding females both to offset the reduced income from steer sales and to make room for the extra steers held over.

2. There have been two instances where a producer has seen that their branding rate is quite poor (47% and 58%) when compared to others within the group and compared to other group averages. Both these producers are making a concerted effort to improve their branding rate.

   One of these producers is undertaking a lot of personal investigation in order to discover why his branding rate is poor. One of the reasons for the poor branding rate is more than likely phosphorus deficiency, and the producer is slowly coming to the realisation that this might be the case. He is carrying out many and varied on property trials in an effort to get P into his cattle most economically. This is an adult learning outcome. Adult learners will learn more when given some responsibility in choosing methods and resources, and by being involved in sharing responsibility for evaluating their learning.

   Another reason given for the poor branding rate is that there may be too many cattle on the place. The producer that has come to this realisation has quoted anecdotal and actual on property evidence for this conclusion.

3. One producer went home and bought more bulls within weeks of attending the first workshop. The people in question are relatively new to the industry and the interaction at the first Smart Manager workshop showed them that they did not have enough bulls.

4. The second workshop encouraged one producer to go home and look more closely at his pasture resource and the number of cattle he runs in each of his paddocks. This was a direct result of the presentation on AE's and how much an adult animal eats. It was presented in a simple, easy to understand language. This prompted the comment over a beer at the end of the workshop, "*I have never heard it* (AE's and dry matter consumption) *explained like that before.*"
5. Another producer who already feeds some phosphorus, is looking at improving his phosphorus supplementation

6. A number of comments were received to do with making more money and the need to look more closely at the whole operation. "*We need to look more closely at our whole operation, we are not making enough money*"

7. Almost universal, across all groups, was the recognised need for better record keeping. While a large number of group members from the Bowen/Burdekin did have quite good records, the records were very difficult to use for the Smart Manager process. It was difficult to extract complete records for various classes of livestock as the records were spread throughout the whole book.

8. While many people had the records but had difficulty using them, there were also a large number of people who requested help with a recording system and what to actually record. In the last year, branding rates were as low as 35%, where management was found to be not keeping up with drought and season influences. Branding rates of 35 to 55 % were common in the last year. Other properties with improved management were able to achieve acceptable branding rates.

9. Many properties are still looking for answers and tools to address issues identified by the Smart Manager process. Some are not happy with some of the answers and go looking for different and perhaps easier answers.

10. One property spent a lot of time talking to other properties and DPI staff to try to understand why their herd performance has been so low. The process has identified for them
    - severe deficiencies in herd and financial performance
    - that other properties achieve higher levels of performance, therefore it is possible to improve (this has been a major identification)
    - that changes in management need to happen urgently and hard decisions made.

11. Planning for change and planning the change/s, is ongoing on many of these properties. Finance limits mean people have to progress much slower than they would like to.

12. The major drought over the last 3 years put many properties into survival mode. A positive outcome has been producers learning more about the role of supplements, and which are the better supplement strategies to use, and these affects on the benchmarks identified by the Smart Manager process.

13. As a result of Smart Manager, along with the drought and other influences, producers are making more use of tools such as semen testing of bulls, and pregnancy testing.

Charters Towers Region

Prairie group

- Sons now taking a more active role
- Better controlled mating, better records
- Using Dynama as a day to day business tool
- Increased sub-divisional fencing

Attended 'Future Profit'

- Some changes in management skills
- Addressed succession planning
- Previously unproved cattle management practices. Identified gaps in herd management, which resulted in more subdivision, heifer segregation and more finely tuned weaning
- Improved marketing.

- Sold his property and moved to a bigger enterprise. Smart Manager helped in decision making

Attended 'Local Best Practice'

- Smart Manager process occurred while expanding into the Northern Territory. Still have both properties.
- Helped them look at sale turn off options in the Northern Territory.
- Helped in the breeding of more calves to transfer to the Northern Territory.

- A tidy operation – his was the best benchmark within the group. Gave him a good indication of where he stood in the community.
- Smart Manager reinforced his practice/ business approach.
- Assisted with succession planning.

Attended 'Local Best Practice'

- Developed property to increase living area.
- Gave them better turn-off options, heifer management, controlled mating and marketing options.
- Went on to do Hughenden Smart Manager and bought the software.

Attended 'Future Profit'

Belyando

- Good records and management system (controlled mated in a single sire situation).
- Helped him look at how well he was doing.
- A good benchmark for the group. Challenged others.

