



*generating ripples
...creating change*

GrazingFutures

GF NORTH On-Property Survey 2021

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1 Snapshots

This survey comprised **8 graziers** known to have **made practice changes** and were selected by GF staff.

<p>Who do you go to for information?</p> <p>Other = own research/experience/groups</p> <p>6 out of 8 graziers say there is an earlier step "own research first".</p>	<p>Service Provider Staff</p> <p>Rating out of 7</p> <p>Approachability 6.8</p> <p>Response to Enquiries 6.4</p> <p>Confidence in Assisting 5.25</p> <p>"Interact with DAF but don't take as gospel. We refine their information to our cattle on our place..."</p>	<p>Preference - public events or property visits</p> <p>"Field days are good – more people e.g. experts for information and opportunity to network with them and other graziers."</p>
<p>Determining STOCKING RATE</p> <p>"We set-stock at a beast to 50 acres. But people buy here as breeder land and have to run big numbers with their loans. With less numbers they'd get a better result in normal season, but droughts upset that a bit."</p> <p>"Paddock feed condition and amount are where we start. Then to manage it we separate cows and calves and target feed lick as needed and do little cuts early to remove cattle that can be sold."</p> <p>Others use integrated methods</p> <p>There is no one-factor method described by these graziers for how they decide stocking rate.</p>		
<p>Number of years out of 10 with No Stubble/No Ground Cover</p> <p>4-8 years </p> <p>1-3 years </p>	<p> Did activities assist in preparing for drought?</p> <p>3 graziers rated activities as assisting to be well prepared.</p> <p>1 grazier rated activities as assisting in preparing.</p> <p>4 graziers rated activities as poorly or not at all assisting.</p> <p> Making decisions sooner in times of risk</p> <p>NO YES </p>	
<p>Did you make changes to herd and financial record keeping?</p>	<p>"Doing Agrihive for 12 months and seeing value in the record keeping now for decisions, by knowing our financial position and where income is coming from and costs and where we need to spend."</p>	<p>Did recent high cattle prices offer an opportunity to change?</p> <p>"Sell younger as that's where the best money is – sell weaners rather than feeder animals and keep the grass."</p>
<p>Additional Comments:</p> <p>"DAF could be doing other things of use to the grazing industry e.g. economics, weather forecast interpretation."</p> <p>"DAF could do more about moisture retention e.g. contour banks."</p> <p>"DAF says use P supplements however some forms of P are useable, and others aren't. It would be useful if they tested which forms are suitable."</p>		

2 Executive summary

2.1 Service delivery

These eight (8) grazing businesses were selected for this survey by GrazingFutures delivery staff as ones who had attended events or received services through GrazingFutures. All eight (8) businesses reported making changes in the recent past after having participated in events run by the GrazingFutures North team from DAF, Northern Gulf NRM and Southern Gulf NRM.

Five (5) referred to a livestock management change, two (2) to a Grazing Land Management (GLM) change and one (1) in both areas of management.

These graziers know that sometimes they are too busy to go to events run by service providers. Others say non-attendance happens when they thought an event not relevant or interesting enough.

They are clear that they prefer public events over property visits. When they were asked to choose, the majority choose public events because of the content of the event and the opportunity to network including with the other graziers and with presenters. Two (2) added both types are good.

These graziers are readily able to nominate the organisations they go to for assistance and support. It is of interest to note that six (6) of the eight say there is an earlier step to be noted in the process of seeking information for change. That step is to have done something themselves on the topic first. They do that step through their own research, previous experience or discussing it in a group in which they are involved.

Staff in organisations are rated by these graziers at the higher end of the scale for approachability and for how well they responded to what was asked of them. There is more spread in the ratings when rating the level of confidence graziers have that staff in the organisations would be able to assist with their enquiries.

Despite most saying events are relevant to their area, most are also able to nominate other topics.

2.2 GLM

Graziers say they are experiencing the start time of summer rain i.e. their 'break of season', at a different time to earlier years. These changes in seasonal rainfall patterns and different country types suggest service providers consider each area individually when working with landholders on their GLM.

There is no one-factor method described by these grazier for how they decide stocking rate. Their responses reflect the complex decision making required in grazing cattle on naturally grown pastures in north Queensland.

The consistencies in herd structure for these eight grazing enterprises are that their main focus is to breed their sale cattle to go to live export or local feeder markets.

By graziers' own assessment there is currently a lack of ground cover in 5 or more years in 10 on five (5) of the eight beef businesses in this survey. That demonstrates the scope for GrazingFutures to build business resilience by finding ways to engage these graziers so they pursue for themselves improved ground cover at the end of the dry season.

2.3 Business management

Graziers were readily able to nominate what for them were drivers of profit and did so in three categories business, animal production and GLM factors. None of these are unexpected. Only one (1) grazier referred to multiple business factors including looking for changing industry trends.

Only two (2) of these businesses report attending a business management focused event recently. One (1) attended an E-Beef event on using the Agrihive tool for analysis. The other attended an RCS business fundamentals course and is continuing to use the resources they received.

Four (4) graziers' responses provided a theme that the difficulties in building business resilience arise when graziers are set in their ways leading to not making decisions sufficiently early. One followed their assessment with a comment suggesting activities that support graziers to go beyond the limits of their current thinking and experience are valuable. They cited Advancing Beef Leaders ABL as doing that for them.

