The Genetic Advancement of Texas Hair Sheep Field Day

9/16/2021

Texas A&M AgriLife Extension

Supported by USDA SARE Grant # ES19-147

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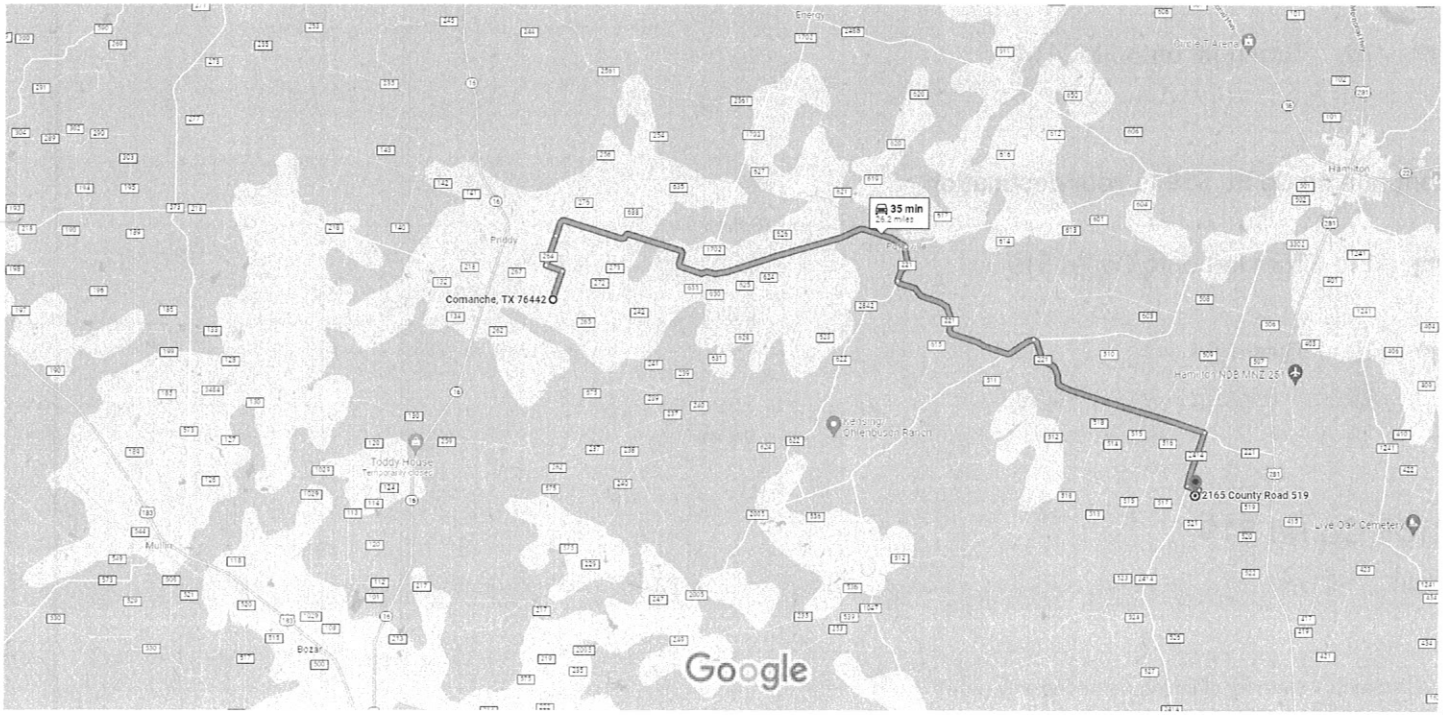
Google Maps

Comanche, Texas 76442 to 2165 Co Rd 519, Evant, TX 76525

Drive 26.2 miles, 35 min



Map data ©2021 2 mi

Comanche

Texas 76442

Take Co Rd 226 and Co Rd 264 to FM 218 E

5 min (2.1 mi)

1. Head west toward Co Rd 226

26 ft

2. Turn right onto Co Rd 226

0.8 mi

3. Turn left onto Co Rd 272

0.5 mi

4. Turn right onto Co Rd 264

0.8 mi

Continue on FM 218 E. Take FM221 to Co Rd 519 in Hamilton County

27 min (23.5 mi)

