



SPRYS

SHORTHORNS

&

ANGUS



BREEDING BETTER BULLS
SUPPLYING BETTER BEEF

2024 NEWSLETTER

WELCOME TO THE SPRYS ANNUAL NEWSLETTER

We welcome you to the 2024 Sprys newsletter and hope that it will keep you informed about the progress at Sprys Shorthorn and Angus.

2024 has been an average season for some but despite that the April sale was very successful and has also been supported by strong paddock sales as breeders continue to invest in their breeding programs for the future.

At Sprys, we are dedicated to the genetic progress of both the Shorthorn and Angus breeds. However, we are also excited by the complementarity that they offer and we are impressed by the impact it is having on clients profitability.

We continue to apply selection pressure to our herd to ensure we deliver the best quality sires for you. Fertility is a key platform and our females must perform through tight joining periods with a no exception rule for any female that fails to conceive. Feet and overall structure, docility, maturity pattern and longevity are other key culling strategies.

At Sprys, we continue to test our sires in the commercial sector to ensure they will contribute positively to your bottom line. 2025 will also see some exciting new genetics coming through in both breeds.

In the Angus group, progeny of Knowla So Right S48, who we purchased for \$190,000, are generating a tremendous amount of excitement. His progeny at Sprys are special - great structure, balance, temperament, natural thickness with a balanced data set. Breeders who have used So Right S48, including ourselves are saying his progeny are very consistent in type with ease of doing.

A new Shorthorn sire with progeny who are going to turn heads is Bell M Guinness 17G, who has produced an awesome set of bulls and females. They are born easily, mainly from heifers, with a lot of natural thickness and depth with exceptional do-ability. The 1st group have been ultrasound scanned showing well above IMF% & Fat levels compared to their contemporary group. We have more to scan and if they are similar, we expect a significant increase in Guinness 17G Fat & Marble Score EPDs.

The other new Shorthorn progeny group are by Bell M Foreman 30A. Whilst new to Australia, Foreman is a high accuracy sire in North America. His progeny display above average growth and balance with very good EPD data sets. Foreman has a couple of exceptional bulls for our April sale. Semen was very limited, so this is going to be a rare opportunity to access outcross genetics that are well proven in both phenotype and data set.

As always, the success of our many Clients who are receiving premiums for Sprys genetics is both humbling and gratifying, particularly breeders who have consistently made astute selections of our bulls & genetics. For those who are seeking new genetics; semen, females, bulls or embryo's, don't hesitate to give us a call anytime. We always ensure we have quality genetics available.

We invite interested breeders to view our outcross genetics plus our tried & proven genetics by appointment by calling Gerald, Matt or Lynden Spry. For those who would like help with improving their beef operations also please make contact, we are only too happy to help.

In June this year we were pleased to purchase another small block of land only 10 minutes south of home which will be a good asset to our Shorthorn & Angus operation.

If you have any questions then do not hesitate to contact one of us at Sprys, Wagga Wagga.

Best wishes for good health, happiness and a rewarding 2025,
Gerald, Lynden & Matt



OUR INVESTMENT IN YOUR FUTURE

Sprys continues to invest in industry leading sires to ensure that we are able to offer elite progeny for your selection each year.

Bell M Foreman 30A is a unique outcross sire with extensive progeny proof already. Foreman excels for Stayability and both Carcase Weight and Quality. He is adding depth, natural thickness, softness and style to his calves. One of the truly elite outcross Shorthorn sires, his sons will feature in the 2025 bull sale and in the years to come.

Dunoon Data Plus S603 was purchased in conjunction with Cottage Creek for \$125,000 in the Spring 2023 Dunoon sale. Dunoon Data Plus S603 scored perfect 5's for front and rear claw shape and heel depth with exceptional softness, docility and the ability to promote calving ease while maintaining a balanced, modern, growth curve. His data profile stands unmatched for his combination of Calving Ease, short Gestation, Birth to Growth spread, Fertility, Docility, softness, Marbling and structure.

Bell M Guinness 17G is a standout Shorthorn sire with exceptional Calving Ease, moderate Birthweight and explosive early growth. He also excels for Stayability and Marble Score. Bell M Guinness 17G is a super sound, deep sided, long and easy fleshing sire backed by generations of maternal excellence.