Attended 'Future Profit', and 'Local Best Practice'

- Cattle only one aspect of business, but the mainstay. Also cotton.
- Cattle records and marketing was ordinary.
- Smart Manager gave them better options for marketing older cattle, were marketing weaners at the time.

- Was “a light turning on” exercise for them.

Attended ‘Future Profit’, and ‘Local Best Practice’

- Used Smart Manager and Future Profit to look at what he was doing (leased out his property and then sold).
- Bought a new property in Julia Creek, used Smart Manager to develop his business plan.
- Has developed a computerised book-keeping system.

Attended ‘Future Profit’, and ‘Local Best Practice’

- Work with neighbour in computing. Put a lot more effort into herd management.
- Made him aware of the importance of record keeping on his own place.

Attended ‘Future Profit’

Ewan (3 Rivers)

- 3rd generation family and run a good operation. Cattle management was traditional. Good figures.
- Learning experience for the son. Changed their appreciation of the nature of the cattle enterprise.
- He developed a herd recording book called “Head Check” and was aware of the value of good records. DPI promoted “Head Check” in SM project and sold them as a stock item.
- “How rough and ordinary people’s figures were” – quite surprising for people running properties worth millions of dollars.
- Running debate about early weaning and the number of calves. Helped improve understanding of early weaning.

Attended ‘Local Best Practice’, and ‘Future Profit’

- Smart Manager improved reduction in calf deaths then improved supplementation. Started to think about segregation of breeders based on nutritional need.
- Tuned up their weaning practices and weaner management.
- Looked at options for “extra calf” scenario.
- Good education for the daughter.

Attended ‘Future Profit’

- Traditionally high stocking rates.
- Smart Manager looked at age of turn-off, selling off more cows, reducing cow deaths.
- Smart Manager reinforced improved pasture, subdivision, and water points to reduce the high deaths in cows identified comparative to rest of group.
- Was a “truthing” serum, led to personal contact.

Attended ‘Future Profit’

- He is an inventor, she is keen and has an intuitive understanding of cattle.
- Smart Manager showed that maybe figures are better than intuition – gave her a learning challenge (about her theories on rates and weights).

Attended ‘Local Best Practice’

- Challenge of putting figures into a model – revelation to him as he has very firm ideas.
- Has leased the property to a step son-in-law.
- Smart Manager helped formulate an equitable lease agreement.

Attended ‘Future Profit’

- For the owner, a major leap to computers but was interested in the figures.
- The property has changed a lot. Have changed business arrangements, succession planning, field days on property re: pregnancy testing, controlled meeting. Quite dramatic improvement in cattle management.
- Sons have looked at the cattle side (controlled mating, weaner management, good heifer management.
- This property was then evaluated using Dynama.

Attended 'Future Profit'

Torrens Creek

- Helped get the group together.
- Developed country with seeding, part of overall herd management and herd productivity improvement.
- Smart Manager was part of an overall process of manipulating herd and management process to justify development costs of improving country.
- Looked at before and after scenarios.
- Bought the software.

Attended 'Future Profit'

- Small rough place
- Looking at what the future is, where we are going?
- Spoke to them about Dynama to look at future of their operation in a planning phase (developed a fair bit of country).

Attended 'Future Profit'

- A good operator, good records
- New to area, challenged others, good handle on the figures.
- Smart Manager gave him a tool to confirm how he was going.
- Challenged on cost of supplements. Good to have him in the group (reality check).

- Keen young fellow, not a big block
- Used Smart Manager to determine how to get the best result from a small property using supplementation and controlled mating.
- Tuned up supplementation program.
- Herd performance improved re Before and After data.
- Property is now 'humming'.

Attended 'Future Profit'

- Younger person in the group. Gave her an insight into records for property management. Excellent learning experience for her (daughter).
- Result was attention to better records and better numbers for second workshop.

Attended 'Local Best Practice'

- Smart Manager benefit was knowing what cattle they had and how much income that would contribute plus off farm income (ie from grader). SM helped with herd management optimisation and options for different ages of turn-off.

Attended 'Future Profit

Pentland

- Very small property where Cape River meat works is, and young couple - much of income is off property.
- Smart Manager helped them set up their operation and establish goals for herd performance. Helped them identify key areas.

- Had sought out their succession and passing responsibility to son. Smart Manager and BeefPlan helped work out where they were going.
- Uses smart manager to tune up the cattle side of things. Gave him opportunity to talk with other competent operators.
- Compared benchmarks and ideas (extra fencing, yards and waters).

Attended 'Future Profit', BeefPlan member

- Brand new cattle people – were previously in potatoes.
- Smart Manager helped them look at options for when their lease runs out, very open to ideas.
- Smart Manager gave them a good framework to look at how cattle might fit into their enterprise.

