



Final report

Delivery of FutureBeef industry engagement

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Abstract

FutureBeef is a collaboration between the Queensland, Northern Territory and Western Australian government agricultural departments and Meat & Livestock Australia to provide coordinated delivery of online extension for the northern beef industry. FutureBeef achieves this through the website, webinars, eBulletins, social media, multimedia and newspaper features. Achievements between July 2017 and January 2022 include:

- a website with over 1220 pages of quality content and over 1.7M pageviews and 950,000 visitors
- 49 webinars with almost 6900 registrations, over 3000 live attendees and over 27,200 webinar recording views, with a total watch time of 3234 hours
- 54 eBulletins published to 6288 subscribers, with an average open rate of almost 33% and click rate of 8.6%
- Facebook, Twitter and LinkedIn with 18,821 combined followers, 85,058 engagements and 58,916 referrals to the FutureBeef website
- 3 podcasts published with 161 listens in two weeks
- 15 professional videos published, with 5789 YouTube views and a Facebook reach of 59,995
- YouTube channel with 280 public videos receiving 157,851 views and total watch time of 13,424 hours
- BeefTalk, CQ BEEF and Northern Muster published regularly in the Queensland Country Life and North Queensland Register.

An external evaluation in 2021 showed that users have a strong awareness of FutureBeef and that FutureBeef is regarded a key source of reliable and relevant information. There is a high level of satisfaction with FutureBeef's current communication tools and information provided. There are also strong indications that FutureBeef is positively contributing to on-farm practice change.

FutureBeef continues to provide efficiencies in the provision of online information, with access to a 24/7 one-stop shop for the northern beef industry. Therefore, it is recommended that the current FutureBeef collaboration and mix of online tools continues, which is strongly supported by external evaluation participants and current adoption projects. However, FutureBeef should explore additional ways to support MLA, Government and private adoption projects in the later stages of the adoption pathway.

Executive summary

FutureBeef is a collaboration between the Queensland, Northern Territory and Western Australian government agricultural departments and Meat & Livestock Australia. It was instigated to achieve greater alignment, coordination and cooperation in the strategic delivery of online extension for the northern beef industry.

The main focus of the project was to provide engagement, support, awareness and education of beef producers and service providers via the FutureBeef website, webinars, eBulletin, social media, multimedia materials and newspaper features. Specific objectives were set for each of these communication and engagement tools mostly around further developing, delivering and evaluating the tools including the numbers produced (e.g. new web pages and, number of webinars/webinar recordings, eBulletins, social media posts and videos) plus specific contributions by the partners and user satisfaction. The other main role of FutureBeef is to support relevant northern Australian beef industry projects in their extension and adoption activities.

The project has an advisory committee and operational team which meet on a regular basis, generally online. The advisory committee sets the overall strategic direction for the project, while the operational team carry out the day-to-day activities to achieve the objectives. The methods used for each of the communication tools are as follows:

- website – externally hosted WordPress site which allows content to be easily added and maintained
- webinars – GoToWebinar licence to allow up to 1000 attendees to participate in webinars
- eBulletin – Mailchimp licence to create and distribute eBulletins to subscribers
- social media – Facebook, Twitter and LinkedIn accounts with Agorapulse used to manage and schedule the distribution of posts
- multimedia – a YouTube account is used to host videos and webinar recordings
- newspaper features – contract with Australian Community Media to publish 3 pages of articles six times a year (contract concluded 31 December 2021, with a new agreement to publish 4 pages of articles four times a year plus online publication and promotion).

For the vast majority of the project's objectives, FutureBeef has either achieved or exceeded all set targets. Only one has been partially achieved; interstate contributions to the newspaper features.

The FutureBeef website is the one-stop shop for northern beef information with over 1220 pages of quality content (technical, projects, documents, videos, webinar recordings and a comprehensive events calendar) and between 2017 and 2022 obtained over 1.7M pageviews from over 950,000 visitors. It is anticipated with the website review and restructure and other planned improvements usability will be enhanced and these numbers will be bolstered.

A total of 49 FutureBeef webinars were conducted between 2017 and 2022, with almost 6900 registrations and over 3000 live attendees. Forty-six of these webinars were recorded with over 27,200 views and a total watch time of 3234 hours.

Fifty-four editions of the eBulletin have been distributed between 2017 and 2022 to 6288 subscribers, achieving an average open rate of almost 33% and click rate of 8.6%.

FutureBeef has three social media accounts: Facebook, Twitter and LinkedIn. Facebook has over 10,700 followers and 2626 posts have been published with 69,800 engagements (reactions, comments, shares and link clicks) since 2017. In the same period there has been over 52,400 referrals from the Facebook to the FutureBeef website. Between 2017 and 2022, there have been 2066 tweets on Twitter to 6784 followers, with an engagement of over 12,500 and almost 5700 referrals to the FutureBeef website. More recently (June 2020) FutureBeef joined LinkedIn (based on stakeholder feedback) and currently has 1276 followers and 108 published posts and an engagement of 2765 and 815 referrals to the website.

Three podcasts (approximately 30 minutes long each) have been recently published (February 2022) on phosphorus, conception rates and pasture improvement with legumes and leucaena, with 161 listens in the last two weeks.

Fifteen professionally produced short videos (<7mins) have been published and promoted through a variety of channels, including social media, eBulletin and newspaper features. To date the videos have had 5789 views on YouTube, a reach of 59,955 and 957 engagements (likes, comments and shares) on Facebook.

The FutureBeef YouTube channel houses 280 public videos, of which 167 of these have been uploaded since July 2017. Since 2017 the channel has received almost 158,000 views and a total watch time of almost 13,500 hours.

BeefTalk, CQ BEEF and Northern Muster have also been published regularly (six times a year) in the Queensland Country Life and North Queensland Register to combined monthly audience of just over 174,000 (print) and 137,000 (online).

An external evaluation in 2021 showed that users have a strong awareness of FutureBeef and FutureBeef is seen as a key source of reliable and relevant information for the northern beef industry. There is a high level of satisfaction with the communication tools FutureBeef is using and the information and events that are being promoted. There are also strong indications that FutureBeef is positively contributing to practice change. This is in large part due to the effective collaboration with current northern beef industry projects ranging from reef, genetics, climate, nutrition and carbon.

The time, effort and funding invested in the FutureBeef online communication tools, and the collaborative efforts of the partners has been a worthwhile investment, which will provide ongoing benefits. The FutureBeef collaboration continues to provide efficiencies in the provision of online information to the northern beef industry, with access to a 24/7 one-stop shop for beef information. It also provides a range of channels for relevant research, project findings and events to be communicated widely to the target audience.

The FutureBeef website and YouTube user location data also suggests that the reach of FutureBeef is far greater than just northern Australia and in fact greater than Australia as a whole, with users in southern Australia and overseas.

Due to the positive results of the current project and the strong sentiment amongst participants in the external evaluation it is recommended that the current FutureBeef collaboration and mix of online tools continues. FutureBeef should also continue to identify and implement improvements

to its current mix of tools, some of which have already been suggested through stakeholder feedback, along with suggestions for new content.

FutureBeef already provides significant adoption support through its effective and many collaborations with current (and past) northern beef industry projects. This is also evidenced by the external survey where almost 50% of those surveyed reported that FutureBeef had contributed to on-farm adoption. However, FutureBeef should also explore other ways of supporting adoption. This may include opportunities for peer-to-peer learning through case studies and producer webinars as well as supporting virtual producer demonstration sites.

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1. Background

The collaborative FutureBeef Program for Northern Australia is an initiative instigated by the partners as a result of the National Beef Production Research Development and Extension Strategy and the need to achieve greater alignment, coordination and cooperation in the strategic delivery of northern beef extension activities. The partners are the Department of Agriculture and Fisheries, Queensland (DAF), the Northern Territory Department of Industry, Tourism and Trade (NT DITT), the Western Australian Department of Primary Industries and Regional Development (WA DPIRD) and Meat & Livestock Australia (MLA).

The FutureBeef Program was implemented on agreed terms based on the existing DAF FutureBeef extension program. The aim of the FutureBeef Program is to improve business productivity, sustainability and profitability of the beef industry, through development and extension activities to accelerate adoption of best practice management and new technologies (Memorandum of Understanding 2012).

There have been two funded collaborative FutureBeef programs:

- E.INV.1412: 30 April 2014 to 30 July 2017
- L.GFB.1802: 23 March 2018 to 28 February 2022 (current program).

The objectives of the first program (E.INV.1412 – 2014-2017) were to:

- Further develop, populate, maintain and evaluate a **public website** (futurebeef.com.au) for the collaborative FutureBeef Program (Qld, NT, WA and MLA) to provide timely, relevant and accurate information to the northern Australia beef industry.
- Further develop, populate maintain and evaluate a **private staff intranet** for the collaborative FutureBeef Program, to allow staff to find and share relevant information. This includes a news section, a repository of technical information, a source of current promotional items, the latest versions of relevant document templates, and information on the different tools available to staff. There will also be a Forum where staff can discuss relevant topics, and a Wiki to store and collaboratively work on various documents.
- Further develop, deliver and evaluate a **webinar series** for the FutureBeef Program to enable improved staff engagement with stakeholders and the delivery of Research, Development and Extension information in a cost-effective manner for both presenters and attendees (e.g. reduced travel requirements). Explore further partnerships to broaden the potential audience.

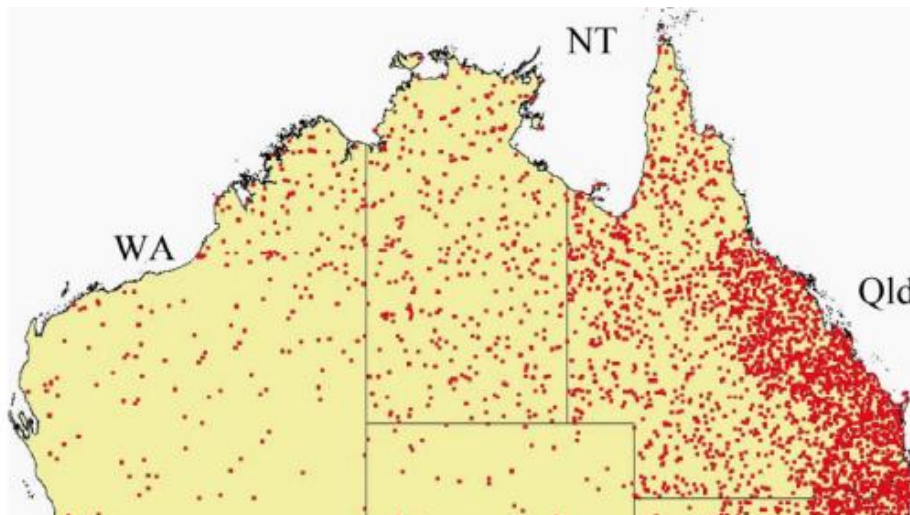
While the outcomes from this program were:

- Improved delivery of information through a website and webinar series that provide timely, relevant and accurate information to the northern Australia beef industry.
- Improved service delivery and cost-effectiveness for the FutureBeef Program.

The focus, objectives and desired outcomes from the second program (L.GFB.1802 – 2018-2022) can be found on page 10 of this report.

The beef properties in northern Australia are dispersed across 4.3 million square kilometres (Figure 1), an area just less than half the size of the United States (NationMaster 2021). Providing services to the approximately 14,000 cattle businesses in this region (ABS 2020) is a formidable challenge (**Table 1**). FutureBeef uses a multi-channel approach to provide information, including a website, eBulletins, webinars, social media and multimedia as well as printed and online newspaper features. These channels also support the range of face-to-face activities delivered by the FutureBeef partner organisations. This mixed approach enables a more effective communication strategy than any one single approach (Kolich 2014). While face-to-face activities are usually better for building trust and rapport (Goldstein & Glueck 2016; Holmes & Kozlowski 2015), online technologies can complement them (Cipolletta, Frassoni & Faccio 2017; Min 2007) and provide an innovative means to connect in real-time without anyone needing to travel (James 2010).

Figure 1. Distribution of beef cattle across northern Australia



Source: Primary Industries Standing Committee – R&D Sub-Committee (2010) p. 15

Table 1. Estimated hectares of land mainly used for grazing and number of agricultural businesses

Location	Hectares	Number of agricultural businesses
Queensland	120,403,587	13,650
Northern Territory	51,814,281	206
Western Australia Rangelands	61,491,415	220

Source: ABS (2020)

It is difficult and inefficient for each of the FutureBeef Program partner organisations to create and maintain beef-related information on their own websites, let alone manage online engagement with industry members. This project was designed to provide a coordinated approach to the delivery of online information and industry engagement. This will save the four organisations from having to re-invent the wheel themselves and inadvertently providing a confusing array of overlapping information.

Webinars are used extensively to engage with FutureBeef Program partners' geographically dispersed clients across northern Australia. The BeefConnect webinar series is a partnership between FutureBeef and Beef Central, where FutureBeef contributes high quality content while Beef Central helps promote the events through their daily eBulletins.

This project aims to provide online engagement mechanisms that support the profitability and sustainability of the beef industry in northern Australia and build FutureBeef staff capacity to deliver effective and efficient online extension services.

2. Objectives

The **focus** of this project is to support sustainable and profitable productivity gains for northern beef producers by providing:

1. Engagement, support, awareness and education of producers and beef industry service providers via the FutureBeef website, webinars, social media, eBulletin, multimedia materials and newspaper features.
2. A platform to seek and enable opportunities for collaboration on common needs. For example, capacity building of extension and adoption staff and other agreed projects that are mutually beneficial across the north.

The **objectives** of the various components of this project annually are as follows:

1. Website and intranet

Further develop, populate, maintain and evaluate the futurebeef.com.au website and intranet to provide timely, relevant and accurate information to the beef industry across northern Australia. This will include reviewing of 20% of existing pages for relevancy and accuracy, with updating as required annually. Additionally, up to 10 new topic items (QLD 6, NT 2, WA 2) will be sourced and created with content specialists based on website search topics and user feedback. This will result in an annual increase in the number of unique visitors, pageviews and time spent per visit of at least 10%. User satisfaction will be ascertained during the final year of the project, aiming to have raised it to 7.5/10 from the 6.2/10 measured in 2016.

2. Webinar series

Further develop, deliver and evaluate the *BeefConnect* webinar series to facilitate improved staff engagement with stakeholders and the delivery of RD&A information in a cost-efficient manner for both presenters and attendees. Up to 10 webinars (QLD 4, NT 1, WA 1, MLA 4) will be conducted, with an annual increase in the number of registrations of at least 10%. User satisfaction will be ascertained during the final year of the project, aiming to have raised it to 7.5/10 from the 6.7/10 measured in 2016.

3. Social media

Further develop, post and evaluate appropriate social media content and activity using the existing FutureBeef Facebook and Twitter accounts, and creating new ones (e.g. Instagram and podcasts) as appropriate. Up to 500 messages will be distributed each year, with an annual increase in the number of followers of at least 10%. User satisfaction will be ascertained during the final year of the project, aiming to have raised it to 7.5/10 from the 6.7/10 for Facebook and 6.3/10 for Twitter measured

in 2016.

4. eBulletin

Further develop, deliver and evaluate the FutureBeef eBulletin service, distributing up to 12 eBulletins containing at least six articles (QLD 3, NT 1, WA 1, MLA 1) to subscribers with an annual increase in the number of subscribers of at least 10%. User satisfaction will be ascertained during the final year of the project, aiming to have raised it to 7.5/10 from 6.6/10 measured in 2016.

5. Multimedia

Further develop, deliver and evaluate a range of multimedia materials (e.g. short videos, webinar recordings and slidecasts), including the creation up to five professionally produced short videos (QLD 3, NT 1, WA 1), up to 10 webinar recordings, and other items as required. There will be an annual increase in the number of views received on the YouTube channel of at least 10%. User satisfaction will be ascertained during the final year of the project, aiming to have raised it to 7.5/10 from the 6.4/10 measured in 2016.

6. Newspaper features

Further develop, deliver and evaluate the newspaper features published in the *Queensland Country Life* and *North Queensland Register*, with each edition having at least one item from NT and WA. As these are published externally in newspapers, it is not possible to easily evaluate changes in reader numbers and satisfaction.

The desired **outcomes** from this project are:

- Improved delivery of information through multiple channels that provides timely, relevant and accurate information to the north Australian beef industry.
- Increased industry engagement with North Australian beef producers, RD&A staff of the FutureBeef project partners, and North Australian beef industry service providers through the delivery of suitable online activities in northern Australia.

3. Methodology

3.1 Advisory committee

Each year the Project Advisory Committee has:

1. Conducted two committee meetings by web conference.
2. Produced meeting minutes for each meeting.

The roles and responsibilities of the Project Advisory Committee were to:

- Endorse the FutureBeef project proposal, including the MER and communication plans
- Endorse the FutureBeef annual operational plan
- Participate in two annual web conference meetings
- Be the go-to people for FutureBeef in their state or territory regarding operational matters

- The project leader will organise and attend the FutureBeef Project Advisory Committee web conferences and provide FutureBeef project updates and recommend online communication and opportunities for building capacity of extension and adoption staff and other extension and adoption projects.

3.2 Operational team

Each year the project team has:

1. Conducted regular team meetings (approximately every six weeks) by web conference and one face-to-face (where possible).
2. At least one representative from each organisation attended the majority of the meetings.
3. Produced brief minutes (including key actions) for each meeting.
4. Used an action learning approach and tested new ideas.

3.3 Website and intranet

The FutureBeef website (futurebeef.com.au) is hosted through an existing external WordPress website which allowed content to be easily added and maintained. In November 2018, Breadcrumb Digital were contracted to provide technical advice and support for ongoing website development and maintenance.

Various FutureBeef team members and other DAF staff have reviewed web pages relating to their area of expertise. However, this has only been on an ad-hoc basis, and as time and other work commitments allowed, and hence reviewing FutureBeef webpages often dropped to the bottom of their priority list.

To rectify this and increase the number of pages reviewed, discussions were held with MLA about additional funding to contract an external supplier. After an MLA tender process, Neil MacDonald and Dennis Poppi were contracted in February 2021 to review priority pages on the FutureBeef website (knowledge centre, projects, and document library). They were also contracted to assist with a restructure of the website by allocating all web pages to content-based topic/subtopic heading(s). Page reviews by MacDonald and Poppi have been completed with the FutureBeef team progressively updating pages based on these reviews. The website restructure has commenced and it is anticipated that this will be completed by early March 2022.

The FutureBeef website also hosts the events calendar. A range of staff across the regions have been trained in how to upload their own events and other regional events to the calendar.

The intranet has not been maintained due to lack of usage by staff. Instead, a OneDrive site was set up to allow sharing of information and documents with key project staff.

3.4 Webinars

An existing GoToWebinar licence has been used to allow up to 1000 attendees to participate in the webinars.

Each webinar delivered requires:

- sourcing suitable topics and presenters
- developing and distributing promotional material (webinar registration page, webinar on events calendar on the website, eBulletin text/article, social media posts)
- training the presenter to use the GoToWebinar functionality and having a practice run
- creating any polls required during the webinar
- delivering and recording the webinar
- creating YouTube video playlists (so viewers can jump to particular sections)
- editing the recording and uploading to YouTube
- creating a landing page on the website
- creating a post-event questionnaire in SurveyMonkey
- creating and distributing a follow-up email message to everyone who registered (which includes links to the webinar recording, the survey and materials mentioned in the webinar)
- analysing the data collected from the post-event survey and sending to the presenter and project partners.

3.5 eBulletin

An existing Mailchimp licence has been used to create and distribute the monthly eBulletin to subscribers. Subscribers can register to receive the eBulletin on the home page of the FutureBeef website. The details captured during this registration process have been updated to include postcode, phone numbers and industry role so that emails can be targeted to regions and interests, while the phone numbers will be used going forward for future surveys and obtaining feedback.

The eBulletin subscriber list is also used to promote the FutureBeef webinars as well as any other timely and relevant information from our partners.

3.6 Social media

Existing Facebook (facebook.com/futurebeef) and Twitter (twitter.com/futurebeef) accounts have been used and a LinkedIn (linkedin.com/company/futurebeef) account commenced in June 2020. Existing Hootsuite and SmarterQueue licences have also been used to manage and schedule the distribution of social media posts. More recently (July 2021), due to ongoing issues, the Hootsuite scheduling platform has been replaced with Agorapulse. Hootsuite/Agorapulse is used to draft and schedule time-sensitive posts (events, scholarships, funding etc), while SmarterQueue is used for evergreen content i.e., content that stays relevant over a long period of time (key technical messages that rarely change). Agorapulse can also be used for scheduling this evergreen content and hence all SmarterQueue content has been transferred to Agorapulse and the SmarterQueue account closed.

The FutureBeef operational team undertook social media training in February 2020 and as a result started sharing more of other relevant organisations content (curated content) as opposed to content that we created ourselves.

Relevant staff in the Northern Territory and Western Australia have been trained so they can draft their own FutureBeef social media posts.

In August 2020 approval was received for a digital communications strategy to increase reach and following on the FutureBeef channels of Facebook, Twitter, eBulletin and podcasts. This included:

- \$4000 for like us on Facebook ads to build FutureBeef's following on Facebook from 8700 to 16,700
- \$1000 to boost key event posts on Facebook and increase event post reach by 100%
- \$5000 for ads on Facebook to build FutureBeef's eBulletin subscribers from 5485 to 10,500
- \$1000 for like us on Twitter ads to increase FutureBeef's Twitter followers from 5697 to 6700
- \$1000 to promote FutureBeef's podcast episodes and channel on Facebook.

3.7 Multimedia

An existing YouTube channel (youtube.com/FutureBeefAu) has been used to host the multimedia materials (webinar recordings and videos). These are also available on the FutureBeef website. The content on YouTube has been categorised into relevant headings such as:

- topics e.g. grazing land management, animal production, animal health and welfare and people and business
- BeefConnect webinars
- FutureBeef videos.

Initially it was thought that the FutureBeef videos would be produced by the same company (RedSuit Advertising) that filmed and edited them last time. However, their quote significantly exceeded the budget. An additional quote was sought from Sound Images, recommended by MLA, and this company was contracted to produce the videos.

A thorough analysis of currently available or soon to be released beef related videos was conducted to ensure the topics selected had not already been covered. Plus, a range of staff were consulted on priority topics in their region (central region was excluded as all 10 previous FutureBeef videos were filmed there).

All 15 videos have been filmed, approved and published and promoted through the FutureBeef communication channels.

3.8 Newspaper features

To produce the Queensland Country Life / North Queensland Register beef features, an existing process that utilised in-house and external editing and creative design services was used. There was also a DAF-Fairfax media contract in place which concluded on 30 June 2019 with the final features (under this contract) published in April 2019. Under this contract the publication frequency was three times per year (April, August and November) and length 6-8 pages.

A new contract was negotiated, which came into effect on 1 June 2019 and concluded 31 December 2021. Under this contract the need for external design services was removed by using Fairfax page templates, which are populated by a Fairfax staff member. The publication frequency also changed to six times a year, with only three pages each edition. Under this contract in 2019 features were only published in September and November, and the following years (2020 and 2021) publication months were February, April, June, August, October, December.

There are three separate features published, each with a regional DAF editor:

- BeefTalk (Southern version of Queensland Country Life) – current editor is Megan Gurnett, DAF Toowoomba
- CQBEEF (Central/Northern version of the Queensland Country Life – current editor is Mick Sullivan, DAF Rockhampton
- Northern Muster (North Queensland Register) – rotating editor from DAF north Queensland team.

The features are also published on both the FutureBeef and Fairfax websites, with a PDF and e-reader version available.

A new agreement has been signed for 2022 with the following key details:

- Print:
 - four 4-page features published each season (April, June, September, December)
 - NT and WA to supply an article for alternate editions.
- Online:
 - All content to be published on the Queensland Country Life/North Queensland Register website news section
 - One nominated article from each BeefTalk and CQBEEF (two in total) promoted on the Queensland Country Life Facebook page
 - One nominated article from the Northern Muster promoted on the North Queensland Register Facebook page.

This new agreement, particularly the online publication of content will be evaluated at the end of 2022/start of 2023.

3.9 User reference group

A facilitated meeting was planned for February 2021 in Brisbane where a range of end users (both producers and service providers across northern Australia) were invited, plus the FutureBeef operational team and advisory committee. The meeting was facilitated by Gerry Roberts (GR Consulting).

The **purpose** of this meeting was to have a selected group of FutureBeef users meet to discuss together and give their feedback on the tools FutureBeef uses to present information and the content of the information.

The meeting **outputs** included:

- suggestions that the FutureBeef team can put in place for each FutureBeef communication tool to make it easier for producers/service providers to get the information they need when they need it
- at least 1 main idea on another tool/method that FutureBeef could be using to get information out to northern beef producers/service providers.

Sample questions that were asked for each of the FutureBeef communication tools included:

- Rate your frequency of use of the FutureBeef tool (on a scale of 1-7, or I don't use)
- Generally, how easy is it to find/read the information?
- Rate the usefulness of the content to your work (comment and rating on a scale of 1-7)?
- Reasons you use/read the FutureBeef tool and/or reasons you don't use/read the tool?

While specific questions for each of the tools included:

Website

- How often are you not able to find what you want on the site? (Most times; Half the time; Every now and again). Please give an example of the topics you have had difficulty finding.
- Webinar recordings on the FutureBeef website:
 - Have you ever used a webinar recording?
 - How easy is it to find the webinar recordings?
 - Do you use the playlists on the webinar recordings – what do you think of them?
- What good or bad comments have you heard others say about the website?
- What are 1 or 2 things you've thought of that would make it better for you to use the website?

eBulletin

- Currently it is sent once a month. How suitable is that for you? Suggest an alternative if not suitable.
- What do you want to see more or less of in the eBulletin?
- Should FutureBeef be doing more regionally specific event promotion through our email list e.g. when there is a workshop on at Rockhampton should we be sending a specific email to people within 200km of that location?