Five (5) of eight report making a business management change in the past 18 months and they described the change and how it assists in their decision making. Four (4) of these graziers could readily speak of the contribution being made to their decisions. Two (2) of those report that Agrihive, provided through E-Beef, is a means to analyse their business position.

2.4 Drought preparedness

The activities and services of the GrazingFutures North team have delivered to these eight grazing businesses have led half of them to assessing they are better prepared for drought. Three (3) of the eight businesses report they will make decisions sooner and two (2) of those also reported being better prepared.

2.5 Other items

Half of the eight businesses have surface water as the only source of stock water at least on some portion of their properties. All four (4) with surface water have looked and are looking for ways to effectively reticulate water for their stock.

Three (3) of the grazing businesses have made other changes as a result of activities or services. All changes mentioned relate to better animal production.

Six (6) graziers made additional comments. A number of these refer to making different sorts of information available to landholders to support their decision making, including which type

of phosphorus supplements are suitable for cattle and which aren't. As well, a number of other comments suggest graziers would like to be listened to by GrazingFutures staff on topics such as rehydration and salt in soils.

3 Methodology

The purpose for this survey was to provide information from their clients for the GrazingFutures North region team to use to improve adoption of recommended practices. All collaborator organisations contributed to the design of the survey and selection of participant graziers.

The qualitative surveying required a methodology which allowed the interviewees to provide their information in an in-depth way and to enable them to talk of their reasoning and what motivated their choices of response.

Because it is data of each person's experiences, a semi-structured discussion approach was taken to allow for the differences and similarities of their experiences to be made apparent by the respondent.

While this sample was just eight grazing business it can offer leads on topics chosen by the collaborators as ones to inform their approaches supporting practice change in clients.

Data analysis was done using grounded theory.

4 Findings and interpretations

In these on-property surveys eight (8) beef business enterprises were invited to participate individually in survey discussions. For six (6) of these businesses the evaluator spoke with one member of the management team. For the other two (2) it was the couple managing the business who responded.

4.1 Management changes

4.1.1 Changes made following activities

All eight (8) businesses reported making changes in the recent past after having participated in events run by the GrazingFutures North team from DAF, Northern Gulf NRM and Southern Gulf NRM.

Five (5) referred to a livestock management change, two (2) to a Grazing Land Management (GLM) change and one (1) in both areas of management.

Examples given of changes were of using technology for water monitoring and cropping for drought mitigation and breeding.

- Put in water monitors on water sources on home property and the one 80 kilometres away and get data each day via the satellite
- Grow forage sorghum for drought mitigation to feed while spelling native pasture
- Planting *Leucaena* to take the pressure off native pastures

- Controlled breeding plus new genetics and cows are responding well getting a break from having bulls in. Cows are in better body condition when mating and calves born when feed is better. Aim is for more for turn off.

All graziers report having started their changes in management. They rated how their change was progressing on a scale where 1= Not very well; 4=Too early to tell; 7 =Very positively. Four graziers rated their progress as 'Very positively' while with others rating down to 'Too early to tell' (See Table 1).

Table 1. Ratings for how changes are going so far

Rating	Percent	Responses
Not very well 1	-	-
2	-	-
3	-	-
Too early to tell 4	12.5%	1
5	25%	2
6	12.5%	1
Very positively 7	50%	4

In commenting on their rating some examples were:

- It is monitoring for piped artesian water designed by myself and a consulting engineer. It does not include tanks and only troughs. It has clear alarms and full details on consumption rates and is working very well
- Value adding to returns by growing sorghum to feed sale animals for weight gain
- Change is water bot monitoring which I do each morning and I can see which waters are operating properly and that reduces the need to do water checks as often
- Weaner paddock spelling and seeding has been very successful and it reduces our agistment costs as we can feed them ourselves. A recent condition assessment showed the weaner paddock was 94/100 in land condition score.

And two (2) report their progress as works in progress:

- Our changes were made only in the last 1-2 years and we are yet to get it all sorted and some lab analyses are not back yet. We have done a phosphorous lick over wet season with lick examination for leaching so we can refine our dry licks
- Water monitoring system needs to be perfected yet as one unit has failed twice which means I probably should have used Farmbot rather than the cheaper Goanna Ag brand.

4.1.2 Summary

The grazer respondents were each chosen for their recent changes in management and doing so has allowed them to reflect on the process to make informed comment about the services provided when they wanted to do the change.

The changes made were for animal production and GLM, and half report their changes as progressing very positively. Two (2) are still working to complete theirs.

4.2 Access to service provider support

4.2.1 Attending service provider events

These graziers were invited to comment on their capacity to attend events delivered by service providers. Seven (7) report it 'sometimes' isn't possible to attend such events and one reported that for them it was 'often' not possible attend.

When they are unable to attend events these eight graziers identified three usual reasons:

- Seven (7) choose 'Too busy/too much time away from your business/property'
- Two (2) said it happened when they thought an event 'Not relevant/interesting enough'.
- One (1), reported that at least at times they couldn't go because it was 'Too costly or too far to travel to event'
- None report the events as being 'Poorly timed due to on-property activities' nor that there were 'Clashes with community events/other commitments'.