His sons will feature heavily in 2025 as outcross sires that will offer clients a tremendous pathway to outstanding daughters and profitable steers that will hit the grid.

Prime Pure Gold T29 was purchased at the Prime Angus 2023 bull sale for \$86,000 at 14 months of age. Pure Gold T29 is a tremendous son of Sterling Pacific 904 and offers excellent Calving Ease with explosive growth, impeccable temperament, softness with carcase weight and elite marbling. Add to his credentials a great carcase shape with the ability to lay fat and Top 3% for Days to Calving, expect Pure Gold T29 sons to create highly profitable steers and easy doing daughters with excellent fertility, docility and softness.



BELL M FOREMAN 30A



DUNOON DATA PLUS S603



BELL M GUINNESS 17G



PRIME PURE GOLD T29



SPRY'S ELITE SEMEN SIRE'S

KNOWLA SO RIGHT S48

DOB: 03/01/2021

ID: BLA21S48



POSS EASY IMPACT 0119

BALDRIDGE ALTERNATIVE E125

BALDRIDGE BLACKBIRD A030

KNOWLA SO RIGHT S48

WATTLETOP SITZ 458N E111

KNOWLA DESIGNER L21

KNOWLA DESIGNER C16

EBVS 01/10/2024

CALVING EASE ★★★★★ CARCASE ★★★★★ DOCILITY ★★★★★ **\$190,000**
 GROWTH ★★★★★ MATERNAL ★★★★★ STRUCTURE ★★★★★

EBV	CE-D	CE-M	BWT	200	400	600	MCW	DTC	SS	DOC	CWT	EMA	RIB	P8	RBV	IMF	\$A	\$A-L
EBV	+3.6	-3.4	+3.7	+56	+97	+126	+107	-6.0	+2.8	+29	+77	+9.1	+1.4	+1.7	-0.1	+4.0	\$241	\$398
%	39	93	43	26	34	34	42	21	27	18	23	21	21	18	80	13	13	15

DUNOON DATA PLUS S603

DOB: 10/08/2021

ID: BHR21S603



THE ROCK K8

DUNOON Q943

DUNOON DANDALOO J672

DUNOON DATA PLUS S603

LAWSONS NOVAK E313

DUNOON Q226

DUNOON PRINCESS L559

EBVS 01/10/2024

CALVING EASE ★★★★★ CARCASE ★★★★★ DOCILITY ★★★★★ **\$125,000**
 GROWTH ★★★★★ MATERNAL ★★★★★ STRUCTURE ★★★★★

EBV	CE-D	CE-M	BWT	200	400	600	MCW	DTC	SS	DOC	CWT	EMA	RIB	P8	RBV	IMF	\$A	\$A-L
EBV	+7.3	+4.6	+0.9	+51	+95	+135	+105	-8.4	+3.6	+33	+75	+5.0	+1.9	+2.1	-0.6	+3.9	\$248	\$426
%	11	35	5	47	42	18	44	2	11	11	30	66	14	15	94	15	9	5

SPRY'S ELITE SEMEN SIRE'S

SPRY'S DOWN UNDER S77

ID: GLSS77

DOB: 02/08/2019

HBR



MURIDALE THERMAL ENERGY 15A

SPRY'S DOWN UNDER S77

\$70,000

SPRY'S BUDDY LAVENDER P41

DOCILITY ★★★★★ GROWTH ★★★★★ DOABILITY ★★★★★

EPD	CE-D	CE-M	BWT	WW	4YW	MILK	MWWT	STAY	DOC	CWT	REA	FAT	MARB	YG	\$API
EPD	+9.2	+6.2	+3.5	+60.8	+91.9	+25.6	+56	+14.5	+18.4	+21.5	+0.64	-0.05	-0.05	-0.28	\$115
%	35	45	75	15	15	20	10	30	2	3	3	4	45	90	35

