



Final report

NB2: Delivery of ‘Pathway to Practice’ pillar of Northern Breeding Business (NB2) program – Part II

Project code: P.PSH.1310
Prepared by: Jo Gangemi
Department of Agriculture and Fisheries
Date published: 28 October 2024

PUBLISHED BY
Meat & Livestock Australia Limited
PO Box 1961
NORTH SYDNEY NSW 2059

This is an MLA Donor Company funded project.

Meat & Livestock Australia acknowledges the matching funds provided by the Australian Government to support the research and development detailed in this publication.

This publication is published by Meat & Livestock Australia Limited ABN 39 081 678 364 (MLA). Care is taken to ensure the accuracy of the information contained in this publication. However MLA cannot accept responsibility for the accuracy or completeness of the information or opinions contained in the publication. You should make your own enquiries before making decisions concerning your interests. Reproduction in whole or in part of this publication is prohibited without prior written consent of MLA.

Abstract

This is the final report of project P.PSH.1310 – NB2 Delivery of Pathway to Practice.

The *Northern Breeding Business (NB2)* program aims to address key issues limiting long-term viability and sustainability in the northern beef industry (low weaning rates, high mortality rates and low turnoff weights) through increasing adoption of proven management practices and technologies. The NB2 'Pathway to Practice' pilot project, tested a methodology of standardised collection and analysis of business and production data, to provide a framework for self-identification of interventions for northern beef businesses. Delivery of the program took place within a producer peer group, supported by a trained facilitator and group coordinator, with this format identified as the most likely to achieve sustained practice change.

Forty-six business across three states (Queensland, Northern Territory and Western Australia) participated in the pilot project, representing an area of 13,747,931 hectares running 436,441 breeding cattle.

The methodology for the pilot was successfully tested, with the Queensland Department of Agriculture and Fisheries (DAF) acting as pillar leader for adoption, as well as establishing and facilitating two producer groups, Fitzroy (10 businesses covering 119,575 hectares and 12,990 breeders) and Burdekin (7 businesses covering 153,754 hectares and 7,900 breeders). The majority of *all* businesses involved in the pilot project completed two years of standardised data collection on pasture, herd and business metrics, with some also providing historical datasets for analysis. Personalised business and aggregated group reports, developed from the provided data, were generated in 2022 and 2023.

Information from the reports was reflected on via facilitated discussion within the DAF led groups and the interventions implemented by businesses were identified. One hundred percent of businesses within the DAF led groups have made some form of business change since being involved in NB2. The interventions vary and include significant breeding and herd practice changes, adoption of annual forage budgeting and land condition monitoring, improved herd recording technologies and practices, adoption of digital technologies and calculation of business emissions baselines.

Executive summary

Background

The 'Pathway to Practice' pilot delivery of the NB2 program was designed to address key issues limiting long-term viability and sustainability in the northern beef industry (low weaning rates, high mortality rates and low turnoff weights) through increasing adoption of proven management practices and technologies.

Northern Australian beef breeding businesses interested in exploring options for improved performance (through the collection and analysis of production and business data), were recruited for the program.

The results and recommendations resulting from this pilot project provide the foundation for ongoing delivery of the NB2 program across northern Australia.

Objectives

- Complete two years of peer-to-peer group participation and business data collection and analysis for two DAF led producer groups, Burdekin and Fitzroy (achieved)
- Form and manage an advisory group to provide recommendations to MLA to transition smoothly into the next phase of the project (achieved)
- Report on the pilot process, including recommendations and delivery manuals for future groups (achieved)
- Participate in, provide information and advice for the independent MER report (ongoing, independent MER report to be completed in 2024).

Methodology

Through producer peer groups (supported by a trained facilitator and group coordinator), support participating businesses to:

- Collect and analyse standardised business and production data
- Determine their current situation
- Identify an opportunity for increasing production
- Source specialist advice, learning opportunities or technologies
- Paddock test identified interventions
- Reflect on the outcome through ongoing collection and analysis of data.

Results/key findings

Forty-six business across three states (Queensland, Northern Territory and Western Australia) participated in the pilot project, representing an area of 13,747,931 hectares running 436,441 breeding cattle. DAF led two groups in the Fitzroy (10 businesses covering 119,575 hectares and 12,990 breeders) and Burdekin (7 businesses covering 153,754 hectares and 7,900 breeders) regions.

Participation in the NB2 program contributed to implementation of interventions for all participating businesses. Interventions were often incremental and influenced by learnings from both within and outside of NB2. The project found facilitated, peer-to-peer learning effective in achieving adoption of proven management practices and technologies. The collection of production and business data in standardised formats was difficult to achieve for businesses whose existing recording systems were not aligned to providing the data required.

Benefits to industry

The NB2 program has successfully tested a methodology of standardised collection and analysis of business and production data, to provide a framework for self-identification of interventions for northern beef businesses. Delivery within a producer peer group was confirmed as the delivery format most likely to achieve sustained practice change. Completion of the pilot has delivered a range of recommendations to guide ongoing delivery of NB2, and has provided comprehensive training manuals for future facilitators, coordinators and group members.

Future research and recommendations

The collection of herd production data in standardised templates was more difficult than anticipated in delivery of the pilot project. Many current herd recording systems (while meeting current needs of northern beef producers) are not able to provide the breadth and accuracy of data required for the production analysis templates, used in the NB2 program. Future extension and adoption investment is needed, to establish effective herd recording systems more widely across the northern beef industry.

Table of contents

Abstract	2
Executive summary	3
1. Background	7
2. Objectives.....	7
3. Methodology	8
4. Results	9
4.1 De-identified and aggregated results from data collection templates and analysis for the Burdekin and Fitzroy groups.	9
4.2 Evaluation of NB2 process including key recommendations for NB2 process, group formation, foundation training, and sequence of activities. Recommendations to encourage independent group continuation.....	9
4.2.1 Key recommendations for NB2 process	9
4.2.2 Group Formation	9
4.2.3 Foundation Training.....	11
4.2.4 Sequence of Activities.....	13
4.2.5 Independent Group Continuation	15
4.3 Final MER reporting in accordance with MER plan and the MLA Extension Evaluation Framework	15
4.3.1 Method	15
4.3.2 Results - Feedbase	16
4.3.3 Results - Herd	17
4.3.4 Results - Business	18
4.3.5 Results - Capacity.....	20
4.3.6 Conclusions	20
4.4 Training and skill development activities completed by the Burdekin and Fitzroy groups.....	21
4.5 Identification of interventions to be implemented for groups	27

4.6	Case studies written on two producers for use by MLA comms.....	33
4.7	Submission of print ready proofs for manuals.....	33
5.	Conclusion	33
5.1	Key findings.....	34
5.2	Benefits to industry	34
6.	Future research and recommendations.....	35
7.	Appendix	36
7.1	Aggregated results from data collection templates – herdflow and cashflow.....	36
7.2	Aggregated results from data collection templates – feedbase	36
7.3	Print ready - NB2 Herdflow and Cashflow training manual	36
7.4	Print ready - NB2 Feedbase training manual	36
7.5	Print ready - NB2 Facilitation Manual	36
7.6	Collated qualitative feedback from final KASA surveys (Burdekin and Fitzroy groups)	36

1. Background

The NB2 program aims to address key issues limiting long-term viability and sustainability in the northern beef industry (low weaning rates, high mortality rates and low turnoff weights) through increased adoption of proven management practices and technologies. The NB2 Pathway to Practice pilot project, tested a methodology of standardised collection and analysis of business and production data, to provide a framework for self-identification of interventions for northern beef businesses. Delivery of the program took place within a producer peer group, supported by a trained facilitator and group coordinator, with this format identified as the most likely to achieve sustained practice change. The research target demographic focused on northern beef breeding businesses looking to identify and address productivity issues via improved data collection and analysis.

The pilot project successfully tested the methodology, with the Queensland Department of Agriculture and Fisheries (DAF) acting as pillar leader for adoption, as well as establishing and facilitating two producer groups, Fitzroy and Burdekin. As outlined in this report, 100% of businesses within the DAF led groups have made some form of business change since being involved in NB2. The interventions vary and include significant breeding and herd practice changes, adoption of annual forage budgeting and land condition monitoring, improved herd recording technologies and practices, adoption of digital technologies and calculation of business emissions baselines. The recommendations made within this report will help guide the ongoing delivery of the NB2 program.

2. Objectives

Delivery of 'Pathway to Practice' pillar of Northern Breeding Business (NB2) program – Part II objectives:

Complete an additional year of the Pathway to Practice pilot study (P.PSH.1310) to further evaluate the process and develop a proposal in preparation for the main phase of the project.

By July 2024, the project will have completed the operational phase of the 6 pilot producer groups to:

- Complete two years of peer-to-peer group participation and business data collection and analysis (achieved)
- Form and manage an advisory group to provide recommendations to MLA to transition smoothly into the next phase of the project (achieved)

By November 2024, the project will have completed the overall leadership of the pilot phase by:

- Reporting on the pilot process, including recommendations and a reference manual for future groups (draft final report achieved)
- Participate in, provide information and advice for the independent MER report (ongoing, independent MER report to be completed in 2024).

3. Methodology

This project continued with the successful methodology from the previous project (P.PSH.1310) with the six participating NB2 groups assessing their own businesses with the benefit of using fellow group members to exchange ideas. Supported by trained facilitators and a producer coordinator, participating producers follow a simple process to identify opportunities and improve their businesses. Underpinning the adoption process is developing trust and confidence in the group that they can openly discuss, share, and learn from each other, as well as engaging specialists. This process (Figure 1) includes:

- a basic, standardised recording system to document their beef business (basic templates for herd, pasture and cashflow)
- annual standardised reports with Key Performance Indicators (KPIs) to understand their current business situation
- opportunity to work with specialists to identify options for improvement
- advice on putting the best option into practice.



Figure 1 Pathway to Practice process

Facilitators and producer coordinators plus specialists in the fields of herd, feedbase, business and producer group management (peer to peer learning principles) are unchanged from the previous project (P.PSH.1310) to provide continuity of support to all groups as required to further develop their skills.