- Small herd, tough little block.
- More mature couple, were looking at how the herd was operating.
- Not very good records but knew where they were going. Major benefit of Smart Manager was cost/ benefit of supplements and marketing options. Especially females. They hadn't been selling a lot of females.

- Came with an option analysis plan to put through the program. Had the figures from the Torrens Creek workshop. Demonstrated that it was a valuable exercise.
- Were able to get their head around the figures.

Attended 'Future Profit'

- A good experience for wife – though she was from different country – Winton area .
- Learnt the value of keeping good records.

- Traditional management, not a lot of cows turned off and managing of records not so good.
- Improved groups of cattle records.

- Can't recall.

May have attended 'Future Profit'

Mingela / Ravenswood

- Good operation, small place, very tight cattle enterprise (control mates and preg tests).
- Looking at options that reinforced what he was doing well, how it “stacked up”. His benchmarks stood up well.
- His presence was valuable support for others. (Eg Square Post for control mating and preg testing. The model helped put figures on what they were talking about. Gave an opportunity to show how to work the brandings.

Attended ‘Future Profit’ and ‘Local Best Practice’

- Smart Manager was catalyst for getting things to happen. Controlled mating.
- Tightened up figures.

- Smaller operation. Looking at optimisation of herd performance.
- Sorted out the cattle records better between the two meetings
- Marketing was the issue given the small number of cattle that they had. Looked at marketing options.

Attended ‘Future Profit’

- More mature operator
- Not looking to make major changes- good cattle records.
- Gave good experience of the area, have operated a small property in a traditional manner for a long time.

North-Western Queensland

Cloncurry group

- Youngest person in the group (son of owner). Smart manager provided an insight into records required for effective property management. Excellent learning experience regarding management options process.
- Result was attention to better records and broader knowledge of management options in a commercial herd.
- Was able to compare commercial herd outcomes with stud operation.

- Stud operator took to the SM process like a “duck to water”. She has since bought the Breedcow & Dynama package, familiarised herself with the programs, reviewed records and management options, attended further training, bought her brother the package, and then spent a day showing him how to use it. She has now used Dynama for a long term property business plan and management plan for their enterprise.
- An additional Smart Manager impact was knowing what the stud herd contributed to the overall business and showing that gross margins for the stud were considerably higher than those from the commercial herd.

- Manager is now based on the Barkly tableland.
- She recognised the application of the program and the SM process and went onto further Bc&Dyn training.
- She then used the Dynama and Investan programs to demonstrate to the owners the long term returns from undertaking a weed control program in NWQ. She compared the area of spread now and the impact of infestation in 10 to 25 years time in terms of mustering costs, carrying capacity and growth rates. She was able to show the benefit in terms of profit from a control program and convinced AACo to adopt the weed control program.

- The workshop was attended by the son-in-law of the owner, who agists cattle on the property and does “outside” work as well to supplement income while his cattle numbers build up.
- SM highlighted the need for better records particularly regarding breeder numbers and breeder performance.
- The benchmarking process showed low gross margins and highlighted a need for improved management regarding weaner and breeder management.
- Does not wish to commence SM phase 2 until a full round of mustering is done and he has his figures sorted out (end of June).

Hughenden groups (2)

- Good records and management system.
- Had a view to improving returns through changing genotype as part of a syndicate.
- Used the SM process to assess options of investing in Wagyu cattle. This included using the SM process to compare performance of the breed in the environment of his property. It was necessary to compare performance required for premium prices (mainly based on weight gain and age) compared to predicted and actual performance of the breed in that environment. This led to his decision to sell up and move further south.
- A good participant for the group. Challenged others.
- Attended further training in Bc&Dyn.

- SM was attendee bought the Bc&Dyn package.
- SM highlighted the need for better records; they started weighing cattle regularly.
- Smart Manager gave them better options for marketing male cattle and managing the breeders. Have since started control mating
- Was “a light turning on” exercise for them. They indicated that the workshops led them to focus more on management and was a catalyst to attend a “Grazing for Profit (GFP)” school and get into “Profit Probe”.
- Has been “working on” another property in their GFP group to get them to use the Breedcow & Dynama package.

Attended ‘Future Profit’

- Used Smart Manager and Future Profit to look at what he was doing and where he was heading. He has since put his property up for auction.
- Used the SM process to look at numerous sale options, particularly for male cattle and reducing age of turnoff. The benchmarking process confirmed his breeder management was on track.
- Attended further training in Bc&Dyn.
- Had accounting skills and had no problem handling the program.