EPDS 01/10/2024

SPRY'S CRACKER JACK R62

ID: GLSR62

DOB: 01/08/2020

HBR



MURIDALE THERMAL ENERGY 15A

SPRY'S CRACKER JACK R62

SPRY'S REMBRANDT'S JUDITH N93

STAYABILITY ★★★★★ CARCASE ★★★★★ API INDEX ★★★★★

EPD	CE-D	CE-M	BWT	WW	4YW	MILK	MWWT	STAY	DOC	CWT	REA	FAT	MARB	YG	\$API
EPD	+8.9	+4.7	+3.4	+59.1	+85.9	+20.9	+50.5	+18.6	+11.2	+6.8	+0.52	-0.08	+0.01	-0.38	\$126
%	40	75	70	20	30	65	35	4	45	20	10	45	30	45	15

EPDS 01/10/2024

SPRY'S GOLDEN ROD P39

ID: GLSP39

DOB: 24/06/2018

HBR



JSF GOLDENROD 57U

SPRY'S GOLDEN ROD P39

SPRY'S MISS BUDDY M36

MATERNAL ★★★★★ DOCILITY ★★★★★ STRUCTURE ★★★★★

EPD	CE-D	CE-M	BWT	WW	4YW	MILK	MWWT	STAY	DOC	CWT	REA	FAT	MARB	YG	\$API
EPD	+10.9	+4.4	-0.4	+56.2	+81.6	+25.5	+53.6	+16.6	+16.0	+12.3	+0.51	-1.1	-0.23	-0.43	\$117
%	20	80	10	25	35	25	20	15	10	15	15	100	95	15	30

EPDS 01/10/2024

SPRY'S THERMAL ENERGY Q71

ID: GLSQ71

DOB: 06/08/2019

HBR

MURIDALE THERMAL ENERGY 15A

SPRY'S THERMAL ENERGY Q71

CALVING EASE ★★★★★

STAYABILITY ★★★★★

SPRY'S GRISSOMS KATE H200

CARCASE ★★★★★

EPD	CE-D	CE-M	BWT	WW	4YW	MILK	MWWT	STAY	DOC	CWT	REA	FAT	MARB	YG	\$API
EPD	+13.9	+9.5	+0.4	+51.4	+75.9	+25.7	+51.4	+17.2	+13.8	+9.5	+0.54	-0.09	+0.14	-0.38	\$139
%	10	5	15	55	60	20	30	10	15	15	10	55	10	40	3

EPDS 01/10/2024



SIMPLIFYING GENETIC SELECTION

Article by Graham Winnell - AGS

There have been countless articles written over the last 30 years about genetic evaluation systems (EBV's or EPD's) and how best to use them. Just as many have been written to explain the importance of using these systems to enhance your bottom line. Often, the authors feel exasperated that there isn't greater uptake from readers.

So the battle lines are drawn, between those that are fully supportive and those who choose to reject the science. Information and misinformation is everywhere and we are all expected to choose a side.

But the truth is, as commercial breeders, you are the customer. And you're free to use as much or as little of the information in front of you as you like when making your decisions. So firstly, let's take the pressure out of it and accept that it's your choice.

If you plan to use the data, let's start with the most important thing to know. EBV's and EPD's often don't accurately describe the animal you see in front of you. That one gets used a lot by breeders trying to discredit the science. But the truth is, if you could see it, you wouldn't need the numbers.

Firstly, much of what you are looking at isn't heritable and EBV's and EPD's only describe the heritable bits. Secondly, they are not trying to describe the animal but how the animal's progeny will perform for key economic traits and we can all agree that a sire's progeny don't always look or perform the same as their sire did.

So don't worry if a bull looks different to his numbers. That means the science is working, not the other way around.

The second point is, as important as the heritable components are, there are physical traits that matter greatly.

Bulls need to perform like athletes to get the job done through joining. They can't do that if they aren't physically sound. They will also struggle for fertility if their physical scrotal size is too low. And they're heavy and you need to handle them safely, so making sure they have a good physical disposition is critical.

Then, there is a type that suits your herd and environment and types that just don't. You know your operation best and every farm is a microclimate after 150 years of unique management. Selecting the type that suits your environment is always better for your bottom line than changing your environment to suit the type.

Buyers also place an emphasis on how your sale cattle present, so sires that look the right type for your target market have value.

Please make sure you, or someone you trust, inspects the sires physically before you buy them. It's really important.