Webinars

- What difficulties have you had registering, getting into or attending a FutureBeef webinar on any device (desktop, laptop, iPad or smart phone)?
- Is lunch time still a suitable time? What other times are realistic options too?
- Is the length of 1hr ok?

- Which option is more appealing? (Full session with Q&A at the end, or break up the presentation with multiple Q&A sessions, or Something else?)
- Are the topics relevant and timely to your needs?
- Are there other topics you think FutureBeef should do webinars on?

Social media

- Currently FutureBeef posts twice a day. Is post frequency ok?
- How relevant is the timing of our posts for what you are doing?
- What do you suggest would get people to respond e.g. with a 'like' or a comment/question?
- Do users want to see posts on: profiling staff, current projects, going live at trial sites/field days, humorous (cow related joke) content and/or photo competitions?

Newspaper features

- Are there other publications in the Northern Territory/Western Australia FutureBeef should be targeting?

3.10 Brand awareness survey

During April to October 2020 an online survey was conducted to find out how widely known FutureBeef was in the industry. The key questions included:

1. What do you think are the most reliable and relevant sources of best practice information for the northern beef industry?
2. Why do you consider these sources to be reliable and relevant?
3. Have you heard of FutureBeef?
4. Are you a producer, agent, consultant, government or NRM officer, agribusiness or other?
5. Which state/territory are you from: Queensland, Northern Territory, Western Australia or other?

The survey was promoted through the FutureBeef mailing list, eBulletin, social media and newspaper features. FutureBeef partner organisations (and others relevant organisations) were also asked to promote the survey through their own communication channels. The survey questions were also included on event feedback sheets; however, this was inhibited due to COVID-19 restricting the number of events being held in this period. To help overcome this the questions were included on the FutureBeef webinar feedback forms. A total of 461 survey responses were received.

3.11 Independent evaluation of FutureBeef

Consultants Sophie Folder (Pear Consulting), Alex Ball (Rural Analytics) and Kimbal Curtis (Livestock Dynamics) were engaged to evaluate FutureBeef by addressing four key evaluation questions:

1. What level of brand awareness exists for FutureBeef within the northern beef industry?
2. How satisfied are the users of FutureBeef communication tools? (Including the website, eBulletin, webinars, social media, newspaper features and YouTube channel)
3. How has engagement in FutureBeef communication tools influenced practice change?
4. What are the future industry needs of FutureBeef beyond the current project?

The evaluation was undertaken in two phases. The first component of phase one comprised of an online survey developed in consultation with the FutureBeef advisory committee and implemented via the Survey Monkey® platform. The survey aimed to evaluate brand awareness, user satisfaction with, and usefulness of, the FutureBeef communication tools, to identify elements of practice change and needs for a subsequent FutureBeef program.

A link to that survey was distributed through FutureBeef communication tools and through paid advertisements on several social media platforms. The survey was open for 25 days during March-April in 2021. At the close of the survey, there were 202 respondents that had completed the survey of which 184 were from the northern beef jurisdictions.

The second component of phase one involved one-on-one interviews conducted via phone or video conference (Zoom) with 19 FutureBeef stakeholders. The interviewees were selected from the online survey participants who firstly indicated that they were prepared to be interviewed and had provided contact details and then secondly those that had undertaken a practice change partly attributable to FutureBeef. The interviews followed a semi-structured interview that obtained more in-depth responses to expand on the survey findings in relation to practice change and future needs.

Phase two of the project was undertaken following the completion and reporting of the survey and interviews. It involved the development of four producer case studies to illustrate how engagement with FutureBeef communication tools has supported meaningful practice change. More details on the survey and case study methodology can be found in Folder et al. (2021), available at futurebeef.com.au/resources/futurebeef/.

4. Results

4.1 Advisory committee

From 1 July 2017 to 31 January 2022 the FutureBeef advisory committee met eight times and notes including key actions have been produced for all these meetings. Two of these meetings have been face-to-face and both in Brisbane (February 2020 and June 2021). The advisory committee have also discussed items via emails in between these meetings. The key items discussed at these meetings were:

- new project including roles, expectations, critical success factors, why the project may fail, communications plan evaluation plan, opportunities for collaboration
- introduction of new project leader, quality control of website information, update from each of the partners
- roles and responsibilities, web publishing process, objectives and progress

- communications plan, progress against objectives, communications planner and key messages, brand awareness survey, digital communications proposal, producer/beef research committee's involvement
- review and approval milestone report, endorsement of podcasts and LinkedIn, website restructure and review
- end of project/user satisfaction survey, new project proposal, updates on podcasts, LinkedIn and videos
- website review/restructure, new project proposal, video update, NABRC/regional committee presentations
- current project results to date, feedback from operational team, results of end of project survey, new project proposal particularly objectives and outcomes.

4.2 Operational team

Between 1 July 2017 and 31 January 2022, the FutureBeef operational team have met 23 times and brief notes with key actions have been produced for all these meetings. Two of these meetings have been face-to-face in Brisbane (February 2020 and June 2021). In between meetings there has been numerous contacts via emails and phone calls. The main purpose of the team meetings was to keep the team up to date on project progress and updates on the communications tools used and upcoming deadlines for publication.

4.3 Targets vs achievements summary

Table 2 summarises the targets for the FutureBeef communication tools as well as what has been achieved by 30 June 2021. The 2017-2018 figures were used as baseline as the project contract was signed May 2018. Overall FutureBeef has met and exceeded the majority of targets.

Table 2. FutureBeef targets and achievements summary

Target	2017-2018 (baseline)	Target 2018- 2022* (total)	Achieved by January 2022	
WEBSITE				
10 new web pages per year	NA	35	341	✓✓✓
6 QLD, 2 NT and 2 WA webpages per year	NA	21 QLD, 7 NT and 7 WA	267 QLD, 58 NT and 16 WA	✓✓✓
Review 20% of web pages per year	NA	636	803	✓✓✓
10% increase in users per year	146,360	737,442	788,594	✓✓✓
10% increase in page views per year	343,943	1,732,974	1,400,951	✓
10% increase in time (mins) spent per visit per year	1.28	1.61 (avg)	1.72	✓✓
User satisfaction raised in final year	6.2 (2016)	7.5	7.7	✓✓
WEBINARS				
10 webinars per year	NA	35	46	✓✓✓
4 QLD, 4 MLA, 1 NT and 1 WA	NA	14 QLD, 14 MLA, 4 NT and 4 WA	28 QLD, 12 MLA, 3 NT and 3 WA	✓✓

Target	2017-2018 (baseline)	Target 2018- 2022* (total)	Achieved by January 2022	
10% increase in registrations per year	751	3784	6148	✓✓✓
10 webinar recordings per year	NA	35	43	✓✓✓
User satisfaction raised in final year	6.7 (2016)	7.5	8.4	✓✓✓
EBULLETIN				
12 eBulletins per year	NA	42	42	✓✓
3 QLD, 1 MLA, 1 NT and 1 WA article per edition	NA	126 QLD, 42 MLA, 42 NT and 42 WA	297 QLD, 51 MLA, 53 NT, 43 WA,	✓✓✓
10% increase in subscribers per year	4025	5893	6288	✓✓✓
User satisfaction raised in final year	6.6 (2016)	7.5	8.2	✓✓✓
SOCIAL MEDIA				
500 messages per year	NA	1750	4790	✓✓✓
10% increase in followers per year	11,064	15,462	18,821	✓✓✓
User satisfaction with Facebook raised in final year	6.7 (2016)	7.5	8.0	✓✓✓
User satisfaction with Twitter raised in final year	6.3 (2016)	7.5	8.6	✓✓✓
MULTIMEDIA				
5 videos per year	NA	15	15	✓✓
3 QLD, 1 NT and 1 WA video per year	NA	9 QLD, 3 NT and 3 WA	9 QLD, 3 NT and 3 WA	✓✓
10% increase in YouTube views per year	17,847	91,111	139,757	✓✓✓
User satisfaction raised in final year	6.4 (2016)	7.5	8.5	✓✓✓
NEWSPAPER FEATURES				
Each edition having at least 1 item from NT and WA	NA	11 NT and 11 WA	14 NT and 8 WA	✓

✓ = partially achieved target

✓✓ = achieved target

✓✓✓ = exceeded target

4.4 Website

The FutureBeef website was launched in May 2012 and currently has (at January 2022) 1222 pages. Since July 2017 the website has had 1,744,894 views from 954,380 visitors, Table 3.

Error! Reference source not found.3. FutureBeef website metrics (July 2017 to January 2022)

Website metric	2021-2022*	2020-2021	2019-2020	2018-2019	2017-2018
Users/Visitors	131,355	215,193	210,585	231,461	165,786
Pageviews	234,360	377,078	367,002	422,511	343,943
Time spent per visit (mins)	3.18	1.23	1.28	1.19	1.28

*data only until January 2022

Source: Google analytics

During this period (July 2017-January 2022) the majority of site visits were from within Australia (50%), followed by United States (16%), India (4%), South Africa (3%) and United Kingdom (3%), Table 4. The Australian based site visits were primarily from Queensland (37%), New South Wales (30%) and Victoria (18%) with lower numbers from Northern Territory and Western Australia reflecting fewer grazing businesses in those jurisdictions, see Table 5 for more details.

Error! Reference source not found.4. Top 5 website user locations by country (July 2017 to January 2022)

Country	Users/Visitors	Sessions	Pages per session	Average session duration (mins)
Australia	428,298	687,785	1.63	1.42
United States	135,547	150,646	1.14	0.33
India	35,955	40,931	1.20	0.47
South Africa	25,019	31,735	1.37	1.28
United Kingdom	22,653	25,653	1.19	0.40

Source: Google analytics

Error! Reference source not found.5. Top Australian website user locations by state/territory (July 2017 to January 2022)

State/Territory	Users/Visitors	Sessions	Pages per session	Average session duration (mins)
Queensland	165,300	294,875	1.93	2.13
New South Wales	133,735	193,147	1.42	1.21
Victoria	77,861	105,252	1.34	1.10
Western Australia	25,804	37,685	1.46	1.25
South Australia	25,785	36,717	1.41	1.21
Tasmania	5887	7630	1.36	1.2
Australian Capital Territory	5261	7065	1.56	1.18

Northern Territory	2661	5324	2.16	2.33
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Source: Google analytics

The highest proportion of site visitors are 25-34 years old (26%) and lowest 65+ (9%), Fig 2., while the split between male (55%) and female (45%) visitors is shown in Fig 3.

Figure 2. Age distribution of FutureBeef website users

Source: Google analytics

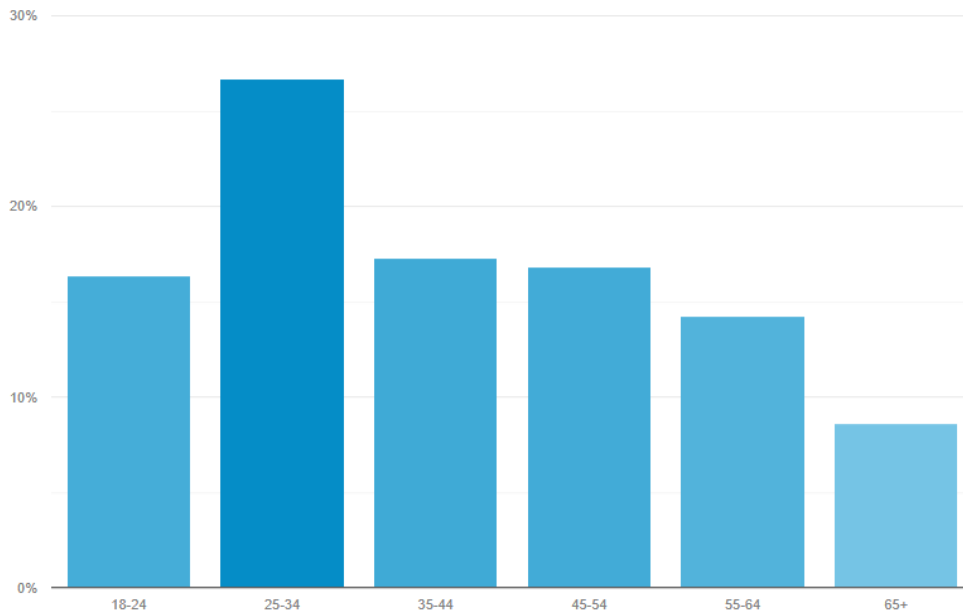
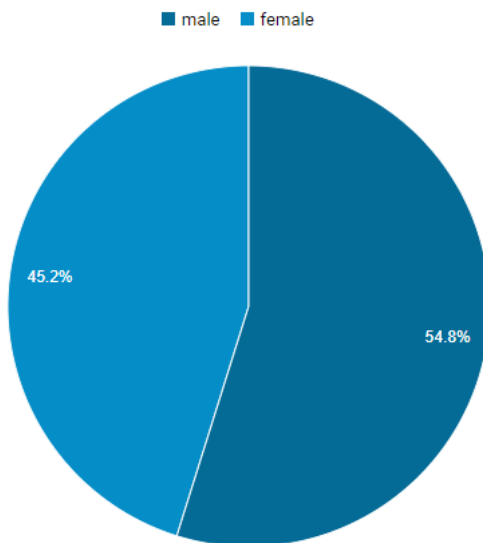


Figure 3. Gender split of FutureBeef website users

Source: Google analytics

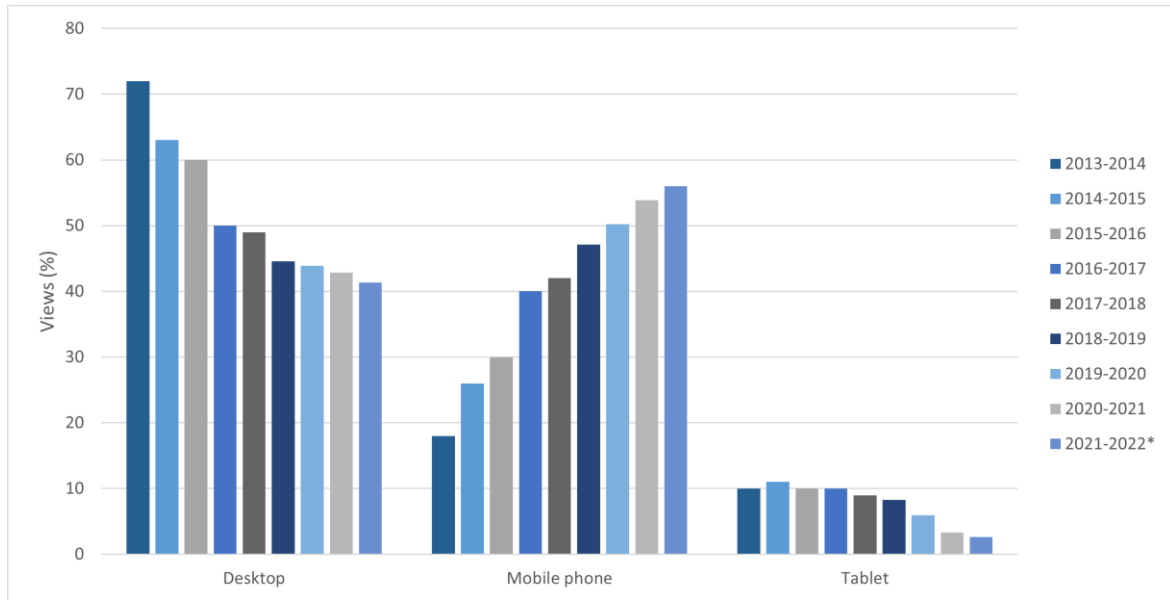


During 2021-2022 the breakdown of people accessing the FutureBeef website on different devices was: mobile (56% of users), desktop (41% of users) and tablet (3% of views). It is interesting to note the steady increase in the use of mobiles as the primary device (Fig. 4).

Figure 4. The devices most commonly used to access the FutureBeef website

* data only until January 2022

Source: Google analytics



The top 10 pages by number of views are listed in Table 6. The continuing popularity of the calf rearing, and molasses supplementation pages reflect the ongoing drought conditions across the majority of Queensland. Short videos have also been produced for two of these top 10 pages (ageing by teeth and vaccinations) to complement existing site information.

Error! Reference source not found.6. Top 10 website pages by views (July 2017 to January 2022)

Page Title	Pageviews	Average time (mins)
Cross breeding systems for beef cattle	97,482	5.44
Calf rearing, poddy calves, feeding, calf health care and more	88,014	8.63
FutureBeef - your one-stop shop for north Australian beef information	69,545	1.17
Molasses supplement cattle	47,075	6.06
Dehorning cattle	47,046	5.34
Ageing cattle by their teeth	47,025	4.77
Feed consumption and liveweight gain	39,813	5.45
Castration	33,678	4.59
Vaccinations for beef cattle	27,986	5.70

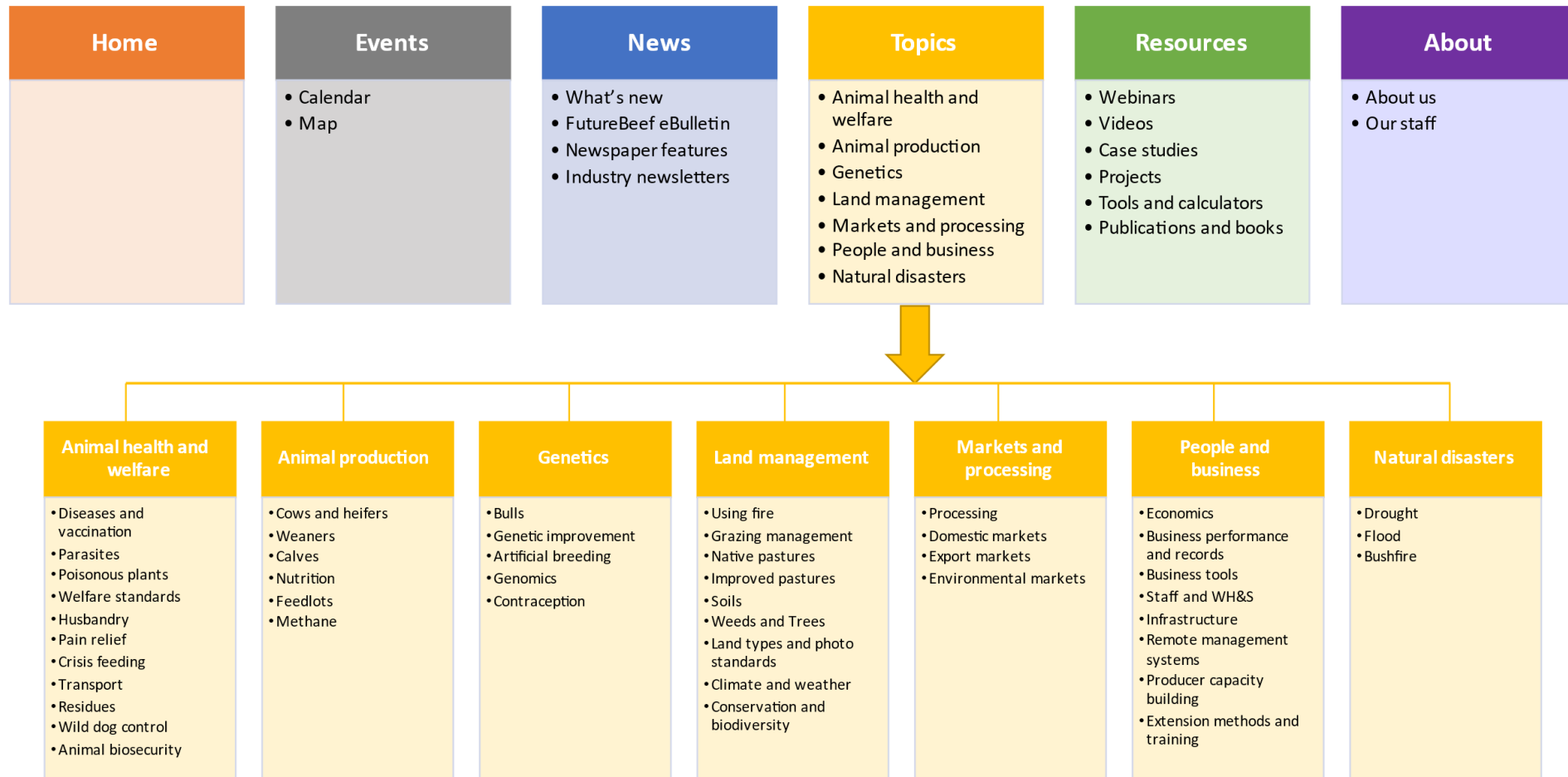
Diet formulations	27,269	4.96
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Source: Google analytics

During 2021 and the start of 2022 Neil MacDonald and Dennis Poppi were contracted by MLA to review approximately 500 technical pages on the FutureBeef website and assist with the website restructure by allocating all web pages to new topic and subtopic headings. During this period 678 pages have been reviewed by Neil and Dennis with most pages only requiring minor changes and updates, while some pages have been identified for deletion. The FutureBeef team has commenced updating the pages reviewed by Neil and Dennis, with more to be completed in the first half of 2022.

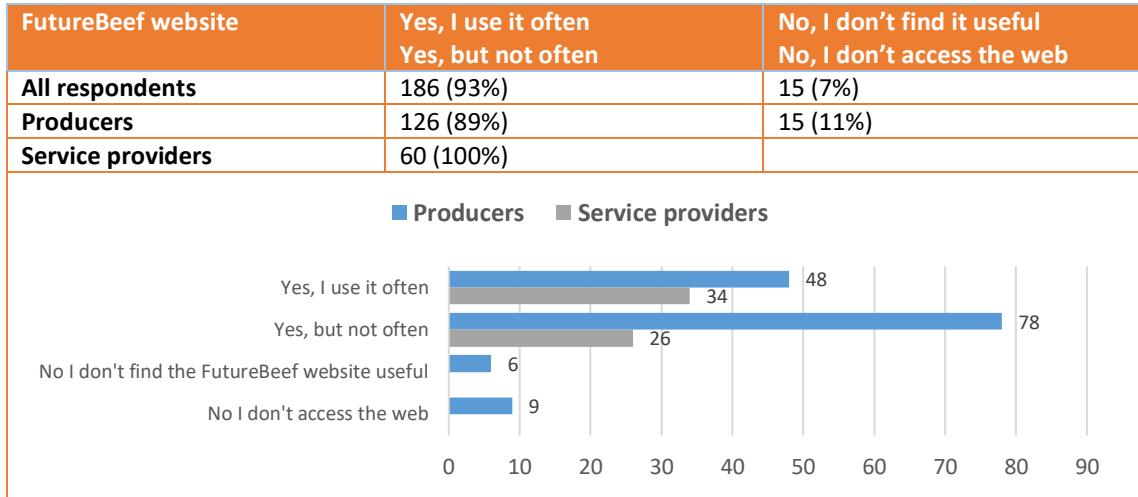
The website restructure has also started using the initial topic and subtopic headings and page allocations provided by Neil and Dennis (with some modifications by the FutureBeef team). This is due to be completed by early March 2022. It is anticipated that any feedback gathered about the new structure over the next few months as well other site improvement suggestions will be implemented during the next phase of the funded project. The current website menu mock-up is shown in Fig. 5.

Figure 5. New FutureBeef website menu mock-up



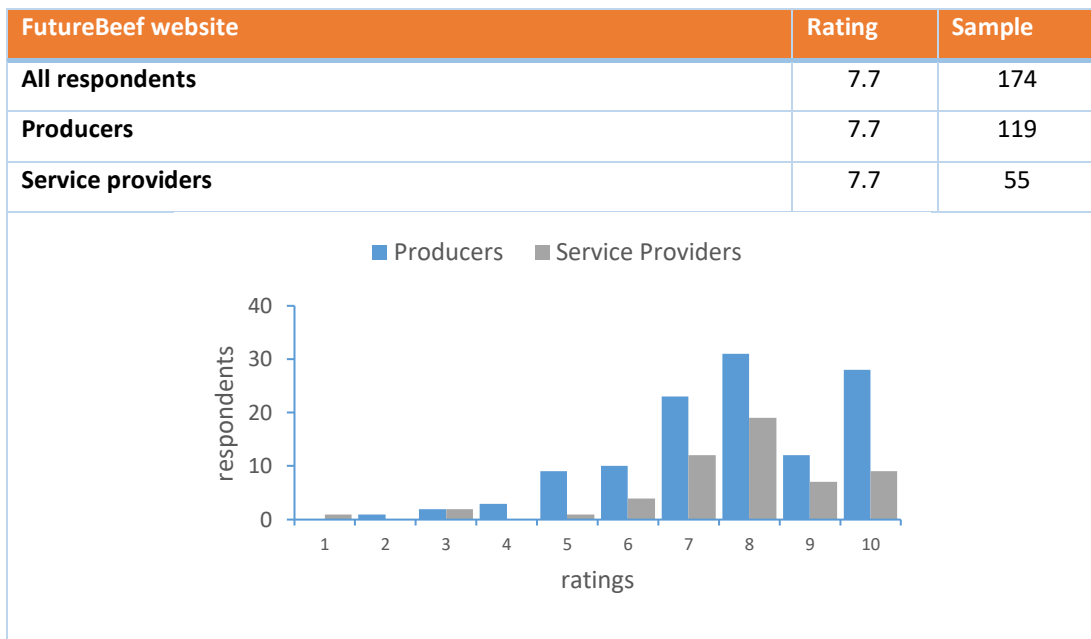
Based on the external evaluation the use of the FutureBeef website was very high, particularly with service providers (100%; see **Error! Reference source not found.7**). Of interest, 11% of producers either did not find the website useful or did not access the website.

