



Newsletter

2024



Welcome to our 2024 Newsletter

In honesty this newsletter was started in January in a hope of getting two out this year. One of the reasons (not making excuses), is that we were waiting for the Sheep Genetics analysis enhancements to be launched. These enhancements came through on the 15th May, so catch up on what this has delivered to NA in the article.

Lots has been happening, some research around Methane testing within the NA Flock, visitors from the UK, which is always enlightening, genetic trends, dressing percentages plus lots more to read.

Important dates to remember are our **Inspection Day on the 30th August**. An afternoon where the rams catalogued for sale are penned and you can take a walk through them at your leisure. We have more time on this day to spend with you and discuss the rams and the traits they can deliver to your business, direction of our business of breeding or just a catchup. It is a great opportunity to see the rams with no sale pressure and also select rams so you can buy on-line if you cannot make it to the sale.

Sale Day on Thursday, 12th September once again interfaced with AuctionsPlus. **NA** will be offering about 100 rams again this year.

Craig & Jenny

GAIN THE GENETIC ADVANTAGE



Genetics in Action

Clint Neville's Journey to Enhanced Farm Productivity

Clint Neville has an inspiring story about leveraging genetics to boost agricultural production. His 1800-hectare farm, situated between Forbes and Grenfell, features a diverse mix of cropping and sheep farming. On the cropping side, Clint grows canola, wheat, barley, oats, vetch, and faba beans. His livestock includes 1500 first cross ewes crossed with Poll Dorset rams, supported by an average annual rainfall of 525mm.

In 2016, Clint faced production challenges. The time taken to raise lambs from birth to market was 22 weeks, and the lambing percentages were not where he wanted them, with twin-bearing ewes producing only 140% lambs marked to foetuses scanned. Additionally, Clint had to shear 650 underperforming lambs out of a total of approximately 1650.

Recognising the need for change, Clint enlisted a consultant to reassess his farming strategy. They began with a focus on the ram team, selecting rams that aligned with Clint's breeding objectives. Key traits included growth potential (Pwwt) and positive fat (Pfat) for quicker turn-off and better carcass coverage.

Clint acknowledges that fine-tuning this system took several years. Once he built up the ram team, he shifted his focus to the ewes, aiming to match high-growth rams with high-growth ewes. "We thought if we could match

high-growth rams with higher-growth ewes, we could turn them off even quicker. We also wanted to cap adult ewe weight while maintaining quality," Clint explains.

The results of Clint's strategic decisions have been impressive. He still runs 1500 ewes but now turns off over 2000 lambs without needing to shear any. The younger, genetically superior ewes also showed fewer instances of infertility (% scanned dry) compared to the older mixed-age group. Importantly, lambs are now market-ready in just 14 weeks instead of 22, reducing the need for drenching and vaccinations and improving feed conversion rates. This efficiency translates to better feed availability, as there are no late-finishing lambs requiring extended care.

Clint has supported his decisions with data, noting that high-performing ewe progeny exhibit approximately 50 grams per day better growth. While this might seem small, over 14 weeks it adds up to a 5kg advantage. "It just means we can get them to market quicker and have no carry over," Clint remarks.

We believe Clint's story is worth sharing, showcasing the power of genetics in transforming farm productivity. Thank you, Clint, for sharing your insights and experiences.

Note: Clint does not purchase our rams or first cross ewes, although NA bloodlines are part of his breeding program.



Methane Testing at NA

Research Project Selecting for more methane efficient sheep

A National expression of Interest was circulated last year to nominate for involvement in this research project. The project received 24 submissions from across 5 states, Presenting 14 breed and, after assessing all applications NA was pleased to be selected and involved in this research. We believe only two Border Leicester Studs nationally have been selected to be involved.

Aim of the Research

The project aims to enable Australian sheep breeders to select for enteric methane emission. The research team has developed a mobile field test for measuring methane emission on 5,000 sheep across research and commercial breeder flocks. The data will be used to obtain accurate estimates of genetic variation and heritability of emission traits and their correlations with other economic traits in sheep production. Combined with their genotype information, this data will allow genomic prediction of breeding values for methane on selection candidates.

What the study involved

The measurement of methane and sampling of rumen fluid on 280 ewes. Methane measurement of ewes was undertaken in portable accumulation chambers (PAC) while the sheep were kept under consistent pasture conditions prior to entering the measurement chamber.

