2023 SPRYS NEWSLETTER

"Breeding better bulls, supplying better beef"

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WELCOME TO THE SPRYS ANNUAL NEWSLETTER

The 2023 59 Years of Breeding Sale will be the largest ever offering of bulls at Sprys, with 95 outstanding sires to sell on property Wednesday 26th April
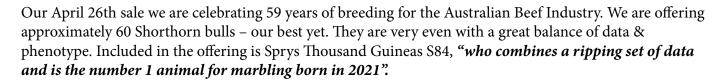
Dear Breeder,
Welcome to Sprys Shorthorns & Angus Autumn 2023 Newsletter, we hope you enjoy the articles we have provided for you.

2022 was a very successful year for the Spry family, having a record breaking April sale for both the
Shorthorns & Angus.

At Sprys, we are dedicated to providing an article which will add to a better bottom line for our valued
Clients. We strive to keep improving our product through genetics, innovation, sire line testing and a balanced data set.

Our April 26th sale we are celebrating 59 years of breeding for the Australian Beef Industry. We are offering approximately 60 Shorthorn bulls – our best yet. They are very even with a great balance of data & phenotype. Included in the offering is Sprys Thousand Guineas S84, *"who combines a ripping set of data and is the number 1 animal for marbling born in 2021".*

You will be able to purchase a bulk lot of bulls which are very similar in data & phenotype.
Also we are offering our very best Shorthorn Donor, Sprys Miss Buddy M36 who is the dam of Sprys Goldenrod P39 and many other sires sold into the seed stock industry. Embryo's from Miss Buddy M36 have been exported to the UK with great success. She has a very impressive, slick coated bull calf at foot sired by Eloora Gunner R10 and she sells open ready to flush.

Also being offered in the sale are 36 Angus & Angus/Shorthorn composite bulls who will impress the most discerning cattle breeder.

Enquiries & Visitors are most welcome. To inspect the offering contact Gerald, Lynden or Matt or your Agent. A generous outside agent rebate will be available (conditions apply).

THERE'S NOTHING LIKE A DAM

LOT 1 - 2023 SPRYS GENETIC SALE - SPRYS MISS BUDDY M36

Take a dive into the deep end of the genetics pool.

Number 1 Donor at Sprys and she sells as lot 1 in the 2023 Sale.
She is the Dam of Sprys Goldenrod P39 who is breeding the house down.

M36 is moderate framed, deep, thick and extremely sound with excellent maternal traits. Currently sits in the Top 20% of the Shorthorn breed for 9 traits.

Embryo's from Miss Buddy M36 have sold to the UK with great results from calves on the ground.
This is a fantastic opportunity to secure a proven donor at the very top of the breed today.

SPRYS GOLDENROD P39 SOLD FOR $30,000 IN 2020.
SONS SOLD TO $60,000 IN 2022.

TEXAS UNDINE M113 JOINS THE ELITE SPRYS DONOR TEAM.

M113 is a daughter of the great Texas UNDINE Z183 who has sold $1,000,000 worth of bulls alone. She is the maternal sister of so many donors at Texas including the incredible Texas UNDINE H647 who is one of Australia's most recognised, dominant females.

H647 is the dam of $225,000 Texas ICEMAN, $108,000 Texas POWERPLAY, and $48,000 Texas QUINELLA to name a few and currently having sold 26 bulls to average $35,550 which includes selling 5 bulls over $40,000 and having already accumulated $930,000 worth of progeny (not many cows can claim that track record).

M113's full sister is Texas UNDINE L621 who has sold bulls to $58,000 and currently averaging $39,000 for her sons.

She is also the maternal sister to Texas UNDINE N555 who was sold recently for $60,000 to be St Fillan's Angus leading donor.

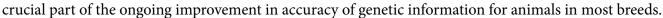*Sprys are excited to have made such a significant investment in the future of our herd and yours.*

USING SCAN DATA VS EBVS

Beef Central – Genetics 30 January 2023- Alastair Rayner

KNOW THE DIFFERENCE BETWEEN SCAN DATA & EBVS AS SELECTION TOOLS

Since the mid 1990's when ultrasound data became more commonly available, the number of animals scanned and presented with data at sales, shows and other occasions is immense. In the Angus Breed alone, a recent paper published in the American Society of Animal Science identified over 640,000 animals as being scanned and recorded in the Angus Australia Database.

