Eidsvold Station Santa Gertrudis
~ BREEDPLAN Pioneers ~

Introduction to Eidsvold Station

With a history of performance recording that dates back some 37 years, Anthony and Sally Coates of Eidsvold Station Santa Gertrudis could be regarded as BREEDPLAN pioneers. Anthony (pictured) admits that they “wouldn’t consider being a seedstock producer without an integrated performance/pedigree evaluation system and BREEDPLAN is accepted worldwide as the leading program.”

The “Eidsvold Station” prefix originates from the name of one of the four properties that the Coates family operate in the Eidsvold district, located in the North Burnett area of Queensland. Across these properties they run approximately 600 stud Santa Gertrudis females and 400 commercial breeding stock.

Anthony says with the knowledge that genetic improvement is a lasting thing in a breeding program; he had a desire to try and understand how to manage it. Their philosophy in cattle breeding has always been “If you can’t measure it, you can’t manage it” – which ultimately led them to performance record their herd, first using the QDPI’s ratio system, then within the National Beef Recording Scheme and finally Santa Gertrudis GROUP BREEDPLAN.

Performance Recording at Eidsvold Station

The performance recording schedule at Eidsvold Station incorporates a range of traits. Weights are recorded at 200, 400 and 600 days of age and also on mature cows. The Coates’ utilise mature cow weights to identify high and low maintenance females and have a tendency in their herd towards a moderate maturity pattern and frame size. Birth weights are not measured due to the extensive nature of their operation and therefore birth weight is managed by using appropriate sires and strict culling of females which experience calving difficulty.

Ultrasound scanning is conducted for the purpose of obtaining carcase information and so that Eidsvold Station bulls can be sold with Carcase EBVs. In terms of fertility traits, scrotal circumference measurements are taken on all bulls and stringent joining records kept for input into the Days to Calving EBV analysis.

Eidsvold Station is one of the few key herds in the Santa Gertrudis breed, and indeed, the beef industry as a whole, who have adopted the practice of recording flight time as a measure of temperament. It is recorded using one of the flight time machines readily available to industry where individual animals are timed passing between two light beams upon exiting the cattle crush. Anthony says that good temperament is vital not only for stock handling purposes, but it is ultimately related to meat quality and the performance of cattle in a feedlot or extensive grazing situation.
Educating Their Clients

Eidsvold Station sell between 150 and 170 bulls each year, with about 80 of these sold in their Annual Bull Sale in September at the Eidsvold Saleyards. All bulls are presented with their set of EBVs and EBV accuracies and more recently with an EBV graph which plots an animal’s EBV for each trait relative to the breed average and the Santa Gertrudis percentile bands. The bulls’ Santa Gertrudis Index values will also be displayed in time.

Eidsvold Station hosts an open day pre-sale each year, which they use as an educational day for their clients. The open day program incorporates a number of informative speakers, usually including a representative from BREEDPLAN who conducts a bull buying exercise using EBVs. The open day is also a great mechanism for obtaining feedback on the performance of bulls sold in the past and future bull requirements. Anthony feels that, in general, their clients’ understanding of EBVs has improved over time.

Selection Using BREEDPLAN EBVs and Indexes

BREEDPLAN is used in the Eidsvold Station herd to weed out the less productive animals, thereby gradually lifting the overall productivity and predictability of their genetics. The Coates’ use EBVs as an important tool when making mating decisions – formulating matings so the sire and dam’s EBVs will compliment one another to improve traits of importance in the next generation. They are careful about using EBVs below breed average and are tough on females with low reproductive figures. According to Anthony, they are more lenient when it comes to considering Milk EBVs because the harshness of their environment means they can tolerate less milk in their female herd.

In terms of sire selection, Eidsvold Station retain seven or eight of their own bulls each year for use but may also purchase bulls from other herds to keep the gene pool open. When using outside genetics, they like to select bulls with EBVs comparable to their own-bred bulls. Anthony says that when they are buying bulls a lot of homework goes into the sale catalogue first before visual inspection of the animals. They place approximately 80% of their emphasis on
EBVs and 20% on visual appraisal in their sire selection, knowing that the classification system in the Santa Gertrudis breed culls out most major structural soundness faults.

Eidsvold Station uses EBVs and more recently Indexes to reduce (cull) the below par performance bulls offered to their clients through their annual sale. They also use the information to assist in selection of the “higher-end” performance bulls for their own breeding program. This method of selection drives genetic progress through the Eidsvold Station herd as well as their client’s herds with the usual seedstock-to-commercial producer lag time.

A history of effective selection using EBVs is evident in the following analysis. Figure 1 and Figure 2 compare the average EBVs of Eidsvold Station’s entire mob of 2005 drop bulls with the 2005 drop bulls selected for their 2006 sale team and the 2005 drop bulls retained for within herd use. Also plotted are the 2006 Santa Gertrudis breed average EBVs for use as a benchmark.

The graphs reveal that the Eidsvold Station 2005 drop bulls are above breed average for each trait. For example, the average 600 day weight EBV for the Eidsvold Station 2005 drop bulls is +11kg whereas the Santa Gertrudis breed average is +5kg.

This analysis also reveals the difference in average EBV between the four groups. Using scrotal size as an example the average EBV is the greatest for the retained 2005 drop bulls, then the sale bulls, then the 2005 drop bulls and last the Santa Gertrudis breed average being +1.4, +0.9, +0.7 and +0.1 cm respectively. This trend in average EBVs between the four sample groups is evident for the majority of EBV traits and Indexes graphed.
Anthony has great support for the Selection Indexes (Domestic and Export) which are now available in the Santa Gertrudis breed. He believes they help “balance things out” for growth, fertility and carcase traits – contributing towards a more balanced approach to selection. The effect of selecting breeding animals with balanced traits rather than extreme individual traits can be observed in the Export Index trends graphed below in Figure 3. Through balanced selection in the Eidsvold Station herd genetic progress for the Export Index has been maintained well above breed average since 1996 when GROUP BREEDPLAN was introduced to the Santa Gertrudis breed.
A Mob of 15 month Old Pasture Fed Eidsvold Station Steers.