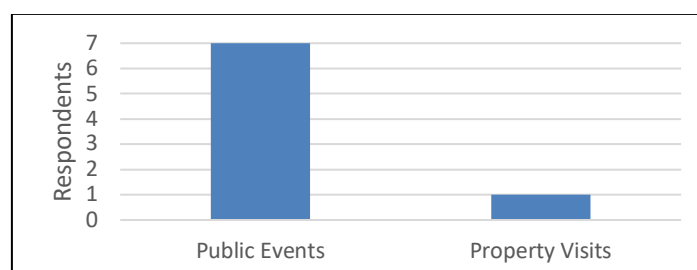
Comments used in explaining their responses included:

- *If it is something I've done before I often don't go*
- *For the producer group with John McLaughlin I am trying to attend more with them as I am interested in technology*
- *Preg testing with SG NRM with Ian Braithwaite was excellent*
- *It is an effort to attend, so I attend when I can.*

4.2.2 Level of preference for property visits over larger public events

When responding to the question 'Do you prefer property visits from extension staff instead of going to larger public events?' these graziers are clear that they don't prefer property visits over public events. When asked to choose, the majority chose public events as shown in Figure 1 and as included in comments. After making their preference known two (2) added that both were 'ok' for them.

Figure 1. Preference for public events or property visits

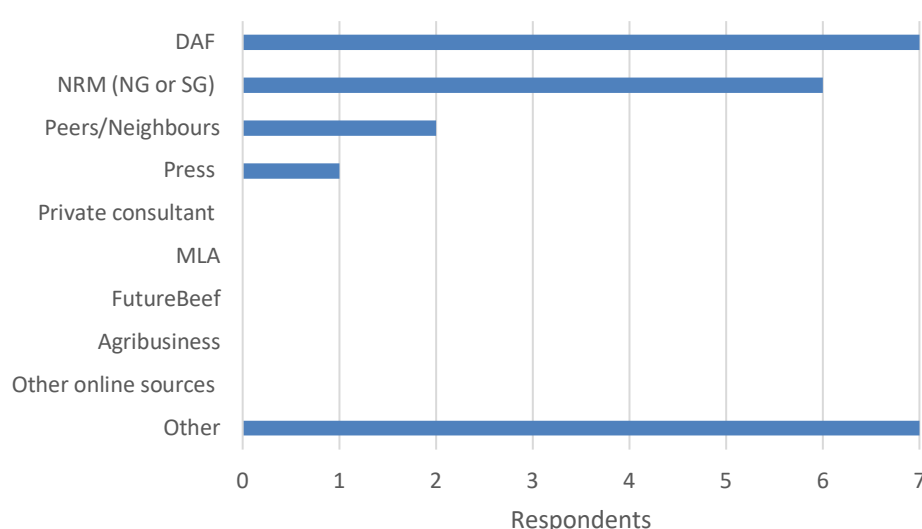


- *If I'm able to, I go to public events and we are happy to host events*
- *A field day with topics and then follow-up on property is good*
- *If I'm up-to-date (with property work) then I go for something new as there is usually some new topic of notice and the opportunity to talk with other graziers and hear them ask question of speakers is valuable*
- *Field days are good as there are more people e.g. experts for information, and also the opportunity to network with them and other graziers.*

4.2.3 Sources of information for making change

Graziers' choices in response to the question, 'When seeking information to make a change in the business who do you usually go to for the information?' are shown in Figure 2.

Figure 2. Sources of information for making change



From the comments made by these graziers after having nominated who they go to, it is of interest to note that six (6) of the eight say there is an earlier step to be noted in the process of seeking information for change. That step is to have done something themselves on the topic first. They do it through their own research, previous experience or discussing it in an industry group in which they are involved. They said it like this:

- *My own research first, then DAF sometimes*
- *My own research ideas and ideas from the Advancing Beef Leaders (ABL) group*
- *My own ideas of how to improve production and simplify management at the larger scale*
- *My own farming background*
- *Own experience we use*
- *RCS Next Steps group.*

One grazer also said, "I contact whoever knows the information I want e.g. for water medication equipment it was the manufacturer". Another graziers replied similarly saying, "Contact KLR Marketing".

4.2.4 Staff in service provider organisations

Approachability

When asked to rate the approachability of staff in the service organisations, seven (7) of eight graziers responded with the highest rating possible as shown in Table 2, where 1= Not at all; 7= Very much so). One (1) grazier give a 5 rating. Another grazier added, *“Joe and Bernie are especially worth their weight in gold.”*

Table 2. Approachability of staff in the organisations - rating

Rating	Responses
Not at all 1	-
2	-
3	-
4	-
5	1
6	-
7 Very much so	7

This shows staff are seen most often as very approachable.

Responsiveness

There is a similar spread when graziers rate staff on how well they respond to what is asked of them. The ratings show five (5) graziers selected the highest rating of 7, two (2) rated staff responsiveness at 6 and one (1) at 4 on the 7-point scale. One grazier said, *“It’s good when they give ideas as I get busy, and aren’t always thinking of new ideas”.*

Table 3. How well staff respond to requests - rating

Rating	Responses
1 - Not well at all	-
2	-
3	-
4	1
5	-
6	2
7 - Very Well	5

These ratings show staff are mostly seen as responding well to requests.

Confidence

There is somewhat more spread in the ratings when responding on the level of confidence graziers have that staff in the organisations would be able to assist with their enquiries. The ratings are shown in Table 4.