Twelve ewes at a time were put into individual chambers and methane measurements were taken after 20 minutes and 40 minutes. Carbon dioxide and oxygen were also measured. After 40 minutes the ewes were released and a rumen sample was taken for microbial analysis. The ewes were then returned to the paddock. This was repeated 6 times per day for 4 days. Testing a total of 280 ewes.

Research team

Professor Julius van der Werf heads up the research team from University of New England in conjunction with NSW DPI and MLA.

This research was carried out the week commencing 12th February 2024. We embrace research that, in the long term, will assist in developing accurate estimates of genetic variation and heritability of emission traits and their correlations with other economic traits in sheep production.

What does all this mean?

We will have a genomic prediction of breeding values and therefore we will be able to select for methane efficiency in the future. This is a trait that will enable us to breed methane efficient sheep. That is, sheep that produce more lambs and meat per kg of methane burped. As ram buyers you may not be directly selecting rams with low methane production, but you will know that the rams offered here at New Armatree will probably have better methane efficiency than rams from untested flocks.





Internationals Visit

We had the pleasure of hosting Lucy Griffiths and Will Maughan from Wales, at the end of November and early December.

Both spent a couple of months in Australia travelling to many sheep flocks, from Armatree to Kangaroo Island.

Lucy as part of her Bursary spent a little over 2 weeks at NA. During this time and enduring 35 degrees+ heat completed lamb shearing, tagging weaned lambs and classing of seedstock not to mention feeding during a very dry period. Lucy was accompanied by her partner Will. Will had just spent six months in NZ on dairy farms before travelling with Lucy to Australia.

Lucy will be speaking at the National Sheep Association NSA event as a recipient of the Samuel Wharry Travel Bursary in partnership with the Staple of England.

"The technology and recording of Australian flocks even on a large scale is amazing and is so well used by the farmers we visited". The sheep varied from the Merino, Border Leicesters and White Suffolks and plenty of composites along the way.

I came out to study how production systems vary in Australia and New Zealand compared to the UK and to see why we are all varying in our passions for the productivity aims. A focus on feed, genetics and technology.

Lucy spoke on the 30th July at Three Counties Showground, Malvern, Worcestershire.

QUESTIONS we are commonly asked

Why don't you show anymore?

A number of reasons. Basically, we don't strive to compete in the show ring, we strive to improve production traits that deliver benefits to the bottom line.

When showing sheep, they must be grouped separately within Sheep Genetics because they will have been managed (fed) differently than the rest of the flock. These smaller management groups are often ineffective and may result in ASBVs with lower accuracy. We try to ensure the highest possible accuracy and integrity of our data.

Sale catalogues with ex show sheep for sale may have inflated ASBVs for these sheep if they have not been grouped correctly. Be aware if buying ex show sheep.

Can you compare sale catalogues and the "Figures" presented

You can compare catalogues and the rams in them if they both have ASBVs produced by Lambplan (Sheep Genetics). The catalogues must both have the Lambplan logo and the same analysis date listed. If this is true, then you are comparing apples with apples.

If a catalogue has Stockscan figures, you cannot compare it with a Lambplan catalogue. They are totally different. Stockscan is a within flock analysis, it does not compare animals across flocks.

Sometimes in a catalogue you might see empty boxes with no ASBVs listed. This means that sufficient data has not been collected and the accuracy is too low for an ASBV to be reported by Sheep Genetics for that trait. *Be wary of catalogues with data missing.*



Carcase Shape



Carcase shape is important at NA and we do take this into account in conjunction with the genetic traits of Muscle and Fat.

Just a couple of pictures to show the difference in carcass shape and the shape we aim to produce.

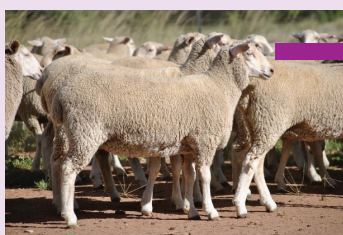
A young 2023 drop ram lamb with a carcass shape we aim to breed.



Current sire within the team demonstrating the depth of carcass we select on. This ram has an Pemd of 1.3 and Pfat of 1.3



Show rams demonstrating the type of carcass we are not wanting to replicate. Also take into consideration that these rams would have been fed up for the show.



NA First X ewes demonstrating the body shape we are breeding.

Link Sires



It is very important for us to continue to improve our flock and to provide accurate and meaningful data for our own use and for our ram buyers to compare rams within our sale catalogue. Linkage helps us do this and also allows you to directly compare our rams with rams from other studs who are in Lambplan. We can achieve linkage by using Link Sires.