5. Continue straight onto FM 218 E

10.7 mi

6. Turn right onto FM221

1.0 mi

7. Slight left toward FM221

194 ft

8. Continue onto FM221

4.7 mi

9. Turn right to stay on FM221

5.6 mi

10. Turn right onto FM2414

1.5 mi

Continue on Co Rd 519 to your destination

2 min (0.5 mi)

11. Turn left onto Co Rd 519

0.3 mi

12. Turn right

Destination will be on the right

0.2 mi

2165 Co Rd 519

Evant, TX 76525

These directions are for planning purposes only. You may find that construction projects, traffic, weather, or other events may cause conditions to differ from the map results, and you should plan your route accordingly. You must obey all signs or notices regarding your route.

Value of a Ram

- Terminal-Oriented Sire
  1. Lamb Survival
  2. Weight Gain
  3. Carcass Value
- Maternal-Oriented Sire – Daughters Production
  1. Lambs Weaned
  2. Weaning Weight
  3. Fitness to Environment
     - A. Maintains Condition
     - B. Parasite Resistance
     - C. Longevity

1

EBVs – Predict These Traits

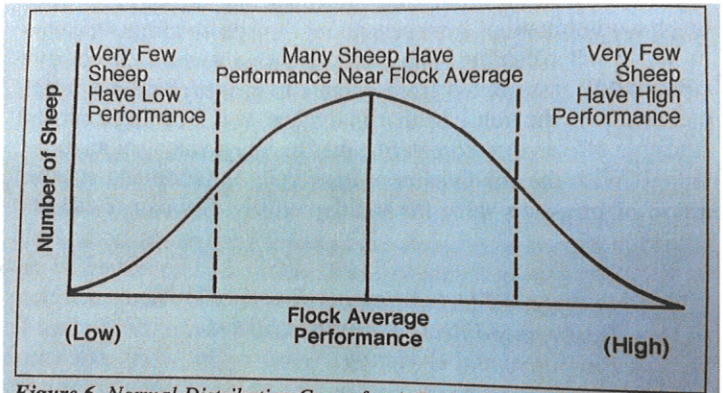


Figure 6. Normal Distribution Curve for A Quantitative Trait. Most sheep have performance levels close to the average of the flock with few sheep having very low or very high performance.

TEXAS A&M AGRILIFE EXTENSION

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Difference from Mean (2 lamb example)

- Weaning Weight – 65 lb average
  - 70 lb single * 1.00 mf = 70 lb
  - 60 lb twin * 1.23 mf = 74 lb
- Lamb Crop – 1.25 lamb/ewe
  - Single - 1.0
  - Twin - 2.0
- Parasite Load – 1,500 epg
  - 1,000 epg
  - 2,000 epg

TEXAS A&M AGRILIFE EXTENSION

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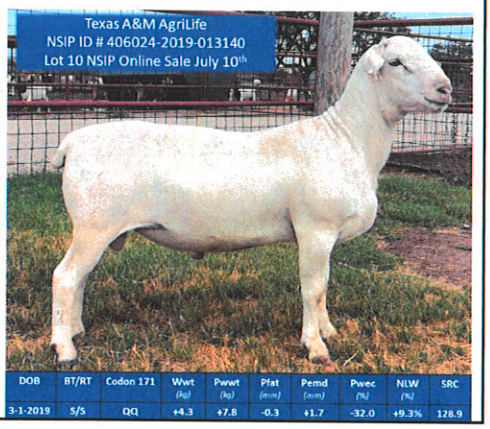
Superior (Top 10) vs Average (Top 50)

- Weaning Weight (kg)
  - 12 vs 9 EBV
- Lambs Born (%)
  - 9 vs 3 EBV
- Fecal Egg Count (%)
  - -50 vs -35 EBV