Table 4. Level of confidence graziers - rating

Rating	Responses
Not well 1	-
2	1
3	-
4	-
5	4
6	1
7 Very much so	2

Four (4) of these graziers made comments and they explain some reasons for the somewhat wider spread of ratings too. As well, in their comments there is a theme that graziers know they have to take their own role in making the decision that suits their situation, saying:

- *We have interactions with DPI but we don't take it all as gospel and we refine their information to our cattle on our place. It would be good to know who else is doing it and go (there) as that is local research and has local relevance. We do need to trial for ourselves too. It is important to not be put off by a specialist who says it won't work*
- *Those that come through with Bernie and Joe are pretty good too*
- *It would be good if they'd run trials as there's not one set of rules that fits all country types...and we have to choose for ourselves*
- *We are responsible for the decisions so we are more confident with Joe and Bernie.*

All but one of these graziers reported that, in their experience staff of these organisations, staff have 'chased up' information requests in a timely manner. The eighth said, *"They have been slow to believe my information about water consumption."*

4.2.5 Relevance of event topics to local issues

Six (6) of these graziers say the topics are well matched to the issues in their areas. For example one said, *"All are well matched and they don't run ones that aren't e.g. Northern Gulf ran a tech day last year and it was good."*

Both other graziers report doing much of their own research and thought the match for them in their area was not so good. One said they didn't need much that was on offer as their skill,

"...is doing research on topics so I've already got a handle on much in management. Some of that's come from Breedcow and Dynama as it gets you thinking, for example about economics and selling cattle younger to save grass".

Even with six (6) saying events were well matched, most were still able to nominate other topics requiring attention. It makes a useful list for these collaborating organisations to have their attention on.

The topics are listed in Table 5 by the categories of animal production, GLM and other.

Table 5. Topics requiring attention

Animal production	GLM	Other
<ul style="list-style-type: none"> • Co-funding practical management things like preg testing schools which builds resilience because it provides animal production information to use. We have got to have a plan for the preg testing use in management and include the information as part of a full management plan otherwise it is a waste of time. • Bull selection. • DAF need research into relevant local topics e.g. WOW is research, and it provides information on weight gaining or losing and I use it and it is invaluable information and DAF could publish weight changes weekly. • Manual preg testing school rather than scanner as is more practical which E-Beef couldn't do as wasn't using new technology 	<ul style="list-style-type: none"> • Ways to increase production such as the dollar benefit of <ul style="list-style-type: none"> ◦ 1) different grazing pressures at Wambiana; and ◦ 2) what are the benefits of keeping 30% of grass in the paddock. • Land types for research - spear grass, basalt, forest country. • Prickly acacia funding for control. • Farming information for fodder crops. • Erosion control through managing/slowing overland flows down e.g. with contour banks 	<ul style="list-style-type: none"> • Forecasting weather and its reliability - BOM get the big picture right most of the time. - What the media says in a grab about the forecast is often misleading to graziers. • Technology e.g. water medication

4.2.6 Summary

These graziers know that sometimes they are too busy to go to events run by service providers. Others say non-attendance happens when they thought an event not relevant or interesting enough.

These graziers from eight beef businesses are clear that they don't prefer property visits over public events. When they were asked to choose, the majority choose public events because of the content of the event and the opportunity to network including with the other graziers and with presenters.

These graziers are readily able to nominate the organisations they go to for assistance and support. It is of interest to note that six (6) of the eight say there is an earlier step to be noted in the process of seeking information for change. That step is to have done something themselves on the topic first. They do that step through their own research, previous experience or discussing it in a group in which they are involved.

Staff in organisations are rated by these graziers at the higher end of the scale for approachability and for how well they responded to what was asked of them. There is somewhat more spread in the ratings for the level of confidence graziers have that staff in the organisations would be able to assist with their enquiries.

Comments suggest this may reflect that longer serving staff are accepted as more knowledgeable, there are comments by several graziers that qualify such an interpretation. The comments are in two categories.

In the first category are those graziers who say that while they do listen to service providers, they also know they need to take any information and decide if and how they can use it to add value to the enterprises. The second category is that some graziers also say they've already researched any topic they go to service providers about. These two categories may represent intelligence that could be used by less experienced staff to develop their personal extension techniques. Combined they may offer a conversational starting point for new staff to begin any interaction meaningfully with a grazer client. A process could be to ask them if they've had an opportunity to do some of their own research yet, and if so what have they found out.

4.3 Grazing land management

4.3.1 Break of season

The timing when graziers expect first substantial rain in the summer, break of season, can tell a service provider much about the industry's and/or individual's approach to production through grazing land management (GLM).

The criteria for the break is described by service providers as 50mm over 3 days and with these eight graziers most agree it has changed to December/January. In doing so most qualified their statement with a comment, for example:

- *Early January to mid-January and Mt Surprise is the more reliable area*
- *It is unseasonal now and can be expected from October onwards*
- *Used to be November 20 years ago but it is Christmas now*
- *January 15 is a worst case. Would be nice by mid-December for us*
- *February, second week and we need to use our experience, for example with the amount of feed left and the forward forecasts from BoM.*

One grazier said, "We don't have a date and 50mm is too little to get this country started. It needs to be 100mm over a week, especially if we get 45 °C after it as then the moisture doesn't last on this black soil country as it takes more to get it going."