Linkage is where genes are represented across multiple environments, generally through the use of common sires between flocks, years and management groups. Linkage provides a genetic benchmark so that genetic merit can be compared across flocks and environments.

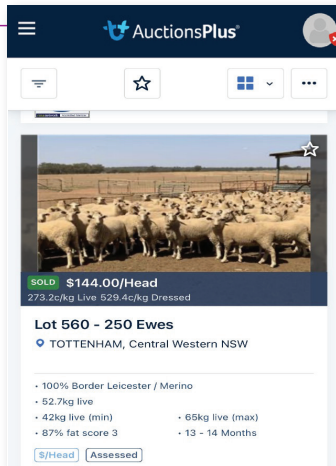
The regular Artificial Insemination (AI) programs that we run here at New Armatree using sires that have (or will have) progeny in other Border Leicester studs gives us that all important linkage. Sires which we have purchased and within the stud naturally also provide some linkage. These Link Sires, as well as providing linkage, must also offer us genetic gain in some of the traits which we think are important for us and our ram buyers.

The 2024 drop will have progeny from an AI Link Sire as well as a couple of sires which have been bought in.



Sales for 2023/ 2024

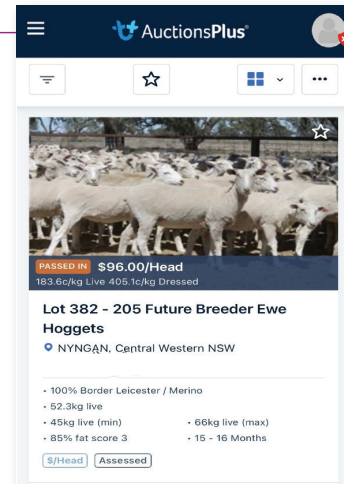
Late last year was a difficult time to move any stock, finished, young or old however there were some highlights.



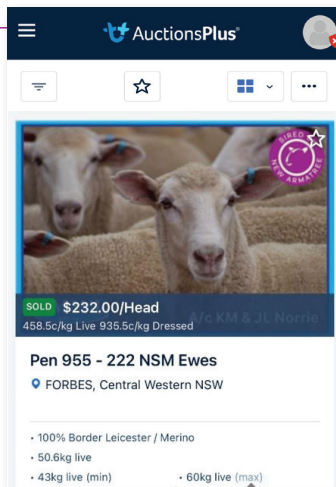
Sales for 2023/ 2024

The two drops of ewes either side were offered on the same day within the same catalogue, October 2023. The weight difference was 0.5 of a kilo with the ewes on the right a fraction older. Both lots were presented very well.

The ewes that sold were sired by NA rams and advertised accordingly.



Always difficult to tease out why some lots sell and other don't but the owner and us at NA were pleased at the result in tough selling conditions.

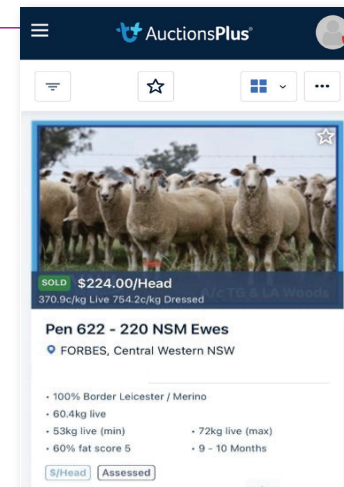


Sales in 2024

January 2024 Forbes First X ewe sale

A pen of April drop ewes, approximately 1 month younger and close to 10 Kg lighter sell for \$8/head more.

935.5c/ Dressed for the ewes sold under the "sired By "Logo in comparison 754.2 c/kg for the other ewes.



NEW ARMATREE STUD SIRE AVERAGES 2024



	BLX	Bwt	Pwt	Awt	Mwwt	Pemd	Pfat	WR	IMF	SFS	Dress%
NA Team Average	162.2	0.4	12.7	12.7	1.4	1.6	1.3	0.23	-0.02	0.25	2.21
Breed Average	131.6	0.3	9.53	11.6	1.1	0.5	-0.1	0.1	-0.17	1.31	1.36
Top 5%											
Top 10%											



Analysis Enhancements

When Sale Catalogues start arriving this year, you will probably notice that there has been a significant shift in ASBVs and Indexes. Sheep Genetics regularly update and improve the way they calculate ASBVs. This year has seen a major improvement with the introduction of more breeds into the Maternal and Terminal analyses through the use of DNA from genotyping.

