



Final report

Herd XL livestock management and marketing decision support App and Web App development

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Prepared by: Megan Miller
XL Ag Innovations Pty Ltd
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Abstract

XL Ag Innovations, through this MDC project, has taken prototype decision support tools for beef producers and advisors and now has a suite of decision support tools that can be accessed via phone app or web app, with or without mobile service. The tools can be saved for future reference and the results easily shared with others in the business.

A Marketing Plan for commercialisation and marketing material has also been developed through the project.

Executive summary

HERD XL is developed by farmers for farmers. Andrew Miller and Megan Miller designed HERD XL after realizing success using complex spreadsheets to help them make herd decisions and maximize profits. They partnered with beef industry consultant, Ian McLean and software developer, Dmitriy Kan, to develop a suite of calculators for beef producers.

Through this MDC project, the tools were taken from a prototype app and developed into a web app and phone apps, where scenarios can be saved within the app and shared with non-users of the app.

The apps developed are:

- Selling Comparison Tool
- Trader Tool
- Turnoff Date
- Turnoff Weight
- Dressing %
-

A marketing plan was developed also as part of the MDC project.

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1. Background

HERD XL is developed by farmers for farmers. Beef producers Andrew Miller (Founder) and Megan Miller (Founder) designed HERD XL after realizing success using complex spreadsheets to help them make herd decisions and maximize profits for themselves and their business partners. In conjunction with beef industry consultant, Ian McLean and software developer, Dmitriy Kan, the team of four have designed a suite of calculators that allow beef producers to harness the power of those complex spreadsheets in a simple and effective mobile app that isn't dependent on internet connectivity.

Through this MLA Donor Company project, the app has been taken from a prototype version to phone (IOS & Android) and web apps available through app stores ready for commercialisation. A marketing plan has also been developed for commercialisation of the product.

Equivalent decision support tools are not available on any other app. Other beef cattle production tools are complicated, not available in an app form, are too expensive for the everyday producer or too complex to understand. The Herd XL app is also available for use without mobile coverage, allowing for it to be used in the office or out in the paddock - anywhere, anytime. It improves production efficiencies by enabling producers to retain more profit. This is a new product that will enable market opportunities to be identified and compared in a simple and easy format for producers.

2. Objectives

Herd XL is on a mission to provide every Australian producer with simple yet powerful cattle tools to maximise their beef cattle profit. Their vision is for software developed to be an integral part of livestock business success. They have developed a basic prototype and user interface. Their current suite of tools and calculators have been designed in house. Equivalent decision support tools are not available on any other app. Other beef cattle production tools are complicated, not available in an app form, are too expensive for the everyday producer or too complex to understand. Our app is also available for use without mobile coverage, allowing for it to be used in the office or out in the paddock - anywhere, anytime. It improves production efficiencies by enabling producers to retain more profit. This is a new product that will enable market opportunities to be identified and compared in a simple and easy format for producers.

Objectives;

- To develop an intuitive livestock management and marketing decision support App and Web App that features a suite of decision support tools which can be used on apple, android or web application
- To launch the final tested product to Australian Beef Producers in 2023

3. Methodology

This project has progressed with the assistance of the MDC arrangement.

Starting with milestone 1 – our Software Development Team worked hard to organize the authentication provider and storage setup for the database, including the payment gateway platform. This first milestone allowed us to be able to set up an account ready for future testing and a subscription-based platform.

Milestone 2 was exciting as our initial version of the Herd XL app was completed. In this step we worked closely with a marketing specialist where we came to understand just how important the marketing of this app was going to be. We created our first draft of the marketing plan. Throughout the past few months, we have worked on this and now have a usable document we can refer to.

Working with our marketing specialist opened doors for us to be involved in an MBA project where some PHD students analyzed Herd XL with particular attention to its pricing and launch strategies. This MBA project took up a lot of our time with numerous meetings etc. however it was a useful tool in working with outsiders to view a differing perspective of the app. This process was incredibly valuable and helped to create more insights and ideas surrounding Herd XL and its future. It was fortunate for us to have these students who had no understanding of the cattle or agriculture industry, to be able to work out how to use Herd XL, understand its benefits to producers and also help us work through a detailed pricing and launch plan.

Milestone 3 – The final version of the app was completed. The user experience and user interface were finalized, and we explored opportunities to incorporate NLRs data through MLA API. Meeting with an MLA contact about the NLRs data and sharing this information with our software developer has also been beneficial and allowed us to start planning how we can incorporate the API into the app in the future.