At this point, you might think that I've chosen a side. Physical selection matters most, right?

Wrong. Because if your stud breeder is trying to convince you that you can't have all that and also make progress for key economic and heritable traits, then they just aren't prepared to work hard enough for your money. Quite clearly, they care most about their profitability, not yours. You can have both.

Anyone can feed an animal long enough to cover the faults but all you get are progeny that need the same. That's not efficient or effective and if this industry is really going to move forward, we should demand better.

Genetic evaluations take a massive amount of data from an awful lot of herds.

So rather than listening to one breeder tell you how good they think their cattle are, third party genetic evaluations take in millions of pieces of data from multiple herds to give you a clearer picture of how they really work. Coupled with genomics that's a lot of decision making power.

Which makes it hard to hide behind the smoke and mirrors, so they try to discredit the science.

Remember that a stud breeder might get paid for how good their bulls look on sale day, but you won't. Your profitability largely depends on how their progeny perform all year round.

That doesn't mean you shouldn't value those key physical traits or that you must select in the Top 10% for everything. Seriously, your herd could already be in the Top 10% of the population for some traits or it could be that selecting above breed average initially will give you a boost. Try sampling a random percentage of your heifers with genomics if you need a clearer picture. It's a wonderful age we live in.

EBV's and EPD's are easy to use. Just identify the 3 key economic traits that you need to improve most and focus on them at the start. Once they are locked in, move onto the next 3 and remember that a functional and efficient cow herd will save you more money than simply increasing steer sale weights can make. Also remember that the genetics you choose today will affect your herd for the next 10-15 years to come.

Most importantly, make sure that your seedstock provider values your success as much as their own.

Because whether you use the numbers a lot or a little, it's critical that the data you do use is as accurate as the seedstock breeder can make it.

If they won't measure the key economically relevant traits properly, how do they expect you to manage them?

There is an old saying, that genetics is a science and breeding is an art, but that doesn't mean the two are mutually exclusive or that you need to choose a side. Science and art do coexist.

What is most important is that whichever choice you make for your business, that you had the opportunity to make the most informed choice possible and not one that's been limited for you by a stud breeder who only values their own success.



WE LIVESTOCK CROSS FOR PROFIT

WE Livestock principals, Mark, Wendy and Emily Perkins have extensive experience in corporate agriculture, particularly the beef supply chain.

Mark was the Operations Manager for Stanbroke Pastoral while Emily was the Feedlot Manager at Prime City for JBS Australia.

It's that basis and their vast experiences that have ensured they chose genetics as one of the key tools driving profitability in their newly formed family beef production business.

Now running 300 breeders as well as backgrounding and finishing cattle across both lease and agistment properties, the Perkins family have a clear picture of the returns they need to meet costs.

"When you pay a set fee for the lease or agistment as well as for the input costs, it's really easy to understand exactly where you need to be to stay on the positive side." Mark said. "In mixed operations sometimes, it can be harder to segregate each unit."

Leaning on their background allowed WE Livestock to have a clear picture of the vehicle they needed for their enterprise. Starting with predominately Shorthorn and then Shorthorn Angus cross and then Angus cows, Mark said they selected for females that were moderate types with deep bodies, width and shape. The foundation females are then joined to Shorthorn bulls with the F1 females then crossed back depending on coat colour.

"It's not complicated but it works. If she's black she gets a Shorthorn bull, if she's red she gets an Angus bull. You don't need a complicated program."

Having said that, the females weren't joined to just any Shorthorn bull. Realising that they still needed genetic gain in the F1 cross as much as in a straightbred cross, the Perkins family selected Shorthorns that provide extra scale and carcass weight, whilst maintaining a mid maturity pattern.

"A moderate to mid maturity animal gives you more market options and they are easy to keep. It minimises your risk profile by having options along the way. In variable seasons, we can still access the best market when we need it. Last spring was a great example, a short season, we wouldn't have had the feed available to finish late maturing types.

The F1 cross is a really nice cow. Not extreme, fertile, productive, better carcass weights, excellent temperaments and the bonus of hybrid vigour. The salvage value is also excellent and that's important, it's a significant part of any enterprises cashflow. We run them where we can't live with them 24/7, so they must perform with what they have in front of them. If they don't cope, they go."