DOB	BT/RT	Codon 171	Wwt (kg)	Pwwt (kg)	Pfat (mm)	Pemd (mm)	Pwec (%)	NLW (%)	SRC
3-1-2019	S/S	QQ	+4.3	+7.8	-0.3	+1.7	-32.0	+9.3%	128.9

4

Value of 100 Daughters

- Weaning
  - 3 lb * 100 lambs = 300 lb * $2.50 = $750
- Lamb Crop
  - 3 % * 100 ewes = 3 lambs * $200 = $600
- Parasite
  - 1 less drench = $500

TEXAS A&M AGRILIFE EXTENSION

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Annual Value of Daughters Production

DOB	BT/RT	Codon 171	Wwt (kg)	Pwwt (kg)	Pfat (mm)	Pemd (mm)	Pwec (%)	NLW (%)	SRC
3-1-2019	S/S	QQ	+4.3	+7.8	-0.3	+1.7	-32.0	+9.3%	128.9

TEXAS A&M AGRILIFE EXTENSION

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NSIP EBV Notebook

Number 1 Updated Dec. 16, 2018

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NSIP EBV and Indexes

EBV for Weight Traits

- The **Birth Weight (BWT) EBV** (kg) estimates direct genetic effects on weight at birth. Positive selection on Birth Weight EBV is anticipated to increase birth weight and have correlated positive effects on early lamb survival, especially in twins and triplets. Negative selection on Birth Weight EBV is anticipated to reduce birth weight and lambing difficulty associated with oversized lambs, especially in singles. Changing birth weights is generally not a primary selection goal. Positive selection may be advantageous in prolific breeds and in flocks where lambing difficulty is not a problem, whereas negative selection may be desirable in less-prolific breeds or flocks with a history of heavy birth weights and associated lambing difficulties. The birth weight EBV is positively correlated with weaning and postweaning body weight EBV. Selection to increase weaning and postweaning weights is anticipated to result in increased birth weights, and negative selection on birth weight EBV will reduce selection responses in weaning and postweaning weights.

  [All Breeds]

- The **Maternal Birth Weight (MBWT) EBV** (kg) estimates genetic effects of the ewe on the birth weight of her lambs. This EBV mainly reflects the quality of the uterine environment provided by the ewe and may also be influenced by ewe effects on gestation length. Ewes with positive Maternal Birth Weight EBV provide a favorable uterine environment for lamb development, whereas ewes with negative Maternal Birth Weight EBV provide a more limiting uterine environment. The Maternal Birth Weight EBV will not receive major selection emphasis in most flocks, but positive emphasis on Maternal Birth Weight EBV can be useful in flocks that have had problems with small weak lambs.

  [All Breeds]

- The **Weaning Weight (WWT) EBV** (kg) provides an estimate of preweaning growth potential and will likely receive positive selection emphasis in most flocks. In extensively managed flocks with weaning at 90 to 150 days, the Weaning Weight EBV is commonly estimated from preweaning weights taken at 45 to 90 days of age. In such flocks, the true weaning weight is recorded as an early postweaning weight, with genetic differences reflected in the Postweaning Weight EBV.

  [All Breeds]

- The **Maternal Weaning Weight (MWWT) EBV** (kg) estimates the genetic effects of the ewe on the weaning weight of her lambs. It can be thought of as a measure of the ewe's merit for mothering ability. This EBV mainly reflects genetic differences in ewe milk production, but other aspects of maternal behavior may also be involved. The Maternal Weaning Weight EBV is derived by evaluating if individual ewes produce lambs that are heavier or lighter than expected based on the weaning weight EBV of the parents. Ewes whose lambs grow faster than predicted are assumed to be better milk producers, whereas ewes whose lambs grow more slowly than predicted are assumed to produce less milk. Selection for high maternal milk EBV is expected to improve milk production and mothering ability and is considered to be important for maternal breeds. The total anticipated genetic contribution of an animal's daughters to lamb weaning weight includes effects on both weaning weight and maternal milk, and can be calculated as:

$$\text{Total Genetic Effect on Weaning Weight} = \text{MWWT EBV} + 0.5 \times \text{WWT EBV}$$

This calculation recognizes that the genetic contribution of a ewe to the weaning weight of her lambs combines effects of her milk production (measured by the Maternal Weaning Weight EBV) and a sample one half of her genes for preweaning growth potential (measured by the Weaning Weight EBV).