This has resulted in more data available and better relationships identified between animals with common genes. It means that ASBVs will be more accurate and therefore more reliable. It will also mean that ASBVs and Indexes may change (up and/or down). This applies to the current drop of rams as well as others you may have bought over the years.

As you can see from the table, the enhancements have been beneficial for New Armatree, with a significant gain in Index value compared to the breed.

Analysis Enhancement BLX Index Changes - Breed vs New Armatree

Average BLX Index	BL Breed	New Arm	Difference
Pre-Enhancement (1st May 2024)	125.1	133.7	8.6
Post Enhancement (15th June 2024)	128.9	147.6	18.7
Change	+3.8	+13.9	

Other significant enhancements to the analysis affect the harder to measure carcase traits related to Eating Quality and Lean Meat Yield. With genomic data being linked with physical data from processors, this will mean better ASBVs being produced for these traits of the future.

The most important thing to remember is to use the Percentile Report provided in Sale Catalogues to benchmark the sale rams against each other, against other studs and against the breed.

Balancing Growth, Muscle and Fat and Why it is Important

At NA our Breeding Objectives cover many traits. We remain focused on balancing the main carcase production traits of Growth, Muscle and Fat.

A trait can be defined as a production characteristic that you can select for, e.g. Growth rate Post weaning weight (Pwt) or Weaning weight (Wwt)).

As a breeder it can be very simple to select for one trait such as growth however there are always consequences if you narrow your selection criteria. Let us take growth as an example. If we put more pressure on higher growth rates, it can lead to higher birth weights, higher adult weights and less desirable eating quality traits.

Eye Muscle Depth (emd) - the main reason to select for improved muscling is to improve the value of the carcase through increasing the amount of lean meat it contains. EMD can result in a higher value carcase, more weight in the high value loin area and less weight in the low value forequarter. Additional benefits include increasing dressing percentage, improved reproductive performance and higher worm resistance. However, Higher muscling can result in lower growth and when combined with low fat levels, high muscling can also result in poor eating quality.

Combining both Growth and Muscle and selecting

on these two traits sounds like a good plan, but it can lead to a large framed animal that is carrying muscle but is difficult to finish especially if seasonal conditions cut out. If reproduction is incorporated into this mix, the ewes can take longer to reach a condition score required to achieve or improve reproductive performance. The missing trait that we strongly believe needs consideration here is Carcass fat. Selecting for Carcass fat can also improve intramuscular fat and eating quality as well as making animals easier to finish. Fat and muscle are also very important in helping to achieve optimum reproductive performance.

A balanced approach for these three traits within the Border Leicester stud is very important to us because it helps us achieve our objectives within our FX lamb enterprise. Currently our genetic trends are reflecting our Breeding Objective to balance these three important production traits

ASBVs for 2023 Drop

ASBV	Pwt	Pemd	Pfat
Breed Average	9.22	0.54	0
New Armatree	11.08	1.39	0.61

15/6/24 Lambplan Analysis



Genetic Trends

NA continues to focus on production traits and drive our breeding objectives.

At NA we are pleased with the direction the trend graphs are moving whilst continuing to maintain a strong emphasis on structure and conformation.



Numbers and number coincidences!!

NA always find working with numbers interesting especially within sheep groups and in this particular example a family or line of sheep with an interesting set of numbers.

Ram 210189 was mated to ewe 190189 in 2021, producing twins 220189 and 220188. Tagging of all lambs is random and depends on the time of day the lambs were born, the particular paddock that we decided to tag first on that day.

2024 ram 220188 has been retain within the stud. It will be interesting to see if this random pattern continues.

Ram 220188 for interest has the following set of production traits

BLX	Top 5%	167.71
Pwt	Top 5%	14.01
PEMD	Top 5%	2.11
WR	Top 5%	0.26
DRESS	Top 5%	2.83
IMF	Top 20%	0.06
SF5	Top 20%	0.11



INSPECTION DAY 2024

Inspection Day: Friday August 30th 2024
Inspection Time: 1pm onwards

On Property at New Arm Tree, 1.5km west of Arm Tree.

Sale team is above breed average for;

- Carcase Traits
- Dressing %
- Growth, muscle and fat
- Reproductive Traits
- Rams yarded @ New Arm Tree
- Sale catalogue is top 20% on BLX

FOR MORE INFORMATION:

Craig 0428 256 593 or Jenny 0428 422 234

GAIN THE GENETIC ADVANTAGE

Improving Dressing Percentage - A Decade Long Objective



For more than two decades NA has pursued an unwritten breeding objective focused on improving dressing percentages in our commercial operations.