Attended ‘Future Profit’

- Used Smart Manager to look at management options across the enterprise.
- Found that gross margins could be improved if sale weight could be reached at a younger age. He subsequently developed a molasses feeding machine that allowed him to feed molasses to his steers and which only needed to be filled once a month. He won inventor of the year for this at Hughenden show.
- A good example of where the SM process provided figures to enhance confidence to proceed with a change.

- Probably started from a lower management “base” than others in the group.
- Smart Manager made him aware of the importance of record keeping and in particular improvements in management to improve profitability. Looked at options for extra calves and extra dollars from sales strategies.
- Has since improved management through mating management, herd recording and steer management. Has made big changes to management structures.
- Attended further training in Bc&Dyn and bought the Bc&Dyn package.

- Attended Praire SM workshop also, but only the first w/shop
- Have since been using another program that projects figures into the future (similar to Dynama). May have stuck with the Bc&Dyn program but missed the option analysis section so probably didn’t get to understand the concept behind this.
- Learning experience for the wife in terms of appreciation of record keeping for the cattle enterprise.

- Traditionally high stocking rates, small property and looking for a “herd recording” program.
- Had trouble grasping the concept of the SM process of option analysis (stuck in paradigm of herd recording). Husband didn’t attend any workshops.
- Smart Manager process: looked at age of turn-off, selling of more cows, reducing stocking rates and better breeder management.
- Smart Manager reinforced need for improved records though and they have since individually identified the entire breeder herd and started control mating.

- Attended subsequent training in Bc&Dyn and bought the package.

- Attended by two brothers both who had had an interest in the program previously and they purchased the Bc&Dyn package at SM workshop 1.
- Benchmarks showed management already fairly good.
- Both brothers looked at numerous options under SM workshop 2 for both their commercial and stud herds.
- They had had a bad run of dry years with a lot of cattle away on agistment and numbers right down so they also used Dynama to look at herd build up options and how to improve cash flow.
- One brother uses the Bc&Dyn package regularly (monthly) and is using it "to get out of debt" as he put it.

- Also had had a long interest in the Bc&Dyn package.
- Benchmarks again confirmed current management strategies.
- Wasn't able to attend the second SM workshop due to other commitments.

- Attending the workshop and sitting in front of a computer was very daunting for him but he was interested in the figures. (Others in the group said he would always find an excuse to do something else than attend a group activity.)
- Predictable that he didn't attend the second workshop.

- Owner's son attended and was completely lost with the figures, as his dad had not passed any information on to his son. Unfortunately felt out of his depth compared to others in the group, since most had a reasonable handle on their records.
- The SM process only served to highlight what he didn't know about the business.
- Wasn't able to acquire the figures he wanted to attend the second workshop and probably didn't want to go back anyway.

Julia Creek groups (2)

- Owner originally attended Bc&Dyn training prior to Smart Manager but wasn't able to attend the 2nd and most crucial SM w/shop as they had just purchased another property.
- The first workshop highlighted recording issues in their business.
- They bought the program as they saw it as useful in property purchase decisions and herd budgeting.
- Had trouble getting into it though and had some help updating figures in 2001.
- Currently they wish to work through figures re drought mitigation and sales as it is currently very dry out west and they are destocking.
- Wish to use Dynama as a business tool, visit planned for May 30th

Attended 'Future Profit' in McKinlay in 1997.

- Used the program in Smart Manager to look at management options and also purchased the program.
- SM assisted them in defining their goals and helped them with management decisions, particularly with sale cattle.
- SM stimulated better record keeping particularly in the area of growth rates. They subsequently entered cattle into the Toorak Export Link project where cattle performance is monitored bimonthly.
- Owner plans to use the program in purchasing a new property. Property is now sold.

- Heavily involved in agri politics, but found time to attend Smart Manager
- The process highlighted necessary changes in management mainly relating to decisions with turnoff cattle and breeder management.
- Has since bought a ”breeding block” further north and wishes to use the program in phase 2 to look at herd dynamics in their new beef business structure and best bet turnoff options. Also wish to explore breeder management options. Visit planned for May 29th.

Attended Julia Creek Future Profit

- Originally attended Bc&Dyn training but wasn't able to attend Smart Manager due to an illness.
- Have had a continuing interest in the process and were keen to follow through with SM. Visited on May 29th for individual benchmarking

- Young and relatively shy daughter originally attended Bc&Dyn training but declined to attend Smart Manager meeting as she felt she was “out of her depth” with the figures required and also the management aspects.
- Visited individually for SM, now more involved in record keeping. Highlighted aspects of running a beef business she previously wasn't aware of

- Owner and wife attended Bc&Dyn training and one of the SM workshops.
- Smart Manager reinforced their practice/ business approach.
- Gave them better options for turn-off cattle, heifer management and bull management.
- Resulted in more profitable decisions regarding age of turnoff of male sale cattle.