Data collection and analysis

The data collection phase finished in 2023 with two data collection and analysis opportunities. Standard templates for the herd, feedbase and cashflow were used. Bush Agribusiness analysed the herd and cashflow template and Range IQ analysed the feedbase templates.

Measuring change and impact

Knowledge Attitudes Skills & Aspirations (KASA) surveys pre-project, mid-term and post-project will indicate changes. An independent evaluation of the project will be commissioned by MLA.

Project advisory group

A project advisory group made up with five producer representatives, two group facilitators, a master facilitation specialist, and project leaders have made recommendations for future NB2 groups. The formation of the advisory group followed the independent review of the NB2 program in 2022 and has been a valuable addition to the methodology of the project.

Animal Ethics

Separate Animal Ethics approvals were submitted and approved by the relevant Animal Ethics committees in Queensland, Western Australia and Northern Territory. Queensland's Animal Ethics approval number is SA 2021/05/786.

4. Results

4.1 De-identified and aggregated results from data collection templates and analysis for the Burdekin and Fitzroy groups.

Analysis of aggregated results from data collection for the Fitzroy and Burdekin groups was completed by Bush Agribusiness for herdflow and cashflow (Appendix 7.1) and Range IQ for feedbase (Appendix 7.2). All 11 DAF NB2 group businesses that completed the final KASA survey intend to continue collecting herdflow, feedbase and cashflow data using either the NB2 templates or alternatives.

4.2 Evaluation of NB2 process including key recommendations for NB2 process, group formation, foundation training, and sequence of activities. Recommendations to encourage independent group continuation.

4.2.1 Key recommendations for NB2 process

The following recommendations are based on the feedback collated via the NB2 Producer Advisory Group (PAG) meetings. The PAG recommendations have also been incorporated into the NB2 Facilitator Manual (Appendix 7.5) where detailed information is provided on the steps in the NB2 process.

4.2.2 Group Formation

The group facilitators and coordinators are key to the success of the NB2 program and therefore must be selected with care and be well supported. Either the facilitator or the producer coordinator may be the initial driving force for a group coming together. Groups may also be brought together by a 'connector', someone with a high level of credibility amongst their peers.

Groups size should be a minimum of five to a maximum of eight business. It is important to get more than one person from each business to be involved. Group members need to commit for three years with the options for continuing beyond that known and discussed from the start. This could include a signed statement at the start of the program that incorporates confidentiality. The group needs to negotiate an exit strategy, so people know how they can leave if they want to. This could be raised during the 'how we will work together' activity, covered in the initial group meeting.

Having similar businesses (size and type) works well, however the NB2 PAG identified attitude as being more important than business size, skill or ability. With good facilitation, diversity in a group can provide greater opportunities for learning. Businesses operating at a more advanced level can contribute immensely to the group. Less experienced facilitators managing diverse groups will require more support.

An essential component of group formation is providing clarity about the NB2 program and process. It is important that facilitators don't oversell the program and have respect for the aims and aspirations of the group and a commitment to supporting these. The requirement to complete the NB2 templates needs to be discussed early, with the expected outcome of this clearly articulated i.e. the data collected via the templates will allow businesses to be analysed against similar enterprises, to establish baselines for herd productivity, feedbase resilience and business profitability. Getting businesses to this point has always been the goal of the NB2 program. The limitations and potential

concerns producers may have with the templates needs to be understood by the facilitators, who must complete training with the feedbase and herdflow/cashflow trainers, prior to group members and ideally before the first group meeting.

The benefits of a business benchmarking against themselves can be a stronger motivator than benchmarking against others. It is important that facilitators promote both group and individual benchmarking as methods to identify areas for improvement.

Staggered additions (members joining at different times) are not recommended, unless there is strong group support. The trust established between members can be eroded by the addition of new members that miss the 'forming', 'storming' and 'norming' stages, and the group dynamic altered significantly.

It is extremely important to have a skilled facilitator (or to bring in a facilitator coach) for initial meetings when capturing expectations and setting goals is undertaken. Allowing the group to determine a focus, as outlined in the NB2 facilitation manual (Appendix 7.5, page 20) creates the motivation for data collection (via the NB2 templates). The group focus may also identify benchmarks or KPIs they would like to measure, not covered by the templates, so there needs to be flexibility in allowing these to be incorporated.

Measuring and improving the human component of a beef business is not articulated within the NB2 program. If the group focus includes this topic, the facilitator can suggest the development of group KPIs and facilitate discussion around how these will be measured.

Facilitator and Coordinator Roles

Recommendations were also gathered from the NB2 PAG around the roles of facilitator and coordinator.

Facilitator – this role is critical to the success of the group and requires someone who is able to remove their subject matter expert (SME) 'hat' when facilitating. Ideally the facilitator will commit to three years and if there is more than one facilitator, a designated lead facilitator should be assigned. Facilitators need to be fully engaged in the training along with the group and require well prepared meeting run sheets, that detail how to deal with 'pushback' from group members. Facilitators should have access to group and individual business reports prior to any group meetings where benchmarking data will be discussed, so they have the opportunity to help facilitate the identification of interventions.

The NB2 PAG suggested future training for NB2 facilitators include goal setting for their own journey in facilitation.

Producer coordinator – the coordinator provides the link between the group members and the facilitator and has the role of staying focused on the group members' goals. At times facilitators may push the group to move out of their 'comfort zone', in these situations the coordinator is the reassuring mediator. The PAG emphasised that the producer coordinator needs to be well supported by the facilitator coach and the training provided by the master facilitator was essential. The PAG also felt more clarity between the role descriptions for facilitators and coordinators could be helpful.

Early discussions around group continuation post NB2 and the potential transition of leadership from facilitator to coordinator is recommended. Knowing the options for group continuation early,

gives the producer coordinator time to consider what they can commit to, beyond the NB2 program. For groups that want to continue, a strong group leader is essential.

Group Funds

Both DAF NB2 pilot groups found the spending of group funds problematic early in the project. The NB2 PAG suggested new NB2 groups be given information from pilot group's activities as a guide or starting point for planning spending of group funds. The PAG felt the current dollar contribution of \$2000 per business, per year was the right amount for a family business (needing/desiring to improve productivity) to motivate getting value from the investment.

The PAG recommendation was funds not be used for incidental costs (travel, accommodation etc) but instead be spent on engaging guest speakers or specialists and for activities identified by the group's goals or focus. It was suggested a review of the guidelines around group funds, might be beneficial.

Activities to help group formation identified by NB2 PAG

- Having a common linkage/connector (someone that potential members respect and trust)
- Having each group meeting on a different member's property
- Each business sharing a semi-formal overview of their business to the other group members
- Each business sharing an overview of how they currently manage their herd recording and data collection (pre NB2)
- Promoting the value of P2P learning and provide examples of this to the group. This could be done by inviting members of other P2P groups to meetings
- Identifying limiting factors that are common in the region/for group members, to help focus the group
- Limiting the amount of online learning. Face to face is better
- Focusing on creating social cohesion and spending time building trust and rapport. Do it well at the start to get commitment to the group and process.

4.2.3 Foundation Training

Prior to foundation training, a discussion around how data will be managed needs to take place. Some businesses in the pilot program expressed concerns around the use of their template and report data by Bush Agribusiness. Addressing these concerns before they arise will help ensure everyone is comfortable with the processes for managing data. It is also important groups discuss and agree on how individual business reports will be used within the groups.

An important component of the NB2 process is the review of group and individual reports in a peer-to-peer workshop, after the first year of data collection (Appendix 7.5, NB2 Facilitation Manual, page 26). For facilitators to pose questions and create discussion on relevant topics, they need to know what the individual reports contain. The value of the benchmarking review meeting is enhanced if members are also willing to share their individual reports within the group. Facilitators are encouraged to draw on support from the facilitator coach on when and how to bring this conversation to the group.

Facilitators need to be aware that different timings of data collection may exist within their group. Some businesses complete their livestock returns on a calendar year, while others do this on a financial year. It is helpful for the facilitator to understand this prior to the foundation training and discuss how this will impact the group's data collection and review, with the training provider.

Another concern identified during the pilot project, was the potential double data entry into NB2 templates by businesses with existing data collection systems in place. It is important facilitators address this early, prior to the foundation training. Requiring all businesses to complete NB2 templates for at least twelve months (or one round of reporting) may be a compromise. For businesses already collating data in other formats or programs, it could help to provide one on one support in the transfer of existing data to NB2 templates. This may demonstrate gaps in existing systems, which may be unable to generate the level of data and information available from NB2 templates and reports.

It is preferred that all businesses complete the NB2 templates for two rounds of reporting, so identifying issues early and working to resolve them is important. The goal of the program to use standardised data collection templates to generate business baselines for herd productivity, feedbase resilience and business profitability, may need to be revisited regularly. If there is dissatisfaction in the group around the templates, facilitators are recommended to seek support from the facilitator coach in managing these conversations.

Facilitators must complete foundation training prior to the group members and ideally before the first group meeting. Facilitators need to clearly understand how to complete the templates, the purpose of collecting the data, how the data will be managed and how the data will be used within the group.

The timing of the foundation training needs to be flexible and group formation could be more important than templates for the first twelve months. Until groups have identified the need for data to help them achieve their goals, the motivation to put time and effort into collecting data will be lacking. When the templates are introduced, the connection between data driven decisions and achieving identified goals, needs to be made and potentially regularly revisited.

Having another business (external to the group) describe how they use data and information to make better decisions, can be a great strategy to provide the motivation for a commitment to data collection, and was used by some groups during the pilot program.

Templates - Herdflow

Discussion around current data collection systems and the data that will be required to complete the herdflow template, prior to foundation training is recommended, identifying:

- current systems being used e.g. notebook, customised paddock book, excel, herd recording or farm management software
- if data is being recorded at either an individual animal or mob/paddock level
- what information is being generated from the data e.g. paddock numbers, herd numbers for the accountant, reproduction rates, kgs produced, sales/cash flow forecasts, etc.
- what decisions are made from the information e.g., forage budgets and stock number adjustments, bull purchases, etc.
- what information is needed to make better decisions i.e. what data needs to be collected to generate that information and what systems are required to collect that data
- what data will need to be collected (that is not already) to complete the NB2 herdflow template.