Table 7. Proportion of survey respondents that use the FutureBeef website



Respondents that used the website rated the site as useful (7.7) on a scale of 1 (not at all useful) to 10 (very useful), with no apparent differences between producers and service providers, Table 8. The key reasons given for rating the website more highly were independence, comprehensiveness and ease of use. While difficulty in navigation and content management and structure were key barriers to website usefulness.

Error! Reference source not found.8. Average rating assigned to the FutureBeef website, including number of observations by rating



4.5 Webinars

4.5.1 Live webinars

A total of 49 webinars were conducted using GoToWebinar from 1 July 2017 to 31 January 2022, see Appendix 1 for a complete list. A total of 6899 people registered for these webinars (range of 31-370 per webinar) and 3029 attended live (range of 12-166), with an average live attendance of 44%, Fig. 6. Producers accounted for approximately 36% of both total registrations and total live attendees with the remainder being government staff, consultants, agents, Natural Resource Management groups and others.

Those that attended the FutureBeef webinars were asked to provide feedback and a total of 959 (32%) attendees completed the online feedback form. Webinar attendees represented almost 112M ha of land, over 5.5M cattle and just over 1.4M sheep (noting that repeat attendees would be counted multiple times in these figures). The webinars were rated as an average of 7.7 out of 10 for improving knowledge (range 6.1-10) and 8.4 out of 10 for satisfaction (range 6.7-9.8), Fig. 7.

Attendees were also asked if, as a result of the webinar, they intended to make a practice change and how likely they were to make this change. Overall, 53% of webinar attendees intended to make a practice change and 20% of these were very likely to make this change, Fig. 8. Please note that this metric was only introduced into the feedback form in October 2018, hence the webinars before this do not have this data. Also, there were two webinars in February 2019 about the northwest flooding where this information was not collected due to consideration of the impact of this disaster on producers.

Some of the qualitative feedback from the webinars included:

- *'This webinar was very informative; the delivery was very well done, and I look forward to seeing more of them.'*
- *Excellent - keep up the good work with the webinar series 'Very well organised presentation with excellent information that was easily understood. A big thank you to all who helped to produce this very engaging, hands on webinar. Great job.'*
- *'This webinar was excellent. It was so informative and relevant. As it was on during lunchtime my husband wandered in and stayed to listen.'*
- *'It was my first webinar and now I probably will be a regular!!'*

Figure 6. Registrations and attendees at FutureBeef webinars (July 2017 to January 2022)

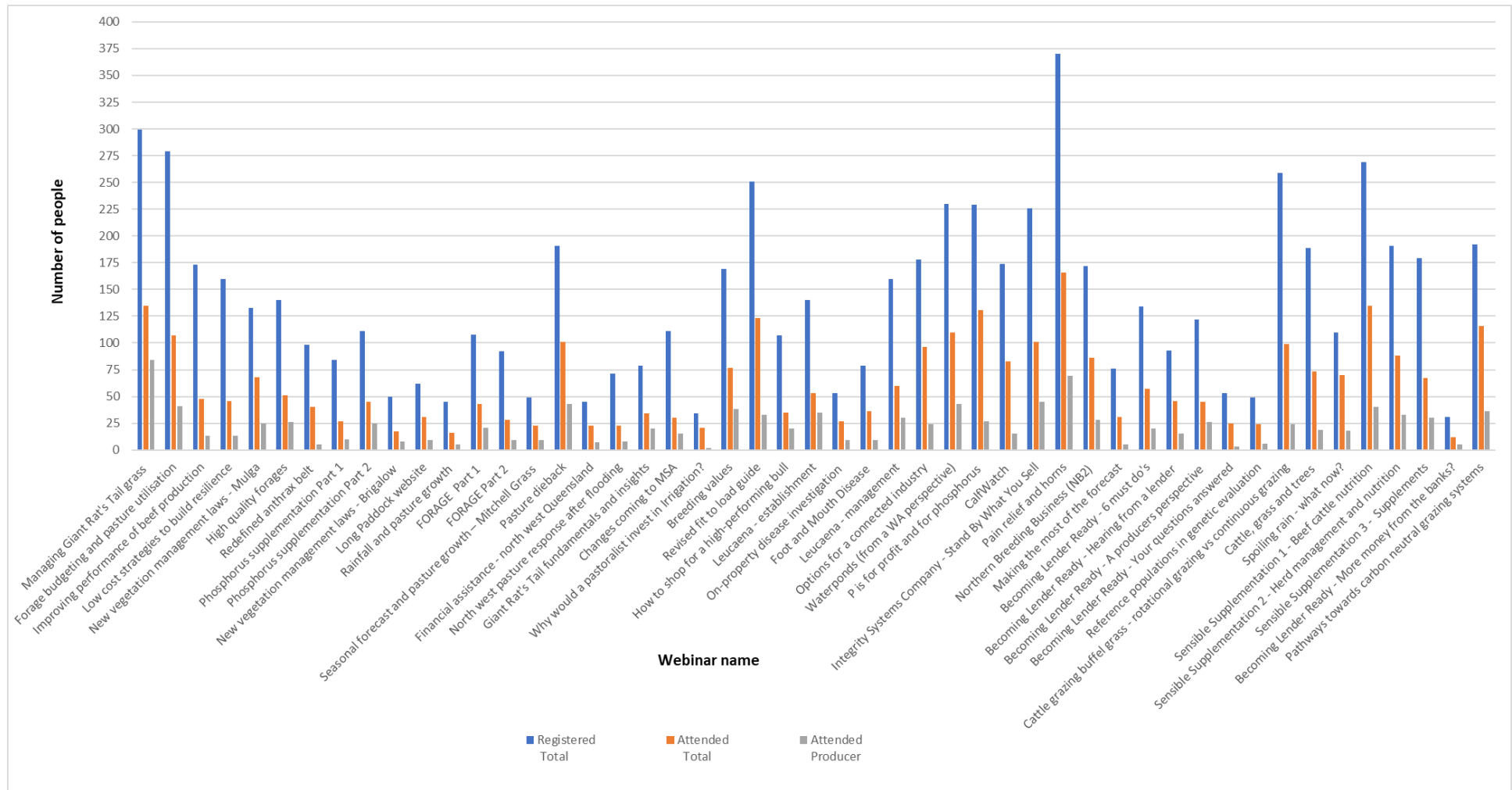


Figure 7. Improved knowledge and satisfaction with FutureBeef webinar survey respondents (July 2017 to January 2022)

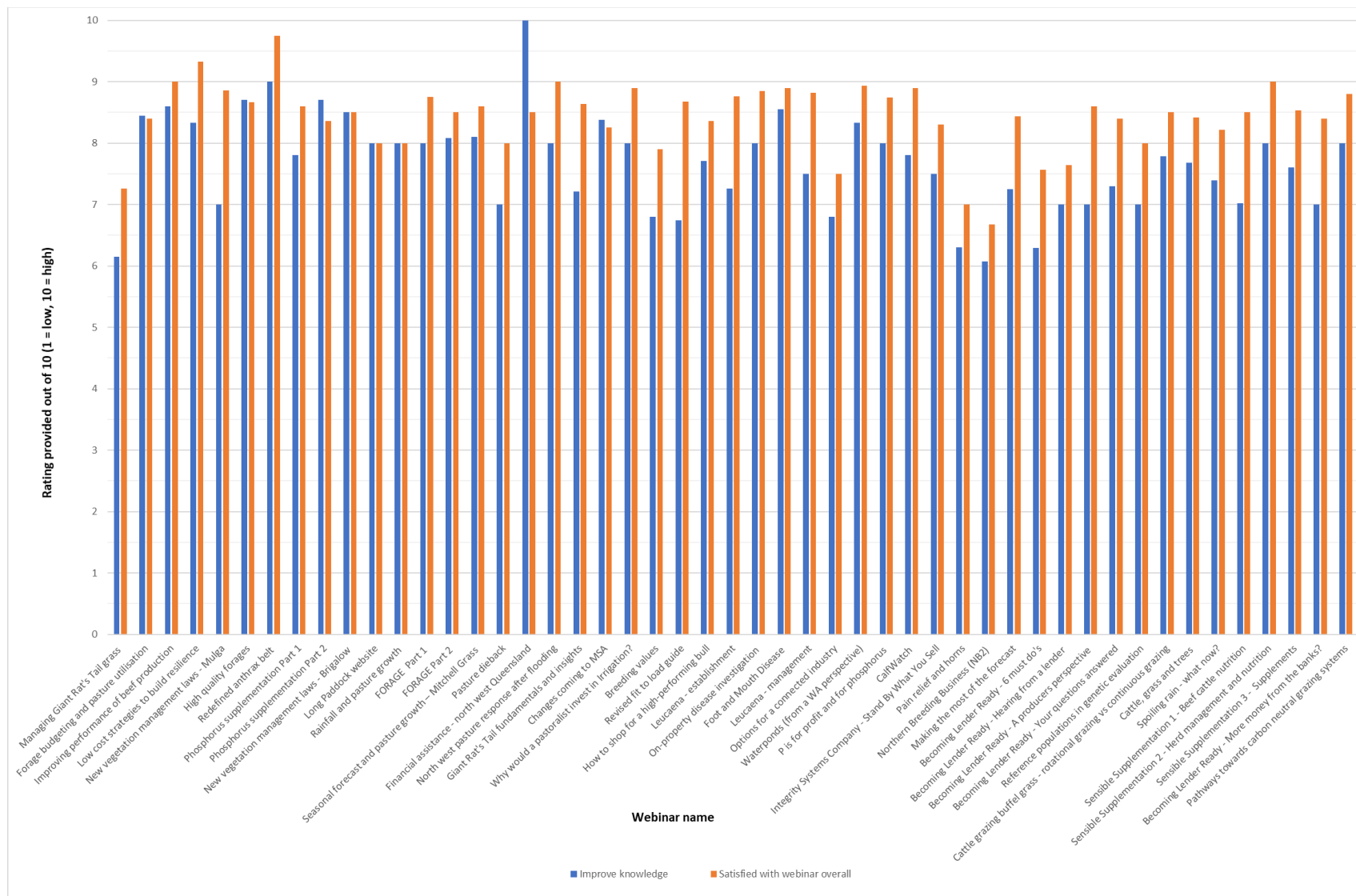
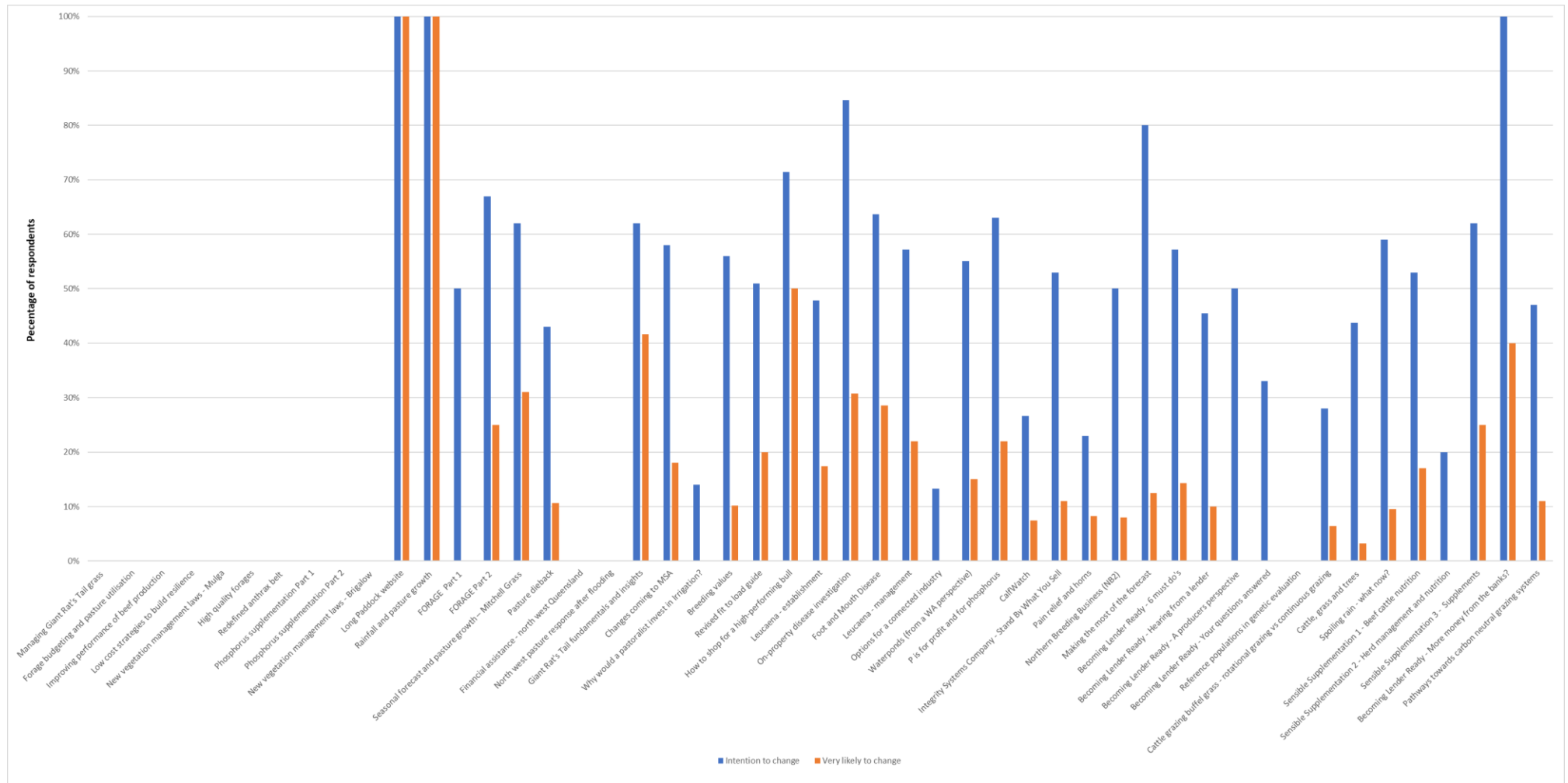


Figure 8. FutureBeef webinar survey respondent’s intention to make a practice change and those very likely change (July 2017 to January 2022)



* Note this metric was only introduced in October 2018, hence webinars prior to this do not have any data recorded

Approximately two-thirds of survey respondents in the external evaluation had accessed the live or recorded versions of FutureBeef webinars. Importantly, a significant proportion did access the recorded versions for various reasons. Timing and/or internet access was the most common reason given for not accessing the live webinars. There was only a small number of respondents that were not interested in webinars. Service providers tended to access the webinars at a higher rate (see Table 9).

Table 9. Proportion of survey respondents that access or view FutureBeef webinars

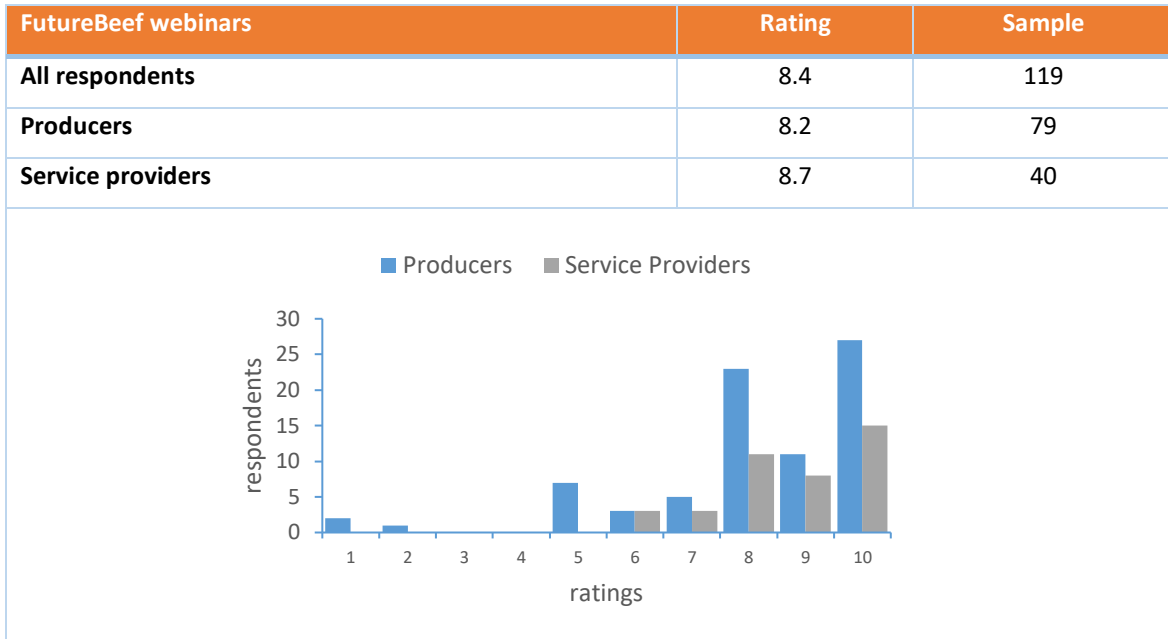
FutureBeef webinars	<ul style="list-style-type: none"> • Yes, I access or view the live webinars. • Yes, I access the recorded versions via the website or YouTube channel. • Yes, but rarely. 	<ul style="list-style-type: none"> • No, the topics have not interested me. • No, the timing or my internet access prevents me from using this product. • No, did not know about them. • No (other reasons).
All respondents	124 (67%)	62 (33%)
Producers	81 (62%)	50 (38%)
Service providers	43 (78%)	12 (22%)

Reason	Producers	Service providers
Yes, I access or view the live webinars	51	26
Yes, I access the recorded versions via the website or YouTube...	29	16
Yes, but rarely	1	1
No, the topics have not interested me	6	1
No, the timing or my internet access prevents me from using...	37	10
No, did not know about them	2	0
No (other reasons)	5	1

The ratings on a scale from 1 (not at all useful) to 10 (very useful) were consistently high for the FutureBeef webinars (**Error! Reference source not found.10**), with an average rating of 8.4. Approximately one-third of respondents rated webinars as a 10 and less than 5% rated them lower than 5. Service providers rated webinars higher than producers.

In general webinars are seen as convenient, interactive and well presented. Given the remoteness of many northern beef industry stakeholders, reducing isolation and improving access to learnings from others is a key adoption positive. There were virtually no negatives for webinars (apart from internet connectivity limitations). While webinars rated well, and many viewers appreciated the opportunity to catch up on webinars at a time of their choosing and to re-watch them, there were several comments that the webinars were delivered at an inconvenient time and that *'access to recordings would be great.'* This indicates a need to not just advise of upcoming webinars, but also highlight that recording of past webinars are available on the FutureBeef website and YouTube channel. It was also suggested that an easier way to find the webinar recordings is needed.

Error! Reference source not found. **10. Average rating assigned to FutureBeef webinars, including number of observations by rating**



4.5.2 Webinar recordings

Forty-six (of 49) FutureBeef webinars have been recorded (see Appendix 1) and saved on the FutureBeef YouTube channel and uploaded to the FutureBeef website. Three webinars were not recorded or made public at the request of the presenters. There has been a total of 27,261 views of these recordings and a total watch time 3234 hours.

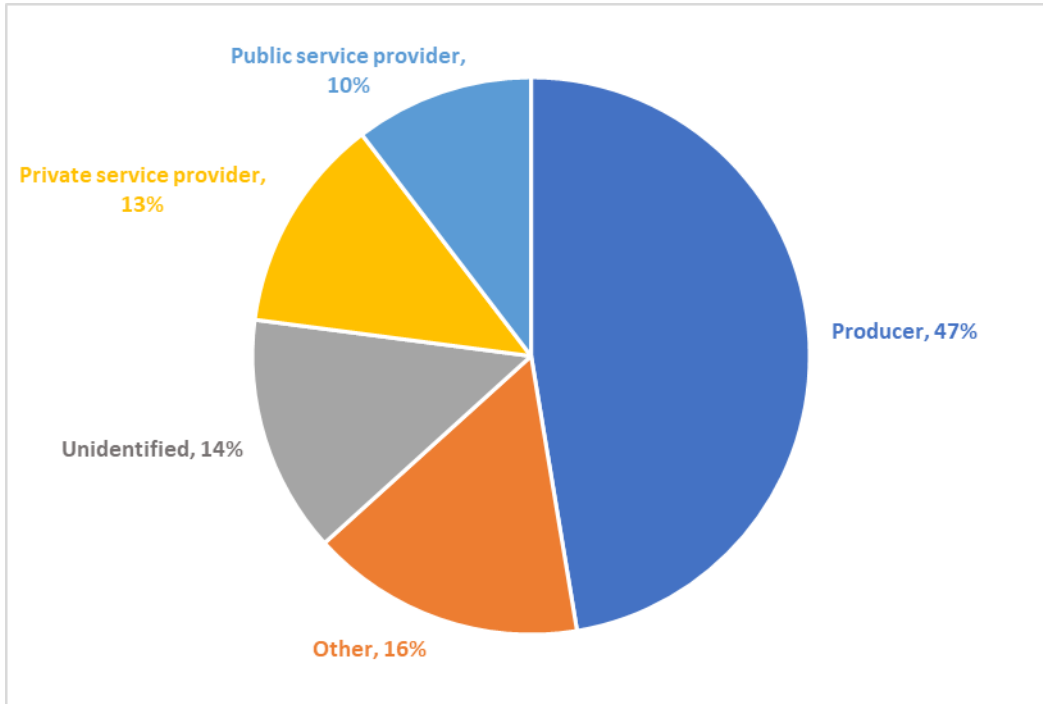
More detailed data on these webinar recordings is summarised in Appendix 1. The average view duration is low (approximately 7 minutes) compared to the entire recording length (average 38 minutes). However, the webinar recordings are saved as both the entire recording for people to watch as well as a playlist so viewers can easily jump to the section of interest. This allows people to only watch a small section of the webinar rather than the whole recording.

4.6 eBulletin

The FutureBeef eBulletin is a free monthly publication, containing information about project updates, upcoming events, the availability of new publications and useful tools, as well as other relevant northern beef industry information. Between July 2017 and January 2022, 54 editions of the eBulletin have been published to 6288 subscribers, with an average open rate of 32.7% and click rate of 8.6%. The main role or occupation of the current eBulletin subscribers is highlighted in Fig. 9, almost half are producers and a quarter service providers.

Figure 9. Main role of FutureBeef eBulletin subscribers

Source: MailChimp analytics



The number of subscribers, number of articles, total opens, open rate, clicks and click rate are summarised in Table 11. Figure 10 visually demonstrates the trend in subscribers, open rates and click rates compared to industry averages (industry average open rate for similar agricultural e-newsletters is 33% and click rate is 4.7%).