The changes occurring in seasonal rainfall patterns and the presence of in the GF North Region of different country types highlights the continued attention by service providers for each district individually when working with landholders.

4.3.2 Stocking rates

Stocking rates impact on grazing land management and when asked how do they determine stocking rates there was only one grazier who reported they set-stocked their cattle. They said they did so at what they considered safer than generally done in their area, reporting, *"We set-stock at a beast to 50 acres. But people buy here as breeder land and have to run big numbers with their loans. With less numbers they'd get a better result in normal seasons but droughts upset that a bit."*

Others described integrated methods of feed assessment, spelling programs they follow and selling and one business reports using more experienced family members too. For example, some said it like this:

- *Paddock feed condition and amount are where we start. Then to manage it we separate cows and calves and target-feed lick as needed and do little cuts early to remove cattle that can be sold*
- *Key is destocking as soon as it rains to spell country. And we look at feed and decide what it can stock at and for how long*
- *We wet season spell holding paddocks each year. We look at ground cover to decide our stocking rate*
- *Do sell if good market even when we have feed. At first muster (May) and second muster (September) at these times we assess feed supply and sell down if we need to*
- *We use our experience and that of other family on other properties. We only have a few paddocks yet so we use grazing radii to measure area and aim is to stock at 1:30 and be safe.*

There is no one-factor method described by these graziers for how they decide stocking rate. Their responses reflect the complex decision making required in grazing cattle on naturally grown pastures in north Queensland.

4.3.3 Optimum herd structure

Herd structure too can influence stocking rate decisions and hence grazing land management. When asked 'What is the optimum herd structure in your region?' they responded in terms of their breeding program and the markets to which the sell.

All eight (8) businesses in this survey group are founded on breeding with most selling progeny into feeder markets with cattle at 350 to 400kg weight saying for example, *"We have breeders and sell feeder steers to 400kg"* and, *"Breed and sell feeder cattle...and grow feeders to 300 - 400kgs to sell at a premium"*.

Others describe targeting export markets, *"Breed and turn off at 350 to 400 for export"* and another produces both feeder and export animals, referring to the suitability of similar weights for each, *"Here we target live export and feeder cattle so we want an animal that can meet both markets."*

They also sell cows over 10 years old and cull weaner heifers. Some have breeder properties and move weaned male cattle to other blocks with feed more suitable for growing cattle.

Two (2) graziers did add additional comments more related to herd structure. The first said they thought, *"Production overall and doing management with simplified systems is more important than herd structure."* The second was about the appearance of the cattle to buyers, *"We aim for even lines of sale animals with eye appeal, in our case all red cattle"*.

The consistencies in herd structure for these eight grazing enterprises are that their main focus is to breed their sale cattle to go to live export or local feeder markets.

4.3.4 Stubble and ground cover at break of season

Level of ground cover at the break of season is significant to GLM in its role in promoting better pasture response to rain events and its capacity to minimise erosion.

When asked in how many years out of 10 do you have some stubble and good ground cover at the break of season there are distinct clusters. One is in the 2-3 years only range and another 8-10 years range.

In each cluster there are three (3) graziers and a typical comment for those with 8-10 of ground cover was, *"Eight years, and we wet season spell every paddock that is eaten down the following year"*. And for those with fewer years with good ground cover a typical comment was, *"In 2-3 years in 10 and sometimes it is due to drought."*

One (1) other grazing business new to the area and still to fence said, *"Our aim is to stock to have 30% left in paddocks. At present we do get eaten down in some areas...with more fences will come more control."* They report managing their stocking pressure using water circles for the moment.

An eighth grazier said they know they go low in ground cover in 5 in 10 years and they know they need to get better, saying they will do so by doing feed budgets early and spelling to improve country.

By these eight graziers' own assessments there is currently a lack of ground cover in 5 or more years in 10 on five (5) of the eight beef businesses in this survey. It demonstrates the scope for GrazingFutures to build business resilience by finding ways to engage these graziers so they pursue for themselves improved ground cover at the end of the dry season.

4.3.5 Improved pastures

One way to get to improve ground cover is through planting into existing pastures where appropriate or through dryland cropping or legumes where that's suitable.

Most of these eight graziers are already doing pasture improvement commenting for example:

- *We have Buffel and Stylo mixes planted*
- *Grow sorghum for growing-out cattle and we don't let it go to seed and it grows again on the soil moisture or additional rain*
- *Sorghum cropping that we use feed standing*
- *Started Leucaena 20 years ago and now have successful plantings in treed country that show the same weight gains as open country*

- *We have pastures for weaners that are seeded with Stylos and are now considering Leucaena when there is more information from forest plantings*
- *MLA data shows there is not enough stand over value in native species here and we need our improved pastures to get stand over value.*

There are limitations for some of these graziers, and the limitations relate to soil types, 'weather impacts' and available infrastructure:

- *Brought Buffel seed with us from Central Queensland but much of this place goes under water and Buffel can't grow but we do have Seca and Verano and they do best on our other block but not here*
- *Fencing and nutrition changes are needed first.*

When graziers are engaged in their own pursuit of improving ground cover and/or being able to preserve ground cover through cropping or spelling, it does happen and five (5) of these graziers demonstrate that. As such it may present as a model for change through service provider led extension, i.e. to engage a grazier through their own ideas of how to improve ground cover. There is support for a general model of creating engagement in learning by supporting adults such as graziers to work on practices of their own choice, and it can be found in the literature of learning as that adults prefer to do this.