Many businesses in the pilot program identified that their current herd data collection system was not robust enough to provide the data needed to complete the herdflow template.

Templates – Cashflow and/or Business Analysis

The NB2 PAG suggested completion of *'The Business Analyser'* (Bush Agribusiness) would have been more beneficial than completion of the NB2 Cashflow template, in the pilot project, however they also acknowledged the time and effort required may be a barrier.

Discussion around the options (NB2 template or more in-depth business analysis), prior to foundation training is recommended for future NB2 groups. Completion of in-depth business analysis (such as *The Business Analyser*) will require either group or individual business funds to cover the cost. This can be problematic if some group members are already paying for a service personally, making the use of group funds for other businesses to do so, more complicated. Being forewarned about this potential issue will help facilitators be prepared for this discussion and facilitate a solution.

Corporate businesses involved in the NB2 pilot program were using *The Business Analyser* prior to NB2 and valued the opportunity to benchmark themselves against other corporate businesses, running similar operations. Benchmarking is standard practice for corporate businesses, but for family-run operations, options for benchmarking are more limited, making NB2 a valuable program to explore options for improved productivity in a supportive peer group.

The NB2 PAG identified that for family businesses, incorporating data collection to generate benchmarks not related to productivity could be relevant. The Indigenous NB2 group (involved in the pilot program) shared their experience in developing KPIs around education and employment. Facilitators should raise this option to their group, if the group focus indicates it would be appropriate.

Templates: Feedbase

The NB2 PAG were strongly supportive of the NB2 feedbase templates, recognising the value of improved pasture management that can result from accurate information on land condition and forage quantity and quality. However, they also felt there is more variability between businesses in managing pastures and acknowledged that commitment to feedbase template completion was low amongst the pilot program groups. The PAG suggested that forage budgeting could be an activity paid for using group funds, to ensure consistency of data. This is something future groups may need to consider, through facilitated discussion.

The PAG also suggested if financial, production and herd analysis is completed first (via completion of herdflow and cashflow templates (or more in-depth business analysis) this process could identify gaps or opportunities. If pasture/feedbase turns out to be the issue identified, this may provide the motivation to complete the feedbase templates.

4.2.4 Sequence of Activities

This sequence of activities links to the detailed process outlined in the NB2 facilitation manual (Appendix 7.5) with page references to this manual incorporated.

Table 1 Recommended sequence of activities in NB2 process

<p>Group Formation (pages 12-16 and 19-23)</p>	<ul style="list-style-type: none"> • Selection of facilitator and producer coordinator • Training sessions for facilitator/coordinator with master facilitator and facilitator coach • Facilitator foundation training with Bush Agribusiness and Range IQ (include coordinator, if possible) • Planning for first meeting (time allocation: 40% pre-event, 20% at event, 40% post-event) • First meeting – NB2 Facilitator Manual page 19 • Post meeting session for facilitator/coordinator with master facilitator and facilitator coach • Planning for next few meetings, based on group focus.
<p>Storming, Norming, Performing (pages 24-25)</p>	<ul style="list-style-type: none"> • The number of group meetings required prior to foundation training for the group will vary • Incorporation of activities suggested by the NB2 PAG for group formation • The following topics need to be discussed prior to foundation training: <ul style="list-style-type: none"> ○ Data management and sharing of data and reports within the group ○ Development of people focused KPIs and data collection if appropriate ○ Managing any potential double up of data collection ○ Current timings of livestock returns within the group ○ Current livestock data collection systems ○ Current pasture management/forage budgeting data collection within the group i.e. rotational or continuous, calendar or financial year ○ Spending of group funds. • Facilitator and coordinator to participate in ongoing training and catchups with master facilitator and facilitator coach and other NB2 group leaders.
<p>Group foundation training</p>	<ul style="list-style-type: none"> • Timing will be determined by the group • Following foundation training, facilitators to provide follow up support for template completion • Set dates for template completion, required for the generation of individual and group reports • Set tentative date for review of group data meeting.
<p>Review of group data (pages 26-29)</p>	<ul style="list-style-type: none"> • Facilitator given access to group and individual reports well in advance of meeting • Group to decide if training providers from herdflow, cashflow and feedbase training, should attend, to run through reports • Consider options for individual sessions with training providers for each business to be included in this meeting • Facilitator to address issues around template completion (or put plan in place to do so) • Following meeting, group to determine steps forward for second data collection and review.

Adjourning or continuation (page 30)	<ul style="list-style-type: none"> • Ensure group meetings during the second year of data collection incorporate discussion around the future of the group post NB2 • Review group fund spending early in this period.
End of NB2 group	<ul style="list-style-type: none"> • Plan for a celebration of the group's success to mark either the end of the group or the move to a new era, post NB2.

4.2.5 Independent Group Continuation

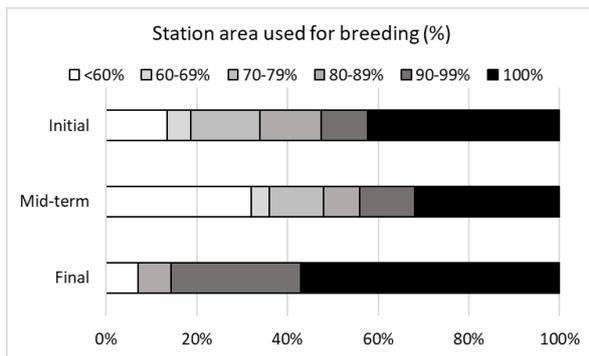
- Talk about this early in the second year and revisit the topic at key points to determine the appetite within the group to continue
- There needs to be a purpose to continue, this can be identified via facilitated discussion to determine what the group wants to achieve by continuing past NB2
- Connecting with other producer peer-to-peer groups can be a motivator. Guest speakers at the 2023 NB2 Draft event, from long running producer groups, provided insight into the factors that influenced their group continuation
- A committed producer coordinator from the group is essential, to provide the group 'glue' and drive to keep things going. Encourage group discussion around succession for this role, if the current coordinator is not wanting to continue
- A committed facilitator is also vital, to ensure the group meetings and activities have outcomes. Funding options for facilitators to continue supporting groups will vary in each circumstance. The group may be prepared to fund this themselves, so the potential costs in doing this need to be communicated early
- If a group decides not to continue, it is important to plan a clear end to the group that includes a celebration and recognition of what the group has achieved together.

4.3 Final MER reporting in accordance with MER plan and the MLA Extension Evaluation Framework

4.3.1 Method

A detailed questionnaire covering herd structure, performance and production, pasture monitoring, business data recording, perceived issues, and staff capacity was completed by collaborators early after joining the project (pre), again in late 2023 (mid-term), and in mid-2024 (final). Comparative results are displayed graphically. Where appropriate and using cases where data for both times (27 and 14 businesses for initial v mid-term and mid-term v final, respectively) were available, change was assessed as being statistically significant ($P < 0.05$) using a χ^2 test.

4.3.2 Results - Feedbase



Roughly, a third each of the businesses used <60%, 60-99% and 100% of their country for breeding (Figure 2). No significant change has occurred.

Figure 2 Station area used for Breeding (%)

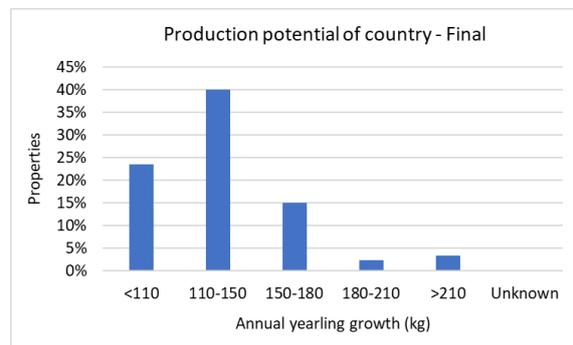
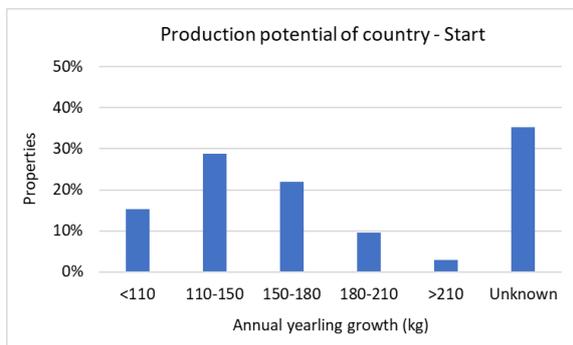


Figure 3 Production potential of country

Initially, a third of collaborators did not know the production potential of their country (Figure 3), i.e., typical annual yearling growth. In the final survey, all collaborators knew the production potential of their country ($P < 0.05$).

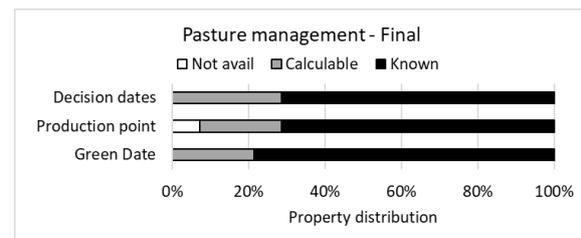
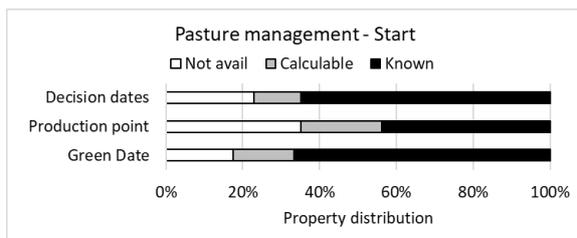


Figure 4 Pasture parameters

Almost all collaborators now know, or can calculate, key pasture parameters (Figure 4) compared to about 80% with this capacity initially ($P < 0.05$).

Initially, 10% of collaborators were unfamiliar with pasture budgeting and this reduced to nil mid-term (Figure 5). In the same period, the proportion of businesses conducting feed budgets on at least 75% of their pastures increased significantly from 40% to about two-thirds. No further change has occurred.