Error! Reference source not found. **11. FutureBeef eBulletin metrics (July 2017 to January 2022)**

Issue	Date published	Subscribers	No. of articles	Total opens	Open rate (%)	Total clicks	Click rate (%)
59	5 Jul 17	3297	7	1204	37.5	375	11.6
60	1 Aug 17	3336	7	1158	35.7	241	7.3
61	5 Sep 17	3511	8	1325	38.6	441	12.8
62	7 Oct 17	3608	7	1302	37.2	317	9
63	7 Nov 17	3649	7	1162	32.8	241	6.8
64	5 Dec 17	3715	9	1183	33.2	309	8.6
65	2 Jan 18	3669	8	1276	35.8	397	11
66	6 Feb 18	3711	8	1129	30.8	294	8
67	6 Mar 18	3736	9	1274	34.5	355	9.6
68	3 Apr 18	3812	8	1282	34.1	347	9.2
69	9 May 18	3933	7	1317	33.9	278	7.2
70	5 Jun 18	4025	7	1369	34.8	394	9.9
71	4 Jul 18	4111	8	1413	34.9	375	9.3
72	20 Aug 18	4146	6	1294	32	241	5.9
73	12 Sep 18	4152	8	1332	32.7	345	8.4
74	5 Oct 18	4160	6	1404	33.9	322	7.8
75	7 Nov 18	4177	9	1314	31.6	292	7
76	10 Dec 18	4189	9	1265	30.4	317	7.6

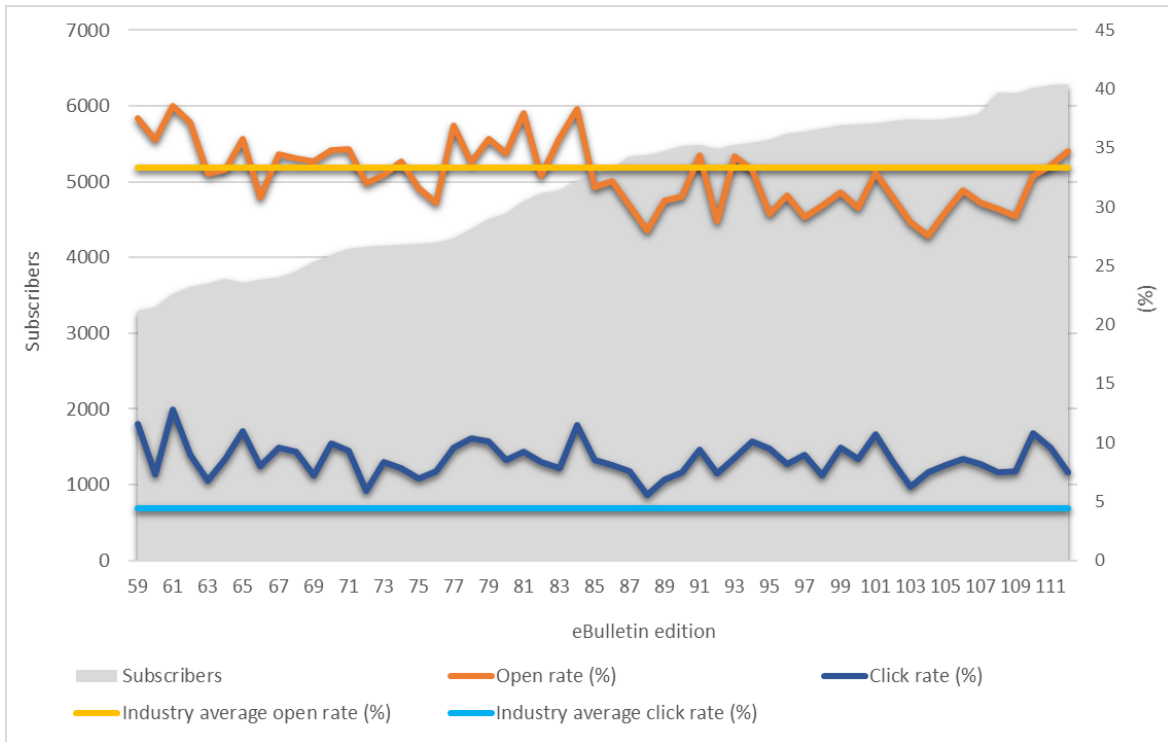
Issue	Date published	Subscribers	No. of articles	Total opens	Open rate (%)	Total clicks	Click rate (%)
77	8 Jan 19	4247	8	1554	36.9	404	9.6
78	12 Feb 19	4366	14	1462	33.8	451	10.4
79	12 Mar 19	4503	13	1596	35.8	449	10.1
80	4 Apr 19	4574	11	1571	34.6	387	8.5
81	7 May 19	4739	13	1784	38.0	433	9.2
82	4 Jun 19	4852	16	1568	32.6	403	8.4
83	4 Jul 19	4891	12	1742	35.9	377	7.8
84	9 Aug 19	5004	15	1904	38.3	569	11.5
85	5 Sep 19	5101	12	1607	31.7	430	8.5
86	1 Oct 19	5159	15	1652	32.2	417	8.1
87	20 Nov 19	5331	14	1598	30.1	404	7.6
88	12 Dec 19	5355	15	1495	28.0	298	5.6
89	10 Jan 20	5404	8	1645	30.5	369	6.9
90	9 Feb 20	5464	11	1668	30.9	406	7.5
91	13 Mar 20	5488	10	1864	34.4	512	9.4
92	9 Apr 20	5429	12	1551	28.8	397	7.4
93	11 May 20	5485	10	1872	34.3	472	8.7
94	9 Jun 20	5155	13	1826	33.2	555	10.1
95	9 Jul 20	5548	15	1623	29.4	523	9.5
96	17 Aug 20	5628	12	1729	31	457	8.7
97	3 Sep 20	5667	15	1639	29.1	505	9
98	29 Sep 20	5704	13	1706	30.1	409	7.2
99	4 Nov 20	5747	16	1773	31.2	547	9.6
100	3 Dec 20	5750	14	1706	29.9	494	8.6
101	12 Jan 21	5775	14	1884	32.9	613	10.7
102	4 Feb 21	5803	11	1766	30.8	483	8.4
103	4 Mar 21	5825	16	1659	28.7	361	6.3
104	12 Apr 21	5812	18	1598	27.6	316	7.5
105	14 May 21	5829	13	1718	29.6	472	8.1
106	2 Jun 21	5825	15	1827	31.4	501	8.6
107	1 Jul 21	5896	13	1783	30.4	479	8.2
108	5 Aug 21	6174	16	1825	29.8	457	7.5
109	3 Sep 21	6163	12	1787	29.2	467	7.6
110	14 Oct 21	6234	10	2015	32.6	668	10.8
111	18 Nov 21	6274	12	2075	33.5	595	9.6
112	21 Dec 21	6288	9	2160	34.7	363	7.5
Average			11	1578	32.7	413	8.6

^ATotal opens for the campaign, i.e. the individual eBulletin

Source: MailChimp analytics

Figure 10. FutureBeef eBulletin metrics (subscribers, open rates and click rates)

Source: MailChimp analytics



Most respondents to the external evaluation indicated that they actively read or scan the FutureBeef eBulletin with a slightly higher read rate amongst service providers when compared to producers (93 vs 89% respectively). Of note approximately 10% of the respondents indicated that they did not read or did not receive the eBulletin (see **Error! Reference source not found.12**).

Table 12. Proportion of survey respondents that read the FutureBeef eBulletin

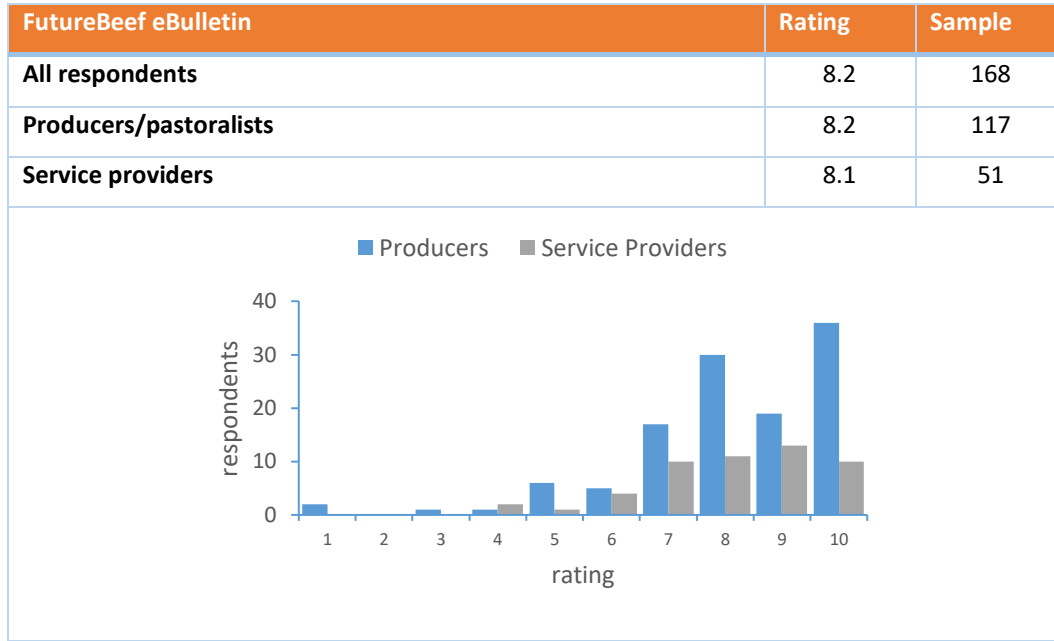
FutureBeef eBulletin	<ul style="list-style-type: none"> • Yes, I actively read articles and follow links • Yes, I scan articles of interest 	<ul style="list-style-type: none"> • No, I do not read the eBulletin • No, I don't receive the eBulletin
All respondents	179 (90%)	19 (10%)
Producers/pastoralists	125 (89%)	15 (11%)
Service providers	54 (93%)	4 (7%)

Category	Producers	Service providers
Yes, I actively read articles and follow links	72	27
Yes, I scan articles of interest	53	27
No, I don't read the eBulletin	7	2
No, I do not receive the eBulletin	8	2

On a scale of 1 (not at all useful) to 10 (very useful), respondents that had read the eBulletin rated it highly, with an average rating of 8.2, Table 13. There was no apparent difference between producers and service providers. The key comments provided by respondents to explain the rating they gave the FutureBeef eBulletin were:

- new information, ease of use and practical actions were the higher rating, generally more positive responses
- content that is neither useful nor relevant appears to be the most common negative or barrier to the eBulletin usefulness.

Table 13. Average rating assigned to FutureBeef eBulletins, including number of observations by rating



4.7 Social media

FutureBeef has three social media accounts; Facebook (facebook.com/futurebeef) Twitter (twitter.com/FutureBeef), and LinkedIn (linkedin.com/company/futurebeef/) which continue to grow.

4.7.1 Facebook

FutureBeef joined Facebook in January 2012, and as of January 2022, 10,761 people have ‘liked’ the FutureBeef profile on Facebook. Between July 2017 and January 2022, there have been 2626 posts published on the FutureBeef Facebook page. Engagement on FutureBeef Facebook over this period totals 69,790 and is made up of reactions, comments, shares and link clicks Fig. 11. Table 14 shows the four most engaging Facebook posts, highlighting the array of posts published.

Figure 21. FutureBeef Facebook engagement as reactions, comments, shares and link clicks between July 2017 and January 2022

Source: Hootsuite and AgoraPulse analytics

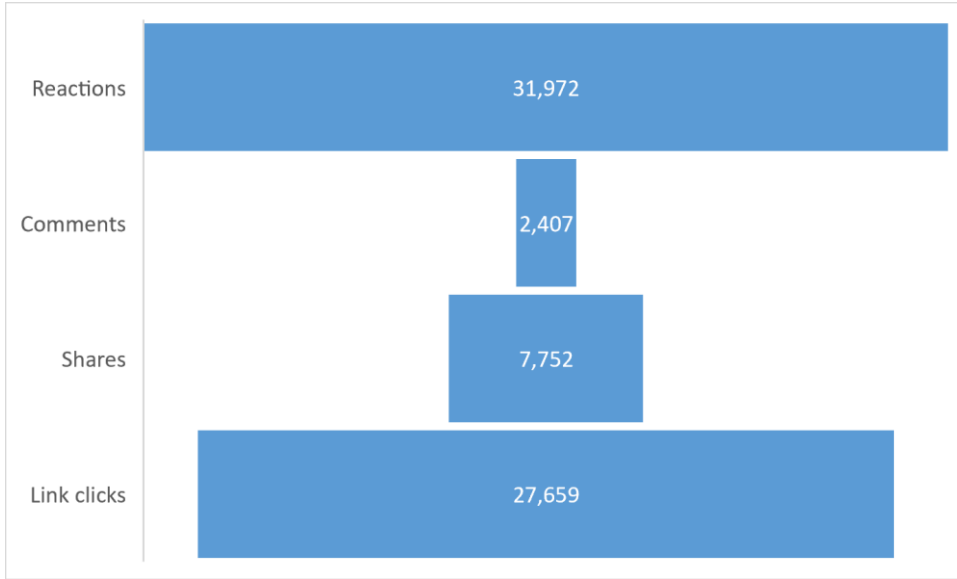


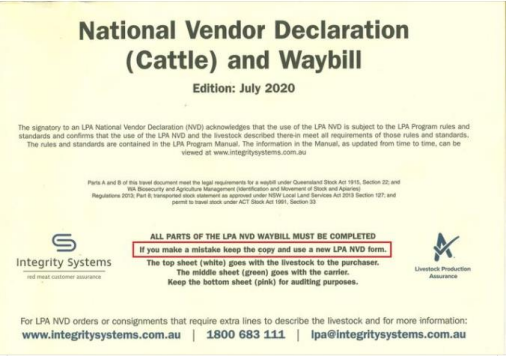


Table 14. The top 4 FutureBeef Facebook posts by organic reach (July 2021-January 2022)

Organic reach	Engaged users	Post
32,899	1828	<p>FutureBeef June 4, 2021 · 🌐</p> <p>Well ain't that the truth ?? #fridayfunny (Source: Missouri Beef Cattlemen Assn.)</p> <p>Everyone Get Out on the Road! Our Owners Leave on Vacation in less than an Hour!</p> <p>Will Bassett, Hayley McMillan and 164 others · 82 Comments 109 Shares</p> <p>Like Comment Share</p>

Organic reach	Engaged users	Post
6624	738	<p>FutureBeef June 25, 2021 · 🌐</p> <p>The Advancing Beef Leaders group in Central Queensland has been selected! The final group of 11 participants were selected from a strong pool of 31 applications.</p> <p>Please join us in congratulating the CQ group of Deborah Hatte, Ellie Carter, James Kent, Kristie Lisle, Matt Quinn, Rachael Cruwys, Ross Newman, Sarah Donovan, Steven Kirby, Stuart Buck, and Zoe Rickertt. For more information on the program follow this link: https://futurebeef.com.au/cqabl/</p>  <p>Rebecca Butcher and 33 others · 4 Comments 17 Shares</p> <p>Like Comment Share</p>
5544	435	<p>FutureBeef posted a video to playlist. November 6, 2021 · 🌐</p> <p>"There's no way to tell a bull is fertile just by looking at him" – Mark Madew from Cundarra Santa Gertrudis.</p> <p>Keen to learn about how they conduct a Bull Breeding Soundness Evaluation?</p> <p>Hear from veterinarian Jo Connolly about what's involved in bull testing and from Mark about why he wouldn't go back. ... See more</p>  <p>You and 43 others · 1 Comment 21 Shares</p> <p>Like Comment Share</p>
4891	381	<p>FutureBeef November 3, 2021 · 🌐</p> <p>Whoops! Won't do that again!</p>  <p>Sullivan Livestock November 2, 2021 · 🌐</p> <p>***UPDATE*** We have followed up on this issue for further clarification. And have now been advised that it is acceptable to change and initial an NVD by the pe... See more</p> <p>Kylie Herrod and 22 others · 25 Comments 13 Shares</p> <p>Like Comment Share</p>

Source: Hootsuite and AgoraPulse analytics

Between July 2017 and January 2022 there has also been 52,412 referrals (sessions) from Facebook (Table 15) to the FutureBeef website. Table 15 shows the pageviews, sessions, average session duration and pages per session on the website solely from Facebook posts directing users back to the FutureBeef website.

Table 15. Facebook referrals to the FutureBeef website

Metric	2021-2022*	2020-2021	2019-2020	2018-2019	2017-2018
Sessions	5656	6357	11,619	12,552	16,228
Pageviews	7043	8012	15,041	16,579	21,199
Average session duration (minutes)	0.46	0.51	1.08	1.01	0.49
Pages per session	1.25	1.26	1.29	1.23	1.31

* data only until January 2022

Source: Google analytics

Only 40% of the respondents to the external evaluation actively follow or occasionally look at the FutureBeef Facebook page, with the proportion rising to half among service providers (Table 16). A large proportion of the other 60% were respondents that did not actually use Facebook.

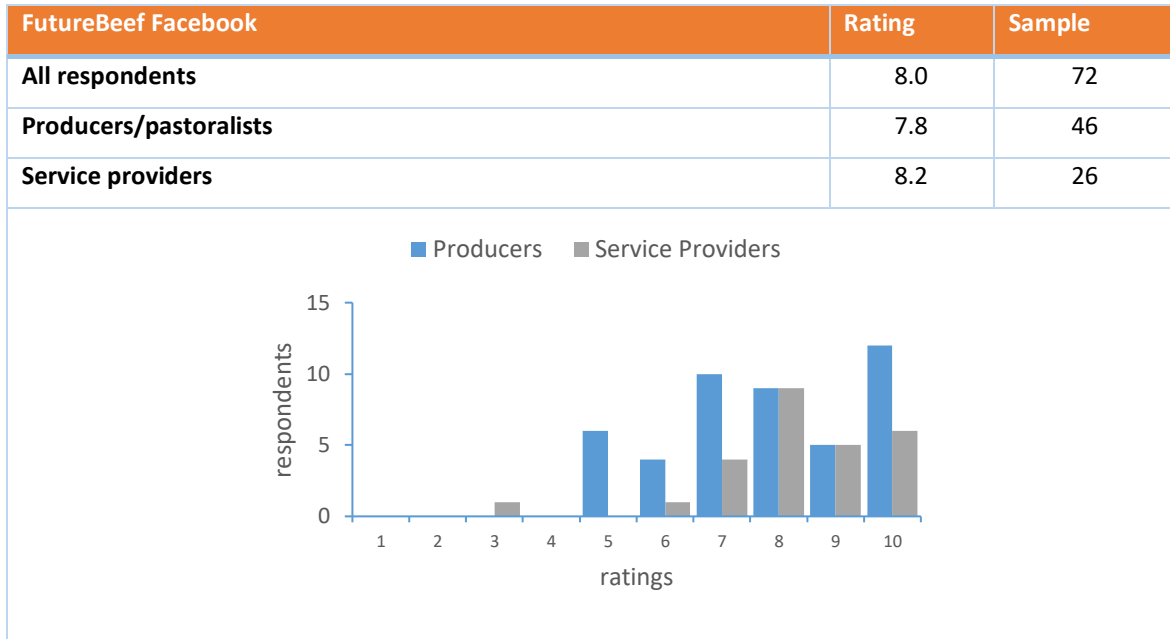
Table 16. Proportion of survey respondents that follow FutureBeef on Facebook

FutureBeef Facebook	<ul style="list-style-type: none"> Yes, I actively follow the Facebook page Yes, I occasionally look at the Facebook page 	<ul style="list-style-type: none"> No, I don't recall looking at the Facebook page No, I don't use Facebook
All respondents	76 (40%)	113 (60%)
Producers	48 (36%)	85 (64%)
Service providers	28 (50%)	28 (50%)

Response Category	Producers	Service providers
Yes, I actively follow the Facebook® page	21	11
Yes, I occasionally look at the Facebook® page	27	17
No, I don't recall looking at the Facebook® page	41	14
No, I don't use Facebook®	44	14

Survey respondents that do follow the FutureBeef Facebook page gave it a relatively high rating (8.0) with service providers rating it a little higher than producers, Table 17. The main reasons for these high ratings were that it is useful, easy to access, up to date, good content and a stepping-stone to the website.

Table 17. Average rating assigned to FutureBeef Facebook, including number of observations by rating



4.7.2 Twitter

FutureBeef joined Twitter in May 2012 and as of January 2022, there were 6784 followers. Between July 2017 and January 2022, there have been 2066 tweets on the FutureBeef twitter account.

Engagement with FutureBeef on Twitter over this period (July 2017 to January 2022) totals 12,503 and is shown in Fig. 12. Table 18 shows the four tweets that attracted the most engagement.

Figure 12. FutureBeef Twitter engagement as reactions, comments, retweets and link clicks between July 2017 and January 2022

* Number of replies is 154

Source: Hootsuite and AgoraPulse analytics

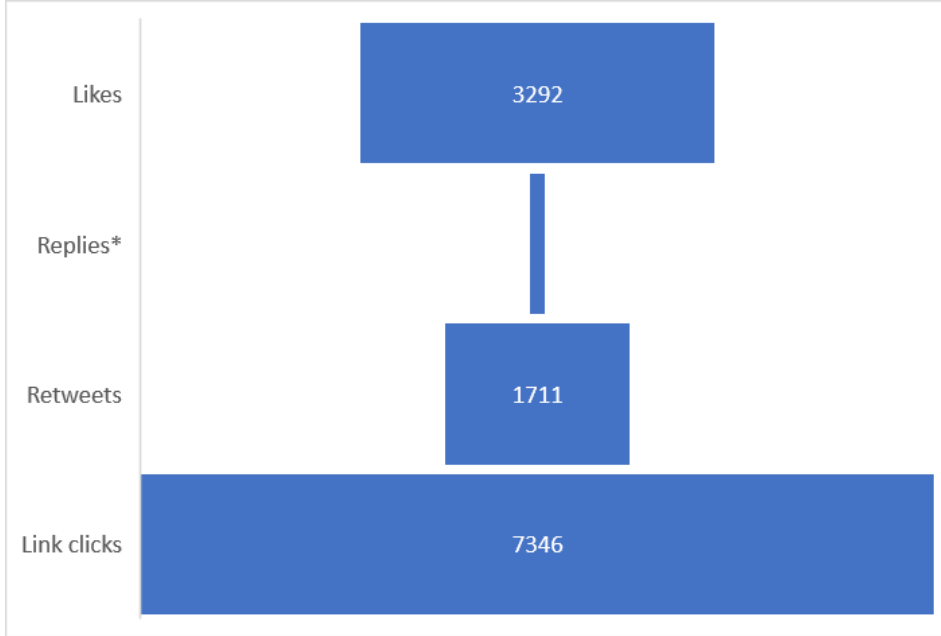





Table 18. The top four FutureBeef Tweets (January 2021 – January 2022)

Organic reach	Total engagements	Tweets
6024	172	

Organic reach	Total engagements	Tweets
2376	133	 <p>FutureBeef @FutureBeef</p> <p>This is how much grass a non-lactating cow would need to eat in a day to maintain condition (approximately 2% of her body weight).</p> <p>bit.ly/3xFYpEI</p> <p>#beefcattle #nutrition #productivity #profitability #efficiency #healthyhappycattle</p> <p>2:08 PM · Oct 13, 2021 · Agorapulse app</p> <p>View Tweet activity</p> <p>7 Retweets 18 Likes</p>
3564	113	 <p>FutureBeef @FutureBeef</p> <p>Fantastic turn out at the Livestock Advisor Update in Brisbane today.</p> <p>Currently listening to Dr Dennis Poppi explain why we need science, how to read research results critically, where to source credible information, and more.</p> <p>#lovingthis</p> <p>Livestock Advisor Updates and 2 others</p> <p>10:40 AM · Nov 29, 2021 · Twitter for iPhone</p> <p>View Tweet activity</p> <p>2 Retweets 2 Quote Tweets 21 Likes</p>

Organic reach	Total engagements	Tweets
4861	94	

Between July 2017 and January 2022 there were 5689 referrals (sessions) from Twitter to the FutureBeef website. Table 19 shows the pageviews, sessions, average session duration, and pages per session on the website solely from Tweets directing users back to the FutureBeef website.

Table 19. Twitter referrals to the FutureBeef website

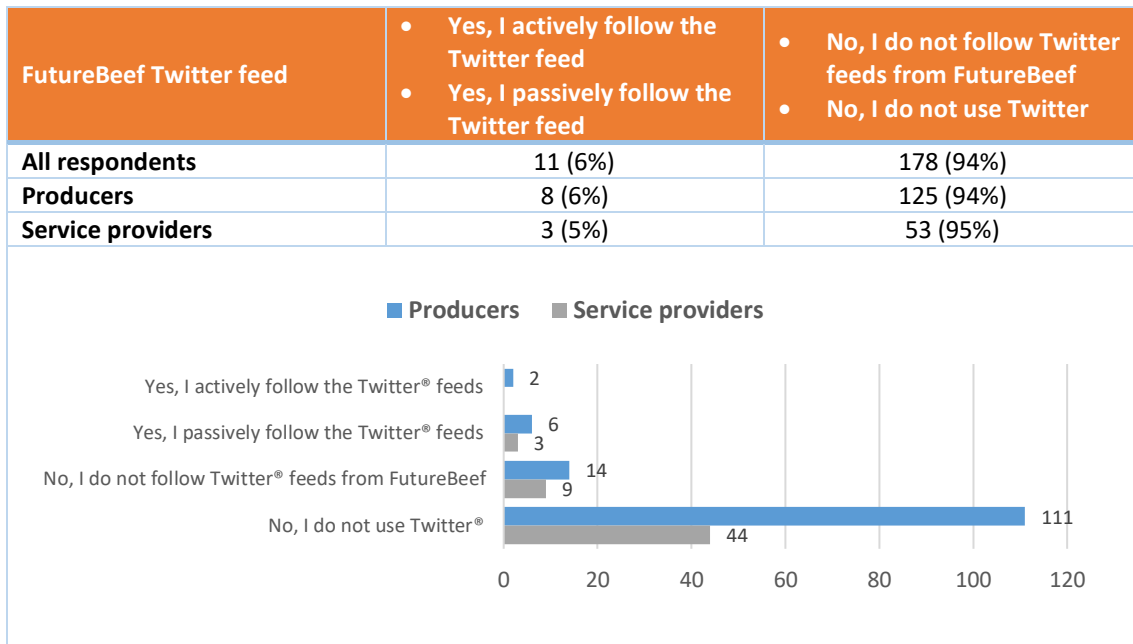
Metric	2021-2022*	2020-2021	2019-2020	2018-2019	2017-2018
Sessions	336	829	957	924	2643
Pageviews	554	1091	1905	1540	3364
Average session duration (minutes)	1.31	0.45	2.33	1.36	0.35
Pages per session	1.65	1.32	1.99	1.67	1.28

* data only until January 2022

Source: Google analytics

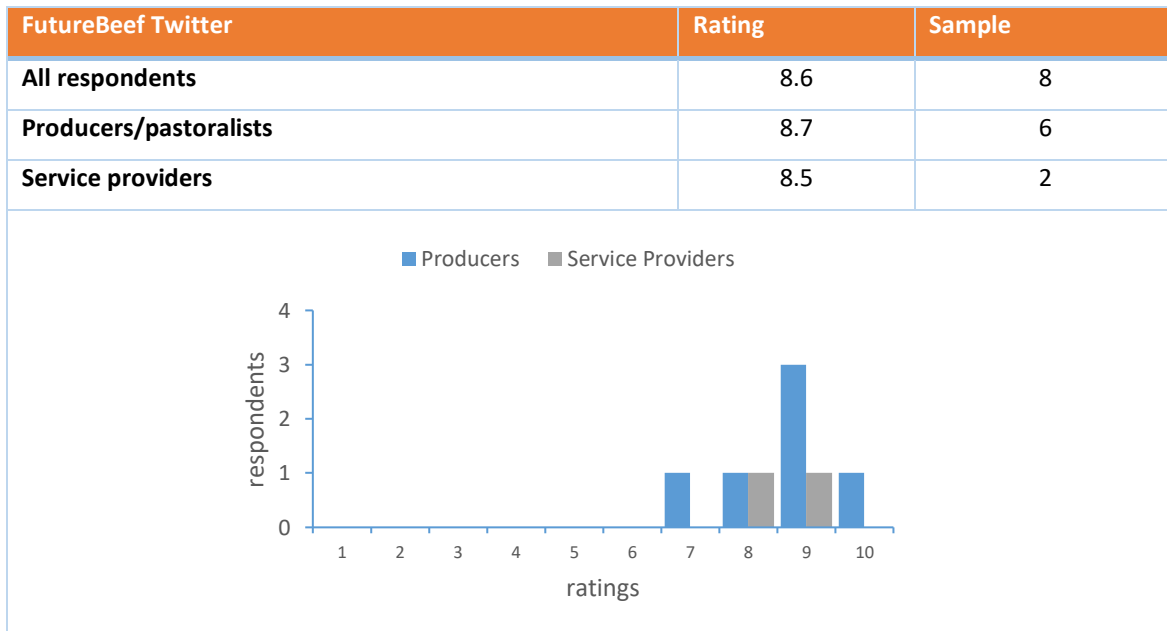
Only six per cent of the respondents to the external evaluation follow FutureBeef on Twitter, Table 20. The vast majority (87%) of those not following FutureBeef tweets simply do not use Twitter.