Without doubt, scanning for the production traits of eye muscle area, subcutaneous fatness and marbling have vastly improved the ability of producers to identify and select superior genetics. The use of trained and accredited scanners to record and enter data into programs such as BreedPlan has been a crucial part of the ongoing improvement in accuracy of genetic information for animals in most breeds.

However, its equally important to remember that ultrasound scanning data has to considered and understood within context. As raw data collected crush side, the information available only shows how animals that are measured at them same time, from a contemporary group have performed against each other. While that data may look impressive, it is not possible to compare the data collected against the breed average or even against other groups of animals run in a different environment within one property.

It's always important to bear in mind that the phenotype of an animal, its physical appearance is a direct function of its genetic potential and the influence of its environment. How an animal appears may not always accurately reflect the genetic potential of its progeny. Raw data, either through scanning, or simply weighing is the collection of the current phenotype of the animal. Until that data is used as part of a broader analysis, then its use is limited to a comparison of similar animals at that location and at that time.

Following a recent carcase competition, the risks of trying to use raw scan data as a prediction of progeny performance was highlighted to a group of Qld producers. The animas in question had been bred by a bull that was listed in the sale catalogue as having the largest EMA in the draft. However his progeny when they were eventually finished and sent into the competition were found to be among the group with the smallest EMAs of the competition.

The almost immediate reactions were firstly that somehow the carcase data had to be wrong, as the animals were sired by an anima with large EMAs. The close second reaction was to suggest the scan was wrong and inaccurate. While these are understandable reactions, they are incorrect on both accounts, and highlight the fact many producers confuse raw data with an EBV.

It may well have been correct that the bull who sired those animals did have the largest EMA when scanned. However, all that scan data shows are the result of the interaction of that bull's genetics and environment.

The scan data doesn't really allow for any insights into the genetic potential that bull had to change the EMA of any progeny. So much depends not only on the genetics of the sire, but also on the genetics of the cows that bull was then joined to. It can be possible that a raw measurement may be the largest in a group, but across a breed, when analyzed and compared against more data as part of a Breedplan analysis, that this was a one off. And in fact the animal may well be genetically average for this trait. It's just that as an individual in that environment, the bull was able to express a larger EMA than his contemporaries.

Where that bull then fits, either above, on par or below average is the first half of the equation. As a bull contributes half of a calf's genetics, the genetics of its dam are also a key factor in the eventual carcase result. If those cows were genetically average, or even below average, this has a direct impact on how much change a bull can have. And finally there is also the impact of the environment those calves were raised in ahead of their entry into a carcase competition.

At the time, my message to the breeders and producers is not to start blaming the scanner or the grader. Rather the issue comes back to what information was used to make that breeding decision. Using raw scans for more than looking at how animals may grow and exhibit traits in a particular environment, increases the risk for producers to select the wrong animals. Using that data, without knowing what needs to be corrected in the breeding herd at home is an even greater risk.

It is also worth remembering that carcase competition data is also data that is effectively raw data from a single point in time. The results of a single competition alone shouldn't be seen as the signal to change an entire program. However, if the data can be included with other data collected on farm and from carcase feedback from commercial sales, a trend may start to emerge of the areas where herds need to improve. If these traits are to be corrected or improved, a more reliable indicator is to use EBVs that have high accuracy.

In the longer term this process is likely to be more effective in achieving the progeny outcomes a program has in mind.

Alastair Rayner is the Principal of RaynerAg, an agricultural advisory service based in NSW. RaynerAg is affiliated with BJA Stock & Station Agents. He regularly lists and sell cattle for clients as well attending bull sales to support client purchases.
Alastair provides pre-sale selections and classifications for seedstock producers in NSW, Qld and Victoria.
He can be contacted here or through his website: www.raynerag.com.au

KNOWLA SO RIGHT S48

Sire: BALDRIDGE ALTERNATIVE E125

PEDIGREE:

Dam: KNOWLA DESIGNER L21

ANIMAL ID: BLA21S8
DOB: 01/03/2021

Calving Ease: ★★★★ **Carcase:** ★★★★ **Docility:** ★★★★★

Growth: ★★★★★ **Maternal:** ★★★★★ **Structure:** ★★★★★

- *So Right was the $190,000 selection at the 2022 Knowla Livestock Prouction Sale, where 8 Alternative E125 sons averaged just under $50,000.*