- Originally attended Bc&Dyn training but wasn't able to attend Smart Manager due to mustering commitments.
- Visited individually for SM

Attended 'Future Profit'

- Very keen to improve their knowledge of using Bc&Dyn and attended original training.
- They see Smart Manager as part of an overall process of assessing herd and management decisions.
- Visited individually.
- Bought the software.

- Owner attended Bc&Dyn w/shop. Not computer literate.
- Small rough place with poor cattle records
- Spoke to her about Dynama to look at future of their operation but she felt out of her depth regarding management issues.

- A good operator, good records and attended Bc&Dyn training.
- Challenged others, good handle on the figures.
- Smart Manager provided him a tool to confirm how he was going. He already had a fairly good idea.
- Didn't attend second workshop so wasn't able to look at management options. When discussed over the phone he had trouble grasping this concept possibly because he had been doing reasonably well anyway.

- Owner attended Breedcow & Dynama training and bought the program as she saw value in it for their business.
- They were determined to get the best result from a small property using supplementation and pasture improvement. The process of training helped with herd management optimisation and options for different ages of turn-off.
- Wasn't able to attend the SM workshops but put their own property figures into the program after the initial workshop anyway. There after they became very busy due to staff shortages and dry conditions.
- Offered to follow up this year but the property is "droughted" and they have almost completed destocked (except for a few weaners.)
- Had a better understanding conceptually of the process than most people.

Appendix 6. Case Studies

Coolgarra Station, Mt Garnet

Garry and Roz Burtenshaw purchased their property Coolgarra about 20 years ago. It was in the hands of a caretaker manager (of the 'old school') and remained undeveloped until they moved onto the property in 1996. The Burtenshaw's had previously grown cane and had cattle interests on the coast, which they sold after their two sons had finished tertiary studies and were able to help them in the development of the new property. Coolgarra is between 80 and 90 square miles in area. They run 3,000 head of cattle, including 800 cows and 200 first calf heifer breeders, of high Brahman content. They also have recently acquired about 1400 acres of prime fattening country - top red basalt country.

Roz describes all members of their family unit as open-minded. She is widely traveled and has a background in economics and commerce. They have two adult sons, both tertiary educated (one in agronomy the other education). Roz describes herself as having a farming background. Simon manages the properties; Cameron retains an interest while working off farm.

With limited experience of cattle production in the dry tropics, and, in particular, no familiarity with breeding Brahman cattle, the Burtenshaws contacted the DPI soon after their arrival. First contact was in relation to the contour banking of their sorghum hay paddock. That led them into closer contact with DPI people and with the SM program. The Burtenshaws were hungry for information and developed a good working relationship with DPI staff, contacting them, in the early days, virtually daily.

So rather then go unprepared, we went and asked, listened, looked and participated in the Smart Manager program, with particular interest in early weaning and supplementation, areas we recognised as being essential to our survival.

Said Bernie English, one of DPI's SM project staff : "*If you wanted some information, just ring us up and we could tell you what you want to know straight away."*

Garry and Roz attended all four SM workshops held in the Mt Garnet area. Key observations arising from their involvement with Smart Manager and with DPI extension staff have been:

1. Development of Effective Production Practices

One of the major benefits of involvement with SM was that the Burtenshaws did **not** follow traditional practices and grazing methods. By paying attention to the nutrition of their weaners, putting them on M3U and cotton seed meal; weaning early to 100 kg; and by getting the mothers onto the correct phosphorus balance, their calving rates have improved from 55% to 78%.

…had we followed the usual practice, we may not have achieved the results to-date.

If we had adopted generally accepted procedure , we may have been dealing with a calving rate of between 45 and 55 percent…being guided by DPI, Bernie and Jim and John, we weaned early in dry seasons, supplemented with M3U & M83, used molasses, fed supplements throughout the year and achieved from last year's figures, a calving rate of 78 percent which is above average for our area.

Improved calving and weaning rates meant, for the Burtenshaws, starting with 800 breeders, an improved productivity of 184 calves per annum. Even ignoring the multiplier effect that gives each year, 184 calves worth $250 each results in an increased annual production worth $46,000 over the last four years; hence conservatively $184k.