Despite that, fertility has been excellent with the F1 maiden females still achieving 94% pregnancy rates on a very short joining in tough seasonal conditions last Spring.

Beyond efficient females the enterprise targets steers and surplus heifers that produce heavy carcasses at an early age. They are currently targeting premium grass-fed markets, but market versatility is key. "Backgrounding or feeders have been good market options. Grassfed programs give us another market that's just as rewarding financially."

"Whatever the program, weight drives price. Optimise weight, live or carcass, into the market in a short timeframe. Currently we are turning off a milk tooth, 340-350 kg carcass at 13 months of age, where else can you get that return?"

The Perkins family manage risk and profitability by ensuring cattle are not too early or too late maturing.

Mark is conscious of ensuring that their calves produce a quality carcass, but carcass weight at an early age is the primary driver.

"Whilst the trend is towards meat quality, we need carcass weight as well. Calves that have good nutrition for whole of life and harvested at a young age, you get good meat quality. So there's more value that comes from a better carcass weight at a young age."

It's the pursuit of genetic progress in their herd that led the Perkins family to purchase the top priced Angus bull at Sprys Shorthorns and Angus 2024 bull sale.

At \$40,000, Sprys Testament U614 was the second youngest bull in the catalogue.

Emily Perkins said he was a good fit for her family's operation.

"We think he's a good carcass bull. We believe that's where the Australian industry is going," she said.

Whilst the \$40,000 price tag might seem high for a commercial breeding business, Mark said they didn't make the decision lightly, purchasing the sire only after completing a tremendous amount of research.

"The sire, grand sire and their maternal line is one of the best at the famed US stud, Tehama Angus. His dam at Sprys is an excellent daughter of the Sprys \$38,000 donor, Wattletop Barunah E295 who has done a great job for the Sprys family. We wanted maternal depth and U614 has that.

He is phenotypically very good, the right type for our program and he also has an excellent data set for progeny."

The sire will be used to in 150 joinings in the WE Livestock herd and Mark said when you consider the impact he will have, the resulting calves will be extremely cost effective.

"The technology and techniques and the skill with modern AI programs is very different to 10 years ago. It's more affordable, you get better results, genetically superior calves and lower cost per calf on the ground."

Mark is also conscious that to get the most out of cross breeding requires making good genetic selection decisions, rather than just relying on hybrid vigour.

"In years past, the crossbreeding model saw average herds from one breed buying below average bulls in another breed and the crosses didn't quite stack up. Go into crossbreeding focussed on using the best genetics from both sides to get the best out of it."

For the Perkins family, the use of strategic cross breeding has been an easy business decision.

"For one the system is easy. Secondly, we aren't limited by market access, we get excellent carcass weights at an early age and market versatility which more than offsets any premiums and we get better females."



WHY SHORTHORNS & ANGUS?

For most seedstock breeders, other than Angus, the chance to add an Angus stud to their existing operation is an opportunity to expand the volume of bulls they can sell.

However, that's not the case for Sprys Shorthorns and Angus. It's the combination of the two breeds that really excites them.

"They are the perfect fit together", Gerald Spry said, "People often say to us, which breed do you take the most seriously. The answer is both breeds. We take all our breeding seriously."

Many Sprys clients are using both breeds in their commercial programs, balancing the strengths and weaknesses of each to achieve the optimum outcome. So what makes Angus and Shorthorn such a great cross.

BREED COMPLEMENTARITY

Essentially, it means selecting breeds that are genetically different but also excel for traits that complement each other. No single breed does everything well, but cross breeding allows us to select genetics that yield a more ideal balance of key traits.

By way of example, let's compare two elite sires from both breeds. Both sires are registered and have progeny recorded in IGS, so it allows for direct comparison between the two.

In this example, the Angus sire is Millah Murrah Paratrooper P15, one of the truly elite and highest use Angus sires in the breed in recent times.

The Shorthorn sire is Muridale Thermal Energy15A who also needs little introduction.

Rank % within the Shorthorn population has been used to describe each bull.