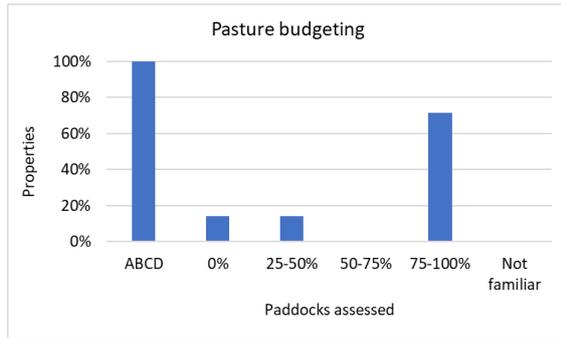


Figure 5 Pasture budgeting

4.3.3 Results - Herd

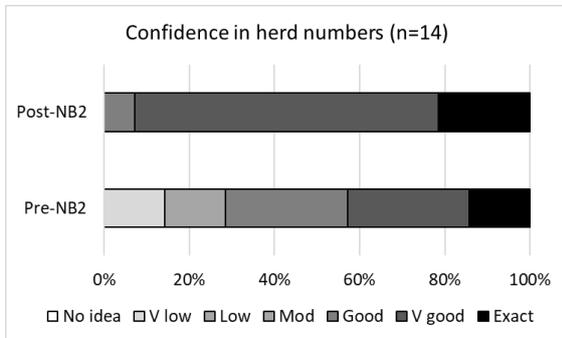


Figure 6 Confidence in herd numbers

About 90% of business sell or transfer steers from their property between weaning and 2.5 years of age (Figure 7). This has not changed during the project.

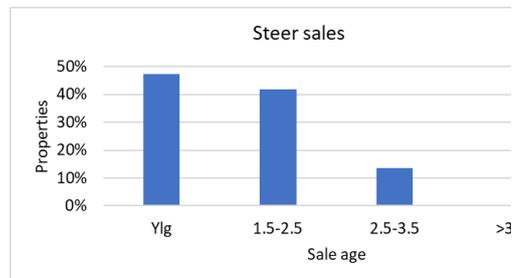


Figure 7 Steer sales

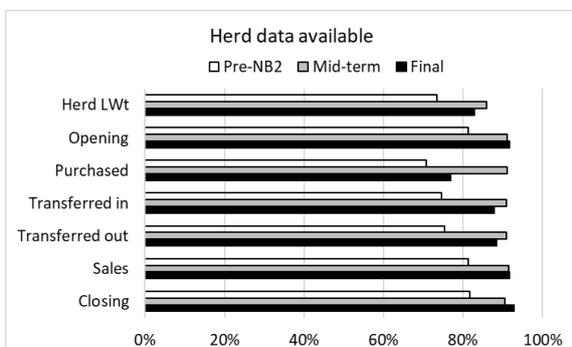


Figure 8 Knowledge of liveweights and numbers by class

Over the project period, the understanding of specific herd structure improved considerably (Figure 6), e.g. 43% had a very good or exact handle on their herd structure initially, increasing to 93% by project end ($P < 0.05$).

About 75% knew, or could estimate, typical live weights of cattle classes in the beginning. This increased significantly to about 90% mid-term and remains at that level (Figure 8).

Initially, about half of businesses perceived moderate-major performance problems associated with growth, survival and reproduction of their breeding cattle. This perception has changed considerably, with only a quarter of businesses still believing they have sub-optimal cattle performance (Figure 9).

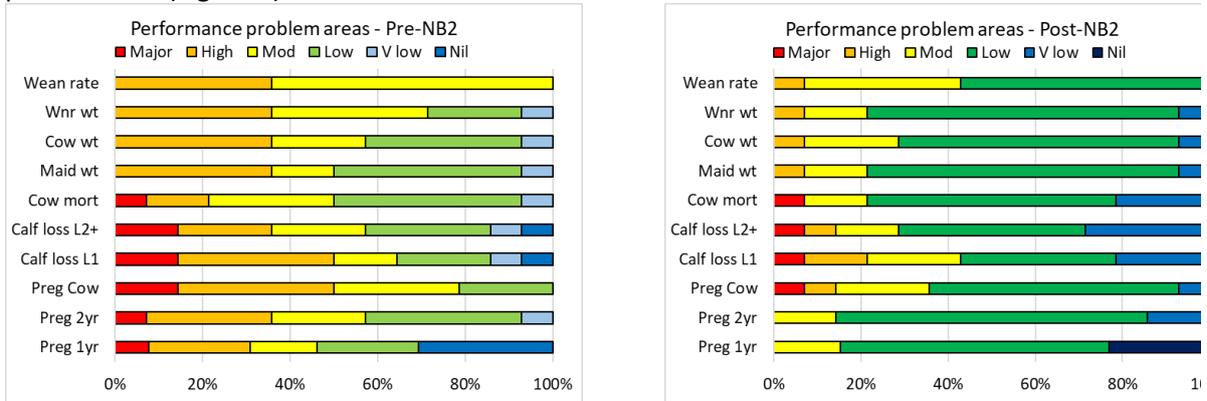


Figure 9 Perceived performance problems, pre and post NB2

4.3.4 Results - Business

About 45% had no business plan in the beginning. Though this reduced significantly to about 15% mid-term, the current status is as it was initially (Figure 10).

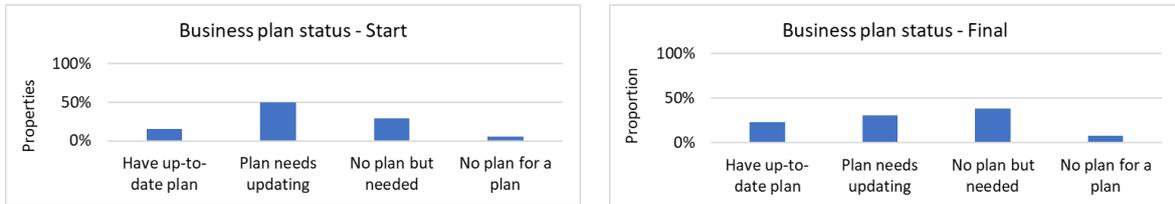


Figure 10 Current business plan

About half of the collaborators sold or transferred steers off their places by 1.5 years of age, and most of the rest by 2.5 years of age. No significant change has occurred (Figure 11).

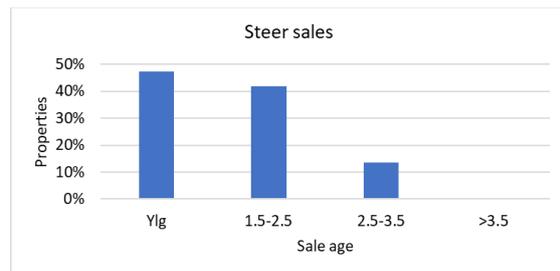


Figure 11 Steer sales

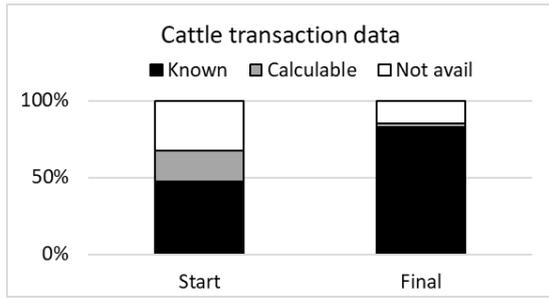


Figure 12 Cattle transaction data

About 70% knew, or could calculate, cattle transaction data (live weight transacted and associated values for each animal class) in the beginning. This increased significantly to about 85% mid-term and has remained at that level (Figure 12).

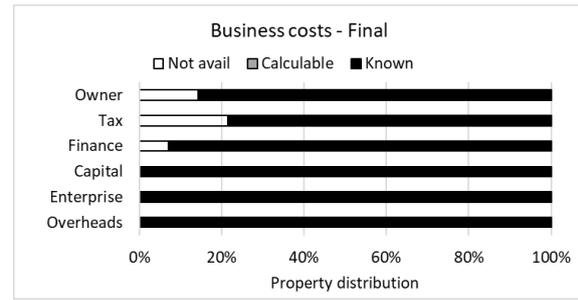
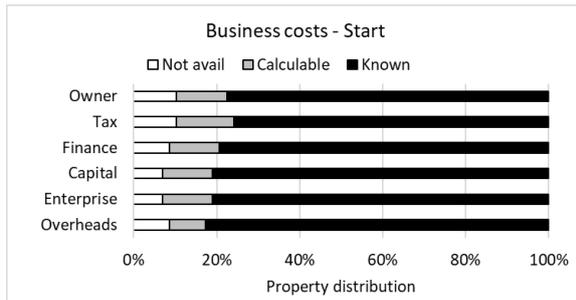


Figure 13 Knowledge of business costs, pre and post NB2

About 80% of businesses knew their costs initially. Now significantly, almost all businesses know all business costs (Figure 13).

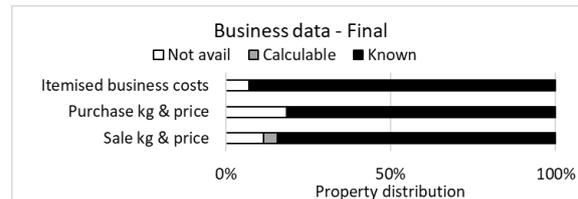


Figure 14 Knowledge of business data, pre and post NB2

About 60% knew both business costs and transaction data in the beginning. This has increased significantly to about 85% (Figure 14).

Almost all collaborators planned to continue business analyses using various templates. About 20% wish to continue with the NB2 templates, with multiple options being selected for the balance of businesses (Figure 15).