Weaner management was a very important dimension of the Burtenshaw's new production practices. Today the weaners are handled daily in yards where they are fed and trained, with working dogs. The weaners learn to mob up and walk towards a person with the dogs behind. As a result the cattle are gentle and easily handled. Roz illustrated the benefits. *The other day, without assistance, I led 300 cattle from one paddock to another, walking ahead of the cattle and the dogs working the rear.*

Mustering the property used to take us 23 days on horseback, has now been reduced to 1 day with the helicopter and 2 days of yard work.

As seasonal conditions dictate (late wet season, fires, drought etc) they sell off breeders at 9 to 10 years rather than up to 15 years - this produces an added cash flow and reduces the breeder death rate. Their operational costs are above average but they are getting the return. They sell into a premium coastal market, receiving up to $2.35 per kg live in the Dec. to Feb. period.

Through SM they learned much about the live export industry, markets, specifications, prices etc. Also, through SM, Roz was encouraged to get back into computers. She had worked with computers previously and had vowed never to touch them again. SM helped her to change her mind.

Roz says many of these benefits are directly attributable to SM. The workshops gave them contacts with other growers and led to discussion and questions on specific property management and husbandry practices. *This is THE biggest benefit. You swap ideas, learning who is doing what, then adapt the most suitable ideas to the property.*

The design of their new set of yards was, a result of involvement, with SM. *Condon's' new 5 way draft was being discussed at one of the Smart Manager meetings and it was suggested we have a look at it. Simon said, I have seen it, it is expensive, can we afford it?*

We have monthly family meetings, where we discuss and decide priorities that will fit in our budget. We decided that because there are less and less capable Ringers available and the situation doesn't appear to be improving, we could not afford to be without the 5 way draft.

Roz says the industry is concerned about the axing of DPI services also research and development and some government advisors stated view that the beef industry is a sunset industry. She says, in an unsolicited comment, that Bernie English, John Boorman and Jim Kernot are *"three of the most respected men in the north. The amount of knowledge they have is enormous. If I had to choose three government people in whom I had total confidence, it would be them. They are totally committed to this industry and to sustainable production."* The Burtenshaws had not met Jim Kernot or Bernie English prior to SM or John Boorman.

So the major benefit was having the DPI men on call whenever required. I don't think we would have achieved the same level of success, without their assistance. DPI advice allowed us to avoid the pitfalls other stations made, particularly with our property set up.

I think that having the right advice at the right time has made the difference between us being viable and non viable.

The Burtenshaws are continuing to develop their country. *We were looking at going to about 3 thousand head of breeders, when we get more water up the top* [of their property].

Part of that enterprise development was the recent acquisition of their fattening blocks on the wet Tableland. This purchase was made with the guidance of Bernie English and Jim Kernot who inspected the whole property with the Burtenshaws examining its characteristics and offering advice on how best to develop it.

2. Neighbours

Says Roz: "Some are doing what they had done for generations and they do not appear to be changing or doing anything' different. Without fencing it is difficult to manage a property effectively. If you have heavy grazing pressure in one paddock, you shift the cattle into another, fencing makes this option available. You need to keep the grazing pressure off sensitive areas so that it can regenerate. (Closing up a paddock over the wet season has shown a much improved ground cover). Some properties don't appear to be open to different ideas or innovations."

Says Bernie English: *"They've, been invited to Smart Manager days and that might have been too much for them too threatening to them…but when we've just had general information days or land*

care days where they can just come along and there's nothing threatening, they don't come to anything to observe demonstrations or swap information."

Yet there are subtle influences on the neighbours. Says Roz: "*the other day when we rang our neighbour to say we had some of his cattle, he had to come and have a look at our 5 way draft and he said* **"** Wow!, where did you get this?" *Simon showed him the options the draft provided, how few men we needed on the gates and the minor alterations he had made to suit our operation. We have just finished our 2nd round muster and had put about 800 head through the draft and processed them, all within a couple of hours. It shows what you can do with 3 men and some innovative ideas. The outlay for the draft was fairly expensive, however in the long run it will save us time and money."*

3. The Future

Roz was asked, in the interview, about the consequences for them as producers at the completion of SM and perhaps the reduction in access to DPI expertise.

"… the potential for future advancement would be limited, we need continuity. Without our present access to DPI advice, help and encouragement, we remain at this level. The Beef industry as with all industries, is continually evolving and improving, we do not wish to be left behind.

…we need to keep abreast of changes, to continually be updated, be aware of market requirements and possible 'value added' situations which will enable us to be more competitive in the future. Our over- riding concern is to retain our pastures in prime condition. This is where the DPI stands alone as the provider of individual property management which will enable us to be economically and environmentally sustainable.

