

ABBA Progeny Test/Beef Information Nucleus

**Field Day
Banana Station, Banana
Tuesday March 24**

An ABBA – MLA Donor Company Project

What is BIN?

- ❑ **Beef Information Nucleus**
- ❑ **Part of the Beef CRC/MLA Strategic plan for DNA Marker Commercialisation**
- ❑ **Provides for the systematic collection of accurate phenotypic information on economically important traits**
- ❑ **Originally – To facilitate the independent validation of DNA markers relative to Australian breeds and production systems**
- ❑ **Now – To contribute to improvement of Gene Marker predications and accuracy specific to the Brahman breed**
 - ❑ **Technology changes mean there will be continuous updating and validation as new data is accumulated**
 - ❑ **Only breeds with good quality data will be able to take advantage of DNA marker technology**



ABBA BIN

- ☐ **Structured progeny test**
- ☐ **Will test 20-25 bulls annually for 3 years**
- ☐ **Aim to produce approx 15 steers & 15 heifers per sire**
- ☐ **All steer progeny will be slaughtered for carcass and meat quality data**
- ☐ **Heifer progeny will be retained within the project to pregnancy test after the second joining**



ABBA BIN – Major objectives

- ❑ To attract and evaluate sires which will influence the future of the Brahman breed for a range of economically important traits including;**
 - ❑ Carcase & meat quality**
 - ❑ Female reproduction**
 - ❑ Growth traits**
- ❑ To ensure ABBA members and the Brahman breed is able to take advantage of DNA marker technology**
- ❑ To provide the resources to conduct other separately funded research into areas which would assist the future development of the Australian Brahman breed**



The Project

- ❑ **Evaluate 20-25 sires each year for 3 years**
- ❑ **Produce about 30 calves per sire in 3 Co-operator herds each year**
 - ❑ **Mark & Belinda Wilson, Banana Station, Banana producing calves by AI from high grade commercial Brahman heifers – AI 500-600 heifers plus 800 in Round 3**
 - ❑ **Rob & Annie Donaghue, Baradoo, Bauhinia producing calves by AI from high grade commercial Brahman heifers – AI 500-600 heifers plus 700 in Round 3**
 - ❑ **CSIRO – Belmont producing calves by AI and natural service from the Belmont registered Brahman herd – Rounds 1 & 2 – AI 120 plus natural service**



The Project cont

- ❑ ABBA purchased steer progeny at weaning to finish on grass, grain feeding would only be used as a drought contingency**
- ❑ Heifer progeny will be retained in the project until preg test following second joining within the co-operator herds**
- ❑ Blood and hair samples from sires and all progeny will be collected for DNA extraction and storage as well as sire verification**
- ❑ All data collected will be entered into the ABBA database and analyzed in Breedplan**
- ❑ Analysis of DNA samples against marker panels in the future is not part of the project**



Data to be collected

Growth traits

200, 400 & 600 day weight

Mature cow weight & condition score

Carcase & Meat quality

Ultrasound scan at 600 days

Eye muscle area

Rib fat

Rump fat



Data to be collected cont

Direct carcase data

Eye muscle area

Rump fat

Rib fat

MSA grading

Meat Colour

Fat Colour

Ultimate PH

Intra Muscular Fat

Ossification

Hump height

Meat quality (at 14 days aging)

Shear force

Meat Colour

Cooking loss

Extracted fat

MSA taste test on some samples



Data to be collected cont

Female reproduction

Days to calving

Teat & udder scores on heifers

Other Data

- **Structural soundness scores**
- **Flight Time**
- **Ovarian Scans**
 - **600 days**
 - **Into mating**



Progeny Details

Sire Total 70 including 6 CRC link sires

	Steers	AV/Sire	Range	Heifers	Av/Sire	Range
Round 1	239	12.6	8-20	246	13	6-18
Round 2	295	12.3	6-17	315	14	7-20
Round 3	339	15.3	11-29	388	15.8	8-23
	833			949		



Future Programme

	Round 1	Round 2	Round 3
Steer turnoff	Completed	April 2015	May/June 2016
Heifer joining	Completed	Completed	Nov 2015
Preg test & foetal age	Completed	Completed	Jan/Feb/Mar 2016
Heifer calving	Completed	Aug/Sept 2015	Aug/Sept 2016
Second joining	Completed	Nov 2015	Nov 2016
Preg test	Completed	April/May 2016	April/May 2017



The Future

- **Genomics will get cheaper**
- **Markers will explain more of the genetic variation**
- **Markers will have higher accuracy**
- **But to work they will require high quality phenotypes recorded across all traits**
- **BLIN type data will continue to be required**