Milestone 4 – This milestone included creating explanatory videos and testing the final version of the app and web app with producers. It was great to have the app ready to be tested by other beef producers and to receive their comments and feedback. This was quite a process, and we used the explanatory videos we had made to show some of the producers how to use the tools and go through the features. This helped us to receive feedback on the videos as well.

Some of the feedback we received from producers led us back to our software developer to make some minor changes. These slight changes will impact on the videos we have already made, and some will need to be redone. As a team, we decided it was far more important to include these small changes though, and we are comfortable to reshoot the videos as soon as the app is ready.

4. Results

4.1 App Development

There are five decision support tools developed within the Herd XL app as part of this project. These tools can be accessed via Android operating system, IOS or the web-based app. Scenarios can be saved within the app and accessed through an alternate viewer (i.e., scenario saved in phone app and viewed through web app and vice versa). The scenarios can also be saved in pdf format and the information can then be sent to others or saved for future reference.

The tools are;

- **Selling Comparison Tool** - The Herd XL cattle Selling Comparison tool uses distance to sale point, selling fees, agent commission etc to calculate net proceeds from different sales points to help you determine how to sell your cattle for the most profit. Simply enter potential income and costs for each scenario for quick insights into how to boost the net on farm price received for your cattle.
- **Trader Tool** - The Herd XL cattle Trader calculator provides gross beef cattle profit margins and return on capital outlaid using purchase data, estimated performance metrics (i.e. daily gains and mortality rates) and sales estimates. Use it to calculate profit per head and per kilogram to evaluate past cattle trades and maximise returns from future trades.
- **Turnoff Date** - The Herd XL Turnoff Date tool estimates the number of days between the tail and the lead hitting minimum target weights. Enter any combination of lead, average and head current and target weights, and estimated average daily gain to define the best time to sell your beef cattle.
- **Turnoff Weight** - The Herd XL Turnoff Weight calculator estimates future weight of cattle by the selected turnoff date using current weights and average daily gains. Use in conjunction with our other cattle calculators to decide when to sell your beef cattle for maximum return.
- **Dressing %** - The Herd XL Dressing % calculator uses liveweights and average (or entered) dressing percentages to calculate carcass weight, or vice versa. Price received per kg can be added to compare over-the-hooks versus live weight values per head

These tools provide a simple, yet powerful way for producers to assess and analyse options, in the office, in the paddock or at the yards with or without mobile service.

Figure 1 to Figure 6 below show the phone app and the results screen from each of the decision support tools. Figure 7 to Figure 11 below show the web app results screen for each of the decision support tools and Appendices one to four show the pdf exports for the tools.

