Taurus Feedlot Auto Cursh

Oct 2024

Background

- In 2017 and 2019 MLA engaged in two projects looking at opportunities for feedlot induction automation opportunities.
- These studies showed strong interest from Feedlots with the following key focus areas.

1. **Immobilising animals**, in particular head restraint, or full body restraint.
2. **Automated Processes** have the potential to deliver calm and restrained animals
3. **Semi-automation of application of Treatments**, and recording

- In 2019 MLA engaged with Te Pari on a multiyear R&D project.

About Te Pari

- Established in 1980
- Family owned and operated
- Modern manufacturing plant in Oamaru NZ
- Export 60% - Australia, UK, EU and USA
- Australian operation based in Melbourne
- Sell direct nationwide
- In field technical support team

What we developed.

Combined several existing and new technologies into a super heavy-duty cattle crush specifically focused on Feedlot induction.

The Trials

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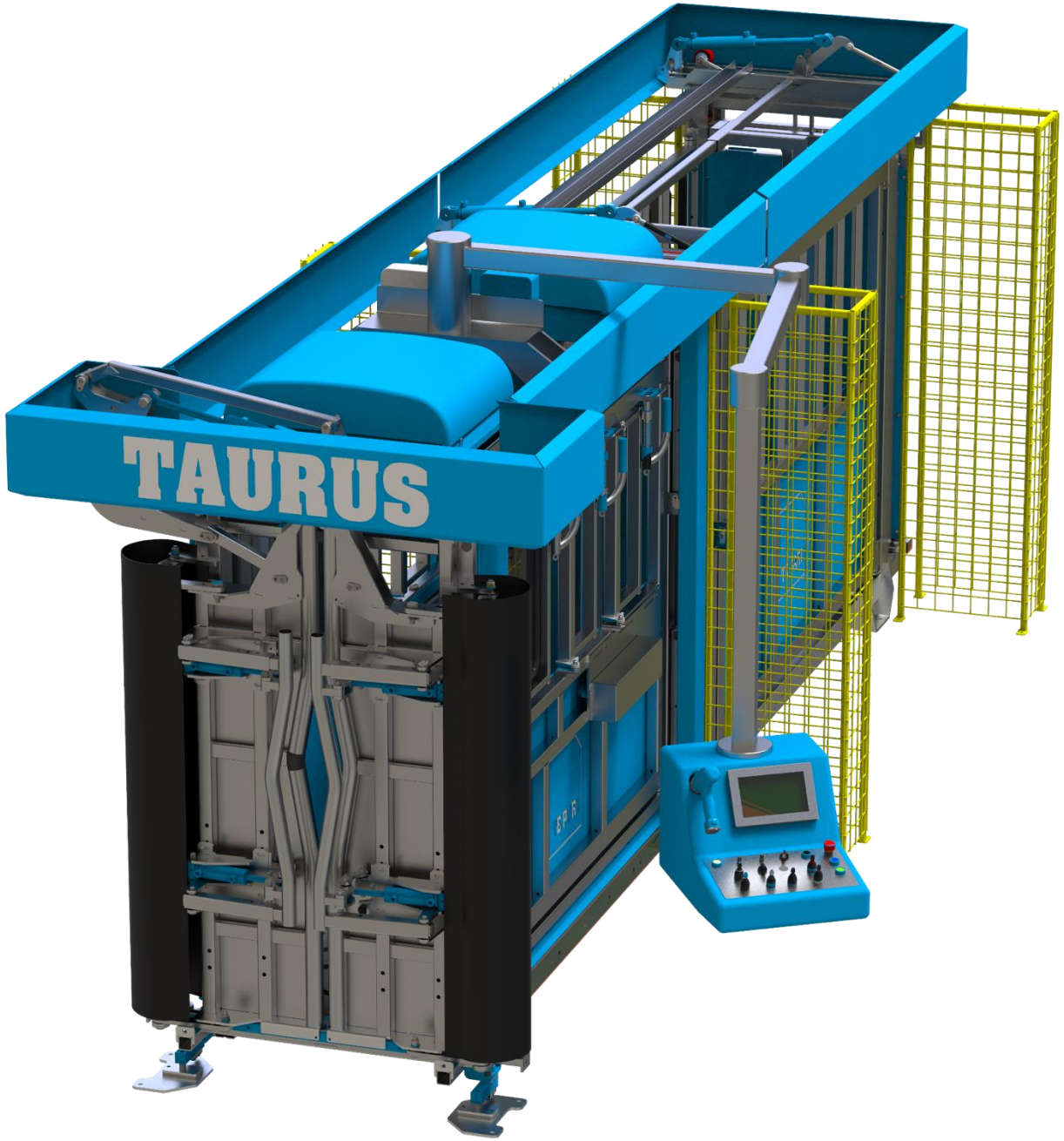
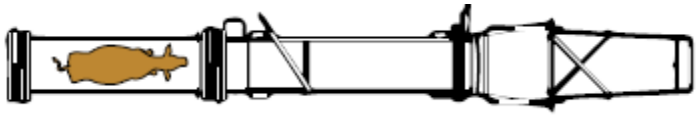
The Final Result



How it works…



1. The Cattle first enter the holding zone.
2. Cattle enter the Crush and into the headbail, the rear sliding gate and head bale automatically close, restraining the animal.
3. Following this the Hydraulic Parallel Side Squeeze and Hydraulic Anti-backing bars are activated.
4. A weight and EID is recorded automatically.
5. A hydraulic Neck Extender is controlled by the operator.
6. The Revolution Gun automatically calculates a treatment based on the animal's actual weight.
7. When processing is complete a single button opens all crush functions to allow the animal to exit.
8. The Crush system then automatically resets to start the process again.

Variable Position Control (VCP)

The patented Variable Position Control system for the Hydraulic Headbail is designed to mimic a human operator. This innovative control feature allows the headbail to reset to an ‘open and ready’ position for the next animal. Dual optical sensors then activate the Headbail to secure the animal.


TE PARI
www.tepari.com

Feedback from the field

What didn’t go well:

- Lead in race due to site restrictions
- Auto Injector – requires further development
- Data integration – issues were resolved during trial

Considerations:

- Technology – proved to be reliable.
- Headbail didn’t let any cattle slip through

Feedback from the field

What went well:

- Cattle Calmer
- Could use lower skilled staff
- Focus on preparation instead of operating the crush
- Save 1-2 labour units depending on tasks as no need to worry about catching the animal.
- More time for accurate data recording.

Questions…

Thank you