4.3.6 Wet season spelling on your property

All eight (8) grazing business do report wet season spelling with six (6) doing it for the duration of the wet season. One (1) refers to it being problematic when there is insufficient follow-up rain to get a significant benefit, *"Depends on the rain as to the (benefit)... Lack of follow-up rain on the spelled country is the main problem"*.

Of interest then is the proportion of the property spelled as well as the timing and duration of spelling.

The range in proportions of their property that is spelled was reported as 15%, 20-25%, 50-80% with one (1) reporting all paddocks were being spelled.

Six (6) spell during the wet season for example, *"I like to get shifting of cattle done off paddocks to be spelled in January in advance of February, our wettest month."* One (1) is still fencing and so their method is, *"Do it by spelling some then shifting stock out of other paddocks while there is still soil moisture from the wet season."* Those not doing it in the wet season say for example, *"(We) do now in May/June and if emptied after first muster we find it does work."*

4.3.7 Sell-down or destocking trigger points

Five (5) businesses report having destocking trigger points and three (3) say they don't. Those using trigger points were able to describe their trigger points and the impact it has for them and these are shown in Table 6.

Table 6. Description of trigger points and the impact

Description	Impact
<i>I use market trends and rain forecasts to decide when to sell to lighten grazing pressure. We adapt to what's in front e.g. forecasts/feed-available/market.</i>	<i>We can sell when stock are in good saleable condition and get the better prices and not overgraze available feed in paddocks.</i>
<i>If it (wet season) hasn't delivered what was expected, we start to destock early by selling early.</i>	<i>We sell cattle in good condition which gives us a better price and takes the pressure off our pasture.</i>
<i>Based on rainfall, one year is ok, we can handle that with our stocking rates as we trade cattle however more than one dry year is difficult and we do sell down.</i>	<i>We trade to maintain cash flow, trade to advantage with market opportunities and in that way, we maintain pasture condition. Feed available is in better condition because I manage stocking rate to maintain feed.</i>
<i>Assess available feed at mid-March.</i>	<i>Look at what feed we have then and work out what we can run that year and set a selling program.</i>
<i>We manage our stocking rates using water circles and male cattle go to other family properties.</i>	<i>Taking male cattle elsewhere decreases stocking rate/grazing pressure.</i>

One of those without trigger points said, "I assess available feed supplies and move cattle to other country we have and the impact is it allows us to keep producing each year."

And for a second grazer who doesn't have trigger points, "Depends on the season and I make decisions as needed."

4.3.8 Recent high cattle prices and the opportunity to change

There are four (4) of these eight grazing businesses that have not used higher prices to change their selling practices or business practices. Often, they explained their reasons or the influence that has led them to that decision. For example:

- *Not really as trying to maintain breeders. We still off-load the same and I don't agree with selling weaners*
- *Haven't needed to. We plan how we manage our country and maintain production.*

The other four (4) businesses who did sell differently also explained their reasons. For example:

- *Sell younger as that's where the best money is, so sell weaners rather than feeder animals and keep the grass*
- *Yes. Feeder (weight 300kg) cattle take an extra year to get to the weight so we sell weaners now as the market is offering good returns e.g. \$1000.*

One of those who had sold to the market also took an extra step into forward selling, saying *"Yes I sold to buy new equipment for our operations and I established forward delivery date for feeder animals."*

4.3.9 Summary

Graziers say they are experiencing a later start time of summer rain i.e. their 'break of season' at a different time to earlier years. These changes in seasonal rainfall patterns and different country type suggest service providers continue to consider each area individually when working with landholders on their GLM.

There is no one-factor method described by these graziers for how they decide stocking rate. Their responses reflect the complex decision making required in grazing cattle on naturally grown pastures in North Queensland.

The consistencies in herd structure for these eight grazing enterprises are that their main focus is to breed their sale cattle to go to live export or local feeder markets.

By each grazier's own assessment there is currently a lack of ground cover in 5 or more years in 10 on five (5) of these beef businesses. That demonstrates the scope for GrazingFutures to build business resilience by finding ways to engage these graziers so they pursue for themselves improved ground cover at the end of the dry season.

When graziers are engaged in their own pursuit of improving ground cover and/or being able to preserve ground cover through cropping or spelling, it does happen and five (5) of these graziers demonstrate that in how they've acted to plant improved pastures. As such it may present as a model for change through extension, that of engaging grazier through their own ideas of how to improve ground cover. There is support for a general model of creating engagement in learning by supporting managers to work on practices of their own choice, and it can be found in the literature of learning that adults prefer to do it this way.

All eight (8) grazing business do report they wet season spell, with six (6) doing it for the duration of the wet season. One (1) refers to it being problematic when there is insufficient follow-up rain to get a significant benefit.

Five (5) businesses report having destocking trigger points and three (3) say they don't. Those using trigger points were able to describe their trigger points and the impact it has for them.

There are four (4) of these eight grazing business that have not used recent higher prices to change their selling practices or business practices. Four (4) have use the higher prices to sell differently and they often say they do it to save grass. As well, one (1) of the four now selling earlier have also moved their business into some forward selling.