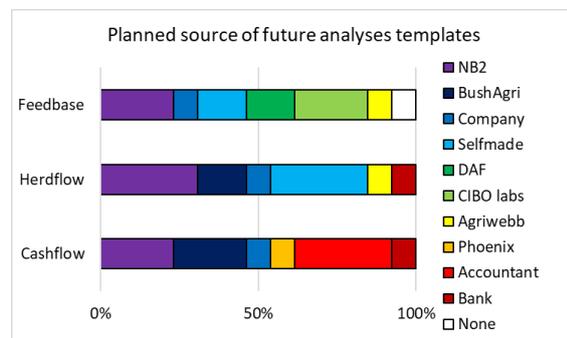


Figure 15 Planned source of future analysis templates

4.3.5 Results - Capacity

About half the collaborators claimed improvements in multiple skills during NB2. This occurred despite no significant change in pre-conceived needs for skills' development (Figure 16).

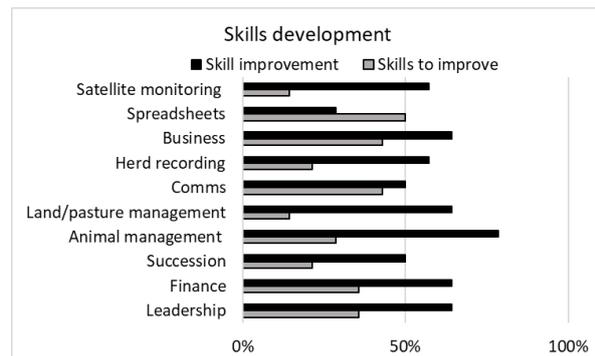


Figure 16 Skill development

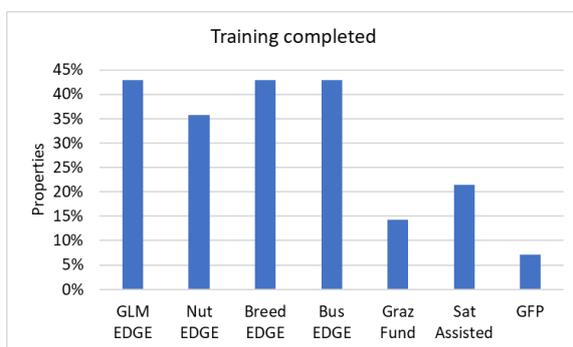


Figure 17 Training completed

About half of the collaborators have completed one or more EDGE packages, and 20% have completed one or more other beef business training programs. No significant change occurred over the project period, i.e., most was completed pre-NB2 (Figure 17).

4.3.6 Conclusions

- All collaborators have or are developing a plan.
- Almost all are now completing objective pasture measurements and pasture budgeting.
- Herd structure has not changed, i.e., business objectives have not changed. However, though a third did not initially know the production potential of their country, all now do.
- The halving of issues perceived with cattle performance over the project may have resulted from a clearer understanding by many businesses of production potential and associated animal performance.
- 90% of collaborators have mastered counting their herd by class, enabling detailed production and performance analyses by a majority. A similar proportion now have a structured understanding of their business costs.
- Formal training has not changed, indicating that the large improvement in business skills may have been more from peer-to-peer than in formal settings.
- Planned universal use of templates for on-going business analyses indicates a major improvement in beef business management capacity. The NB2 templates were the most valued compared to many options available.

4.4 Training and skill development activities completed by the Burdekin and Fitzroy groups

The training and skill development identified in Table 2 has been drawn from the activities documented in the DAF NB2 coordinator reports submitted within previous milestone reports. A large amount of knowledge transfer and resulting skill development has taken place because of NB2 engagement and activities, that is not captured in this report. Every meeting held on property provided a rich peer-to-peer learning experience with producers making the most of the opportunity to ask questions, in a group where connection and openness had been established.

The value of this learning environment was identified in feedback collected at the end of the pilot project from Fitzroy and Burdekin group members. (Note - each quote is from a different business).

“Our favourite part of the program was the opportunity to visit other group member’s properties, sharing ideas and learning different ways of doing things”.

“Forming a circle of trust which has enabled us to openly discuss all aspects of our business from herd management to more personal subjects such as effective communication within our business and therefore families”.

“We have gained a network of fellow producers with whom we can share our thoughts and ideas and know we will receive honest and positive feedback and opinions”.

“We enjoy the P2P learning model and opportunity to broaden our network and work collaboratively with a broad range of people”.

“It has been beneficial to mix with like-minded producers who are pushing the parameters of their family business to increase profitability, sustainability and performance”.

“NB2 has been a wonderful learning opportunity which has provided a safe place to try new ideas, gain new skills, be exposed to new technology and network with other producers. The connections with DAF extension staff and other specialist presenters along with the shared experiences of the group members has enabled us to tackle projects with confidence and motivated us to move forward and achieve some long-standing goals”.

Table 2 Consolidated training and skill development activities (Fitzroy and Burdekin groups)

Burdekin group, training and skill development 2021-2024		
Timing, Location	Activity, Lead	Outcomes
December 2021, Ayr	Business and herd foundation training, Bush Agribusiness	<ul style="list-style-type: none"> • Average knowledge and understanding of the topic lifted 1.7 points from 3.9 to 5.6 (1-7 scale) • Feedback: value of using Excel, the need to have accurate records, importance of good quality production data.
December 2021, Ayr March 2022, Charters Towers and on property	Feedbase training, Range IQ	<ul style="list-style-type: none"> • Average knowledge and understanding of feedbase budgeting lifted 2.2 points from 3.0 to 5.2 (1-7 scale) • Feedback: improved understanding of the factors influencing pastures, increased confidence in estimating feed availability, assessing land condition and managing feedbase risks.

<p>June 2022, on property</p>	<p>Using Cibo Labs and EBVs, Alastair Rayner</p> <p>Facilitated group discussion</p>	<ul style="list-style-type: none"> • Feedback: understanding of Pasture Key and the AFM, importance of EBVs and setting breeding objectives, the need to record herd data efficiently. • Importance of business and strategic planning and integration of data, desire for more in depth discussion on each business within the group for peer comparison. • Inspiration and motivation from peer to peer learning.
<p>August 2022, on property</p> <p>Ayr</p>	<p>Business presentations by each member of the group</p> <p>Business planning, AAA Consulting</p>	<ul style="list-style-type: none"> • Skill development in preparation of a business situation analysis and presentation to peers. All businesses participated and found they were in 'similar boats'. Common themes included low calving/weaning rates, supplementation strategies, off-farm investments vs expansion, yard designs, herd recording options for analysis. • The business presentation activity was a catalyst in shaping the purpose of the group to allow for peer coaching and support. At this point, no collated template data had been provided. • This financial consulting business was already working with one of the group members, who suggested them as a presenter. Following this activity, several other group members engaged AAA Consulting to assist with business planning, including succession.
<p>November 2022, Gatton</p>	<p>Post NB2 Draft field trip</p>	<ul style="list-style-type: none"> • The field trip to UQ Gatton, raised awareness of the breadth of beef research being undertaken and the complexities involved in running research projects. • The field trip included a session on silage making and discussion around the use of silage as an option for supplementing pasture. One of the group members was already making silage and incorporating it into their supplementation for finishing cattle. All group members engaged in discussion around this option, putting supported peer learning into action.
<p>February 2023, Charters Towers</p>	<p>Review of consolidated reports, Bush Agribusiness</p>	<ul style="list-style-type: none"> • This in-depth explanation of consolidated and individual business reports was an important milestone for the group in valuing the data being collected via the NB2 templates. While each business had previously received their own report and the combined group data had been presented at the NB2 Draft event, it was not until this training activity that the value of the reports began to be appreciated. • The fact the facilitators were not privy to the individual business reports and were unable to comment or provide assistance in interpretation prior to this meeting, was a contributing factor in the under valuing of these reports.

	Facilitated discussion on training needs	<ul style="list-style-type: none"> Some businesses acknowledged they didn't have accurate herd data to enable historical completion of the template for previous years. Skill development in prioritising common training needs for the group. Outcome was to focus on herd recording training and skill development for the next group meeting. One group member identified they were all using the same brand of recording equipment, so they suggested having that company present to the group. (One business was borrowing equipment; this catalysed them to purchase the same brand).
June 2023, on property	Capturing herd data, Gallagher	<ul style="list-style-type: none"> Led by the group co-ordinator, this training activity was highly valued by all group members. A range of pre-requested specific skills/functions were covered in the training and the activity was an excellent example of peer learning in action. The group have subsequently become each other's support network in the nitty gritty of herd data collection. Success and proficiency in this skill underpins all herd data analysis and implementation of subsequent interventions to improve performance.
	Facilitated discussion on training needs	<ul style="list-style-type: none"> Skill development in prioritising common training needs for the group. Outcome was to focus on nutrition training and skill development for the next group meeting.
September 2023, on property	Sensible Supplementation, DAF	<ul style="list-style-type: none"> The skill of NIRS dung sampling was developed with tests collected and submitted by each property prior to the meeting, and the results used for discussion and training. Other skill development included: interpreting lick labels, calculating crude protein and phosphorous levels in own licks, calculating intakes required to achieve targeted requirements and calculating the cost of the product per head per day. Individual supplement analysis with DAF staff member Mick Sullivan, led to a number of businesses adjusting their supplementation products/mixes.
	On going peer to peer support for herd recording	<ul style="list-style-type: none"> Group members have continued to seek support from one another for herd recording skills.
March 2024, on property	Individual property visits, DAF coordinators	<ul style="list-style-type: none"> As part of the group wrap up activities for NB2, the two DAF coordinators visited each individual business separately. As none of the group had opted to complete The Business Analyser, information from the individual cashflows were used to generate rough enterprise