Table 20. Proportion of survey respondents that follow FutureBeef on Twitter



Those few followers of the FutureBeef tweets rate it highly (Table 21). The main feedback was that it was a useful alert system (*‘Useful first alert to issues’*) and that it was *‘Short and to the point’*.

Table 21. Average rating assigned to FutureBeef Twitter, including number of observations by rating



4.7.3 LinkedIn

FutureBeef joined LinkedIn in June 2020, and as of January 2022, had 1276 followers and published 108 posts. Engagement with FutureBeef LinkedIn over this period totals 2765 and is shown in Fig. 13. Table 22 shows the four posts that attracted the most engagement.

Figure 13. FutureBeef LinkedIn engagement as reactions, comments, shares and link clicks June 2020 – January 2022

* Number of comments is 30

** Number of shares is 63

Source: Hootsuite analytics and AgoraPulse

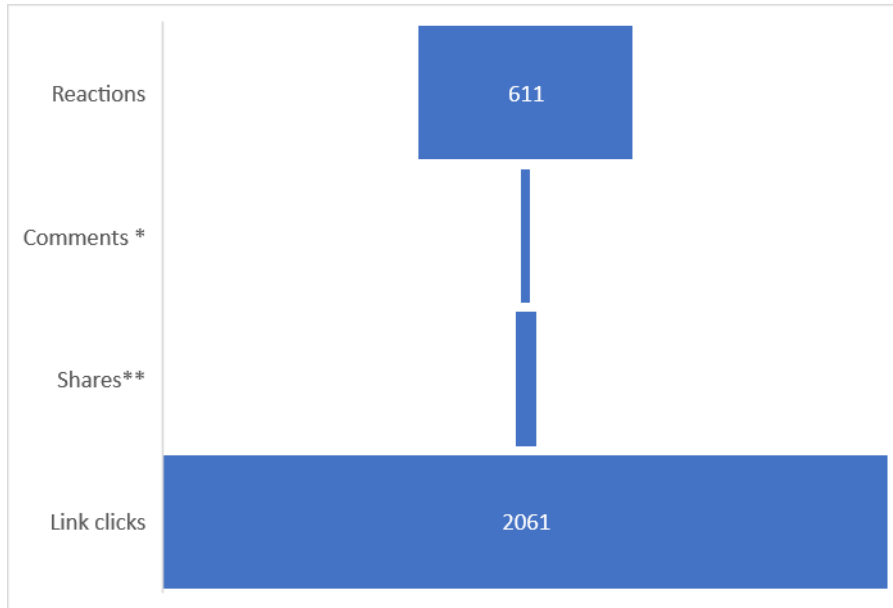


Table 22. The top four FutureBeef LinkedIn posts (January 2021 – January 2022)

Organic reach	Total engagement	Post
618	111	<div data-bbox="555 331 957 1265"> <p>FutureBeef 1,276 followers</p> <p>If you would like to be part of a new dynamic team focused on developing the north Australian pastoral industry in the Northern Territory, this is the job for you!</p> <p>There is an exciting opportunity to join the Northern Territory Department of Industry, Tourism and Trade's Livestock Industries team as an Extension Officer based in Katherine. The successful applicant will be joining a team with good experience and understanding of the northern cattle industry with a particular focus on extension, research and development. As a key member of the Livestock Industries team, they will be required to work collaboratively with internal and external colleagues to plan, coordinate and conduct extension activities aimed at improving the sustainable development of agricultural industries in the Katherine region.</p> <p>To be successful in this position, a bachelor's degree in agriculture, or equivalent qualification or experience, is required. This is to be supported by a demonstrated ability to coordinate extension activities, great interpersonal skills and encourage a safe and hardworking team environment. Applicants should have an interest in science, be passionate about agriculture, be self-driven and work well in a team.</p> <p>If this sounds like you, find out more here! https://lnkd.in/g/ghetWqef #Jobs #opportunity #agriculture #environment</p> <p>You and 6 others · 1 share</p> <p>Reactions</p> <p>Like Comment Share Send</p> </div>
802	109	<div data-bbox="555 1288 957 2004"> <p>FutureBeef 1,276 followers</p> <p>Thank you to everyone who swung by the combined AgForce Queensland and Department of Agriculture and Fisheries (Queensland) tent over the last two days at Westech! It was great to see you!</p> <p>To keep up-to-date with the latest beef and rangelands research relevant to northern Australia, subscribe to the monthly FutureBeef eBulletin: https://bit.ly/3DHKqJl</p> <p>Marc Lemman and 17 others</p> <p>Reactions</p> <p>Like Comment Share Send</p> </div>

Organic reach	Total engagement	Post
435	80	<div data-bbox="555 271 959 1003"> <p>FutureBeef 1,276 followers 8mo · 🌐</p> <p>Northern Territory Government's Livestock Industries team have been full steam ahead across the Territory of late with many projects in full swing!</p> <p>Read project updates from the reducing calf loss from exposure and selected Brahman projects, and the pain relief and water medication producer demonstration sites: https://bit.ly/3xx49Tg</p> <p>#agriculture #livestock #beefcattle</p> <p>Megan Munchenberg and 2 others · 1 comment · 1 share</p> <p>Reactions</p> <p>Like Comment Share Send</p> </div>
586	76	<div data-bbox="555 1048 959 2004"> <p>FutureBeef 1,276 followers 8mo · 🌐</p> <p>In the August eBulletin:</p> <ul style="list-style-type: none"> * Potential Indian couch invasion area revised to 14 million hectares * Mosaic agriculture guide from Department of Primary Industries & Regional Development (DPIRD) * Research update from the Livestock Industries team Northern Territory Government * Cementing the foundations for CN2030 with Department of Agriculture and Fisheries (Queensland) * Eliminating parasites like a boss with ParaBoss thanks to Meat & Livestock Australia * GrazingFutures roadshow recap thanks to Northern Gulf Resource Management * Save the date! Cattle, Carbon and Country at Kidman Springs * The latest pasture dieback research and more! <p>Read the August eBulletin: https://lnkd.in/g3XFhjxp</p> <p>If it's beef related or if it's rangelands related, you'll find the latest in the monthly FutureBeef eBulletin. To subscribe, click here: https://bit.ly/3BczLgN</p> <p>Roger Hill and 2 others</p> <p>Reactions</p> <p>Like Comment Share Send</p> </div>

Between July 2017 and January 2022 there were 815 referrals (sessions) from LinkedIn to the FutureBeef website. Referrals to the FutureBeef website from LinkedIn was occurring prior to the creation of the FutureBeef account, as others were posting links to the FutureBeef website that were being clicked on by other users. Table 23 shows the pageviews, sessions, average session duration, and pages per session on the website solely from LinkedIn posts directing users back to the FutureBeef website.

Table 23. LinkedIn referrals to the FutureBeef website

Metric	2021-2022*	2020-2021	2019-2020	2018-2019	2017-2018
Sessions	545	135	23	79	33
Pageviews	736	152	35	105	40
Average session duration (minutes)	1.32	0.19	1.17	0.56	0.09
Pages per session	1.35	1.13	1.52	1.33	1.22

* data only until January 2022

Source: Google analytics

Only a very small number of the respondents to the external evaluation (8%) see FutureBeef's LinkedIn posts, Table 24. Participation by producers (5%) is much lower than by service providers (14%), most likely reflecting the target audience of this social media platform.

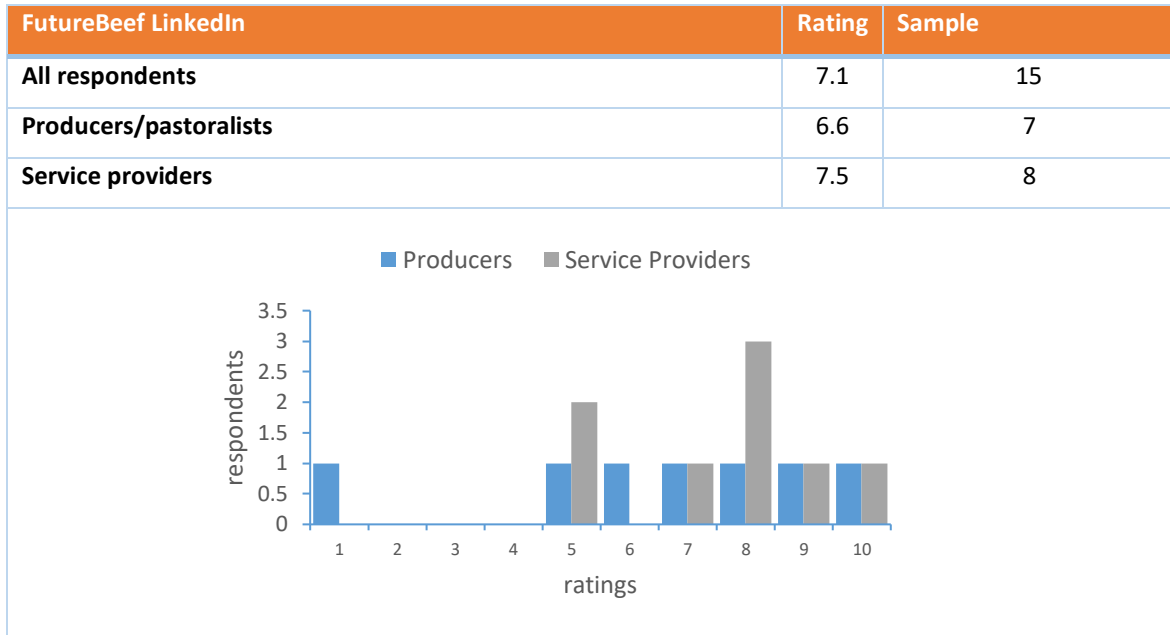
Table 24. Proportion of survey respondents that follow FutureBeef on LinkedIn

FutureBeef LinkedIn	<ul style="list-style-type: none"> Yes, I have added FutureBeef as a link Yes, I see the occasional FutureBeef posts 	<ul style="list-style-type: none"> No, I don't see FutureBeef posts No, I don't use LinkedIn
All respondents	15 (8%)	173 (92%)
Producers	7 (5%)	125 (95%)
Service providers	8 (14%)	48 (86%)

Response Category	Producers	Service providers
Yes, I have added FutureBeef as a link	4	2
Yes, I see the occasional FutureBeef posts	3	6
No, I don't see FutureBeef posts	34	19
No, I don't use LinkedIn®	91	29

Average ratings for FutureBeef's LinkedIn posts were moderate (7.1), see Table 25. However, this result is problematic because of the low sample size (n=15) and because several respondents admitted to not having seen the FutureBeef posts on LinkedIn. Only one respondent gave the highest rating for the LinkedIn posts indicating it was his main 'e-Access' entry point.

Table 25. Average rating assigned to FutureBeef LinkedIn, including number of observations by rating



4.7.4 Digital communications advertising strategy

The results of the social media digital communications advertising strategy are highlighted in Table 26, with 53 paid advertisements produced at a cost of \$10,231, with 333,442 engagements. While Table 27 shows some examples of the social media ads.

As Facebook advertising preferences changed, FutureBeef ads adapted in response, by creating similar ads with different target engagement types. For example, two types of ads had the aim of increasing eBulletin subscribers, one using a Facebook form (On-Facebook leads) and the other with a link to the usual eBulletin subscription template. While Facebook prioritises ads that feature in-app activities such as On-Facebook leads, many people in our target audience don't feel comfortable providing their personal details to Facebook due to privacy concerns. The varied engagement type social media advertising strategy was also applied to video, event, and podcast promotion.

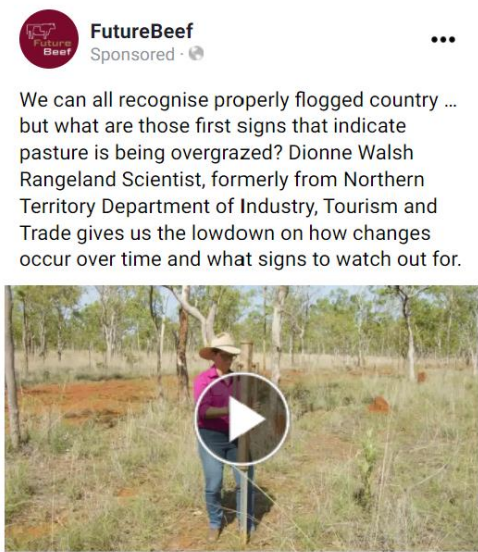
When creating an ad on all the social media platforms, you are required to allocate a goal to your campaign. The platform will then share your ad with people who are most likely to engage with your content. An example of this is when promoting the FutureBeef videos—in some ads 'ThruPlays' were prioritised (Facebook shows the ad featuring the video to people who are likely to watch videos within the target audience). While in other ads, link clicks were prioritised to reach those users who prefer to watch videos on YouTube.





Ad creation on LinkedIn and Twitter are much less user friendly than Facebook.

Table 26. Social media advertising expenditure and return on investment

Social media platform	Ad type	Number of ads	Target engagement type	Engagements	Amount spent (exc GST)	Cost per engagement (\$)
Facebook	eBulletin subscriber	1	On-Facebook leads	286	\$1000	\$3.50
		5	Link clicks	2123	\$678	\$0.32
	Event	1	Event response	26	\$50	\$1.92
		4	Link clicks	468	\$465	\$0.99
		1	Engagement	140	\$100	\$0.71
	Follower campaign	6	Applications	16	\$100	\$6.26
		7	Page likes	1111	\$2334	\$2.10
		2	Link clicks	410	\$150	\$0.37
		1	Engagement	1133	\$179	\$0.16
	Video promo	5	Reach	295,361	\$991	\$0.00
		5	Thru plays	29,105	\$1321	\$0.05
		1	Message conversations	2	\$100	\$50.00
	Podcasts	3	Link clicks	1105	\$825	\$0.75
		1	Engagement	1611	\$275	\$0.17
LinkedIn	Follower campaign	1	Page likes	32	\$250	\$7.81
		2	Link clicks	418	\$711	\$1.70
	Podcasts	4	Link clicks	63	\$348	\$5.52
Twitter	Follower campaign	3	Page likes	32	\$353	\$11.03
Total		53		333,442	\$10,231	

Table 27. Examples of social media advertisements

Platform	Metric	Engagement	Post
Facebook	Video reach	92,976	 <p>FutureBeef Sponsored · 🌐</p> <p>We can all recognise properly flogged country ... but what are those first signs that indicate pasture is being overgrazed? Dionne Walsh Rangeland Scientist, formerly from Northern Territory Department of Industry, Tourism and Trade gives us the lowdown on how changes occur over time and what signs to watch out for.</p>

Platform	Metric	Engagement	Post
Facebook	Video Thru plays	6111	 FutureBeef Sponsored · 🌐 <p>Why foetal age? It allows you to tighten your calving pattern and strategically wean in poor seasons. Hear from father daughter duo Michael & Jessi Flynn, veterinarians and graziers from Charleville about why they've been foetal aging at Valera Vale since the 1980's</p> 
LinkedIn	Link click	418	 FutureBeef 1,460 followers 2w · 🌐 <p>WEBINAR: Reduce methane emissions while increasing business profitability — 22 February, 12.30pm (AEST)</p> <p>The 'Carbon Neutral Grazer Network' is proud to have Dr Steve Wiedemann of Integrity Ag & Environment, provide practical steps you can take now to reduce emissions from your grazing business.</p> <p>Join Steve to expand your knowledge and awareness of the practical, win-win options you can take now to reduce methane emissions while increasing the profitability of your grazing business.</p> <p>Click here to register: https://bit.ly/3uRcFeX Department of Agriculture and Fisheries (Queensland) Clean Energy Regulator Meat & Livestock Australia Cattle Council of Australia AgForce Queensland</p>  <p>👤 Kate Bermingham and 34 others 3 comments</p>

4.8 Podcasts

Based on feedback from stakeholders, FutureBeef decided to trial a podcast (The FutureBeef Podcast). The podcast explores issues and management strategies relevant to the north Australian beef industry, but in a conversational style. Jayne Cuddihy was engaged, and three podcasts have been produced:

- A phosphorus affair! – Mick Sullivan and Kylie Hopkins (27:56 minutes)
- Making your pasture make you money – Joe Rolfe, Bernie English, Craig Lemin and Kendrick Cox (38:08 minutes)
- Inconceivable! How conception drives production – Roxanne Morgan and Dave Smith (32:13 minutes).

The podcasts are available on the FutureBeef website <https://futurebeef.com.au/futurebeef-podcast/> as well as the major podcast channels: Spotify, Apple, Google and Pocketcasts. The FutureBeef podcasts were only published in mid to late February and to date (3 March 2022) have received 161 listens:

- A phosphorus affair! (72)
- Inconceivable! How conception drives production (51)
- Making your pasture make you money (38).

To date 99% of the listeners are from Australia, 62% are male and 33% female and 51% are in the age group 28-44 years old.

The podcasts have been promoted on the FutureBeef social channels and in the monthly eBulletin.

Jayne also delivered a 1.5-hour online podcast training session for the FutureBeef team and other interested staff. Twelve people attended from Queensland, Western Australia and Meat & Livestock Australia. The training was pitched at an introductory level and covered:

- purpose and clarity around why you are making a podcast
- equipment and software
- format and quality
- planning and preparing talent
- interview techniques.

The training was recorded so that those who were unavailable can watch it at their convenience, as well as to provide a resource to be referred back to at a later date.

4.9 Multimedia

4.9.1 Videos

DAF engaged an independent, professional company (Sound Images) to produce 15 separate educational videos, each 5-7 minutes in length, to promote industry best management practices for beef producers and showcase regional extension staff. The videos feature producers and extension staff talking about best management practices applied on-property. The video topics are:

Queensland

North Queensland

1. Wet season spelling
2. How to make an informed decision in changing conditions
3. Using decision dates in grazing management
4. Getting the best out of your weaners
5. Stylos to boost beef production
6. Managing land condition

South west Queensland

7. Pregnancy testing for forward planning
8. Foetal ageing for targeted breeder management
9. Vaccination best practice for healthy herds

Northern Territory

10. Using fire as a management tool in grazing lands
11. Phosphorus supplementation in Northern Australia
12. Signs of overgrazing

Western Australia

13. How to do a Bull Breeding Soundness Evaluation
14. Transporting cattle safely
15. How to age cattle by their teeth

The film company (Sound Images) and FutureBeef staff have completed filming in all three states. Filming was undertaken at various locations across north and south west Queensland, the Katherine region in the Northern Territory and Moora region in Western Australia. The project team were pleased to have the opportunity to film in each state given travel challenges incurred through COVID-19 restrictions.

All 15 videos are finalised and publicly available. To date these videos have had a total of 5789 views on YouTube and a reach of 59,955 on Facebook and 957 engagements (likes, comments and shares), Table 28.

The videos appear on both the FutureBeef YouTube channel and website. They are also uploaded to Facebook and promoted through Twitter and LinkedIn. There has been a small budget for some paid social media advertising to increase their reach to our target audience across Northern Australia (Table 26). The videos have also been promoted through the eBulletin and newspaper features. The same process will be followed with the remaining three videos.

Completed videos will also be made available on USB sticks for project partners staff to use at upcoming events. Not only will this increase promotion of FutureBeef and the videos but more broadly awareness of the role our project plays in core extension delivery. This will also be important to increase viewers and awareness in areas with connectivity issues.

Table 28. Video metrics on YouTube and Facebook

Video	YouTube		Facebook		
	Date uploaded	Views	Date uploaded	Reach	Likes Comments Shares
Using decision dates in grazing management (7:44) https://youtu.be/rTB1DPQJ9o0	1 Dec 2021	144	21 Feb 2022	3287	9
Pregnancy testing for forward planning (4:39) https://youtu.be/9rsXjqEVNhM	18 Nov 2021	189	21 Feb 2022	4780	24
Vaccination best practice for healthy herds (4:17) https://youtu.be/-akDTXl0d6k	18 Nov 2021	573	21 Feb 2022	1129	34
Wet season spelling (6:08) https://youtu.be/ONAavPAZ0hc	18 Nov 2021	266	20 Nov 2021	7752	75
How to make an informed decision in changing conditions (2:36) https://youtu.be/4KFUttiQ1xM	18 Nov 2021	75	3 Dec 2021	4674	40
Foetal ageing for targeted breeder management (6:31) https://youtu.be/cm_nXoyQ9uc	10 Nov 2021	102	21 Feb 2021	3294	67
Transporting cattle safely (5:58) https://youtu.be/x_4DAOHzvnQ	5 Oct 2021	248	30 Oct 2021	10859	203
How to do a Bull Breeding Soundness Evaluation (5:08) https://youtu.be/QKV96kvjEfs	5 Oct 2021	718	6 Nov 2021	9210	180
Using fire as a management tool in grazing lands (7:12) https://youtu.be/E56rE6lzTu4	5 Oct 2021	133	12 Nov 2021	2738	111
Phosphorus supplementation in Northern Australia (5:13) https://youtu.be/gHPTOLCD9J8	5 Oct 2021	517	9 Oct 2021	3860	95
Signs of overgrazing (6:48) https://youtu.be/0kRRqjTPHr8	5 Oct 2021	245	21 Feb 2022	1333	48
How to age cattle by their teeth (6:50) https://youtu.be/4Df7p6GQXmQ	28 Sept 2021	2332	10 Oct 2021	7039	71
Managing land condition https://youtu.be/lu0jj9h29xo	16 Mar 2022	32	NA	NA	NA
Stylos to boost beef production https://youtu.be/mgyOnh3SuyQ	16 Mar 2022	175	NA	NA	NA
Getting the best out of your weaners https://youtu.be/t9Qpu9VyYcA	16 Mar 2022	40	NA	NA	NA

NA – not uploaded to Facebook yet.

4.9.2 YouTube

The FutureBeef YouTube channel was created in November 2011 and contains 280 publicly available videos, of which 167 have been uploaded since July 2017. During the last four and a half years the channel has received 157,851 views, with a total watch time of 13,424 hours. The annual metrics are summarised in Table 29, while the top 10 videos since July 2017 and their metrics are shown in Table 30.

The top 5 locations of YouTube channel viewers are shown in Table 31, with no surprise with Australia being number 1. During the first six months of 2021-2022 the breakdown of people accessing the FutureBeef YouTube channel on different devices was: mobile phone (46% of views), computer (37% of views), TV (11.5% of views) and tablet (5.5% of views). Interesting to note is the sharp decline in the use of computers as the primary device during the last two financial years and the subsequent increase in mobile phone usage. Tablet use has remained reasonably similar (Fig. 14).

Table 29. FutureBeef YouTube channel metrics (July 2017 to January 2022)

Year	Views	Total watch time (hrs)
2017-2018	17,847	1367.7
2018-2019	21,883	1848.2
2019-2020	25,764	2462.1
2020-2021	61,504	5231.8
2021-2022*	30,606	2514.2

* data only until January 2022

Source: YouTube analytics

Error! Reference source not found.30. Top 10 FutureBeef YouTube channel videos by views (July 2017 to January 2022)

Video	Publication date	Duration (minutes)	Views	Total watch time (hrs)
1. Building water ponds with a road grader	7 April 2020	21.19	34,593	2940.3
2. Feedlot industry investment	20 February 2012	35.41	16,732	2203.2
3. How to raise poddy calves	3 July 2017	3.34	10,503	429.2
4. Virtual fencing: automated farming (E-Beef showcase #2)	6 July 2020	11.31	6564	355.0
5. ReproScan – early pregnancy testing in cattle (E-Beef showcase #2)	3 July 2020	11.22	3114	74.1
5. Changes coming to MSA: what cattle producers need to know	1 May 2019	34.18	2563	213.5
6. Crossbreeding for more profit with tropically adapted Bos taurus cattle	16 June 2015	49.36	2326	247.9
7. Establishing small seeded legumes in existing grass pastures	14 December 2015	65.17	1883	297.0
8. How to reliably establish leucaena	12 September 2019	43.56	1821	297.2
9. Grazing systems fact or fiction	2 December 2011	54.18	1752	215.2
10. Managing breeder condition	3 April 2012	11.16	1752	116.5

Source: YouTube analytics

Error! Reference source not found.31. Top 5 locations of FutureBeef YouTube channel audience by views (July 2017 to January 2022)

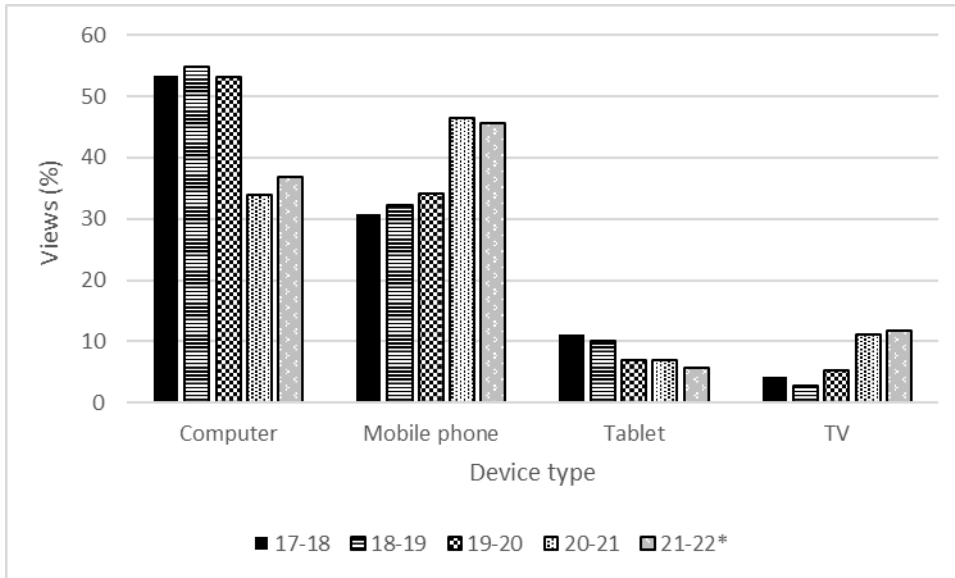
Location	Views	Total watch time (hrs)
1. Australia	61,985	5923.3
2. United States	18,565	1763.3
3. India	1493	31.1
4. Brazil	802	47.4
5. Canada	665	56.5

Source: YouTube analytics

Figure 14. The most commonly used devices to access the FutureBeef YouTube channel

* data only until January 2022

Source: YouTube analytics



Approximately one-third of survey respondents in the external evaluation have accessed or actively follow the FutureBeef YouTube channel. A higher proportion of service providers (43%) than producers (28%) access or follow the FutureBeef YouTube channel which is perhaps driven by their better internet access, Table 32.