Our goal has been to achieve a dressing percentage of 50% for our first cross wether lambs at Over the Hook (OTH) sales.

Each year, we manage between 600 to 1000 Merino x Border Leicester wether lambs. Our journey began with OTH trading through the Tooraweenah Prime Lamb Co-operative. All lambs underwent assessment prior to sale. This foundational process included recording weights, fat score and age and calculating dressing percentages of our lambs that were sold over the hook. Our production system is straightforward and consistent.

Lambs are raised on improved pasture of lucerne, medic and clover mixes, supplemented with barley through self-feeders, and ad lib lime and salt licks. Seasonal variability in our system can be a challenge. However, the major uncontrollable variable throughout this period has been the trimming process within processing plants, which has affected dressing percentage. It is likely that dressing percentages could have exceeded 50% in earlier periods had trim remained consistent.

Initially, our recorded dressing percentages averaged 46.5%. By 2024, our unwritten breeding objective has been achieved, with consignments consistently achieving a dressing percentage of 50%. This includes the entire drop of wether lambs, along with approximately 170 Border Leicester ewe lambs that were culled, averaging 49.5%. In total, about 1200 lambs were processed OTH in 2024, predominantly wether lambs with some first-cross ewe lambs and cull Border Leicester ewe lambs.

To ensure consistency and accuracy in our assessments, we follow a standard procedure. After weaning, lambs are prepared for finishing and managed in groups of around 200 based on live weights. Once the lambs are booked in and a kill date is set, they undergo a 10 to 12 hour curfew period 3 to 4 days prior to transporting. Each lamb is individually weighed and fat-scored and recorded. After assessment, the lambs are returned to the same paddock until the final loading curfew before transporting.

Our commitment to improving dressing percentages remains a cornerstone of both our Stud and commercial genetic selection and management practices. This dedication not only ensures that we meet and exceed industry standards but also enhances the overall quality and efficiency of ours and your breeding operations.

Value Addition Through Dressing Percentages

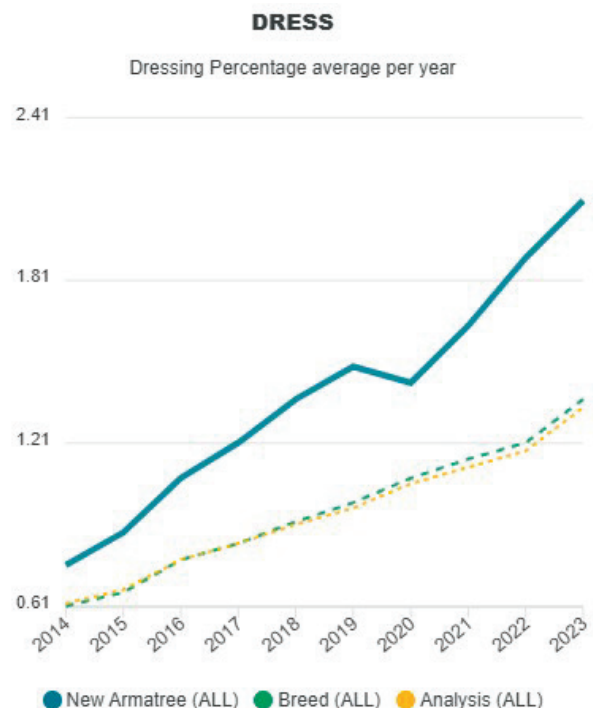
Improving dressing percentages yields tangible benefits, as illustrated below:

EXAMPLE COMPARISON	Animal 1	Animal 2
Liveweight:	58 kg	58 kg
Dressing Percentage:	46.5%	50%
Dressed Weight:	26.97 kg	29 kg
Price:	\$7.20/kg	\$7.20/kg
Revenue:	\$194.18	\$208.80

The difference in dressing percentage between Animal 1 and Animal 2 results in a significant financial gain of \$14.62 per head. For a herd of 1000 lambs, this amounts to \$14,620, highlighting the substantial economic impact of improving dressing percentages.

In conclusion, our ongoing pursuit of higher dressing percentages underscores our commitment to excellence and efficiency in lamb production, ensuring continued success in both stud breeding and commercial operations.

Below is the Trend Graph for Dressing Percentage ASBV showing New Armatree well above and increasing over the Border Leicester breed.



15th annual New Armatree Border Leicesters Sale

Online bidders were pivotal to the success of the 15th annual New Armatree Border Leicesters on-property sale, near Armatree.