- *So Right has a tremendous amount of spring and depth of rib, stoutness and muscling, all being clean fronted with a great ability to move effortlessly with presence and eye appeal.*

- *The cow power behind So Right is unmatched, mother entering the donor program, already having two daughters in the donor pen. So Right is a great grandson of Designer V96, who is arguably the best cow to walk at Knowla. The longevity in the pedigree is outstanding, expect So Right daughters to last.*

- *When you analyse the phenotype and structure of the bull, his amazing temperament, the cow power behind him, and the data set he brings to the table, So Right S48 is the complete package.*

Knowla So Right S48 was purchased for $190,000 in Spring 2022 for extensive use in Sprys & Cottage Creek studs. An outstanding young sire who combines phenotype, structure & a balanced data set in an ideal maturity package. So Right is a tremendous investment in the future profitability of our clients herds.

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Semen available:
Gerald Spry – 0428 651 481
Jack Laurie - 0467 484 479

2023 SALE BULLS

60 Red, White & Roan Shorthorn Sires, 35 Impressive Angus & Angus X Shorthorn Composite Bull.
1 Donor- Sprys No. 1 Donor, Sprys Miss Buddy M36. Sells with an outstanding bull calf at foot.

SPRYS THOUSAND GUINEAS S84

No. 1 2021 drop bulls for Marble Score EPD.
Powerful Muridale Thermal Energy son.

OUTBACK SPRYS GIGABYTES S277

SPRYS DOWN UNDER S77

SPRYS THERMAL ENERGY S68

SPRYS-W ALTERNATIVE S599

Outstanding paternal brother to the
$190,000 Knowla So Right S48.

SPRYS-W BEAST MODE S553

SPRYS-W BALANCE S560

SPRYS TOP DOG S519 - 7/8 SH 1/8 AN

SHORTHORN ANGUS X WORKS

To say that the Angus Shorthorn cross works well, would be an oversimplification.

As one breeder said: "You've got to be sourcing the best genetics you can from both breeds. If you put rubbish genetics in you get rubbish out, whether it's straightbred or crossbred. Use the best genetics you can get; you've still got to make genetic gain."

The benefits of crossbreeding can be summarised by two main categories: heterosis and breed complementarity.

Heterosis is the advantages in production seen over the average performance expected from two purebred lines, while breed complementarity matches the core traits of two breeds to complement strengths and weaknesses of each other.

To use crossbreeding well, it is important to understand that heterosis is also influenced by the heritability of traits. The lower the heritability, the greater the effect of heterosis on the trait and vice versa. In the broad sense, fertility traits are lowly heritable, growth traits are moderately heritable and carcase traits are highly heritable.

One of the key considerations for cross breeding is that to make the cross work, you need more than complementary breeds, you need the right selection of trait performance within the breeds. For example, marbling is more highly heritable so the impact of heterosis will be lower. So, it's best to rely on genetic gain and use genetics from each breed that are similar for marbling. Growth traits will receive benefit from heterosis but so will mature cow weight. So if you are looking to breed more efficient females, then select for growth but be careful of late maturing parents.

The greatest advantage of heterosis will also come if you retain the F1 females, so select genetics from two breeds that naturally complement each other maternally.

That's why the Shorthorn Angus cross can work well, but works particularly well when you choose the right Shorthorn and Angus genetics. Fewer faults to correct in either population, means a more consistent and profitable F1. Stayability is also enhanced in the F1 female.

Gerald Spry, Sprys Shorthorns and Angus explains "The Shorthorn, as far as growth and meat quality, aligns itself well with the Angus breed. We aim to breed functional, fertile fast growing and high yielding cattle with strong maternal traits in a medium maturity package from both breeds."

And the combination of medium maturity, high marbling Sprys & Outback Shorthorn genetics in Angus herds is certainly creating tremendous value for those commercial breeders using their bloodlines.

Mark & Emily Perkins are running a successful Shorthorn Angus cross program.

"The Shorthorn Angus cross female is a pretty complete cow. Fertility is excellent, calf raising abilities, the weaners are always good. You aren't excluded from the premium markets either including domestic and grassfed. Then you take whatever hybrid vigour you get above that, it's a free ride."