		<p>costs/AE vs KG beef/AE and price received (\$/kg) vs enterprise costs (\$/kg) for consideration and comparison (de-identified - for those business, which information was available).</p> <ul style="list-style-type: none"> As a result, two businesses decided to engage the services of Bush Agribusiness to complete The Business Analyser.
March 2024, on property	<p>Review of consolidated reports, 5-year plan, Bush Agribusiness</p> <p>Facilitated discussion on continuation of group post NB2</p>	<ul style="list-style-type: none"> Overview of nine criteria for economic stability in a beef business. Businesses were asked to identify which of these criteria was most important for them and to begin developing a 5-year plan. Presentation of group data led to discussion on the need to continue to build on data collection skills and accuracy. Facilitated by <u>group members</u> (skill development in negotiating a group consensus for ongoing group purpose and structure). Outcome of the discussion was the group wished to continue post NB2 and a range of options were put forward. A final decision was not reached at this meeting. Two group members subsequently put together a proposal to apply for peer-to-peer funding.
June 2024, Emerald	<p>5-year Business Plan, Bush Agribusiness</p> <p>Communications Training , The Right Mind</p> <p>On property</p> <p>Facilitated discussion</p>	<ul style="list-style-type: none"> Six businesses chose to attend a follow up session to continue working on their 5-year plans. Skill development in better managing relationships and communication in multi-generational businesses, including dealing with conflict and managing difficult conversations. The closeness and trust within the group allowed for personal and sometimes difficult issues to be discussed in a supportive environment. All group members expressed a desire to remain together and be part of the peer-to-peer funding proposal.
Funds committed to training post June		<ul style="list-style-type: none"> Three businesses have booked to attend a KLR Marketing School, two businesses have booked MLA Business Edge and one business has booked to attend MLA Breeding Edge.
Fitzroy group, training and skill development 2021-2024		
Timing and Location	Activity, Lead	Outcomes
February 2022, on property	<p>Presentations by Black Box and Minitube</p> <p>Facilitated discussion</p>	<ul style="list-style-type: none"> Groups provided with information on the services offered by these two providers as part of determining the group focus. Group considered if funds should be spent on all businesses completing Black Box analysis, with a decision

		made to leave this as an individual business option. A number of businesses have since implemented Artificial Insemination breeding programs and have utilised the information provided by Minitube.
March 2022, on property	Feedbase training, Range IQ	<ul style="list-style-type: none"> All members appeared comfortable with the level of difficulty and were prepared and eager to begin to apply templates to their businesses.
June to December 2022, Rockhampton	Fulton Group, overview of Townsville to Tassie pilot project	<ul style="list-style-type: none"> Overview of the project was presented. Involvement in the project includes a range of benchmarking activities including carbon footprint business assessments to identify pathways to improvement and providing approval to processors to include de-identified carcass data into a reporting pool. Participants in the pilot will be provided with a data set evidencing natural capital stewardship. Group participants agreed to start the Tassie to Townsville pilot project in 2023 by completing a carbon footprint benchmark for their businesses.
October 2022, on property	DAF, Grazing Futures Livestock Business Resilience (GFLBR) workshop	<ul style="list-style-type: none"> Skill development in preparation of a business plan, with group completing GFLBR plan templates and checklists.
December 2022, Brisbane	NB2 Draft, field trip	<ul style="list-style-type: none"> Following the NB2 Draft, the group visited Macquarie Downs at Millmerran (Wagyu breeding and finishing business). A number of the group have since introduced Wagyu into their breeding herds.
April 2023, Rockhampton	Carbon Accounting, DAF and Pasture Key training , Cibo Labs	<ul style="list-style-type: none"> Workshop on possible natural capital and environmental opportunities. Skill development in calculating total greenhouse gas emissions for each business. Training by Cibo Labs on using Pasture Key. Emissions and pasture assessment data collection undertaken to assist group members in joining the Tassie to Townsville pilot project. Skill development in using Pasture Key data to assist in Forage Budgeting.
April 2023, on property	In paddock training, Cibo Labs	<ul style="list-style-type: none"> Training for group on assessing woody vegetation and calibrating Cibo Labs assessments. Skill development in taking pasture cuts to calibrate the Cibo algorithm.
May 2023, on property	Review of consolidated	<ul style="list-style-type: none"> Several financial aspects of the group data were reviewed including calculation of return on assets

	<p>reports, Bush Agribusiness</p> <p>Refresher training on Cibo Labs data, group coordinator</p>	<p>managed and consolidated herd performance measures based on the group's 3-year financial averages.</p> <ul style="list-style-type: none"> Concerns around confidentiality meant data was presented deidentified, limiting some sharing and discussion on the data. Delivered by group coordinator, who had identified a lack of confidence in the group with using Cibo data. Completing one-on-one training with Cibo, the coordinator then shared this with the group and offered ongoing support.
September 2023, on property	<p>Presentations by Ruminati, Fulton Market Group and Mort & Co</p>	<ul style="list-style-type: none"> Update on Australian and global beef consumption and marketing trends. Explanation of Ruminati emissions calculating and reporting program (linked to Carbon Accounting workshop in April). Explanation of Predictor Plus software (Mort & Co). This meeting had low attendance from the group, (potentially an outcome from the previous meeting where group trust had been challenged). Skill development outcomes include increased awareness around global trends and potential tools for adoption. The group has continued to remain involved in the Townsville to Tassie project and two businesses have continued using the Predictor Plus technology.
December 2023, Banana	<p>Facilitated discussion</p>	<ul style="list-style-type: none"> Led by the coordinator, discussion focused on evaluating learnings from 2023 and planning topics of interest to investigate in 2024. Skill development in reaching a group consensus and a decision was made to focus on the topic of communication with Jill Rigney. Group decision to attend Bush Agri-business breakfast at BEEF 24 and to hold a final meeting on property in June. This meeting was an important turning point for the group, as attendance and enthusiasm had been dropping off.
2023, Online	<p>Facilitation training for coordinator - AgConsulting</p>	<ul style="list-style-type: none"> Over the year, leadership of the group moved from the facilitator to the group coordinator, which was supported by the NB2 master facilitator and coach facilitator. Skill development for the coordinator included meeting preparation, particularly in preparing a run sheet with notes for particular stages of the meeting and how to best organise the proceedings for the day, stay focussed and present in the room and keep everyone doing the same.
March 2024, on property	<p>Communication in Family</p>	<ul style="list-style-type: none"> This meeting was well attended, with group cohesion restored. In depth participation and engagement in the workshop.

	Business, The Right Mind	<ul style="list-style-type: none"> • Skill development for attendees in understanding communication styles and effectively managing family business meetings.
May 2023, on property	<p>Using FORAGE reports, DAF</p> <p>Facilitated discussion on group continuation</p>	<ul style="list-style-type: none"> • Skill development in use of FORAGE reports to assist in assessing land condition. • Skill development in group self-management. Consensus reached in continuing as a group with support of DAF and agreement to spend remainder of funds on follow up training with Jill Rigney (The Right Mind). • Ongoing group meetings will be held on property, to be organised and coordinated by the hosting member. Meetings will be made open to neighbouring properties and invited guests.

4.5 Identification of interventions to be implemented for groups

Evidence of shifts in practice

The recommendations identified are supported by the observed shifts in practice for each group as documented in Table 3.

Qualitative feedback was collected at the end of the pilot project, on outcomes for businesses attributed to their involvement with NB2 (Appendix 7.6). Of the eleven businesses from the DAF groups that completed the survey, all reported positive outcomes with five identifying specific interventions that had been implemented:

“We saw a massive improvement in our herd recording”.

“Our involvement with NB2 has given us the confidence and ability to take our herd recording and the tools to use that data, to the next level, to make more informed management choices. We have also learned and honed new skills, from feed budgeting to financial planning, communication skills and animal nutrition. We may not use all these tools, but it is good to have the knowledge which we can apply to situations, as they arise”.

“Working through our herd production issues, we have identified gaps and implemented genetic changes that will lead to improvements”.

“Our business has seen good benefits from the NB2 program. The two most notable areas are in genetics and pasture, with other areas such as financial analysis, carbon baselining and data management also developing. This has been facilitated by the peer-to-peer opportunities NB2 provided”.

“As a result of the training, tools and spreadsheets we have:

- *Improved our financial literacy and have some basic KPIs by which we can monitor our actual performance*
- *Solid pasture budgeting skills which allow us to plan our stocking rates for the dry season and be aware of any areas where there could be a short fall in feed on offer and take action accordingly*

- Started regular family meetings to assist our succession planning journey
- Developed a property plan which has been utilised to focus our efforts on several key areas over the next 5 years
- We have been able to secure advice and devise action plans on erosion issues throughout the property and have completed works on one of the identified gullies
- Are aware of our carbon emissions and understand some of the components of the carbon economy (we still have a long way to go!)
- Have accessed Drought Preparedness Grants for 2 projects – a rotational grazing infrastructure project and a hay shed
- Utilised technology (Cibo Labs) to assist with more efficient preparation of feed budgets for the dry season
- More aware of free government tools on offer to assist with the management of our land, for example FORAGE on the Long Paddock website
- More aware of industry issues and rules and regulations that affect our business”.

Table 3 Consolidated practice change interventions (Fitzroy and Burdekin groups)

Burdekin	
Issue identified	Solution/result
General lack of good pasture records	<ul style="list-style-type: none"> • Foundation training followed by 1 on 1 support in the paddock <p><i>Practice change: Group now confident undertaking their own pasture assessments and how to use these for planning grazing management.</i></p> <ul style="list-style-type: none"> • Guest speaker from Cibo Labs (Alastair Rayner) demonstrated Cibo Labs satellite monitoring on host property. <p><i>Practice change: All businesses signed up for Australian Feedbase Monitor. The Burdekin group has consistently submitted the most feedbase templates for analysis (of all the non-corporate groups).</i></p> <p><i>At the end of the pilot project:</i></p> <ul style="list-style-type: none"> ○ 6 of 7 business reported they conduct regular forage budgets for 25-100% of their property as compared to 1 of 7 businesses at the start of the project ○ All 7 businesses reported they are familiar with A,B,C,D land condition assessment compared to 3 of 7 businesses at the start of the project ○ All 7 businesses know their green date and production point and have key decision dates set as compared to 2 of 7 businesses at the start of the project.
General lack of good livestock records	<ul style="list-style-type: none"> ○ Guest speakers including local Wagyu producer and stud breeder, Gallagher Livestock Systems and Black Box Co, all emphasised the need to have good livestock records to analyse herds. Some businesses were already using digital herd recording systems when they started NB2.