EPD	CE-D	BW	WW	YW	MILK	MCE	MWWT
MILLAH MURRAH PARATROOPER P15	1%	2%	1%	1%	60%	2%	1%
MURIDALE THERMAL ENERGY 15A	10%	45%	15%	20%	30%	5%	15%
EPD	STAY	DOC	CWT	REA	FAT	MARB	API
MILLAH MURRAH PARATROOPER P15	70%	20%	1%	50%	1%	1%	1%
MURIDALE THERMAL ENERGY 15A	5%	4%	5%	10%	4%	2%	1%

As you can see, both sires rank equally in the Top 1% for profitability as defined by the API \$Index, however how they get there varies.

Many traits are similar and elite for both sires; CE-D, MCE, CWT, FAT and Marble Score, but it's the differences that are important.

Paratrooper calves excel for moderate birth weights and explosive early growth and that helps balance out the Thermal Energy progeny, ensuring the offspring will still bend the growth curve.

However, Thermal Energy progeny excel for Stayability; a measure of fertility and reproductive longevity. He also excels for Milk, Docility and REA. So he adds increased maternal quality and longevity, without sacrificing carcase quality.

Whilst both sires progeny excel for overall profitability, the complementarity of the two sires has the capacity to create a more balanced and more profitable outcome than either parent alone.



Obviously this is only one example, different sires would create different results, but it does highlight the fact that both breeds have elite sires that rank similarly for overall profitability and can certainly complement each other without sacrificing genetic gain or returns.

It's also important to understand that the IGS rankings are genetic only and exclude hybrid vigour effects. Hybrid vigour will still increase progeny performance, beyond the balance of genetic gain for each trait. That's important, because we can't just join two complementary breeds and rely on hybrid vigour alone to increase overall productivity and profitability. Breeders need to select sires for cross breeding systems with the same attention to genetic gain as they would apply to bull selection for pure bred programs.

MATERNAL VS INDIVIDUAL HYBRID VIGOUR

In general, hybrid vigour has a larger effect on lowly heritable traits and the least effect on highly heritable traits. As a guide, maternal traits are mainly lowly heritable, growth traits are mainly moderately heritable and carcase traits are mainly highly heritable.

As a result, individual hybrid vigour (pure bred parents from two breeds) adds approx. 8% productivity to British crosses. That's mainly increased weights, whilst changes to carcase traits are largely genetic gain. Maternal hybrid vigour (crossbred female) adds approx. 15% productivity to British breed crosses, through increased conception rates, improved calving ease, increased percentage of calves weaned and increased longevity.

Which means that the greatest opportunity for increased profitability comes from retaining females from complementary breeds that balance each other out genetically and then receive the boost from hybrid vigour. Combining the best Shorthorn and Angus genetics can create extremely balanced and genetically superior females, with hybrid vigour then added on top, to create the "free lunch".

If you haven't considered using the two breeds to increase your herds productivity and profitability, then please feel free to talk to either Gerald or Matt to discuss your opportunity to increase returns in your herd. It's a discussion you won't regret having.

SHORTHORNS THRIVE AT AVENEL

The mighty Avenel Merino Stud needs little introduction in pastoral circles, it has been a mainstay of the renowned Riverina Merino industry for the past 50 years.

However, the McCrabb family's association with the Shorthorn breed has been even longer, running Shorthorns in the pastoral region between Hay and Deniliquin, known as the Old Man Plains.

The McCrabb family settled at "Avenel", Wanganella, NSW in 1950, when Harold and Mabel McCrabb purchased the original 3,000 acre holding.

The Avenel Merino Stud was started by Ken and Mary in 1974 and has since been expanded with the addition of the Poll Merino stud, started by Colin and Amanda McCrabb in 2016.



3 Generations of the McCrabb family at Sprys
-photo courtesy The Land

Avenel is now 17,000 acres with 1,250 acres of flood irrigation for winter pasture. Currently joining 1200 Stud ewes with a split of two thirds Poll Merinos and one third horned Merinos, Avenel also join between 2800 and 3000 commercial ewes to Merino rams.

Shearing takes place twice a year, with the general shearing in April, after pregnancy scanning of the ewes. This allows Avenel to feed according to pregnancy status and means that they are lambing with the optimal amount of wool cover on the ewes.