As expected, in part due to genetics and in part due to hybrid vigour from the cross, fertility is good. For most Southern producers in reasonable seasons fertility isn't a huge issue when seasons are good, but it can be a different story when things are tough.

Despite difficult conditions due to the wet weather this joining season, Mark said fertility was exceptional.

"We got 69% in calf from one round of FTAI."

The fertility aspect was also supported by Holbrook breeders, Tony & Marg Killalea, who have run a successful Shorthorn Angus cross breeding program for some time. Marg said this season was particularly challenging due to wet weather, in one of the tougher winters many can remember.

Their first calving females held at 71% from one round of FTAI.

"They weren't fat, I thought at the time that this might be a wasted exercise, but they settled in calf very well, it was a really good result."

Heterosis also effects more than just fertility. Mothering ability and calf survivability are other key traits impacted. Will & Melinda McCrohon, Holbrook NSW breeders are new to the cross, but can already see benefits maternally.

"We have had less empties in the 1st calvers." Melinda said, "We are really excited by the females we've kept, they're beautiful. Fertility starts you on the profitability train. They milk well, very maternal and you notice they have excellent mothering ability."

Weight gain, as expected, is also a feature in the cross.
"Steers have really solid growth. Post weaning, they have a little extra bone, they're able to grow and fill into themselves. Where the purebreds were starting to slow down a bit and deposit fat, the crossbred calves when they hit the feedlot will grow like steam.' Melinda said.

Photo courtesy The Land

The ability to turn off cattle younger at the right specifications will be part of the sustainability platform for at least some supply chains moving forward.
"In the future, sustainability becomes important. Every day the steers are here they are costing you. When they are off the farm you are not spending money on feed, more feed for breeders, more pasture management options."

For the Killalea family, the cross means they have been able to send their finished steers into a grass-fed domestic brand by 14 months, reducing the time they need to keep those cattle on farm.
Early turnoff has a positive effect on ossification also, which helps improve MSA Index scores.
The crossbred cows seem to weigh heavier, yet there seems to be no concerns about their maintenance or functionality. However, it is increasing returns.
"The cow seems to be a better forager and may have better feed efficiency as well." Mark said, "They aren't really bigger, just heavier. Cull cows are around 30% of your income so it's a bonus."

"Cow longevity has been good," Marg said, "Selling cull cows at 680 kgs adds to the bottom line."

One important element from the cross appears to be docility. Docility is also a trait that is impacted by heterosis. Many commercial breeders list docility as one of their primary selection traits and the Shorthorn Angus cross seems to be working. "The cross is quiet." Melinda says "Once they settle after weaning they are settled."
For Marg Killalea, temperament is non negotiable in their program.
"We won't tolerate anything that isn't safe to handle. I do wonder if part of the reason why the cattle perform is because they are so quiet."

Beyond the maternal and growth benefits, carcase quality is a key feature. Whilst there is some expected heterosis, carcase quality reflects the two breeds complementarity. In the lucrative F1 Wagyu market, Angus and Shorthorn females are the two preferred female groups.
In the most recent Beef Spectacular Feedlot Trial results, the McCrohon family were first time entrants with their Shorthorn Angus cross steers, finishing Reserve Champion in the overall category of the competition.
With a total of 783.5 points, the McCrohon steers finished only 5 points behind the overall winners, Hicks Beef composites.
The Killalea family have also received impressive results for their annual turnoff.
Winning the Lardner Park Grass-fed Steer Trial (in 2018 and 2021) with Shorthorn/Angus cross entries is strong endorsement, but the results certainly aren't a flash in the pan.
"Our steers consistently average in the 60's for MSA Index." Marg said. "For grassfed programs they do really well and provide a quick turnaround."

"There is a clear economic advantage in the cross." Mark said, *"You're not precluded from premium markets including domestic and grassfed and you get a better cow. It's easy to justify investing in better genetics".*

SPRYS TOP DOG S519 - 7/8 SH 1/8 AN

THE VALUE OF GENOMICS

Genomics as a management tool in beef herds has been around for longer than most people realise. Qualitative traits, which usually rely on a simple inheritance pattern, such as polledness, coat colour and many genetic defects have been able to be managed using genomics for many years..

Parentage too, using limited markers, has also been in use for quite a while.