	<p><u>Practice change:</u></p> <ul style="list-style-type: none"> ○ <i>Businesses that didn't have a digital data collection system have since started with Gallagher.</i> ○ <i>All businesses have now implemented additional technology since joining to improve their herd recording collection and analysis.</i> ○ <i>Group has become a support network for each other in trouble-shooting issues around herd data collection.</i> ○ <i>The improved data recording has led to better data collection and in reviewing their herdflow templates with facilitators at the June group meeting reporting that a number of businesses were able to identify discrepancies in their previous years' data.</i> ○ <i>The facilitators also reported participants now having higher confidence in the accuracy of the data they collect.</i> <p><i>At the end of the pilot project:</i></p> <ul style="list-style-type: none"> ○ <i>All 7 business indicated they now know the production potential of their properties as compared to 4 of 7 businesses at the start.</i> ○ <i>Confidence in the accuracy of stock numbers has risen from 4.3 to 6 (on a 7 point scale)</i>
<p>Need for more nutritional knowledge</p>	<ul style="list-style-type: none"> ● <i>Group discussion to prioritise needs, identified nutrition as a key topic. The option to complete a Nutrition Edge course was discussed, but the time commitment and structured delivery was seen as a barrier.</i> ● <i>The DAF delivered 'Sensible Supplementation' workshop was chosen, to be customised to include topics specifically identified by the group.</i> <p><u>Practice change:</u> <i>Nutrition management day (completed September 2023). Individual business commitments following the day included:</i></p> <ul style="list-style-type: none"> ● <i>Review supplements to find more cost effective option</i> ● <i>Complete P blood tests to identify if P deficiency exists</i> ● <i>Complete NIRS testing</i> ● <i>Ask for more clarification from current supplement provider on % of each ingredient in supplement</i> ● <i>Increase dry lick supplement to year-round, complete NIRS samples in wet, increase crude protein in current weaner supplement</i> ● <i>Work with Mick Sullivan (DAF) to plan supplement for first lactation cows, segregate and use different lick for different classes, investigate and potentially trial use of probiotic for weaners</i> ● <i>Complete NIRS samples in March/April</i>

<p>Need to improve general business skills including better data accuracy</p>	<ul style="list-style-type: none"> • Bush Agribusiness follow up for the group to better understand their analysis was useful and discussed the need for better accuracy of data. <i>Practice change: The group used group funds to have Simone Parker from Bush Agribusiness attend two group meetings (February 2023, March 2024). Each business had individual time with Simone to discuss their Bush AgriBusiness reports. 2-3 businesses expressed interest in moving to the full business analysis (Bush AgriBusiness - Business Analyser). The group engaged Simone Parker to facilitate a session on developing 5-year business plans in March 2024. Six businesses attended a follow up session with Simone at the final NB2 group meeting in June 2024.</i> • Business management/succession planning referral from a group member resulted in a guest speaker from the firm they have been using. <i>Practice change: One additional business has progressed through a succession planning process with the firm.</i> • One-on-one property visits by co-facilitators March 2024, providing information from individual cashflows to generate rough enterprise costs/AE vs KG beef/AE and price received (\$/kg) vs enterprise costs (\$/kg) for consideration and comparison <i>Practice change: Two businesses have committed to full business analysis (Bush AgriBusiness - Business Analyser).</i>
<p>Need to improve skills in business planning</p>	<ul style="list-style-type: none"> • Simone Parker (Bush Agribusiness) provided training on developing a 5-year business plan, March 2024. <i>Practice change: Six businesses spent a second session with Simone Parker in June 2024, finalising their business plans.</i>
<p>Need to improve communication skills for managing a family business</p>	<ul style="list-style-type: none"> • Group discussion on identifying key issues in their business, saw communication training as a priority. <i>Practice change: The group used group funds to engage Jill Rigney (The Right Mind) June 2024, to provide tailored communication training for the group. As this was the last training activity conducted before the end of the pilot, application of new skills has not been captured.</i>
<p>Other opportunities including peer to peer learning</p>	<ul style="list-style-type: none"> • Everyone has a good understanding of each other's business. <i>Practice change: The group is very supportive of each other and have expressed a desire to share learning opportunities together rather than attending separate courses.</i> <i>Practice change: All businesses consistently attend quarterly catch ups and value their meetings.</i> <i>Practice change: The group has prioritised learning options: herd recording/Gallagher demonstration (completed), DAF nutrition training (completed), Breedcow & Dynama Economic Analyses, business planning, and property infrastructure planning</i>

	<p><i>(completed as a group and one business has completed an individual analysis).</i></p> <p><i><u>Practice change:</u> The group discussed options for the group continuing post NB2 over a number of meetings. Two group members put together a proposal to apply for peer-to-peer funding. The group has committed to continuing and has ongoing support via DAF beef extension.</i></p> <ul style="list-style-type: none"> • Valuing learning opportunities. <p><i><u>Practice change:</u> 6/7 businesses travelled to Brisbane, at their own expense, to attend the inaugural Draft in November 2022 and found it worthwhile meeting other participants to discuss their businesses.</i></p> <p><i>6/7 businesses attended the 2023 Draft in Townsville and again reported it as a worthwhile event.</i></p>
Fitzroy	
Issue	Solution/result
Understanding Carbon management opportunities	<ul style="list-style-type: none"> • Workshop on greenhouse gas emissions and carbon accounting together with pasture monitoring. <p><i><u>Practice change:</u> Group members have now calculated their own greenhouse gas emissions.</i></p> <p><i><u>Practice change:</u> Group has now joined Tassie to Townsville carbon project.</i></p>
Better pasture/land management	<ul style="list-style-type: none"> • Group has participated in the Grazing Resilience and Sustainable Solutions (GRASS) project. <p><i><u>Practice change:</u> All businesses have each completed action plans for land management.</i></p> <p><i><u>Practice change:</u> All businesses subscribed to Cibo Lab's Pasture Key program to assess their paddocks.</i></p> <p><i>At the end of the pilot project, 4 businesses completed the final KASA survey:</i></p> <ul style="list-style-type: none"> ○ All 4 businesses reported they conduct regular forage budgets for 25-100% of their property as compared to 2 of the 4 businesses at the start of the project ○ All 4 businesses reported they are familiar with A,B,C,D land condition, know or can calculate their green date, production point and key decision dates, as compared to 1 of 4 businesses at the start of the project.
Improved herd performance	<ul style="list-style-type: none"> • A number of group members have attended pregnancy testing and artificial insemination training. <p><i><u>Practice change:</u> group interaction has provided the incentive and encouragement for a number of businesses to adopt improved herd management practices.</i></p>
Better business management	<ul style="list-style-type: none"> • Bush Agribusiness follow up for group to better understand their analysis.

	<p><i>Practice change: Simone Parker attended group meeting in May 2023 and discussed report feedback individually and with the group.</i></p> <p><i>Practice change:</i> <i>Group showed interest in moving to the full business analysis (Bush Agribusiness Business Analyser).</i> <i>Four businesses went on to complete the Business Analyser in 2023 which includes:</i></p> <ul style="list-style-type: none"> ○ <i>additional KPIs including cost of production, labour efficiency, return on asset managed</i> ○ <i>one on one meeting to go through the result of the analysis (identify strengths, weaknesses and opportunities within the business)</i> ○ <i>comparison of their data to the Bush Agribusiness dataset</i> <p><i>Two businesses were existing clients of Bush AgriBusiness</i></p> <ul style="list-style-type: none"> • <i>Breedcow Dynama (BCD) training day to understand options analysis to make better decisions.</i> <p><i>Practice change: All businesses are now aware of the opportunities to use this to determine options (using BCD) when assessing their data.</i></p> <ul style="list-style-type: none"> • <i>A business planning workshop was held by the group.</i> <p><i>Practice change: All businesses are now prepared for opportunities to better access business loans/grants through Queensland Rural and Industry Development Authority (QRIDA) if needed.</i></p>
<p>Livestock Data</p>	<ul style="list-style-type: none"> • <i>The group has had a meeting with Blackbox Co.</i> <p><i>Practice change: Three businesses are now trialling the Black Box fertility data analysis and dashboard.</i></p> <ul style="list-style-type: none"> • <i>Producers, the Leathers, demonstrated the use of AgriWebb software to the group at the March meeting.</i> <p><i>At the end of the pilot project:</i></p> <ul style="list-style-type: none"> ○ <i>Confidence in the accuracy of their stock numbers has risen from 5.25 to 6.25 (on a 7 point scale) Note – this data is from a subset of 4 businesses that completed the final KASA survey.</i>
<p>Improving family business communication</p>	<ul style="list-style-type: none"> • <i>Training provided by Jill Rigney in March 2024</i> <p><i>Practice change: Group used funds to book a second training opportunity with Jill Rigney (post June) in order to support implementation of improved family communication skills.</i></p>
<p>Breeding Objectives & Markets</p>	<ul style="list-style-type: none"> • <i>Group members have completed breeding objectives & refined market access for their cattle.</i> <p><i>Practice change: Three businesses have changed their breeding strategy to target other market opportunities.</i></p>

<p>Other opportunities including peer to peer learning</p>	<p>Better understand the project and meet with other participants. <i>Practice change: 6/10 businesses travelled to Brisbane, at their own expense, to attend the inaugural Draft in November 2022 and found it worthwhile meeting other participants to discuss their businesses.</i> <i>Practice change: 6/10 business used group funds to attend the Bush AgriBusiness breakfast at BEEF 24 as a group.</i></p>
--	--

4.6 Case studies written on two producers for use by MLA comms

Two case studies (Appendix 7.7 and 7.8) have been prepared (for use by MLA communications) by the Fitzroy and Burdekin group coordinators. Rather than focus on a single producer, both case studies cover group achievements, with every business being given the chance to provide input into the document.

The Burdekin group case study (Appendix 7.7) is focused on the common issue identified by the group of inadequate herd records. The need for improved recording systems to generate herd data became apparent to the group after the first year of herdflow template completion. Tackling this issue as a group, data collection hardware was purchased or upgraded by most group members and group training was undertaken. The group has become their own support network in managing this fundamental process underpinning improvements or interventions based on production information (you can only manage what you can measure).