Lamb marking starts mid-July when all the Poll stud lambs are genomically tested and then start the data collection process for ASBVs (sheep EBVs) that are later used for selection. Weaning is early September, with weaning weights taken, usually before the Annual Ram Sale.

The McCrabb family have found shearing twice a year has increased overall fleece weights and improved conception rates. There are also reduced grass seed and fly issues during the summer months, making management easier. 6 monthly shearing also gives the option to return to 12 monthly shearing if the season has been particularly tight and the wool length is insufficient. The aim is for a minimum of 60-65mm length at each shearing.

More than 300 rams are sold annually, including the studs annual auction held in late September. The McCrabb family have been breeding Shorthorns for 5 generations, with Ken's grandparents breeding Shorthorn bullocks in the 1900s.

When Ken and Mary took over the reins at Avenel they continued breeding Shorthorns, this time targeting the milk vealer market.

"At this time the breed was becoming smaller and prone to calving difficulties but also slower maturing." Stud Principal Colin McCrabb said. "We introduced Santa Gertrudis, which improved the calving ease and sped up maturity. However, due to seasonal conditions and increased demand from feedlots, we were referred to Spry's Shorthorns and started sourcing bulls from the Spry family."

Typically running between 80 and 100 cows, this number fluctuates with seasonal feed availability. The Shorthorn cattle are managed with very low inputs, including no supplementary feeding or access to irrigation. Anipro is used in dry times to help cattle better utilise the dry native pastures. In times of extreme drought cows are also fed short chop pit silage, but apart from this there is no supplementary feeding.

"We have the cattle come into the yards a handful of times a year, namely calf marking, pregnancy testing, weaning and trucking to market." Colin said, "Therefore we aim to breed quiet, easy calving and good doing cattle that don't require much input."

Shorthorn bulls are initially selected from the Sprys catalogue based primarily on low birth weight, high calving ease, and good docility. This year McCrabb's also incorporated selection for weaning weight and yearling weight EPDs to allow them to turn off steers as soon as possible post weaning.

"We typically ask Gerald for his advice on bulls he believes would suit us, given we have been buying bulls from Sprys for the past 30 odd years, he understands our needs."

"Then we try to make it to the open day to walk around the bulls and get a feel for their temperament when around people as well as assessing their structure. We like a compact bull with a well-muscled hindquarter, proportional head and shoulders and a good free walk."

Steers have been sold into the JBS Prime City feedlot, Tabbita, NSW at 350-400 kg, subject to season.

"We love the temperament, easy-doing ability and most of all colour that Shorthorns bring to our property. We've found that other breeds don't do as well in the heat and dry of our country when compared to our Shorthorns and they are nowhere near as quiet or easy to handle."

"Gerald and Lynden Spry have been incredibly good to us over the decades. Gerald is always willing to offer advice on bull selection and has looked after us always. With the diverse and very high-quality genetics of Spry's Shorthorns we have found the cattle thrive and do well in our pastoral environment. They walk and forage well whilst putting the most into their calves. We can turn our steers off earlier and have very few calving issues, which suits our minimalist cattle management."

"The quality of Spry's Shorthorns is exceptional and they continue to perform in our country."



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 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 the 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 are economically relevant to beef producers.

For genomics, that means that it isn't enough to know if a gene at one location is recessive or dominate, as these phenotypes are the result of the interactions of multiple genes.

Simply put, genetic evaluations use genomic information from multiple gene markers to predict how the progeny of that animal will perform for each quantitative trait.

To do that, genetic evaluations 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 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.

If the grandparents were genotyped, genetic evaluations use genomics to understand this relationship and can adjust the pedigree matrix to reflect the actual level of inheritance. This further increases the accuracy 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 animal is valuable information for commercial breeders looking to accurately 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 single 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

Genetic evaluation is the prediction of how progeny are expected to perform. That's matters to commercial breeders as how the progeny perform for key traits drives profitability within their herd.

Expected progeny performance is also key information that you can't assess visually when purchasing new bulls.

Of the 4 key sources of data used in genetic evaluation, the most powerful source is the progeny phenotypes, but having progeny information is not possible for commercial breeders when they 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 non-parent sires they are looking to invest in.





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