4.4 Finance and People

4.4.1 The key profit driver in your business

Graziers were readily able to nominate what for them were drivers of profit and did so in three categories of factors business, animal production and GLM. None of these are unexpected.

Only one grazier referred to multiple business factors including looking for changing industry trends.

Topics in the three categories were:

- Business factors, for example they said:
 - *Now with good cattle prices the driver is overheads, which are so high*
 - *Drivers are making timely decisions, knowing markets and looking for indications of changes in beef industry trends*
 - *Choosing the best market options*
- Animal production factors such as breed, fertility rates, health, cow condition score and weaning rate
- GLM factors including grass production and quality.

4.4.2 Events/support with business management and finances as the main theme

Only two (2) of these eight businesses report attending a business event or seeking business support recently. The two (2) each attend a business event. One did so through using the Agrihive tools for analysis through the access provided by E-Beef. The other business had attended the RCS business fundamentals course and was continuing to use the resources.

Only one (1) grazier refers to not ever having attended any type of business focused event.

The other graziers referred refer to previously experiencing training or support for example, *"I use Breedcow and Dynama and it is really valuable. I've been using it for years and use the principles all the time in decision making"*. And for another it was KLR Marketing School, *"I have handle on the process and can decide what to trade by knowing my costs of production"*.

In response to the question 'Have you used any service providers where business management and finances were their core business?' only two (2) report doing so where one used a Rural Consulting Services (RCS) and the other a paid consultant.

4.4.3 Difficulties or obstacles to improving business resilience

It is informative to ask questions such as this for an industry perspective as it enables industry members to comment about others who are their peers, which can prove insightful. Business resilience is important because in the face of variability in the conditions in which the industry operates, it can relate to sustainable success in an enterprise. This is so too in the grazing industry.

Four (4) graziers' responses provided a theme that the difficulties arise when graziers are set in their ways leading to not making decisions sufficiently early. One followed their assessment with a comment suggesting activities that support graziers to go beyond the limits of their current thinking and experience are valuable. Their comment was, *"Graziers can be reserved about making changes. Our involvement in the Advancing Beef Leaders group has shown how others are thinking similarly to us and that gives us increased confidence in the ideas we have for improving production and business resilience. For example, it gave us confidence in wet season spelling by giving us industry backing when deciding on the management plan."*

Other comments were not themed and ranged across seasonal conditions, red tape on clearing, production factors and community expectations of farming industries.

4.4.4 Changes to herd and financial record keeping in the last 18 months

Five (5) of eight report making a change in the past 18 months and they described the change and how it assists in their decision making and these are shown in Table 7.

Table 7. Changes to herd and financial record keeping

Change made	Decision making
<i>More stock records are now.</i>	<i>Use stock records to decide on which animals are better for production.</i>
<i>Keep records of weight gains and feed supplement intake.</i>	<i>The benefit is in calving percentage and weight gain. Sometimes to the detriment of native pasture.</i>
<i>Using Agrihive to record, store and analyse</i>	
<i>Use Agrihive now for records good once information is in.</i>	<i>Doing Agrihive for 12 months and seeing value in the record keeping now for decisions, by knowing our financial RDA position and where income is coming from and costs and where we need to spend.</i>
<i>We use spreadsheets from RCS as well as RCS paddock book and spreadsheet for stock flow.</i>	<i>Allows us to have real figures to make decisions where we work with Ian McLean for business analysis.</i>

Four (4) of these graziers could readily speak of the contribution being made to their decisions through record keeping. For two (2) of those it appears that Agrihive (provided for one grazier through E-Beef) is their means to analyse their business position. One (1) of these graziers said they already had a system for financial management which they said they will continue to use however they have used Agrihive to see how it works and found it useful.

Agrihive is a resource that has not long been available and the responses here may suggest that there is role for it more broadly with other grazing businesses.

Seven (7) of these grazing businesses have someone who comfortably handles the business and finance side of the business. And four (4) report no previous training to do it.

4.4.5 Summary

Graziers were readily able to nominate what for them were drivers of profit and did so in three categories business, animal production and GLM factors. None of these are unexpected. Only one (1) grazier referred to multiple business factors including looking for changing industry trends.

Only two (2) of these businesses report attending a business management focused event recently. The two (2) each attended a business event. One did so through using the Agrihive tools for analysis through the access provided by E-Beef. The other business had attended the RCS business fundamentals course and was continuing to use the resources.

Four (4) graziers' responses provided a theme that the difficulties in building business resilience arise when graziers are set in their ways leading to not making decisions sufficiently early. One followed their assessment with a comment suggesting activities that support graziers to go beyond the limits of their current thinking and experience are valuable. They cited ABL as doing that for them.

Five (5) of eight report making a change in the past 18 months and they described the change and how it assists in their decision making. Four (4) of these graziers could readily speak of the contribution being made to their decisions. For two (2) of those it appears that Agrihive, is a means to analyse their business position.

Agrihive is a resource that has not long been available and the responses here suggest that there may be a role for it more broadly with other grazing businesses.

4.5 Assistance to better prepare for drought

4.5.1 Better preparing for drought

These grazing business managers were each asked to rate how much the support has assisted them to better prepare for managing in times of drought. Their responses are shown in Table 8.