Table 32. Proportion of survey respondents that access the FutureBeef YouTube channel

FutureBeef YouTube	<ul style="list-style-type: none"> Yes, I actively follow the FutureBeef YouTube channel. Yes, I have accessed the FutureBeef YouTube channel to watch a video or webinar recording. 	<ul style="list-style-type: none"> No, I have not accessed or viewed the FutureBeef YouTube channel. No, I don't use YouTube.
All respondents	61 (32%)	127 (68%)
Producers	37 (28%)	95 (72%)
Service providers	24 (43%)	32 (57%)

Response	Producers	Service providers
Yes, I actively follow the FutureBeef YouTube channel	6	2
Yes, I have accessed the FutureBeef YouTube channel to...	31	22
No, I have not accessed or viewed the FutureBeef...	58	22
No, I don't use YouTube	37	10

Both producers and service providers gave the same high average rating (8.5), Table 33, with the key reasons for the high rating being the flexibility to watch (and re-watch) YouTube channel videos in their own time, they are easy to view and are useful, relevant, interesting and well presented.

Table 33. Average rating assigned to FutureBeef YouTube channel, including number of observations by rating

FutureBeef YouTube	Rating	Sample
All respondents	8.5	60
Producers/pastoralists	8.5	36
Service providers	8.5	24

The bar chart displays the distribution of ratings for two groups: Producers (blue bars) and Service Providers (grey bars). The Y-axis represents the number of respondents, ranging from 0 to 20. The X-axis represents the rating from 1 to 10. The data is as follows:

Rating	Producers	Service Providers
1	0	0
2	0	0
3	0	0
4	0	0
5	2	1
6	2	0
7	4	4
8	10	9
9	3	2
10	15	8

4.9 Newspaper features

BeefTalk, CQ BEEF and Northern Muster are published within the Australian Community Media publications: Queensland Country Life and North Queensland Register. Twenty of each of these features have been produced between July 2017 and January 2022. The Queensland Country Life and North Queensland Register have a combined monthly audience of 174,329 (print) and 137,249 (online) as of June/July 2020.

Since 2018, the intent was for NT and WA to contribute one article for each edition (3 editions per year). However, when the publication frequency increased to six per year in late 2019 NT and WA alternated editions, so they each still contributed three articles per year, see Table 34.

Table 34. Published NT and WA newspaper feature contributions

Feature	Article due from	Article published and where
2018		
April	NT & WA	Nil
August	NT & WA	Nil
November	NT & WA	NT – 4 articles in Northern Muster and 1 in CQ BEEF
2019		
April	NT & WA	NT & WA – Northern Muster
September	NT	NT – Northern Muster
November	WA	WA & NT – Northern Muster
2020		
February	WA	WA – Northern Muster and CQ BEEF
April	NT	NT – Northern Muster, CQ BEEF and BeefTalk
June	WA	WA - nil

Feature	Article due from	Article published and where
		NT – Northern Muster, CQ BEEF and BeefTalk
August	NT	NT – Northern Muster, CQ BEEF and BeefTalk
October	WA	WA – Northern Muster, CQ BEEF and BeefTalk
December	NT	NT – CQ BEEF and BeefTalk
2021		
February	WA	WA – 2 articles in CQ BEEF
April	NT	NT – Northern Muster, CQ BEEF and BeefTalk
June	WA	WA – Northern Muster and CQ BEEF
August	NT	NT – Northern Muster and CQ BEEF
October	WA	WA – CQ BEEF
December	NT	NT – Northern Muster, CQ BEEF and BeefTalk

With the conclusion of the old agreement with Australian Community Media at the end of 2021, a new agreement has been signed for 2022. This will see the continuation of the features in hard copy but with four pages, four times a year (April, June, September, December). NT and WA will also continue to supply an article for alternate editions. Online publication of the features through Australian Community Media channels has also been introduced, particularly on the relevant website and Facebook pages. This new agreement, particularly the online publication of content will be evaluated at the end of 2022/start of 2023.

The proportion of respondents to the external evaluation that had read (either often or sometimes) the FutureBeef features (in Northern Muster, BeefTalk and CQ BEEF) in Rural Press publications was ranged from 28 to 40%. A significant proportion of respondents indicated that they had not seen any of the features listed, whilst approximately 35% of respondents did not read those features. There was no difference between producers and service providers (see Table 35).

Table 35. Proportion of survey respondents that have read the FutureBeef features in Rural Press publications

Table 35a. Northern Muster

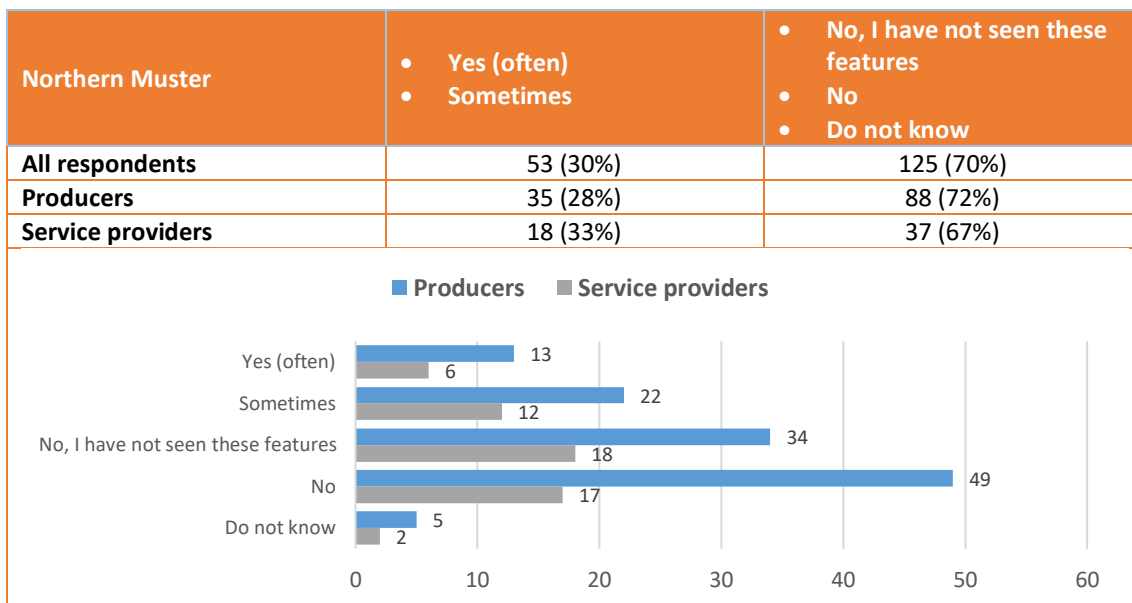


Table 35b. BeefTalk

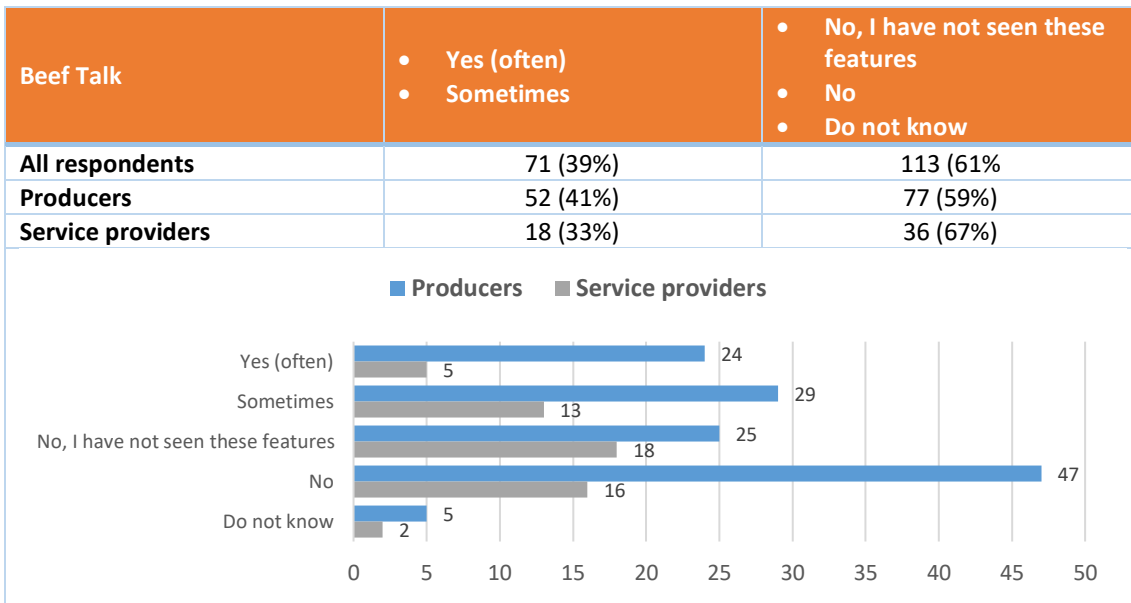
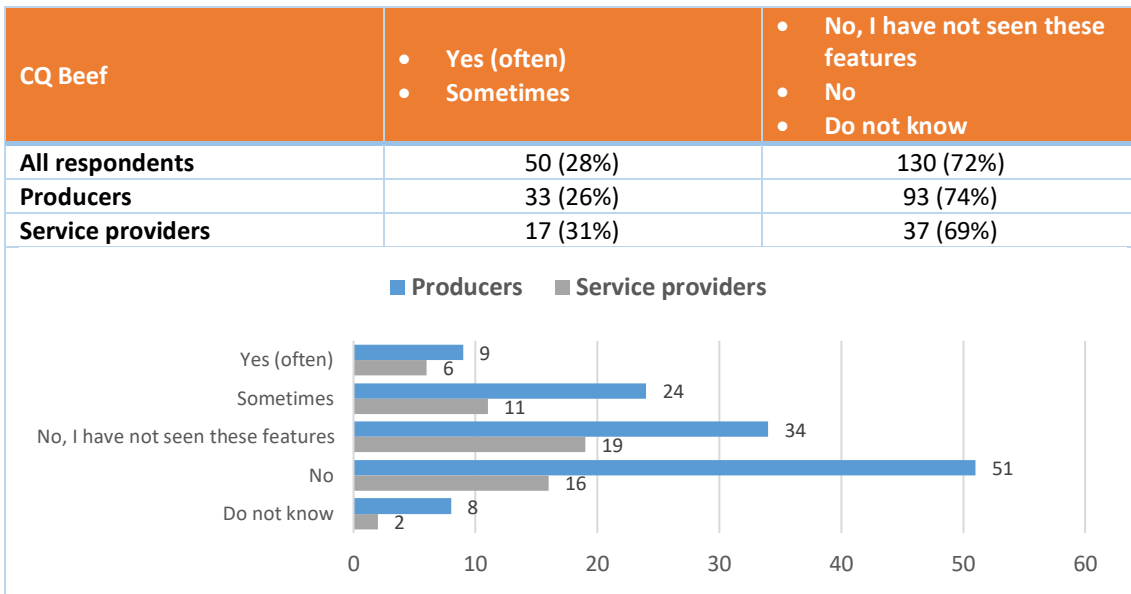
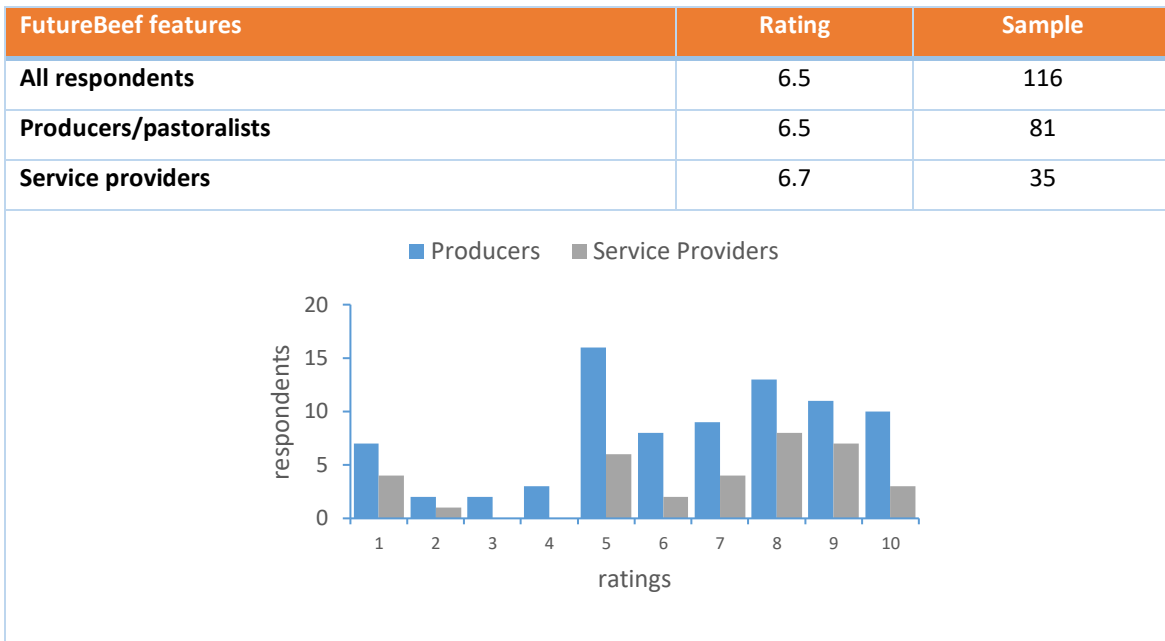


Table 35c. CQ BEEF



There was a positive distribution in ratings on a scale from 1 (not at all useful) to 10 (very useful), for those respondents that had read the FutureBeef features (Table 36). Although the average rating was 6.5, less than 10% rated the features less than 5 which is a good result. From the comments provided by respondents, content in a hard copy format was a strength of the features along with timely and relevant content.

Table 36. Average rating assigned to FutureBeef newspaper features, including number of observations by rating



5. User reference group

Twelve producers and service providers (5 Qld, 5 NT and 2 WA) attended a user reference group meeting, along with eleven of the FutureBeef team (advisory committee and operational). The key suggestions from this group for improvements to the FutureBeef communication tools are listed in Table 37. The group also suggested two new tools for FutureBeef to try—Podcasts and LinkedIn.

The attendees rated the usefulness of this meeting in providing opportunity to give feedback to FutureBeef as 6.7 out of 7. And all suggested that if a similar meeting was held in the future, they would encourage others to attend and give their ideas. Most attendees found the meeting useful and enjoyable with great discussion and networking. Two suggested improvements were to invite more producers/end users and use interactive engagement tools like poll everywhere to get instant feedback that all can view.

Table 37. Suggestions for improvement from the user reference group

FutureBeef tool	Suggested improvements
Website	<ul style="list-style-type: none"> • Redesign with new topic headings • Improve search function • Make home page more dynamic not just static • Ability to customise calendar for regions
eBulletin	<ul style="list-style-type: none"> • Publish a ‘best of’ edition possibly once a year e.g. January • Shorten editorial and less Qld centric • Produce 3 versions for each of the states/territory so relevant articles for each are more prominent • Send notifications of regionally relevant events, but not too frequent
Webinars	<ul style="list-style-type: none"> • Shorter and more use of polls • Try a series based on a theme • Steps/ How to webinars

FutureBeef tool	Suggested improvements
	<ul style="list-style-type: none"> • Ability to suggest webinar topics • Webinar recordings and videos need to be more easily accessible and visible on the website
Social media	<ul style="list-style-type: none"> • Include current social feeds on website • Connect with Beef Central and others as a means of further promoting posts/information • Use current “search” terms from website to inform post topics • Use infographics for people to share • Include more staff profiles, success stories and case studies
Newspaper features	<ul style="list-style-type: none"> • Articles should direct readers back to the website • Use thumbnail image for link to pdf on website • Promote features prior to and after publication • Other options for publication eg ABC rural reports, print and post, Rural Review, Katherine Times, Beef Central

6. Brand awareness survey

At the close of the survey there were 461 responses, with the majority (90%) from the northern beef industry states (Fig. 15). There were a few responses (10%) from outside the target states. Of all the respondents, 272 (59%) indicated they were producers/graziers and 158 (34%) service providers (80 private service providers and 78 public) (Fig. 16).

Figure 15. Distribution of completed responses by state

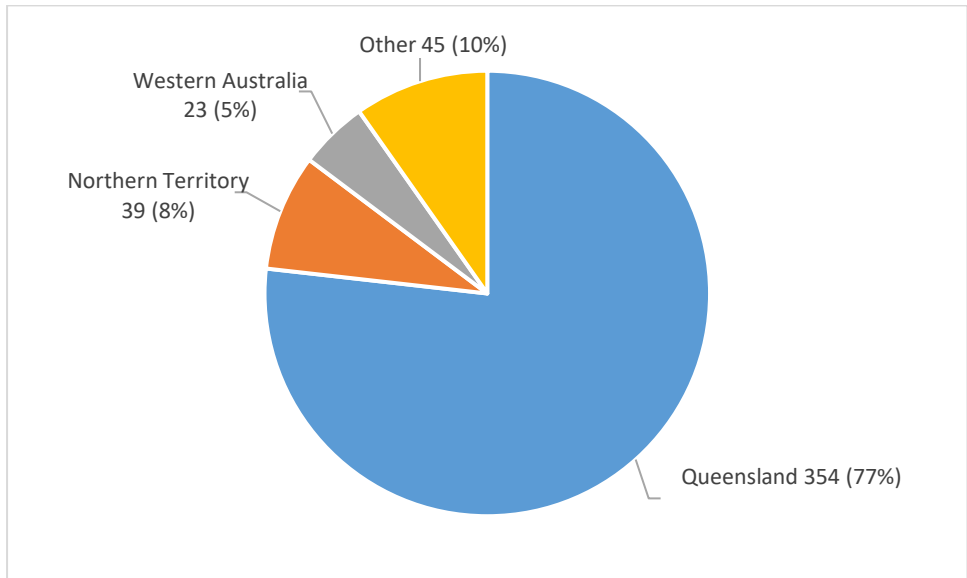
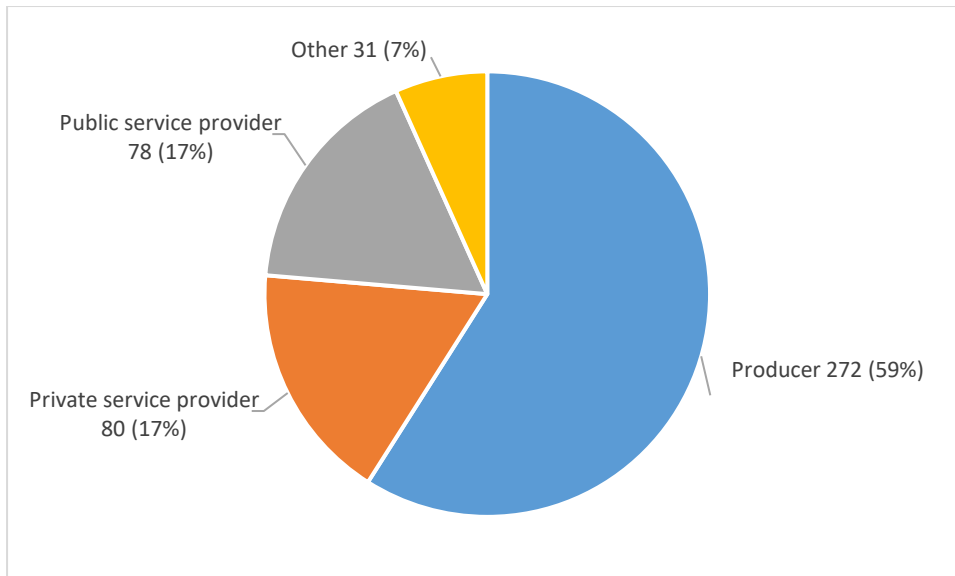


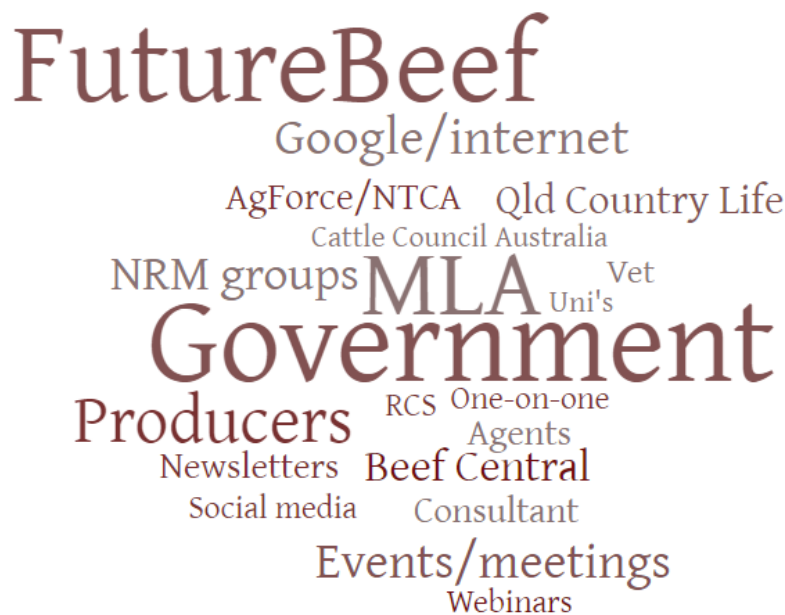
Figure 16. Distribution of completed responses by role

A key performance indicator for FutureBeef is being positioned as a key information source for the northern beef industry. A survey question was asked; what their most reliable and relevant sources of best practice information were followed by a supplementary question; why are these sources of information reliable and relevant?

The word cloud in Fig. 17 indicates the main sources of information that were considered reliable and relevant with the size of the text reflective of the number of mentions recorded in the survey. FutureBeef, the Government, MLA and producers were all identified as key sources of reliable and relevant information. When asked why respondents nominated those sources, the recurring themes (in order of priority) were:

- evidence based and backed by research
- independent and not associated with selling any products, therefore trusted
- organisation was experienced and had been around for a long time
- up-to-date, practical and regionally tailored information provided
- the people—well known and respected
- information is accessible and easy to understand
- industry involvement.

Respondents were also asked if they had heard of FutureBeef, and the majority (84%) indicated yes, only 14% said no and 1% were unsure.

Figure 17. Word cloud for the 20 most mentioned sources of reliable and relevant information

7. Independent evaluation of FutureBeef

An independent external evaluation of FutureBeef was conducted to address four key evaluation questions about brand awareness, user satisfaction, practice change and future industry needs. The evaluation was conducted in two phases: an online survey and semi-structured one-on-one interviews conducted via phone or video conference. Four producer case studies were also developed to illustrate how engagement with FutureBeef has supported meaningful practice change. The full external evaluation report by Folder et al. (2021) can be viewed at futurebeef.com.au/resources/futurebeef/, while the recommendations are detailed in Appendix 2.

7.1. Online survey

At the close of the online survey, there were 291 responses. However, 86 respondents did not proceed past the demographic questions, another two only answered a small number of questions and one gave answers that did not address the questions. The majority (184 or 91%) of the remaining 202 responses were in the northern beef industry states.

Of the 184 northern beef respondents, 132 (72%) were primary producers and 52 were service providers (21 public and 31 private). The majority of respondents were family or privately owned businesses (91%) and they were primarily the owners or decision-makers of these businesses (80%). There was also a roughly equal split of female (48%) to male (52%) respondents, with an estimated average age of females of 45 years and males 53 years. Herd size across all respondents averaged 3554 head with a range from 6 to 200,000. The median number of head across all northern states was 400, with 59% of herds 500 or less.

7.1.1 Reliable and relevant sources of information

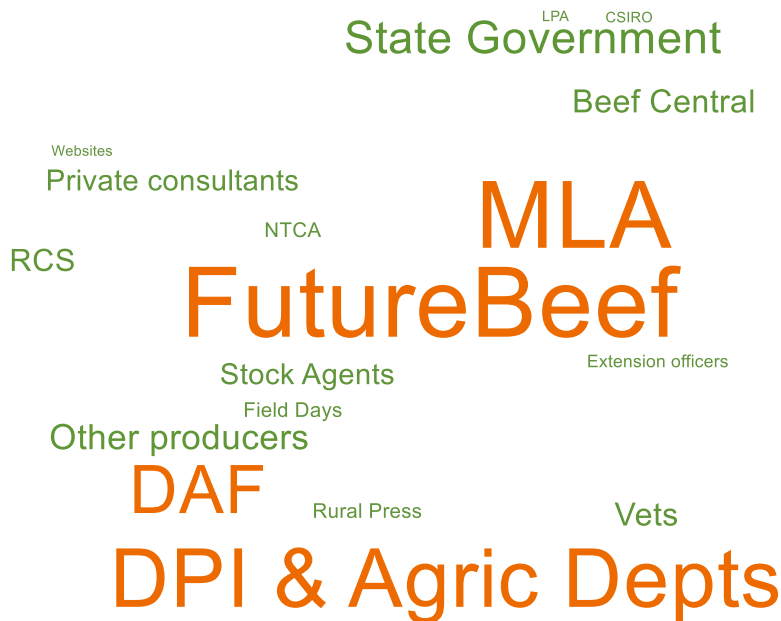
A key performance indicator for FutureBeef is being viewed as a key information source for the northern Australian beef industry. Similar to the brand survey (reported in the previous section) a survey question asked of all respondents was what (or who) were their key sources of information followed by a supplementary question of how reliable and relevant those sources are.