[All Breeds]

- The **Postweaning Weight (PWWT) EBV** (kg) combines information on preweaning and postweaning growth to predict genetic merit for postweaning weight at 120 days. Up to two postweaning weights can be recorded: an "early" postweaning weight at 90 to 150 days and a "late" postweaning weight at 150 to 305 days. Either or both can be recorded. These two postweaning weights are assumed to have a genetic correlation of 1.0 and contribute equally to the final Postweaning Weight EBV. In extensively managed flocks with weaning at 90 to 150 days, the weaning weight is commonly recorded as an early postweaning weight, and the Postweaning Weight EBV predicts genetic differences in body weight at typical weaning ages. Positive selection on Postweaning Weight EBV is expected to favor rapid growth to typical market ages.

  [All Breeds]

- The **Yearling Weight (YWT) EBV** (kg) estimates growth potential to 12 months of age. Animals with high Yearling Weight EBV exhibit sustained postweaning growth, but ewe lambs with high Yearling Weight EBV are anticipated to have heavier adult body weights and greater maintenance requirements.

  [Western Range Breeds, Wool Maternal Breeds, Hair Breeds]

- The **Hogget Weight (HWT) EBV** (kg) estimates genetic effects on body weight at 18 months of age. Negative selection pressure on Hogget Weight EBV can be used to control adult body weights of breeding ewes, but will limit progress in weaning and postweaning weights. Selection emphasis on Hogget Weight EBV must consider the optimum balance between these competing goals.

  [Western Range Breeds, Maternal Wool Breeds, Hair Breeds]

- LAMBPLAN also allows recording of body weights of adult ewes at 2, 3, 4 and 5 years of age and uses the first reported adult ewe weight to produce Adult Body Weight EBV. However, this option is not currently active for NSIP.

EBV for Wool Traits

Fleece data can be reported at postweaning, yearling and hogget ages, and for adult ewes at 2, 3, 4, and 5 years of age. NSIP/LAMBPLAN currently uses data from yearlings, hoggets, and the first adult fleece (regardless of ewe age) to produce yearling, hogget, and adult EBV for wool traits. However, breeders who wish to collect fleece data for adult ewes at more than one age may do so. Those data will be stored for possible future use. Records on the same fleece trait at different ages are strongly and positively correlated, so most NSIP breeders can likely base selection decisions and marketing programs on yearling EBV.

- The **Fleece Weight (GFW) EBV** (%) is based on greasy fleece weights and estimate the animal's genetic potential for wool production. Fleece weights are stored and analyzed in kilograms. However, because of the limited range in resulting EBV and potentially large effects of environment, management, and sex on yearling fleece weight, the GFW EBV is reported as a percentage of the mean fleece weight. A GFW EBV of +10 thus indicates that the animal is expected to produce fleeces that are 10% heavier than average.

  [Western Range Breeds; Maternal Wool Breeds]

- The **Fiber Diameter (FD) EBV** (microns) estimates genetic merit for fleece quality. Animals with finer, more desirable fleeces have negative fiber diameter EBV, so negative EBV are favored for this trait.

  [Western Range Breeds; Maternal Wool Breeds]

- The **Staple Length (SL) EBV** (mm) estimates genetic potential for length of the wool fiber. Positive selection emphasis on Staple length EBV is recommended in flocks that receive premiums for long-staple fleeces or have experienced discounts for fleeces with excessively short staples.

  [Western Range Breeds; Maternal Wool Breeds]

- The **Fiber Diameter Coefficient of Variation (FDCV) EBV** (%) estimates genetic merit for fleece uniformity, expressed as the coefficient of variation (CV) among individual wool fibers in a fleece sample. Animals with more uniform fleeces (lower CV) are desired, so negative EBV are favored for this trait.