Buyers sought rams with good maternal traits and eating quality. New Armatree sold 72 of the 96 rams to average \$1355. The top-priced ram was knocked down for \$3600 to online bidder and first time buyer Laurels Pastoral Co, Woodstock.

The sale topper, NA149, had Australian sheep breeding values (ASBVs) of +2.65 post weaning fat depth (PFAT) and +0.14 weaning rate, placing the ram in the top five per cent of the breed.

Sired by NA210189, the triplet also had ASBVs in the top 10pc of the breed for +1.59 post weaning eye muscle depth (PEMD), +11.81 post weaning weight (PWT) and +141.7 Border Leicester Crossing Index (BLX).

Sean Duggan, of Laurels Pastoral Co, said New Armatree has a fantastic reputation for not only delivering growth, muscling and fat, but also well conformed rams that will hold up well in commercial conditions.

- "We liked him (NA149) because he indexed well, delivers great growth but like all New Armatree rams is a well rounded package of muscling and fat," he said.
- "We needed a large draft of new rams as we have recently expanded our maternal ewe breeding operation at Woodstock.
- "We join 15,000 ewes across three farms near Woodstock/Wyangala, one as a specialist merino operation at Hovells Creek, one as a specialist maternal ewe operation between Lyndhurst and Woodstock, and one that takes those ewes for our Prime Lamb business at Woodstock."
- "We are hoping to bring faster growth traits into our first cross ewes, without sacrificing the fantastic eating quality of lamb, and I'm convinced we can do that with the New Armatree rams."

Laurels Pastoral Co also purchased 13 other rams to average \$1842.



Long-term client David Greig, Bellevue, Tottenham, purchased eight rams to a top of \$3400 to average \$1375.

Mr Greig's top ram, NA377, had ASBVs in the top 5pc of the breed for +0.15 weaning rate and the top 10pc for +139.7 BLX.

The NA210189 twin son also had ASBVs of +11.05 PWT and +0.83 PFAT, placing him in the top 20pc of the breed.

When selecting his draft of rams, Mr Greig targeted an all round figure package that favoured maternal traits.

- "I come to New Armatree because I can find rams that are heading in the right direction for every trait that I'm after, especially maternal traits that will help with lamb survival," he said.
- "I like the quality of New Armatree's figures as they have very consistent breeding values.

- "I have a commercial operation where I normally join about 1000 Merino ewes to the Border Leicesters.

- "We're not trying to breed large first cross ewes as we aim for a more compact animal and the breeding that is put into these animals by New Armatree keeps their daughters at a more manageable size for the people we want to sell them to."

- "We're producing an article that will go onto breed, and we want those first cross ewe lambs to have a decent package of figures in them that will produce a second cross lamb that will do everything."

Catherine and Oli Taylor, Bourbah, Gulargambone purchased 10 rams to a top of \$1600. Cross Country Vets veterinarian, Mrs Taylor said the draft of rams were selected by both a visual and breeding value assessment.

- "We were looking for structural confirmation, scrotal circumference and post weaning weight," she said.

Mr Taylor added that he liked the commercially driven direction New Armatree has taken with their rams.

- "Their even lines suit our operation and we've been really happy with our previous rams," he said.

- "We have a Border Leicester cross Merino flock...the rams will be joined to 3000 ewes in the first week of December."

Jack Bradley, of New Armatree, said the team was very happy with the sale given the current market conditions.

New Armatree stud co-principal Craig Bradley said it was also exciting to see new customers buy on performance traits and good ASBVs.

- "Buyers concentrated on production traits such as post weaning weight, fat and muscle with consideration of eating quality and reproductive traits."

New Armatree Co-principal Jenny Bradley said the top priced ram had everything you could want.

- "He had exceptional growth and is such a well balanced ram with a good weaning rate."

David Turnbull, Bourke, purchased ten rams to a top price of \$1400.

Ian Griffiths, Green Camp, Nyngan, purchased ten rams for \$1000 each.

The auction was conducted by Halcroft and Bennett, Coonamble, and Awn, with Steve Colwell, Halcroft and Bennett as auctioneer. AuctionsPlus provided the online interface.

A point of interest and why we consider the rams presented last year a very good investment was that of the 96 rams offered, 25 were passed in. 33 of the 71 sold made \$1000.

All rams offered in last year's catalogue were in the top 20% on Index for the breed representing exceptional value.



NA first X wether lambs @ 6 months of age and some of the first of the drop to be turned off. This is true to the type of lambs we are now producing – well shaped and deep through the carcass. No long legs!!!



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