The word cloud in Figure 18 indicates the main sources of information that were considered reliable and relevant with the size of the text reflective of the number of mentions recorded in the survey. FutureBeef, MLA and the state departments (including DAF and DPI) were all identified as key sources of reliable and relevant information.

When asked why respondents nominated those sources, the recurring themes were:

- up-to-date, relevant, practical information
- local knowledge and hands-on experience. Learning from other producers
- backed by research, scientifically validated information and delivered by those who did the research
- credibility
- good topics and well summarised.

Figure 18. Word cloud for the 18 most mentioned sources of reliable and relevant information



7.1.2 Awareness

Overall awareness of FutureBeef was high, with an average rating of 8.3 on a scale of not at all aware (1) to very aware (10). However, the responses to the awareness of partners in FutureBeef were mixed. Both MLA and QDAF received strong awareness ratings with 31% and 33% respectively being very aware and overall average ratings of 7.7 and 7.5 out of 10. In contrast, the awareness of the involvement of NT DITT and DPIRD WA was low, with only 10% being very aware of these organisations' involvement in FutureBeef. The overall average rating for NT DITT was 5.0 out of 10 and for DPIRD WA 4.7 out of 10.

7.1.3 Assessment of FutureBeef online communication tools

Table 38 summarises the use and usefulness (on a scale of 1 (not at all useful) to 10 (very useful) of the FutureBeef tools. Strengths, opportunities and suggestions for improvements for each of the FutureBeef communication tools were also identified and these are summarised in Table 39, with more details in Folder et al. (2021), available at futurebeef.com.au/resources/futurebeef/.

Table 38. Assessment of FutureBeef tools by survey respondents

Tools	Use of the tool	Usefulness (average rating out of 10)
Website	93%	7.7
eBulletin	90%	8.2
Webinars	67%	8.4
Facebook	40%	8.0
Twitter	6%	8.6
LinkedIn	8%	7.1
YouTube	32%	8.5
Newspaper features (BeefTalk, CQ BEEF, Northern Muster)	28-39%	6.5

Table 39. Main strengths, opportunities and suggestions for improvements to the FutureBeef communication tools as highlighted by the external evaluation

Tools	Strengths	Opportunities	Improvements
Website	<ul style="list-style-type: none"> Independent source, unbiased Good comprehensive information Links to other sources 	<ul style="list-style-type: none"> Difficulty finding information, overwhelming amount of content Requires an improved navigation process Requires an improved search facility 	<ul style="list-style-type: none"> Better search and navigation Organisation by topic Flag new content
eBulletin	<ul style="list-style-type: none"> Prompt to action, timely Interesting and enjoyable reading Easy to read and well set out 	<ul style="list-style-type: none"> Quick skim only Additional content and suggestions Content not useful and/or relevant 	<ul style="list-style-type: none"> Content ideas Format and style Target audience
Webinars	<ul style="list-style-type: none"> Relevant information Easy to access Access to the recording 	<ul style="list-style-type: none"> Notes at end unavailable Death by power point Content not technically correct and a bit wishy washy 	<ul style="list-style-type: none"> Awareness of and access to the recordings Presentation ideas and format Content ideas and quality
Facebook	<ul style="list-style-type: none"> Easy access Up to date 	<ul style="list-style-type: none"> Not always relevant 	<ul style="list-style-type: none"> More relevant and current content

Tools	Strengths	Opportunities	Improvements
	<ul style="list-style-type: none"> Stepping-stone to the website 	<ul style="list-style-type: none"> Need more regular posts Does not appear in feed 	<ul style="list-style-type: none"> More regular More activity to bring page to top of news feed
Twitter	<ul style="list-style-type: none"> Useful first alert Short and to the point 	<ul style="list-style-type: none"> Content needs to be better formatted for the medium 	NA
LinkedIn	<ul style="list-style-type: none"> Main e-Access entry point Useful articles Need more frequent updates 	<ul style="list-style-type: none"> Not always relevant Don't see FutureBeef information 	<ul style="list-style-type: none"> More content More frequent updates
YouTube	<ul style="list-style-type: none"> Flexibility to watch and re-watch in own time Easy to view Useful, relevant, interesting content 	NA	<ul style="list-style-type: none"> Hard to find – what is on YouTube doesn't link with website Videos on website difficult to enlarge, and hard to see
Newspaper features	<ul style="list-style-type: none"> Good content, well presented Hard copy good to graze over Timely and relevant 	<ul style="list-style-type: none"> Too general, incomplete Rural press in decline Have not seen them 	<ul style="list-style-type: none"> Content ideas More regionally specific Format – summary and more images, print version

7.1.4 Practice change

Almost half of all survey respondents (48%) indicated that FutureBeef communication tools had contributed to practice change on their property or their client's property. A further 26% indicated the tools have contributed to a practice change they intend to make. The most frequent practice change themes are summarised in Fig. 19 with more detail available in Folder et al. (2021) futurebeef.com.au/resources/futurebeef/. Three communication tools, the website, webinars and eBulletins were mentioned most often as influencing practice change (see Fig. 20), both in terms of actual change and intent to change.

Figure 19. Frequency of key practice change themes FutureBeef has contributed to

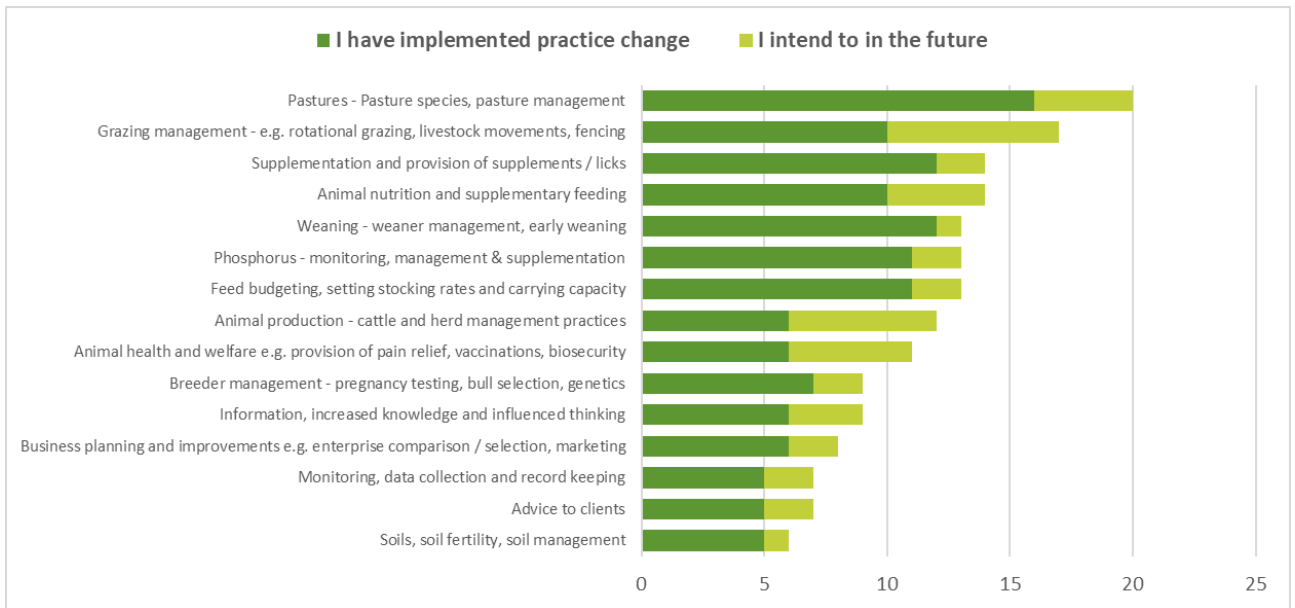
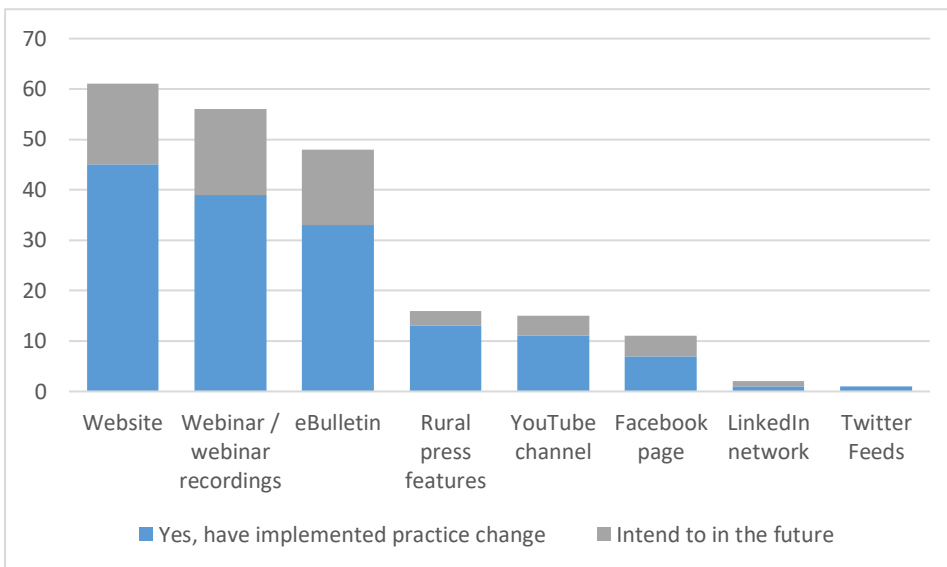


Figure 20. The FutureBeef communications tools in descending order of mentions that have influenced practice change or intent to change



Respondents were asked to rate the impact of their practice change on a scale from 1 (small) to 10 (very large). They were then asked what proportion of their practice change they attributed to FutureBeef. Where some attribution to FutureBeef was reported, there was a good result with an average rating of 6.4 out of 10. The average percentage of the impact of practice change attributed to the FutureBeef communication tools was 58% for those who had implemented a change versus 37% for those who nominated a practice change they intended to implement.

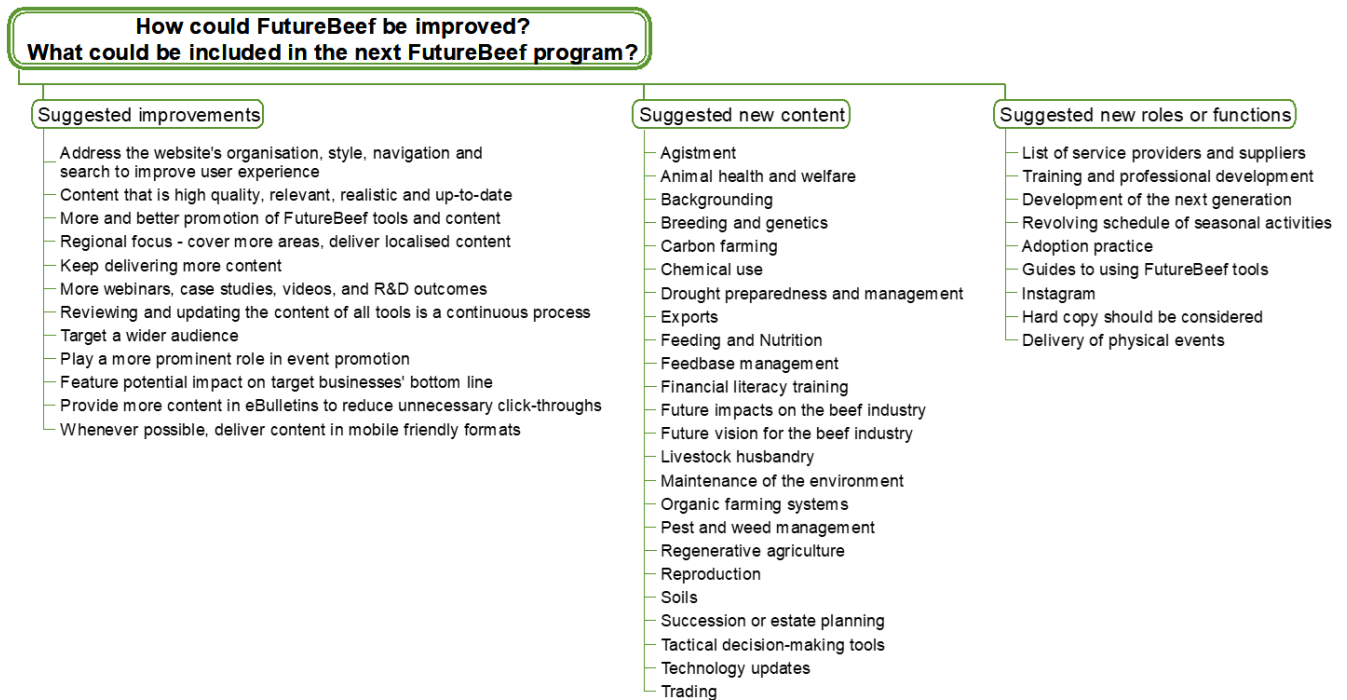
7.1.5 Future opportunities

The final section of the online survey invited participants to comment on what might be considered for inclusion in the next FutureBeef program. Responses are summarised below (Fig.

21) as suggested improvements, new content and new roles or functions and further detail reported in Folder et al. (2021), futurebeef.com.au/resources/futurebeef/.

While neither an improvement nor an idea for new content but rather an endorsement of current value of FutureBeef, the grouping with the most responses could be summed up as 'Keep it going, happy with it as it is.' The overwhelming majority of these responses were provided by producers.

Figure 21. Improvements, new content and new roles/functions suggested for consideration in planning the next FutureBeef project



7.2 One-on-one interviews

Twenty-seven of the online survey respondents were sent an email to request their participation in an interview, of which 19 consented. The demographics represented in the interview sample included:

- 16 participants who had undertaken a practice change and 3 who had indicated an intent to implement a practice change.
- 17 participants who were producers/pastoralists, 1 seedstock producer and 1 public service provider (who also had some cattle).
- 15 participants who were from Queensland, 3 from Western Australia and 1 from the Northern Territory.
- 12 male and 7 female interview participants.
- Represented a herd size ranging from 60 to 4000 head, with an average herd size of 834 head.

7.2.1 Practice changes

Interview participants were asked to describe a key practice change they had implemented as a result of FutureBeef, which included:

- phosphorus supplementation
- use of pain relief
- early weaning
- molasses feeding
- supplementary feeding
- change from breeding to trading
- introduced legumes
- planted leucaena
- control of weed grass
- trying to stop the spread of pasture dieback
- breeder management and use of herd recording software
- use of weather forecasting tools.

These examples were then explored in detail throughout the interview to gain an insight into the changes made, decision making influences, tools and support used and benefits of the change, which are detailed in Folder et al. (2021), futurebeef.com.au/resources/futurebeef/.

7.2.2 Decision making influence

The interviews gave further insight and depth of understanding as to how FutureBeef communication tools are being used by producers in decision making. Key areas explored by the interviews were:

- the prompts and triggers for change
- stages of influence of FutureBeef tools in making decisions and in the adoption process
- other sources of support.

The prompts or motivators for implementing practice change could be broadly grouped into four key themes:

- a desire for improved productivity, efficiency, quality or welfare
- seasonal conditions/drought
- prompted by an article or webinar
- weed incursions.

The trigger for action in most cases was either exposure to a particular article, webinar, research information, case study or a particularly dry year or key point during a drought/dry seasonal conditions.

Participants were then asked to indicate how and why FutureBeef had influenced their decision to make a practice change. The most frequent response was that FutureBeef provided confidence to their decisions. FutureBeef communication tools also influenced decisions by providing information to support the decision by raising awareness/providing a trigger and motivating them to action.

The interview results support the online survey findings that the website, webinars/webinar recordings and the eBulletin were the key FutureBeef communication tools used in supporting practice change. Further to this specific 'articles' which had been read were attributed to a practice change. These were accessed from and may be attributable to either the website or the eBulletin.

Of the interview participants there appeared to be two groupings of how FutureBeef users make use of FutureBeef to support practice change decisions. These can be broadly described as 'Active seekers' and 'Interest was triggered'.

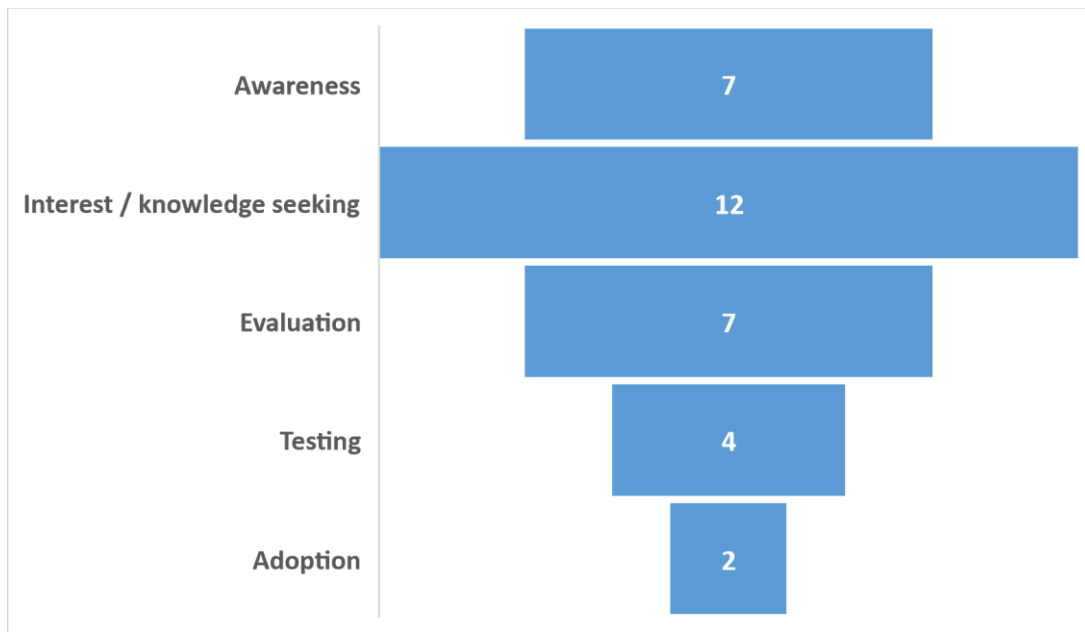
Active seekers – described using FutureBeef as a knowledge resource to support a practice change decision they had made or were considering implementing. They indicated a process of seeking more information, using tools or information to support or provide confidence to that decision. Some described situations where they accessed FutureBeef webinars or specific tools or articles on the FutureBeef website or by another source of support such as a field day, training course or advisor.

Interest was triggered – this group described their interest (awareness) as being triggered by a topic, event or article promoted in a FutureBeef eBulletin or social media post, which they then clicked on or read to gain more information. This is their pathway into the FutureBeef website, webinars or other events promoted by FutureBeef.

FutureBeef is not the sole source of support for producers implementing practice change. The interview participants were asked to list what other resources were needed to help them make their practice change including other information, support, tools and people. In most practice change examples described by producers, they drew on a wide array of sources for help in making decisions and implementing practice change such as:

- talking with other producers
- use of service providers (including vets, nutritionists, agronomists, DAF extension officers, consultants, rural produce shops and sales reps)
- attending training courses, conferences, workshops and field days
- reading research reports, articles and case studies
- MLA
- beef producer groups and industry groups.

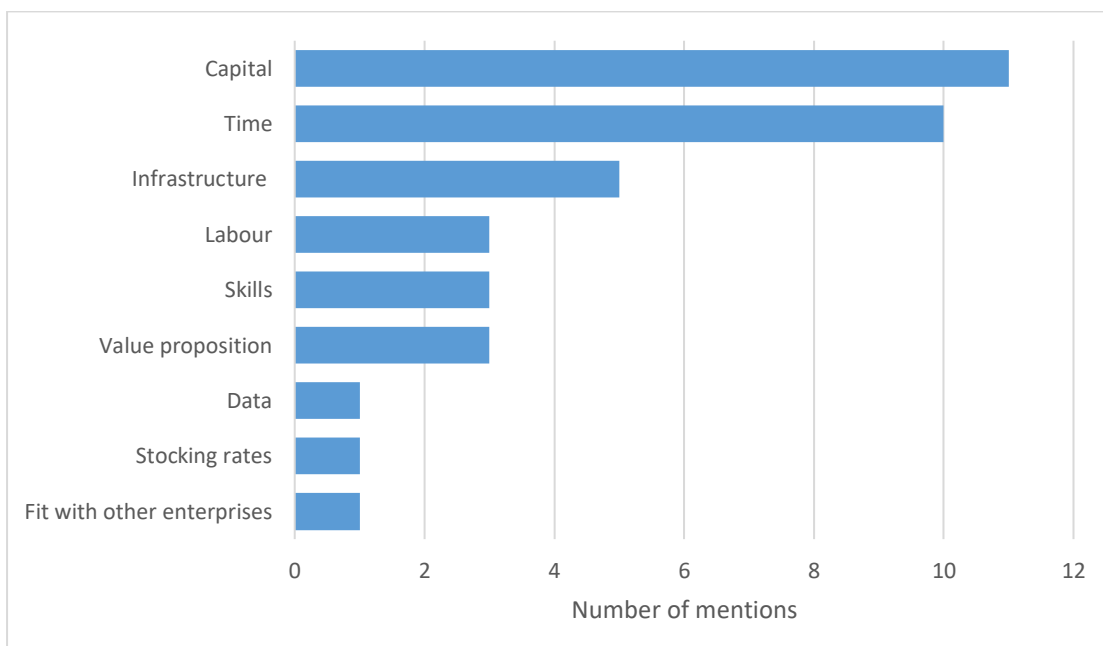
An adoption pathway model (Taluğ and Tatlıdil, 1993) was used to explore the contribution that FutureBeef had on the adoption of practice changes. The model was explained to the interview participants, and they were asked to reflect on and indicate where in the adoption pathway they felt FutureBeef assisted them. Stages of the adoption pathway included awareness, interest/knowledge seeking, evaluation (how does it relate to my property), testing (trial and follow up) and adoption of new practice (dis-adoption of the old practice). Figure 22 shows the relative contribution of FutureBeef to the different stages of the adoption pathway as nominated by interviewees. Interviewees were able to select more than one stage.

Figure 22. Frequency of FutureBeef influence in adoption process of practice change

FutureBeef was shown to have greater influence in the earlier stages of the adoption process, particularly the awareness, interest/knowledge seeking, and evaluation phases. This presents an opportunity for FutureBeef to investigate alternative methods of delivery to influence the later stages of the adoption pathway.

7.2.3 Barriers to practice change

Interview participants were asked to reflect on a practice change they have intended to make but have not yet implemented and what were the key barriers to these changes (**Error! Reference source not found.** 23). Capital, time and infrastructure were the key barriers raised followed by labour, skills and value proposition.

Figure 23. Barriers to practice change listed by interview participants

Poor Internet connectivity across the property was also raised throughout several interviews as impeding the uptake of new technologies they had heard about through FutureBeef.

In most instances, participants felt that FutureBeef could not help them to overcome their barriers to practice change, especially those relating to time, capital and infrastructure. Suggestions that were given for FutureBeef to consider included:

- listing grants and funding sources available where they relate to specific management practices, regions or technologies
- sharing of producer stories or case studies of practice change and how they have implemented it
- listing of service providers or companies that can assist with the implementation of new practices e.g. new technologies.

7.2.4 Future opportunities

Towards the end of the interview, participants were asked to reflect on the future needs of FutureBeef. This included a discussion of the following areas:

- What would they like to see in a new FutureBeef program?
- FutureBeef tools they wish to see continued.
- Further comments about FutureBeef.

As the interviews drew on a subset of the online survey participants there was an overlap of ideas and topics that have already been reported. New ideas for FutureBeef roles or functions and topics raised by interview participants (which were different to the online survey participants) are summarised in Table 40 and detailed in Folder et al. (2021), futurebeef.com.au/resources/futurebeef/.

Table 40. New ideas for FutureBeef roles or functions and topics highlighted by the external evaluation interviews

New roles or functions	New topics
<ul style="list-style-type: none"> • Articles, stories and trial results from commercial service providers 	<ul style="list-style-type: none"> • New technologies including virtual fencing, cattle tracking, drones and water monitoring
<ul style="list-style-type: none"> • Mobile phone versions of tools 	<ul style="list-style-type: none"> • Connectivity options across the whole property to enable technology uptake
<ul style="list-style-type: none"> • More examples for smaller scale producers 	<ul style="list-style-type: none"> • Solar management
<ul style="list-style-type: none"> • Greater (visible) presence of FutureBeef in WA 	<ul style="list-style-type: none"> • Cost benefit analyses of new technologies
<ul style="list-style-type: none"> • Following demonstration trials and focus farms through the year to share learnings 	<ul style="list-style-type: none"> • Pasture dieback including management tools, apps for recording and webinars
<ul style="list-style-type: none"> • Reinforced the need for both technical (scientist) and producer experiences to be shared in webinars 	<ul style="list-style-type: none"> • Grazing management to maintain ground cover and carbon
<ul style="list-style-type: none"> • Provide a place where relevant legislation and regulation requirements is located on the website 	<ul style="list-style-type: none"> • Pastures, legumes and leucaena
<ul style="list-style-type: none"> • Links to grants available to help support adoption 	<ul style="list-style-type: none"> • Tree/grass interaction
<ul style="list-style-type: none"> • Practical tips for new producers 	<ul style="list-style-type: none"> • Land management e.g. erosion control
	<ul style="list-style-type: none"> • Dung beetles

Interview participants either supported the current mix of communications tools or raised specific tools they wished to see continued in a new FutureBeef program. The most popular were the FutureBeef website, webinars/webinar recordings and the eBulletin.