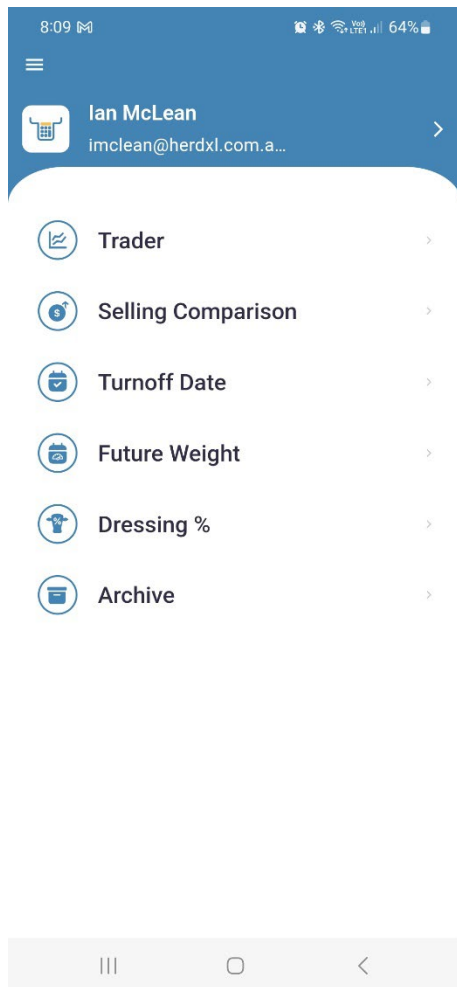


Figure 3 Phone App: main screen

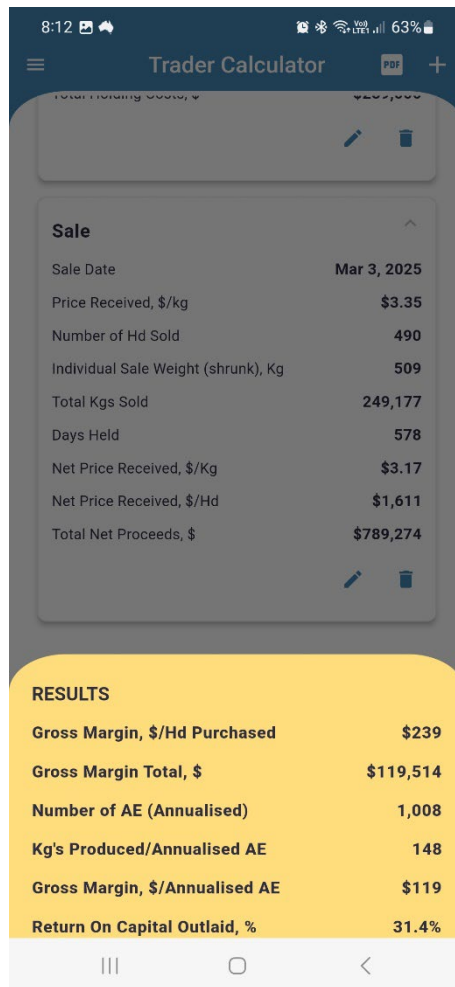


Figure 1 Phone App: Trader Calculator results

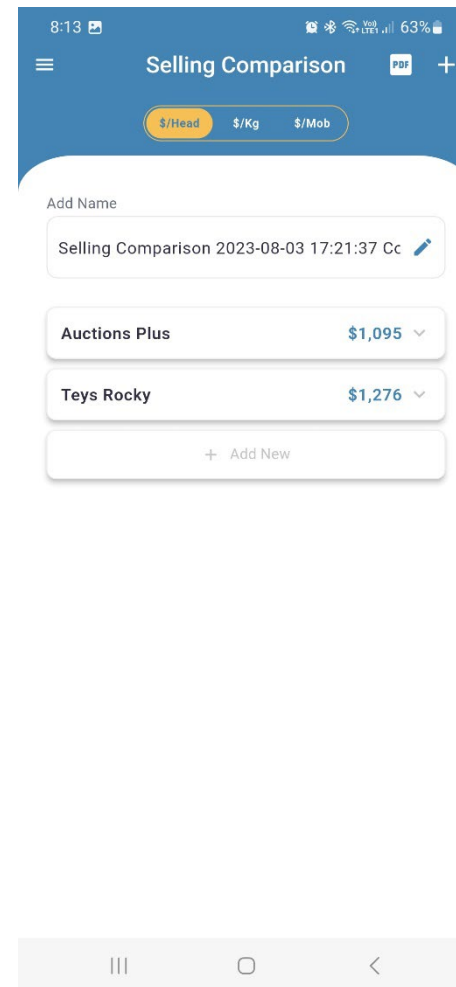


Figure 2 Phone App: Selling Comparison Results

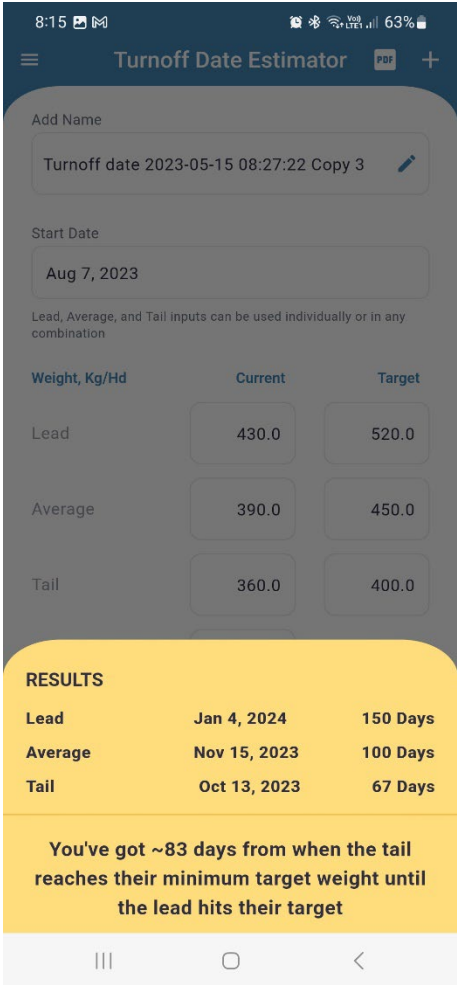


Figure 4 Phone App: Turnoff Date Results

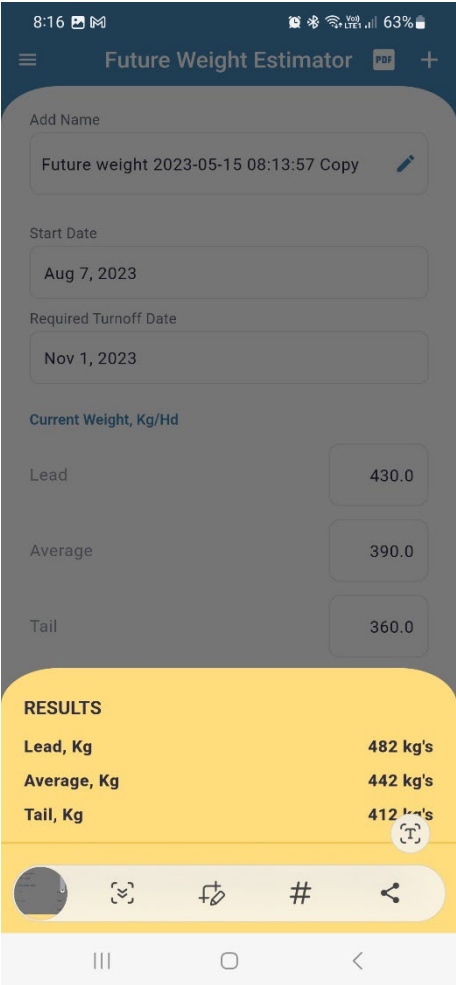


Figure 5 Phone App: Future Weight results

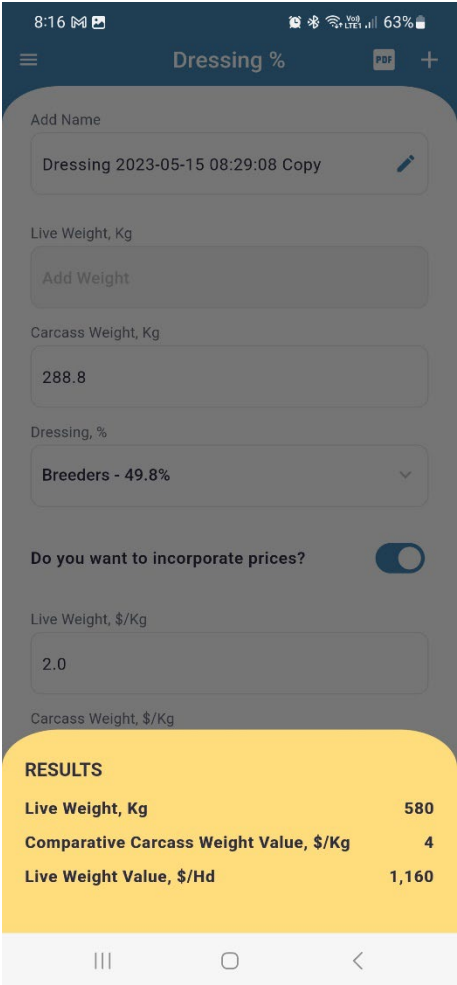


Figure 6 Phone App: Dressing % Results

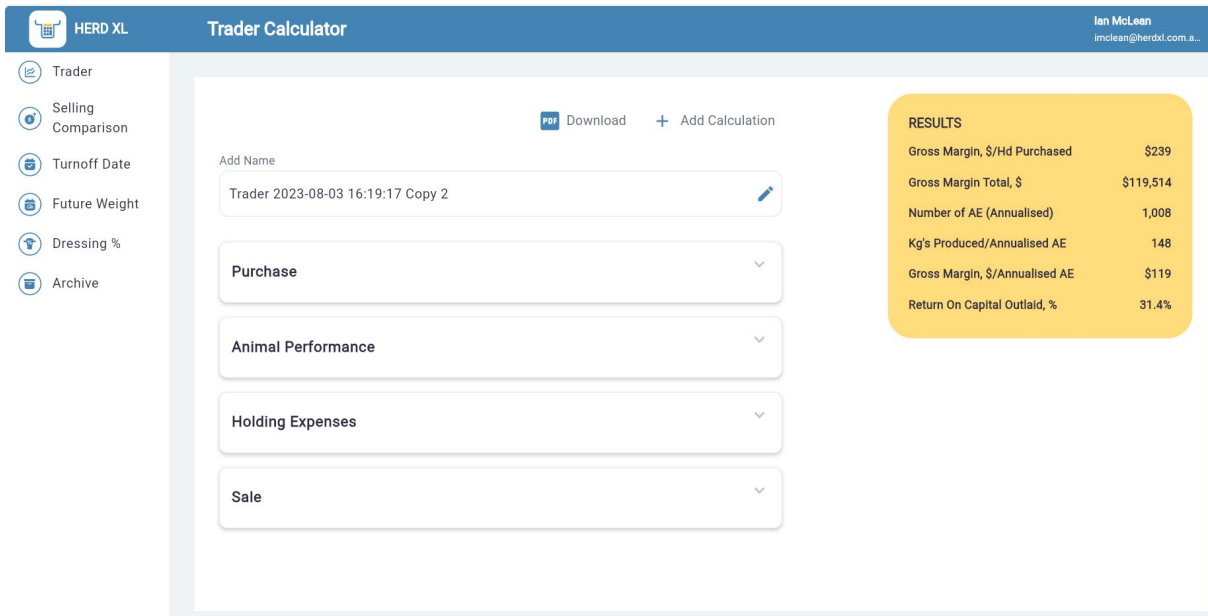


Figure 7 Web App: Trader Calculator Results

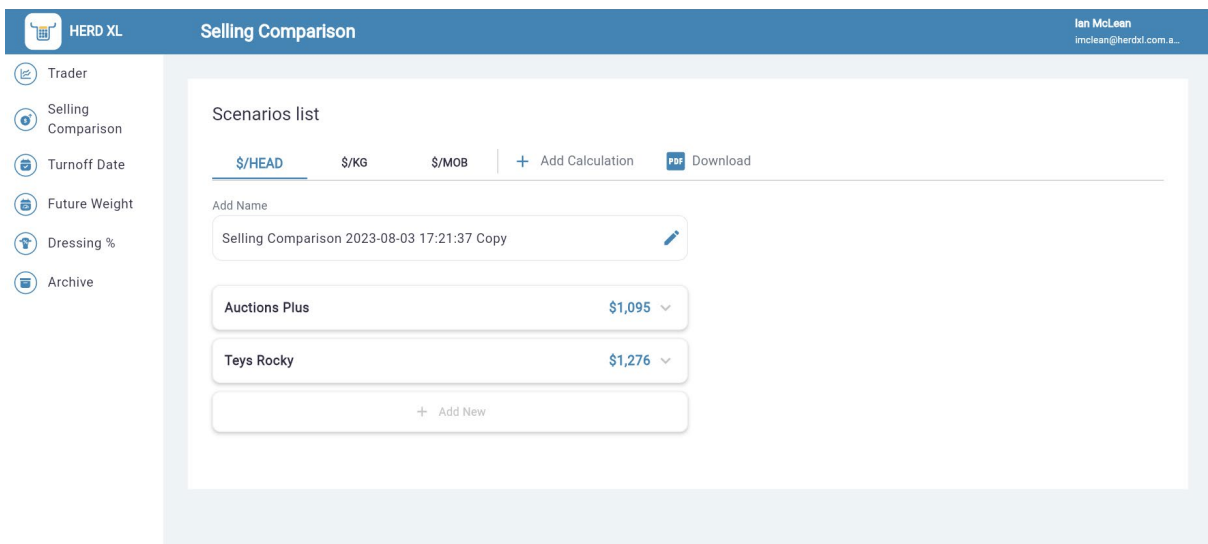


Figure 8 Web App: Selling Comparison Results