The Fitzroy group case study (Appendix 7.8) captures the diversity of this large group, highlighting the variation of benefits attributed by group members, resulting from their involvement in the NB2 pilot program. The two case studies provide an insight into the variation between groups that future NB2 facilitators can expect. While the NB2 program has clearly defined goals (of improving the financial viability of northern beef enterprises and increasing the adoption of proven management practices and technologies, through standardised data collection and analysis) how groups take on the challenge of addressing these goals will vary.

The peer-to-peer learning process is the foundation of the success of the NB2 program and ensures that producer involvement enhances both the individual and group business'. By developing an environment of trust, where group members have respect for the experience, ideas and opinions of their peers, NB2 groups provide a space where producers help each other to learn. As this kind of group is producer led and responsive to producer needs, group outcomes will be unique from other NB2 groups, as evidenced by the Fitzroy and Burdekin group case studies.

4.7 Submission of print ready proofs for manuals

Separate documents submitted with this milestone report, covering the training materials compiled by the herdflow and cashflow (Appendix 7.3) feedbase (Appendix 7.4) and facilitation (Appendix 7.5) training providers.

5. Conclusion

The project has now ended for the DAF led Burdekin and Fitzroy groups, including utilisation of all remaining group funds. As detailed in this milestone report, both the Burdekin and Fitzroy groups

have chosen to continue operating as producer peer-to-peer groups. Both groups will continue to receive facilitation and extension support from the DAF beef extension team, via existing DAF projects. The Burdekin group have applied for funding from the 'Integrated Engagement and Capacity Building' project (funded through the Queensland Government's Queensland Reef Water Quality Program). If successful, this funding will be used to build on the group's foundational learnings from NB2 and to assist them to continue to enhance herd, feedbase and business productivity and efficiency using KPIs to benchmark and set goals.

The Fitzroy group, while not formally seeking further funding, already have future meetings planned, including a second training workshop delivered by Jill Rigney (The Right Mind) paid for with NB2 group funds. While they have not opted to formalise their ongoing activities under an incorporated entity, the group producer coordinator is confident that most businesses in the group will continue to participate in group activities and take turns to organise and host days. The group have agreed to invite businesses external to the group to events and are still considering cost recovery options for the engagement of subject matter experts.

5.1 Key findings

- The NB2 process has been a successful catalyst for the implementation of management interventions in northern breeding businesses (participating in the program) to address known productivity issues
- Businesses already engaged in the collection of data via standardised templates for analysis (such as corporate businesses) found the NB2 process of discussing potential interventions based on this analysis within a peer group, valuable
- Businesses new to the collection of data via standardised templates (within the NB2 program) required more time to generate useable data to allow analysis to be meaningful than businesses already familiar with this, but still found the process of discussing potential interventions within a peer group, very valuable
- A review of the NB2 program in 2022 led to the formation of a producer advisory group (PAG) who provided feedback and recommendations to improve the delivery of NB2 both during and post the pilot project delivery
- The NB2 'Pathway to Practice' delivery methodology of a peer group supported by a facilitator and producer coordinator has been successful (in the DAF led groups) in forming producer groups that found value in the process and wish to continue as a group past the end of the pilot project
- Adoption of the recommendations by the PAG (as detailed in this report) will ensure learnings from the pilot phase of NB2 are valued and used to deliver a more effective program for future groups.

5.2 Benefits to industry

- The NB2 program is continuing to be delivered in northern Australia. As detailed in this report, businesses within the DAF led groups identified the NB2 program as a catalyst for the implementation of interventions to improve their productivity
- The NB2 'Pathway to Practice' model of delivery can be replicated successfully using the recommendations and training manuals developed as part of this project, in the ongoing delivery of the NB2 program.

6. Future research and recommendations

Feedback collated from the NB2 Producer Advisory Group has been instrumental in the development of all recommendations provided in this report. The contribution of the Advisory Group is greatly appreciated, and their efforts have ensured the 'producer voice' is the guiding narrative for the future of the NB2 program. To ensure the red meat industry achieves full value from this project's findings, these recommendations will need to be carefully considered by Meat and Livestock Australia (MLA). The suggested sequence of activities for delivery (4.2.4) and the NB2 facilitation manual (Appendix 7.5) provide specific and detailed guidance for future facilitators, producer coordinators and program leaders.

Variation within northern beef breeding data collection systems (both the detail of data collected and the physical systems in place for collection) is a key challenge for the ongoing delivery of the NB2 program. The development of adoption activities to assist producers to implement robust and efficient herd recording systems, would assist the red meat industry in achieving full value from the investment in the NB2 project. Without good herd data, standardised templates are ineffective tools to develop recommendations for improved performance.

The NB2 pilot project has come to a successful conclusion, providing a comprehensive set of print ready training manuals covering delivery of peer group facilitation, feedbase, herdflow and cashflow data collection. The completion of an economic and overall project evaluation by MLA later in 2024 will provide a dollar return on investment for the NB2 pilot project and help determine if ongoing delivery, while certainly achieving desired practice change, is value for money for money.

7. Appendix

7.1 Aggregated results from data collection templates – herdflow and cashflow

(separate PDF document attached)

7.2 Aggregated results from data collection templates – feedbase

(separate PDF document attached)

7.3 Print ready - NB2 Herdflow and Cashflow training manual

(separate PDF document attached)

7.4 Print ready - NB2 Feedbase training manual

(separate PDF document attached)

7.5 Print ready - NB2 Facilitation Manual

(separate PDF document attached)

7.6 Collated qualitative feedback from final KASA surveys (Burdekin and Fitzroy groups)

Some very positive feedback and a few suggestions for improvement, was provided by the Fitzroy and Burdekin group members, as part of their final KASA surveys. The below ten quotes were from ten separate businesses, noting some have been paraphrased for clarity and to preserve anonymity.

- *“Some templates were time consuming and hard to navigate, without help from DAF facilitators. We saw a massive improvement in our herd recording. It was great to meet like-minded people”.*
- *“We have thoroughly enjoyed being part of our NB2 group and would definitely recommend this program to anyone who was considering joining NB2. We have met and developed lifetime friendships. Forming a circle of trust which has enabled us to openly discuss all aspects of our business from herd management to more personal subjects such as effective communication within our business and therefore families. NB2 has allowed the producers to govern the direction of our group, which has been very successful, however without the assistance of the DAF team, this would not have come to fruition.”*
- *“All information that comes out of the three templates is relevant, important and necessary and has given us an understanding of what information to collect and when. In our business we need to come up with a slightly easier system that we all feel comfortable using. We found being part of NB2 quite positive and being part of our group has been very rewarding. Everyone was open and friendly from the start which helped trust to build and friendships to form. Our favourite part of the program was the opportunity to visit other group member’s properties, sharing ideas and learning different ways of doing things. The field trips and*

excursions (decided upon within the group) were great and the discussions, networks and contacts that came from these trips were highlights”.

- *“The positive outcomes of being involved in NB2 include: learning from each other and understanding the productivity of different land types; having a choice in what to learn at each get-together; getting to know everyone while visiting each property; putting into practice herdflow and understanding our numbers; the importance of having a group leader and the support of DAF; distance at times was a challenge, but also a great opportunity to see other types of country”.*
- *“Our involvement with NB2 has given us the confidence and ability to take our herd recording and the tools to use that data, to the next level, to make more informed management choices. We have gained a network of fellow producers with whom we can share our thoughts and ideas and know we will receive honest and positive feedback and opinions. We have also learned and honed new skills, from feed budgeting to financial planning, communication skills and animal nutrition. We may not use all these tools, but it is good to have the knowledge which we can apply to situations, as they arise. We’ve had access to professionals and experts that we would not have had, without the group budget, to bring them to our meetings. We have been fortunate to have a dedicated (and patient) team of DAF staff members who have gone above and beyond to ensure we have gained the best possible outcomes from each of our group meetings”.*
- *“The positive outcomes of being involved in NB2 include: confidence building from an individual and business point of view; we’ve made some lovely connections with producers from outside our peer group; we feel supported by our DAF facilitators and are confident to reach out for help”.*
- *“NB2 has been a successful project for our family to be involved in. We enjoy the P2P learning model and opportunity to broaden our network and work collaboratively with a broad range of people. Working through our herd production issues, we have identified gaps and implemented genetic changes that will lead to improvements”.*
- *“Our business has seen good benefits from the NB2 program. The two most notable areas are in genetics and pasture, with other areas such as financial analysis, carbon baselining and data management also developing. This has been facilitated by the peer-to-peer opportunities NB2 provided”.*
- *“It has been beneficial to mix with like-minded producers who are pushing the parameters of their family business to increase profitability, sustainability and performance. It would be great to see these groups have the support to continue, rather than just hoping they will continue on their own accord”.*
- *“We have found the NB2 program has provided us with opportunities to improve the management of our business. As a result of the training, tools and spreadsheets we have:*
 - *Improved our financial literacy and have some basic KPIs by which we can monitor our actual performance*
 - *Solid pasture budgeting skills which allow us to plan our stocking rates for the dry season and be aware of any areas where there could be a short fall in feed on offer and take action accordingly*
 - *Started regular family meetings to assist our succession planning journey*
 - *Developed a property plan which has been utilised to focus our efforts on several key areas over the next 5 years*

- *We have been able to secure advice and devise action plans on erosion issues throughout the property and have completed works on one of the identified gullies*
- *Are aware of our carbon emissions and understand some of the components of the carbon economy (we still have a long way to go!)*
- *Have accessed Drought Preparedness Grants for 2 projects – a rotational grazing infrastructure project and a hay shed*
- *Utilised technology (Cibo Labs) to assist with more efficient preparation of feed budgets for the dry season*
- *More aware of free government tools on offer to assist with the management of our land, for example FORAGE on the Long Paddock website*
- *More aware of industry issues and rules and regulations that affect our business.*

NB2 has been a wonderful learning opportunity which has provided a safe place to try new ideas, gain new skills, be exposed to new technology and network with other producers. The connections with DAF extension staff and other specialist presenters along with the shared experiences of the group members has enabled us to tackle projects with confidence and motivated us to move forward and achieve some long-standing goals. We are looking forward to continuing with our group and building a positive farming future”.