Table 8. How much has the support has assisted them to better prepare for managing in times of drought?

Rating	Responses
Not at all 1	1
2	2
3	1
4	-
5	1
6	-
7	1
8	2
9	-
10 Very much	-

Responses range between '1' and '8' on the scale where 1= Not at all, and 10= Very much. Four (4) rated it at 3 or less and four (4) rated it 5 or more. They provided examples of what they've done that will better prepare them for drought, for example:

- *Fenced dams which was better for drought mitigation*
- *Am not going to be as helpless next time. Will be better as a manager to make decisions (sooner) and set (aside) funds to see difficult years through and buy back in*
- *I'll use some information from the weight change data from local DAF WOW site in decisions*
- *Control of prickly acacia*
- *Controlled mating.*

Responses suggest half these businesses believe they are now better prepared for drought because of the assistance they've received.

4.5.2 Making decisions sooner in drought

When asked about whether they would be making decisions sooner from activities attended or services received, three (3) said 'Yes' they would. Their comments on what they will do sooner showed the where or how 'sooner' would happen:

- *Feed budget will help us decide on when we need to make destocking decisions*
- *Are always looking at our rain recordings and pasture to decide on stocking rates*
- *By being more proactive - better to go early with a decision than to leave the decision until it is too late.*

Three (3) of the eight grazing businesses will be making decisions sooner in drought.

4.5.3 Summary

The activities and services of the GF North team have delivered to these eight grazing businesses have led half of them to assessing they are better prepared. Three (3) of the businesses also report they will make decisions sooner and two (2) of them also reported being better prepared.

4.6 Other items

4.6.1 Water to stock – surface or reticulated

Four (4) have all water controlled and reticulated. One (1) has a mix depending on the country type, another has 20% of surface water, another has 95% surface water, the fourth is mostly surface.

The four (4) that have surface have each considered changing to more reticulated waters. Some have been unable to yet find ways to do that cost effectively. For example

- *Bore is deep and produces only a trickle of water*
- *I match water supply to what is possible for me on each property. We do shut off earth tanks with electrical tape on steel posts into wet mud and it is fast to set up and effective.*

4.6.2 Other changes started or completed as a result of activities attended or services received

Three (3) of the grazing businesses have made other changes as a result of activities or services. These are shown in Table 9.

All changes mentioned relate to better animal production through genetics information, supplement intake across all the herd and mating control.

Table 9. Other changes started or completed as a result of activities or services

Change made	Impact
<i>Bull selection – attended the genetics muster – genomics.</i>	<i>Back up value of EBV's to assess potential production figures.</i>
<i>Water medication with urea and possibly Phosphorous later – just beginning the process.</i>	<i>So all cattle get the supplement and we expect to halve our lick costs.</i>
<i>GPS tags to find cattle using a drone when mustering.</i>	<i>To manage our controlled mating program through ensuring the bulls are found and removed in our timber country.</i>

4.6.3 Any other comments

Six (6) graziers made additional comments. A number of these refer to making different sorts of information available to landholders to support their decision making, for example “DAF says use P supplements however some forms of P are useable and other aren't. It would be useful if DAF tested which forms are suitable.”

As well, there are two (2) comments made that suggest attention be paid sooner by DAF staff to information graziers have on production and management. Neither comment suggest taking the information at face value, rather they ask for attention be paid to their information sooner.

Two (2) other comments refer to DAF increasing attention to soil rehydration practices which the both graziers suggest will assist them to manage rainfall variability. It may be another opportunity for GrazingFutures to attend to an idea from graziers that will support them to improve their drought resilience.

All six (6) comments made were:

- *DAF and SGNRM are good for courses and co-funding things such as erosion control. Plus there is a social benefit, it brings people together to discuss and talk on pros and cons of topics – it is healthy to have the discussion*
- *DAF could be doing other things of use to grazing industry. It took time to get DAF to pay attention to the possibility of salt in soil. Two things they could do is more on economics and weather forecast interpretation, a DAF focus on these would be useful. And it took me six months to get DAF to accept the water monitoring results produced in my system*
- *DAF, Southern Gulf and Northern Gulf are always available and helping out for graziers in this area and I'm always happy to help out*
- *DAF could do more about soil moisture retention e.g. contour banks to slow the water or even hold against ridge to allow it to penetrate the soil. This would be a benefit with the variability of rainfall and the often heavier, faster rains that happen now*

- *Overland flow control as done down in the south by SQ Landscapes is something we could do with more of here in North, for better pasture growth and would be good for the variable rainfall*
- *DAF need to make studies longer and store results so new people can use them and keep across it (the available information) rather than redo it. DAF says use P supplements however some forms of P are useable and other aren't. It would be useful if DAF tested which forms are suitable.*

4.6.4 Summary

Half of the eight businesses have surface water as the only source of stock water at least on some portion of their properties. All four (4) with surface water have looked and are looking for ways to effectively reticulate water for their stock.

Three (3) of the grazing businesses have made other changes as a result of activities or services. All changes mentioned relate to animal production.

Six (6) graziers made additional comments. A number of these refer to making different sorts of information available to landholders to support their decision making, including which type of phosphorus supplements are suitable for cattle and which aren't. As well a number of other comments suggest graziers would like to be listened to by GrazingFutures staff on topics such as rehydration and salt in soils.