DPI are up to date with changing times. They can advise and assist with changes, in legislation, regulations, water issues, animal health, tree clearing, etc. DPI expertise, in our experience, is invaluable to the beef industry."

Asked about the best way those services might be provided, Roz replied:

"By person to person contact. There is no substitute for that and I think you'll bring aboard the likes of properties set in the 'old ways' if you can get that person-to-person contact.

I believe that you must have the right people in these departmental jobs, and with the right ones, the sky's the limit…for some properties it's taking a while, but I think people are being forced to take notice… the example of our neighbour looking at our 5 way draft, then recognising the possibilities offered for his own operation.

Without the expertise of the DPI , our beef business would suffer both economically and sustainably.

We need our advisers, we need to be updated constantly, to know which markets to go to and which way we can best utilise our product. i.e. whether we should, perhaps introduce another crossbreed which will give us a better beef product or whether it will make them less or more tick resistant."

Roz observes that the best local operators tap into the expertise available from DPI.

"…In this area, we've some the top producers in the north. And I notice they always drag Bernie and Jim and John on board.

It would be I would suggest one of the worst moves that could be made if they removed the likes of those programs from the north. That's my observation and I guess I say that from the point of someone who has benefited enormously from it."

Asked about fee-for service, Roz replied: "*I haven't thought about it. I wouldn't know how to value something like that. I know what a potential disaster it would be not to have access to the extension and technical services we need."*

Goshen Station, Mt Garnet

Ross Blennerhasset, sons Brett and Grant and his partner Maxine purchased Goshen Station five years ago. Ross grew up with bananas as his business and cattle as his hobby. His father owned the abattoir. Now he runs the cattle business and his boys run the banana business. Together, family members run a number of business: cattle breeding on the Tableland, cattle fattening on the coast, an abattoir selling direct to butchers shops and banana growing selling direct to supermarkets. Their property, Goshen, on the southern Tableland is 48,000 acres. They run 3,500 head of cattle there and a further 1,500 elsewhere.

Ross has attended all four of the SM workshops conducted in the Mt Garnet area and has had Bernie English to his property on a number of occasions.

Key benefits from Ross's involvement in Smart Manager are as follows:

1. **Record keeping**. Prior to SM, Ross's record keeping was basic and manual into a herd-recording book. SM highlighted the benefits of having good herd records. Before that they would only do a rough comparison of bank balance at beginning and end of month. The SM experienced gave him a deep appreciation of the value of good records, of knowing how his herd was performing, branding rates, deaths and growth rates and the importance of gross margins, etc. Of the benchmarking exercise, Ross says: *It's a truth serum, the software, even though it is complicated, it's a truth serum."* He now keeps very accurate computer-based records and can tell you exactly *"what goes down the throat of every animal."*

   Ross's partner, Maxine, keeps their records on computer using a piece of software that is simpler than Breedcow, yet adequate for their needs. Previously, Ross kept his record manually. The computer is substantially more convenient.

   Ross says that a number of his peers would not have a clue what their figures are. In conversation with their colleagues, they are either very circumspect about revealing their figures, either because they don't know, or, it is a cultural norm that this sort of information is not shared in casual conversation. SM created an opportunity for such information to be brought into the open.

   Ross recently experimented with an agistment exercise involving 40 head of cattle. Using his SM-gained appreciation of figures to monitor it closely, he was able to establish that, after costing in every aspect of the expenses, he made **a 50% return on his investment**. This is partially attributable to the fact that these cattle were one's he'd bred himself.

2. **Comparison of performance with neighbours.** Ross was extremely surprised to learn that his 'seat of the pants' early approach to supplementation placed him way ahead of his neighbours in terms of herd productivity and profit. *It was a real eye opener to us to see that the blokes who spent least were making less. We were doing well but we did not know why. At least it opened our eyes. We were going down the right track. It was very satisfying for us to find out that the extra supplement we were using was paying off.*

3. **Changes in production practices.** The biggest benefit Ross got from SM was weaner management; leading to improved fertility, lower death rates and faster growth rates. Previously, though he supplemented the breeders and produced fat healthy calves, they then performed very poorly because they were not valued. Now the females can be sold at two and a half years rather than at three and a half to four years, improving his annual income by $50 000**. In addition there would be a further $60,000 benefit flowing out of the sale of better weight for age bullocks.**

   Before SM, Ross used not to look after his heifers. As a result their later fertility was low. Now looking after their female weaners with greater nutrition attention, they grow bigger faster, develop improved fertility, get into calf earlier, etc. Learnt all this through SM.