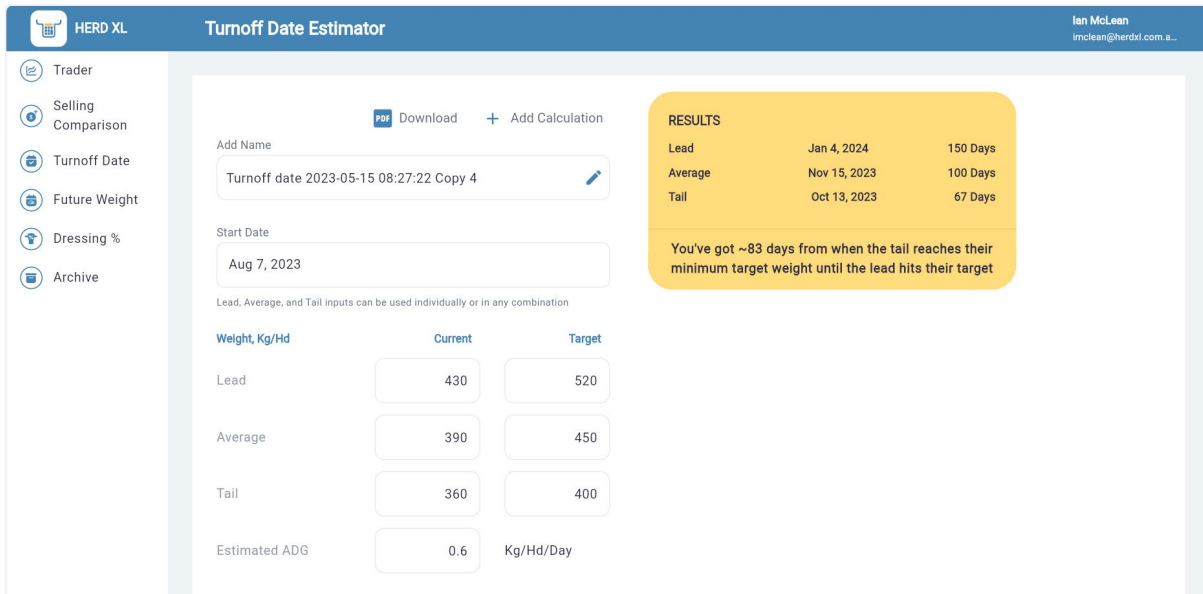


Figure 9 Web App: Turnoff Date Results

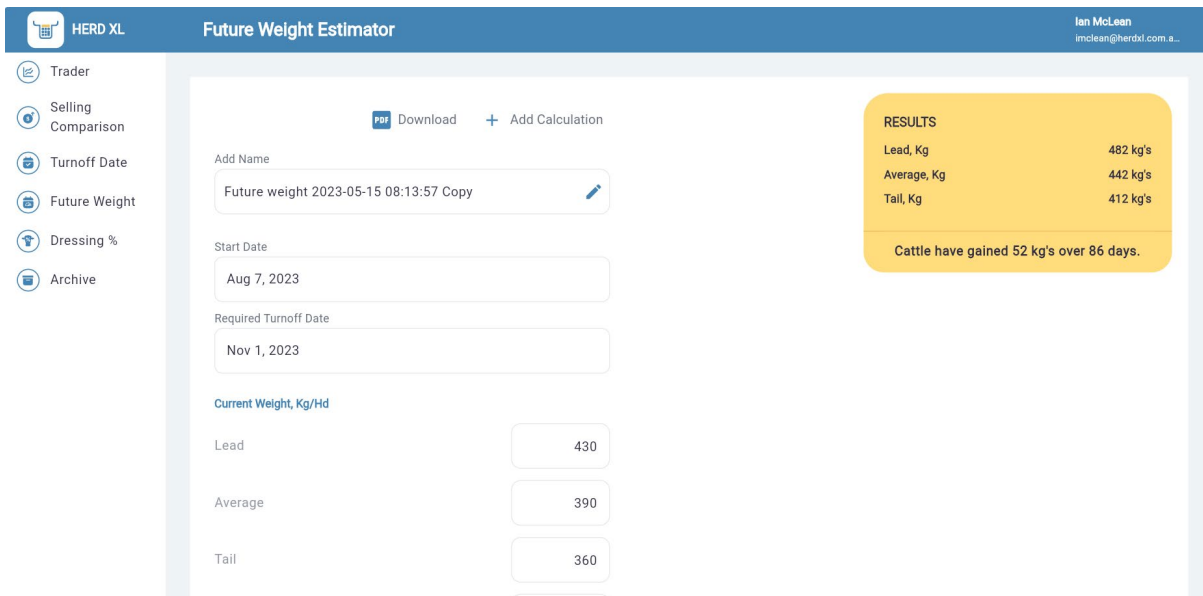


Figure 10 Web App: Future Weight Results

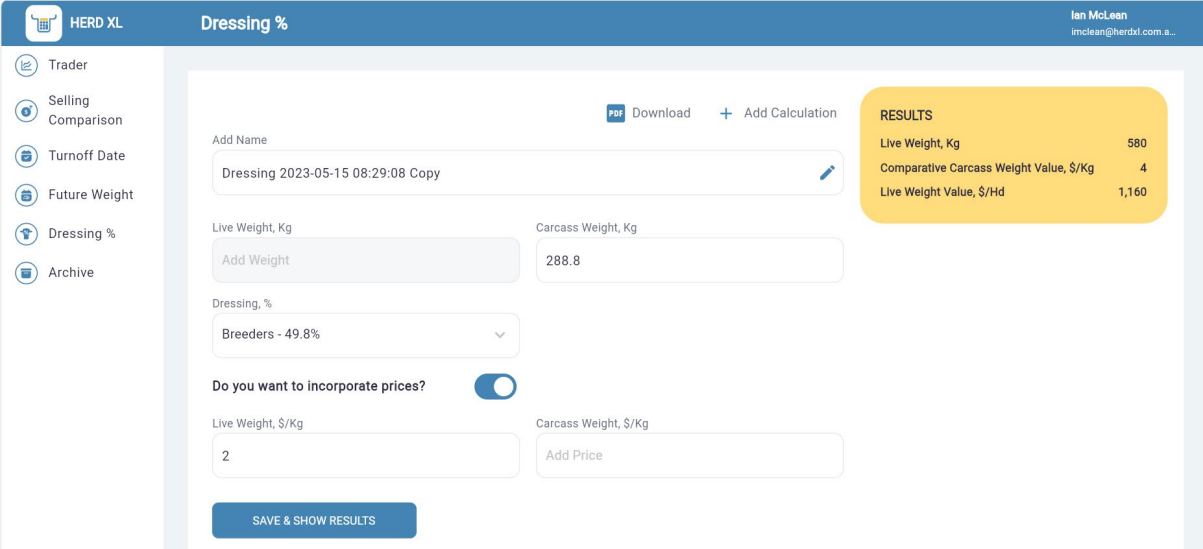


Figure 11 Web App: Dressing % Results

4.2 Marketing Plan

A Marketing Plan was developed as part of this project and is included in full as Appendix Five.

5. Conclusion

This project has helped Herd XL to progress much faster with the help of the MDC. Herd XL is now in a position to be launched by the end of 2023. A soft launch is proposed first, followed by a stronger launch early in 2024.