Other less frequently raised suggestions included a desire for more producer case studies, more printed materials, hands on training e.g. field days, seminars, social media (Facebook and LinkedIn), YouTube videos, on ground trials and one-on-one extension.

There was a strong sentiment amongst the interview participants for the continuation of FutureBeef, supporting the earlier finding from the online survey.

7.2.5 Case studies

Four producer case studies were identified from the phone interviews to highlight the practice changes implemented, the impacts of FutureBeef communication tools in influencing these changes and the benefits they have led to. The four case studies included:

- Breeder herd recording leads to more confident decisions – David Anderson, far north Queensland (futurebeef.com.au/resources/breeder-herd-recording-leads-to-more-confident-decisions/)
- Getting ahead in drought through early weaning and planning – Jim, Jenny and Rebecca Cross, south east Queensland (futurebeef.com.au/resources/getting-ahead-in-drought-through-early-weaning-and-planning/)
- Realising the win wins of using pain relief – Herb and Sue George, western Queensland (futurebeef.com.au/resources/realising-the-win-wins-of-using-pain-relief/)
- Using phosphorus supplementation for improved cattle performance and self herding – Harry and Alys McKeough, Upper Gascoyne region Western Australia (futurebeef.com.au/resources/using-phosphorus-supplementation-for-improved-performance-and-self-herding/).

8 Conclusion

Overall FutureBeef has met, and in most cases exceeded its objectives in relation to the website, webinars, social media, eBulletin, multimedia and newspaper features. The time, effort and funding invested in these online communication tools and the collaborative efforts of the partners has been a worthwhile investment. The platforms, skills and relationships developed will provide ongoing benefits to both the FutureBeef partners' staff and their clients.

8.1 Key findings

The current structure of FutureBeef with an **advisory committee** and **operational team** works well. The direction provided by the advisory committee and the relationships between, and efforts of, the operational team are key to the project's success. **Stakeholder input** (particularly northern beef producers and service providers) is also valuable and critical to the success of the project. However, the time to implement some of the suggested improvements from this group should not be underestimated.

FutureBeef also provides significant support to research, development, and extension across northern Australia for collaborating organisations as well as other relevant organisations and

consultants. This is in the form of providing a platform for greater promotion and extension of events, results and outcomes which supports producer adoption. During the current funded project FutureBeef has supported a minimum of 41 projects across Queensland, Northern Territory and Western Australia, including Northern Breeding Business (NB2), GrazingFutures/GrazingFutures Livestock Business Resilience, Repronomics I and II, EDGE workshops, Central Australian Self Herding (CASH), From Method to Market, CalfWatch, Improving Profitability and Resilience of Grazing Businesses in Queensland, Paddock Power and Sweet Spot.

Based on the **independent evaluation** FutureBeef is seen as a key source of reliable and relevant information. Overall awareness of FutureBeef was high (8.3/10), but awareness of partners in FutureBeef was mixed (range of 4.7-7.7/10).

Forty eight percent of survey respondents indicated that FutureBeef had contributed to practice change on their property or their client's property. A further 26% indicated FutureBeef had contributed to a practice change they intend to make. The key tools influencing practice change were the website, webinars and eBulletin.

How users make use of FutureBeef to support practice change decisions can be broadly described as 'Active seekers' and 'Interest was triggered'. FutureBeef has greater influence in the earlier stages of the adoption process, particularly awareness, interest/knowledge seeking and evaluation phases. Key barriers to implementing change identified included capital, time and infrastructure followed by labour, skills and value proposition.

Overall, the FutureBeef communication tools were rated highly by users (6.5-8.6/10) and the three key tools (website, eBulletin and webinars) were well used (67-93%). With the increasing use of mobile devices, all FutureBeef communication tools need to be optimised for viewing on these devices.

The FutureBeef **website** is the backbone of the project as most of the other FutureBeef communication tools refer back to it. Key website findings include:

- Time and staff capacity to update and review website information is critical and more needs to be dedicated to this function.
- Navigation, searchability and structure of the website need to be improved to enhance user experience. The website structure is being updated to reflect subject matter headings at the time of writing this report and further improvements are planned for the search function.
- Top 10 web pages have changed little over the project, which is most likely due to the seasonal conditions remaining dry in Queensland (largest proportion of users) during this period.
- Time spent per visit is not a useful metric for the FutureBeef website, because if it is increasing it might mean that visitors are having trouble finding what they were looking for or alternatively that the information is really good, and they are spending more time reading it in detail.

Webinars are also a key tool for FutureBeef, and the webinar key findings are:

- Topic and timing of webinars influence registrations and attendance, with more timely and relevant topics being most popular.
- More consideration needs to be given to webinar delivery and attendee engagement to enhance their ability to influence practice change.
- Webinar recordings continue to be popular and an often-used resource, though more attention needs to be paid to promoting the recordings more widely and the ease of finding these on the website. As part of the restructure there will be a dedicated heading for webinar recordings and the latest webinar recordings will be featured on the home page.
- Average view duration of webinars is low compared to the entire recording length which indicates people are using the playlist to just watch the sections of most interest.

The **eBulletin** key findings include:

- As the number of eBulletin subscribers increase, open rate is showing a slight decrease, with click rate remaining reasonably static.
- Specific demographic and interest information is required from subscribers to be able to customise distribution and event promotion.

FutureBeef **social media** is important to direct people to the website and respond in a timely manner to relevant issues. Social media engagement is a more important metric than number of posts. Paid advertising, on social media, takes time and effort to get it right and to achieve the specified outcomes.

At this stage the FutureBeef **podcast** seems to be another good engagement tool, however more time is needed, and the data further investigated before a definite decision is made on whether FutureBeef should continue with podcasting.

The time, effort and cost to produce good **videos** should not be underestimated, particularly with technical topics, a professional contractor and the range of approvals required. To date the published videos have received good engagement which is expected to increase with further promotion.

Shorter videos and, timely/relevant topics on **YouTube** tend to receive more views. Further promotion of the FutureBeef YouTube channel is needed so that its availability and what it contains is more widely known. As part of the planned restructure the latest videos will be featured on the website home page.

Newspaper features should be continued as the one hard copy medium of FutureBeef. However, other relevant/trusted hard copy sources should be investigated besides the Queensland Country Life and North Queensland Register. The requirement for NT and WA to submit articles for the features should be revisited and/or a more relevant hard copy publication found for those regions.

8.2 Benefits to industry

The FutureBeef collaboration between the three state agricultural departments and MLA continues to provide efficiencies in the provision of online information to the northern beef industry. It gives the northern beef industry access to a 24/7 one-stop shop for beef information.

It also provides a range of channels for relevant research and project findings to be communicated widely through a variety of methods to the target audience to support adoption.

FutureBeef also supports numerous projects and activities, by both collaborating organisations and others, that are of interest to northern beef producers which further expands reach, adoption and impact of these.

Surveys demonstrate that FutureBeef is seen by producers and advisors as a reliable and relevant source of beef industry information providing confidence in the information promoted through FutureBeef channels.

The FutureBeef website user location data also suggests that the reach of FutureBeef is far greater than just northern Australia and in fact greater than Australia as a whole, with a large number of website users both in southern Australia (New South Wales, Victoria and South Australia) and overseas (United States, India, South Africa and United Kingdom). Similarly, the FutureBeef YouTube channel also has a reasonable number of views from outside Australia, including United States, India, Brazil and Canada. It is anticipated that the other FutureBeef communication channels would also have both southern Australia and overseas subscribers and followers.

9 Future research and recommendations

There was a strong sentiment amongst the online survey and interview participants for the continuation of FutureBeef and the current mix of communication tools. The overwhelming majority of these responses were provided by producers.

Future recommendations detailed below are compiled from the current projects results and learnings as well as the external evaluation. The full recommendations from the external evaluation are detailed in Appendix 2.

Recommendation 1. Continue with the project **advisory committee** to provide oversight and strategic direction to the project but consider building more linkages with NABRC to provide more regular producer input into the project.

Recommendation 2. FutureBeef **website**:

- a) Review the FutureBeef website restructure (content by topic headings) and make other improvements as necessary, particularly to navigation, search function, prominently highlighting new or changed information and mobile optimisation.
- b) Continue to look for and fill information gaps on the website e.g. projects, technical content etc.
- c) Accurate and up-to date content on the FutureBeef website is critical. Formalise and document options for collaborators staff to review a percentage of key web pages each year, while also looking for gaps.
- d) Use the top 10 website pages as a basis for developing further information and resources to support the implementation of best management practices and improvements around these topics.

Recommendation 3. FutureBeef **webinars**:

- a) Continue to look for options for increasing engagement within webinars.

- b) Investigate and trial options for using webinars and other online meeting technologies to enhance learning and support the first steps to practice change, as well as a follow up to face-to-face activities conducted by the FutureBeef collaborators staff.
- c) With the increased use of webinars and online meetings due to Covid-19 re-consider the frequency of FutureBeef webinars.
- d) Make a printable summary of the key points from webinars available and distributed to registered participants within a prescribed time after completion of the webinar. Links to the summary should also be available to those watching the recorded version.
- e) Due to the value of the webinar recording to producers and other stakeholders ensure all future FutureBeef webinars can be recorded (prior to locking in the topic and presenter).
- f) Consider additional measures to alert industry to the availability of recorded webinars. Options include greater prominence in other appropriate FutureBeef communication tools of the availability of recorded webinars and how to access them, through to registering to receive an alert (email or SMS) once the recorded webinar has been uploaded.

Recommendation 4. FutureBeef eBulletin:

- a) Continue to look for ways to improve engagement with the FutureBeef **eBulletin** e.g. open rate and click rate.
- b) Utilise the eBulletin to highlight new or changed information on the FutureBeef website.
- c) Publish a special edition of the eBulletin to highlight the articles from the newspaper features.
- d) Continue to collect specific demographic information so targeted eBulletins (with key themes or topics) and geographically relevant events can be sent to subscribers.

Recommendation 5. FutureBeef social media:

- a) Continue with the current three social media channels (Facebook, Twitter and LinkedIn) to drive traffic to the website and provide a timely method of getting information out to stakeholders.
- b) Continue to search for methods to increase engagement on the FutureBeef social media channels.
- c) Evaluate the success (or otherwise) of social media advertising campaigns before committing additional budget to this expenditure.

Recommendation 6. FutureBeef podcasts: Further evaluate the podcast analytics (and obtain some direct feedback from listeners) to determine if it is worth the time, effort and budget to continue with podcasting.

Recommendation 7. FutureBeef videos: Evaluate the time and cost of producing professional videos of technical topics against producer engagement and feedback. Consider in-house production and/or videos of producer case studies.

Recommendation 8. FutureBeef YouTube:

- a) Promote the FutureBeef YouTube channel more widely so producers and service providers are aware of its existence and available resources.
- b) Use the top 10 YouTube videos as a basis for developing further information and resources to support the implementation of best management practices around these topics.

Recommendation 9. FutureBeef **newspaper features**: Explore other options for newspaper features in the rural press and/or other hard copy publications.

Recommendation 10. Refine **reporting metrics** for all FutureBeef communication tools to focus more on engagement and user experience.

Recommendation 11. Continue to be explicit about **NT and WA contributions** to relevant FutureBeef communication tools (e.g. number and frequency).

Recommendation 12. Continue to **engage with producers and service providers** on a regular basis (and by a variety of methods) to provide feedback on FutureBeef and the communication tools it uses.

Recommendation 13. Undertake or commission **an evaluation process of the suggested topics** (from the external evaluation) to identify those of highest priority and demand, and these be included in forward planning and delivery.

Recommendation 14. Explore additional methods of delivery (above and beyond what FutureBeef already does to support adoption of current northern beef industry projects and activities) which will further support the later stages of the adoption pathway. This may include opportunities for peer-to-peer learning (e.g. case studies and producer webinars); promoting, supporting or sharing findings from producer demonstration sites or play a supporting role in developing or delivering virtual producer demonstration sites.

10 References

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11 Appendix

11.1 Appendix 1 FutureBeef webinar data (July 2017 to January 2022)

Webinar title	Date	Presenter/s	Registrations	Attendees	% live attendees	Recording length (mins)	Total watch time (hrs)	Total views	Average view duration (mins)	Average % viewed
Managing giant rat's tail grass and other weedy grasses in pasture: learning the latest from Florida	6/03/2018	Wayne Vogler (DAF) & Brent Sellars (Florida, USA)	299	135	45%	24.59	138.7	1316	6.19	25.3
Forage budgeting and pasture utilisation	3/05/2018	Kiri Broad (DAF)	279	107	38%	40.25	113.5	1004	6.46	16.8
Improving the performance of beef production systems in northern Australia	28/06/2018	Fred Chudleigh (DAF)	173	48	28%	61.53	167.9	981	10.16	16.6
Low-cost strategies to build the resilience of beef production systems in northern Australia	5/07/2018	Fred Chudleigh (DAF)	160	46	29%	39.00	94.7	730	7.47	20.0
What the new vegetation management laws mean for managing Mulga in south west Queensland	13/7/18	Seamus Batstone (DNRM)	133	68	51%	36.23	12.8	120	6.23	17.6
Improving beef business performance with high quality forages	26/07/2018	Maree Bowen (DAF)	140	51	36%	31.27	67.2	665	6.03	19.3
Redefined anthrax belt – are you in it and what you need to know	14/08/2018	Jonathon Lee (DAF)	98	40	41%	58.23	67.1	671	5.59	10.3
Phosphorus supplementation for improved productivity and profitability of beef businesses (Part 1)	30/08/2018	Tim Schatz (NT DPIR) & Simon Quigley (UQ)	84	27	32%	46.73	125.2	1197	6.13	27.1
Phosphorus supplementation for improved productivity and profitability of beef businesses (Part 2)	13/09/2018	Rob Dixon (QAAFI) and Mick Sullivan (DAF)	111	45	41%	35.51	112.8	1639	4.26	25.3
What the new vegetation management laws mean for managing vegetation in the Brigalow Belt of Queensland	4/10/18	Emma Seccull (DNRM)	50	17	34%	24.57	17.8	232	4.35	18.4

Webinar title	Date	Presenter/s	Registrations	Attendees	% live attendees	Recording length (mins)	Total watch time (hrs)	Total views	Average view duration (mins)	Average % viewed
The Long Paddock website: what's new - and free!	9/10/2018	Grant Stone (DES)	62	31	50%	38.44	19.7	280	4.12	10.9
Our rainfall and pasture growth – comparing current seasons with the past	25/10/2018	Grant Stone (DES)	45	16	36%	28.47	19.0	273	4.10	14.5
FORAGE – free property information to assist with grazing land management decisions: Part 1 – currently available information	15/11/2018	Grant Stone (DES)	108	43	40%	42.21	23.0	265	5.12	12.3
FORAGE – free online property information to assist with grazing land management decisions: Part 2 – new and soon to be released	29/11/2018	Grant Stone (DES)	92	28	30%	39.36	10.2	137	4.26	11.2
Seasonal forecast and pasture growth – Mitchell Grass Downs	14/12/2018	David Phelps (DAF) Peter Whip (USQ)	49	23	47%	48.83	19.0	280	4.28	18.4
Latest insights into pasture dieback	15/02/2019	Stu Buck (DAF)	191	101	53%	26.21	161.5	1055	9.11	34.9
Update on financial assistance available for north west Queensland graziers	25/02/19	Craig Turner (QRIDA)	45	23	51%	37.06	7.7	98	4.41	12.7
North west pasture response after flooding	27/02/19	David Phelps (DAF)	71	23	32%	38.47	29.6	278	6.23	16.5
Giant Rat's Tail Grass fundamental and insights for management	28/03/2019	Wayne Vogler (DAF)	79	34	43%	31.41	211.5	1440	8.48	27.8
Changes coming to MSA: what cattle producers need to know	30/04/2019	Laura Garland (MLA)	111	30	27%	34.18	213.5	2563	4.59	14.6
Why would a pastoralist invest in Irrigation?	22/05/2019	Chris Ham (WA DPIRD)	34	21	62%	44.37	22.8	192	7.08	16.0
Breeding values: your tool for looking under the hood of your next sire	12/06/2019	Clara Bradford (MLA)	169	77	46%	37.21	210.7	1780	7.06	19.0
The revised fit to load guide: what's changed?	25/07/2019	Ted Parish (MLA) & Russell Lethbridge (producer)	251	123	49%	31.05	73.2	738	5.57	19.2

Webinar title	Date	Presenter/s	Registrations	Attendees	% live attendees	Recording length (mins)	Total watch time (hrs)	Total views	Average view duration (mins)	Average % viewed
How to shop for a high-performing bull	26/08/2019	Clara Bradford (MLA) & Tim Emery (TBTS)	107	35	33%	40.39	55.3	499	6.39	16.4
How to reliably establish leucaena	11/09/2019	Stu Buck (DAF)	140	53	38%	43.57	307.7	1905	9.41	22.0
Disease investigation on-property – a producer's perspective	2/10/2019	Dan Burton (DAF)	53	27	51%	48.53	0.0	0	0.00	Not made public
Foot-and-Mouth Disease – prevention, identification and reporting of possible cases	9/10/2019	Dan Burton (DAF)	79	36	46%	49.23	0.0	0	0.00	Not made public
How to manage leucaena once established	6/11/2019	Stu Buck (DAF)	160	60	38%	47.37	135.2	903	9.00	18.9
Options for a connected northern beef industry	30/03/2020	Nigel Tomkins (MLA)	178	96	54%	39.57	16.5	160	6.11	15.5
Waterponds (from a WA perspective): the what, how, why and what's involved in building one!	21/04/2020	Matt Fletcher (WA DPIRD)	230	110	48%	57.31	53.3	421	7.35	13.2
P is for profit and for phosphorus – and that's not all the 2 have in common!	25/05/2020	Mick Sullivan (DAF) & Tim Schatz (NT DITT)	229	131	57%	40.32	75.3	810	5.35	27.6
CalfWatch – developing a system to remotely monitor calving in northern Australia	16/06/2020	Tim Schatz (NT DITT)	174	83	48%	34.55	30.3	231	7.56	22.7
Integrity Systems Company – stand by what you sell	26/08/2020	Kathleen Allan (MLA)	226	101	45%	40.44	40.5	268	9.04	22.3
Is pain relief just another pain for graziers and are horns a pain?	27/11/2020	Libby Harriman (private vet) & Glen Sibson (DAF)	370	166	45%	43.52	57.8	582	6.41	30.6
Northern Breeding Business (NB2) – launching a better future	9/12/2020	Lee Fitzpatrick (NB2) and Nigel Tomkins (MLA)	172	86	50%	31.95	22.6	259	4.86	31.4

Webinar title	Date	Presenter/s	Registrations	Attendees	% live attendees	Recording length (mins)	Total watch time (hrs)	Total views	Average view duration (mins)	Average % viewed
Making the most of the forecast	9/02/2021	Anne Marie Huey (NACP)	76	31	41%	33.02	8.7	92	5.41	17.2
Becoming Lender Ready – the 6 must do’s in how to access money from lenders to support your operations and business expansion	11/03/2021	Gordon Stone (ABDI)	134	57	43%	43.49	16.4	115	8.34	19.6
Becoming Lender Ready – hearing direct from a lender about their wants, needs and drivers	18/03/2021	Gordon Stone (ABDI)	93	46	49%	43.59	13.1	83	9.26	21.5
Becoming Lender Ready – a producer’s perspective on accessing finance	25/03/2021	Gordon Stone (ABDI)	122	45	37%	40.41	9.8	68	8.36	21.2
Becoming Lender Ready – your questions answered	15/04/2021	Gordon Stone (ABDI)	53	25	47%	51.08	5.1	36	8.29	16.6
The role of reference populations in genetic evaluation	21/04/2021	Matt Wolcott (WA DPIRD)	49	24	49%	23.29	12.7	108	7.04	30.2
A comparison of the growth of cattle grazing buffel grass under two different grazing regimes: high intensity rotational grazing vs continuous grazing	15/06/2021	Tim Schatz (NT DITT)	259	99	38%	21.36	145.9	1134	7.43	35.7
Cattle, grass and trees – combination, pitfalls and opportunities	21/06/2021	Bill Schulke (PFSQ)	189	73	39%	37.51	46.1	301	9.12	24.3
Spoiling rain – what now?	30/06/2021	Desiree Jackson (private consultant)	110	70	64%	0	0	0	0	Not recorded
Sensible supplementation 1 – beef cattle nutrition principles	01/09/21	Kylie Hopkins (DAF)	269	135	50%	43.24	90.0	536	10.04	23.2
Sensible supplementation 2 – herd management and nutrition	08/09/21	Mick Sullivan (DAF)	191	88	46%	27.46	35.3	236	8.58	32.3
Sensible supplementation 3 – choosing and managing supplements	15/09/21	Mick Sullivan (DAF)	179	67	37%	35.59	30.9	167	11.05	30.8
Becoming Lender Ready – thinking of getting more money from the banks? More changes in 2022	14/10/21	Gordon Stone (ABDI)	31	12	39%	49.33	5.0	45	6.38	13.4

Webinar title	Date	Presenter/s	Registrations	Attendees	% live attendees	Recording length (mins)	Total watch time (hrs)	Total views	Average view duration (mins)	Average % viewed
Pathways towards carbon neutral grazing systems	05/11/21	Richard Eckard	192	116	60%	42.41	81.7	368	13.21	31.3

11.2 Appendix 2 Recommendations from external evaluation

Recommendation 1. That the FutureBeef team consider a technical review of the **website** to ensure all information and advice is consistent with current best practice.

Recommendation 2. That the FutureBeef team consider options to improve navigation of the FutureBeef website including use of the search facility and possible reorganising the content by the topics important to users.

Recommendation 3. That the FutureBeef team develop a mechanism that highlights new or changed material on the website and through the eBulletins. This should be prominent so that users can easily identify when information of interest to them has been added or changed.

Recommendation 4. That the FutureBeef team consider how **eBulletins** can be tailored to the needs of individual readers. This may be through dedicated eBulletins focussed on key themes or topics or regions.

Recommendation 5. That the FutureBeef team consider the value proposition of hard copy **newspaper feature** articles in Rural Press publications. Articles could be included in special editions of the eBulletin.

Recommendation 6. That the FutureBeef team consider additional measures to alert industry to the availability of recorded **webinars** for those unable to participate live or who wish to re-watch them. Options include greater prominence in other appropriate FutureBeef communication tools of the availability of recorded webinars and how to access them, through to registering to receive an alert (email or SMS) once the recorded webinar has been uploaded.

Recommendation 7. That the FutureBeef team make it a priority that a printable summary of the key points from webinars is available and distributed to registered participants within a prescribed time after completion of the webinar. Within two business days is suggested. Links to the summary should also be visible to those watching the recorded version.

Recommendation 8. That the FutureBeef team continue to use **Facebook** as a mechanism to alert northern beef stakeholders to new information and activities within the FutureBeef program.

Recommendation 9. The FutureBeef project team should consider **Twitter** as a low priority for subsequent programs as there is a high proportion of the FutureBeef's intended audience who do not use Twitter.

Recommendation 10. Given the high proportion of survey respondents who do not use **LinkedIn**, the FutureBeef project team should consider LinkedIn to be a low priority as a mode of engagement for FutureBeef.

Recommendation 11. That the **YouTube** channel content is specifically identified and promoted on the website to increase engagement.

Recommendation 12. That the FutureBeef team consider the **suggestions provided by stakeholders** and in particular:

- a. improving the organisation of the website's content and search functionality to improve the user experience
- b. enhancing the value of eBulletins by providing brief summary of referenced articles to minimise unnecessary 'click-throughs'

- c. increasing the promotion of FutureBeef tools and content through existing communications by encouraging further distribution through personal networks (forwarding emails, 're-tweeting', 'likes', etc.)
- d. further customising content for specific regions (e.g. adjusting for seasonal differences, addressing regional issues, using local case studies)
- e. increasing the number of webinars and the range of topics addressed
- f. developing all future content in friendly formats and converting existing high-usage reference material into a smartphone/tablet accessible format.

Recommendation 13. That the FutureBeef team undertake or commission **an evaluation process of the suggested topics** to identify those of highest priority and demand, and these be included in forward planning and delivery.

Recommendation 14. That the FutureBeef team consider the **new roles and functions** (or expand existing functions) as suggested by stakeholders and specifically:

- a. developing lists of service providers (e.g. Vets, rural supplies outlets, agronomists, specialist equipment suppliers, installers and maintenance contractors) that can be filtered by type and region
- b. developing and delivering (or having delivered) industry training and professional development courses specific to the beef industry
- c. refreshing the calendar function to support planning for forthcoming management activities by displaying an annual cycle of regionalised reminders.

Recommendation 15. During periods of adverse conditions, for example drought, FutureBeef should **prioritise and highlight resources that can support** northern beef stakeholders **to confront and manage those conditions.**

Recommendation 16. That FutureBeef **explore additional methods of delivery to support the later stages of the adoption pathway.**

Recommendation 17. That the FutureBeef team **develop a targeted communication strategy** to deliver the communication tools in a way that appeals to the needs of both the 'Active Seeker' and 'Information Triggered' FutureBeef user groups.