This is an important use of genomics. Many producers now look for homo polled bulls for example. Because the polled gene is dominant and the horn gene recessive, progeny of homo polled bulls (ie; have no horned gene), can only produce polled calves.
The same is true of many genetic defects meaning they will only express the defect if they have two copies of the defect genes.
In this way, genomics has been a successful management tool for both stud and commercial breeders.

But now genomics is offering a much greater level of quantitative trait management for beef breeders.

Traditional genetic evaluations have always relied on 3 key sources of data. The animals Pedigree, it's individual phenotypes and it's progeny phenotypes. All collected within defined contemporary groups. Using these 3 sources of data allows genetic evaluations to predict progeny performance.
The most powerful of these 3 is progeny data and that is problem for commercial breeders when they are buying non-parent sires.

But genomics now provides a valuable fourth set of data that provides information on non-parent animals.

EPDs are computed for many quantitative traits; traits controlled by many genes (polygenic) and affected by the environment. Traits that have economic importance to beef producers.
For genomics, that means that it isn't enough to know the if a gene at one location is recessive or dominate, as these phenotypes are the result of the interactions of multiple genes.
Simply put, IGS must use genomic information from multiple gene markers to predict how the progeny of that animal will perform for each quantitative trait.

To do that, IGS requires animals where both genomics and phenotypes have been rigorously collected in order to understand the interaction between different gene markers and the corresponding levels of performance for each key trait. This is called the reference or training population.
Using this understanding from the training population allows evaluations to better predict progeny performance for non-parent animals, like sale bulls.
Importantly, this adds to the traditional evaluation, it doesn't replace it.

There is an old expression that genetics are not inherited equally. Full siblings will share 50% of their DNA on average, but in reality that figure can be higher or lower. This is because progeny receive a random sample of genetics from their parents.
That means that although on average each animal should inherit 25% of it's DNA from each of it's 4 grandparents, the actual amount will vary from that.

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If the grandparents were genotyped, IGS will use genomics to understand this relationship and can adjust the pedigree matrix to reflect the actual level of inheritance. This further increases the acuuracy of the genetic prediction.

The random selection of genes that occurs, even in full siblings, also explains why we need genetic evaluation. Understanding the unique combination of genes in each non-parent sire is valuable information for commecrcial breeders looking to increase performance and profitability in their beef herds.

HOW POWERFUL IS GENOMICS?

One way of measuring the effect of genomics is to use progeny equivalents.
These are expressed as the number of progeny phenotypes that would be needed to increase EPD accuracy in non-parent animals by the same amount as a genomic profile.
As Table 1 shows, a genomic test on 2020 born non-parent animals in IGS is equivalent on average to:
- 25+ Calving Ease Direct progeny phenotypes
- 22 Birthweight progeny phenotypes,
- 25+ Weaning weight & Yearling weight progeny phenotypes
- 15 Stayability phenotypes
- 25+ Docility progeny phenotypes
- 8 Marble Score phenotypes

TABLE 1: IGS Progeny Equivalents for 2020 born animals.

TRAIT	2020 PRGNY EQUIV
CE-D	25+
CE-M	4
BWT	22
WWT	25+
YWT	25+
MILK	19
STAY	15
DOCILITY	25+
CWT	5
MS	8
REA	6
FAT	8

Of the 4 key sources of data used in the IGS evaluation, the most powerful source is the progeny phenotypes, but having progeny information is not possible for commercial breeders who are selecting their sires as non-parent animals.

Which is why genomics is so exciting. It provides critical information for commercial breeders because it substantially increases accuracy on the sires they are looking to invest in.

Genetic evaluation is the prediction of how progeny are expected to perform. That's hugely relevant to commercial breeders as how the progeny perform for key traits helps drive profitability within their herd.
Expected progeny performance is also key information that you can't assess visually when purchasing new bulls.

The challenge though, is that because we can't see it, it can be harder to understand.
But do we need to understand it? When we buy a new tractor, we don't read the whole book.
IGS currently has over 21 million animal records and uses more than 450,000 genotypes in it's analysis.
That's a lot of information. So perhaps it's enough to have confidence that programs like Sprys have undertaken the hard work for you.

Every sale bull in the 2023 Sprys Genetics Sale has been been genotyped and all will have genomically enhanced EPD's.
All done to ensure that you have the most accurate selection tools available for you on sale day.

To the Spry and Schuller families, relationships matter and that's why commercial profitability will always be at the heart of everything Sprys do.

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