Herd XL is in a strong position to make a significant positive impact within the beef industry. Our well-defined marketing and communications strategy will help Herd XL to reach its target markets. Attracting new users, retaining existing ones and leveraging the power of referrals will all be new challenges we will face once we launch. The marketing specialist we have been working with has helped identify these risks and allowed us to strategize to overcome them. We feel this will help grow the Herd XL user base and establish it as a valuable tool within the beef industry.

Our software development team have been extremely accommodating when we have asked them to incorporate last minute changes and ideas into the app. This will always be an ongoing process as we aim to continue to update and improve the app as more feedback and new improvements are raised. We already have a future road map for Herd XL and a timeline in place for future development and expansion.

In conclusion, this project has allowed Herd XL to be in a strong position ready for launch. Our aim is to revolutionize the way the beef industry professionals operate, ensuring they minimize profit wastage, reduce inefficiencies, and unlock the potential of their livestock businesses. We feel extremely fortunate to be involved in this project and would encourage others to also utilize this fantastic resource. We are open to the promotion of the project via MLA channels.

6. Future research and recommendations

- We look forward to being able to work with MLA in the future with incorporating the NLRs data API into the app when this data becomes available.
- We have plans in place to move the app into other livestock areas such as sheep and goats.
- We hope to work closely with MLA to communicate our story to other beef producers.
- Once Herd XL is launched, we will work with beef producers to create new tools and calculators to add to the current suite and update the app where necessary.

7. **Appendix** (links to content submitted commercial in confidence to MLA)

7.1 Trader pdf export

7.2 Turnoff Date pdf export

7.3 Future Weight pdf export

7.4 Dressing % pdf export

7.5 Marketing Plan