   As Bernie English observed: *"Weaner heifers kept on a steady pathway of constant liveweight gain until mating will have a more fertile life.*

"*We used to put them aside cause our steers were the most valued. Heifers are worth 150 bucks or something so why look after a heifer, just put her aside there, and in 2 years time, she'd end up big and fat and everything, but not going into calf."*

As a result of the SM workshops, Ross is now weaning much earlier. Given the natural poor nutrition in his country, with late calves, *"if you don't pull the calf off, the cow dies and the calf dies."* Weaners are then given special supplementation, as are their mothers. Any smaller weaners that could get dominated by the bigger weaners are pulled out, put in a paddock with similar sized animals, until they fill out, then are put back with the others when they are similar size. *" we've been doing that for the last couple of years as well and that's all come through talking to people in these workshops."*

With the improvement in his herd over the last four years, with each year's cattle becoming bigger and bigger, he can now safely and confidently put a good percentage of the 1.5 year-old heifers to his bulls. *"that's how much each generation is catching up because of each generation we're getting better paddocks, and better supplementation, so each year, our heifer sizes are going up. We've now got our top number ones* (2000-born) *with our bulls. Before SM, it wouldn't be heard of."*

4. **Sharing information with others.** Because they arrived in the dry tropics, *"we didn't have a clue what age to cull cows, or how to grow cattle in this country",* says Ross. So swapping information with other local producers has been, for Ross, one of the best aspects of SM. He discovered that though he was a newcomer with a lot to learn from the locals, they did not have all the answers that Ross required. From the outset at Goshen, Ross has been providing supplementation to his cattle. The traditional view of cattle producers on the north is not to spend much on their cattle.

   Before SM Ross was supplementing quite heavily without having any knowledge of how that compared with others or whether it was an appropriate investment. The SM benchmarking exercise revealed the value in this supplementation and helped him to refine it.

   The supplement that Ross developed as suitable for this country began to be sought by all of his neighbours. It is now called the Gunnawarra Road mix. This came about because one of Ross's neighbours, observed, where their cattle share a common watering point, that Ross's cattle were big and fat whilst his were dying. This neighbour then approached the supplement supplier to find out what Ross was feeding his cattle.

   "Because I've got cattle next door, he asks me the same thing as my agistment neighbour asked me. They're seeing our cattle there and asking what the hell's going on here. You know, that's all come from Smart Manager."

   By copying Ross's supplementation and management, all his neighbours' cattle are also improving. Assuming a very conservative 5% improvement in fertility rate. With 20,000 breeders in this area, gives 1000 extra calves (less a maximum of $40 per head per annum on supplementation and husbandry costs) and selling at 2.5 years old for a $600 average, the result is [1000 x ($600 - $80)] an estimated **annual benefit to that small production area of $520,000.**

5. **Ideas on the SM process.** Ross is always conscious of cost factors and how they might be reduced. An example is mustering. *"we can muster here in 6 days, we can put through 1600 breeders, wean 700, brand 300, spay 200, preg tested probably 400, we did that in 7 days this last time. You go to some places, they'd be there for 2 months doing that. Now, you're going to tell me that you can't put mustering costs in your costs, to me it's a variable and it's how efficient you are and how smart you operate.* From this observation, Ross recommends that SM includes mustering costs in the benchmarking figures.

   Another suggestion relates to the frequency of meeting. Ross suggested at least three times per year. *"I know we go over a lot of the same thing all the time but by God, you've gotta keep reminding yourself about these same things all the time otherwise you sought of put them aside …it's so important…and more people can keep putting figures in front of you".*

He also recommends that people in the SM groups all come from all the same area and same soil type, so they can share information about cattle production under similar conditions.

In response to what Ross would like to see happen now that the SM program had come to an end, he indicated – *'the same as always. Bernie sends us a list of 15 or 20 possible relevant subjects, we might talk about, and we choose a few.* Of particular value to participants is hearing from successful fellow producers.

Appendix 7: Papers, Reports, Media Articles

Smart Manager articles have appeared in the Country Life on April 1 1999, the Register on May 27 1999, Beef Improvement News July/August 1999, Tablelands Advertiser December 19 2001, the Autumn edition of NAP news and in various editions of the local DPI publications the Insufferabulletin and the Northern Muster.

If you are interested in finding out more about the Breedcow / Dynama herd budgeting package, please contact Bill Holmes from QDPI, Townsville on 07 4722 2688.