[Western Range Breeds; Maternal Wool Breeds]

- The **Fiber Curvature (CURV) EBV** (° (degree)) predicts genetic differences in crimp frequency. This EBV is based on an OFDA optical measurement of fiber curvature, which is measured in degrees and is a very accurate predictor of crimp. Higher values for curvature indicate broader or bolder crimp. Positive EBV therefore indicate more crimp and, depending on the end-product (knitwear or worsted fabric), may or may not be desirable. Use of Fiber Curvature EBV in breeding programs therefore depends on the requirements, premiums, and discounts applied to your wool.

[Western Range Breeds]

- LAMBPLAN also produces EBV for clean fleece weight, scoured yield, and staple strength in yearlings, hoggets, and adult ewes. These EBV can be made available to NSIP producers who record these variables.

EBV for Body Composition

- The **Fat Depth (FAT) EBV** (mm) is an indicator of genetic differences in carcass fatness between the 12th and 13th ribs. It is derived from ultrasonic measurements of fat depth in live animals and adjusted to standard postweaning weight of 110 lb (55 kg) for Terminal and Maternal Wool breeds and a standard yearling weight of 187 lb (85 kg) for Western Range breeds. Animals with negative Fat Depth EBV are expected to produce leaner progeny with lower, more desirable Yield Grades and are generally desirable. However, the emphasis placed on Fat Depth EBV in individual breeding programs will depend on specifications, discounts, and premiums in current markets.

[All Breeds]

- The **Loin Eye Muscle Depth (EMD) EBV** (mm) is an indicator of genetic differences in muscling. It is derived from ultrasonic measurements of loin muscle depth between the 12th and 13th ribs in live animals and adjusted to standard postweaning weight of 110 lb (55 kg) for Terminal and Maternal Wool breeds and a standard yearling weight of 187 lb (85 kg) for Western Range breeds. Animals with positive Loin Eye Muscle Depth EBV are expected to produce offspring with larger loin eyes and are generally desirable. However, the emphasis placed on Loin Eye Muscle Depth EBV in individual breeding programs depends on specifications, discounts, and premiums in current markets.

[All Breeds]

- Ultrasonic measurements for Terminal and Maternal Wool breeds can be reported at either early or late postweaning ages. However, in contrast to the situation for postweaning weights, only the first reported postweaning ultrasound measurements are used to derive Postweaning Fat Depth and Postweaning Loin Muscle Depth EBV. Therefore, breeders should be sure that the most informative postweaning ultrasound record is also the first reported postweaning record.

- Measurements for later-maturing Western Range breeds can be reported at late postweaning, yearling, or hogget ages. However, late postweaning and yearling measurements are preferred. All 3 of these measurements contribute to the reported Yearling Fat Depth and Yearling Loin Muscle Depth EBV in Western Range breeds.

- All scanning records must be accompanied by a body weight and recorded at the same time as (or at least within ± 7 days of) that body weight.

- Procedures to obtain EBV for scanning traits in Western Range breeds were derived for ram lambs fed at a moderate to high plane of nutrition following weaning at 90 to 150 days of age and scanned at late postweaning, yearling, or hogget body weights of 110 to 265 lb (50 to 120 kg). Records from lambs scanned at lighter weights or ewe lambs maintained on much lower planes of nutrition may not yield valid EBV.

EBV for Reproduction

- The **Number of Lambs Born (NLB) EBV** (number) evaluates genetic potential for prolificacy. This EBV is expressed as numbers of lambs born per ewe lambing. Ewes with EBV of +0.10 for Number of Lambs Born are expected to have an average of 0.10 more lambs at each lambing than average ewes, and their daughters are expected to have an average of 0.05 more lambs at each lambing compared to daughters of average ewes. Selection on Number of Lambs Born EBV is expected to increase prolificacy in the flock.

[All Breeds]

- The **Number of Lambs Weaned (NLW) EBV** (number) evaluates combined ewe effects on prolificacy and lamb survival to weaning. The NLW EBV is expressed as numbers of lambs weaned per ewe lambing. Ewes with EBV of +0.10 for Number of Lambs Weaned are expected to wean an average of 0.10 more lambs at each lambing, than average ewes, and their daughters are expected to wean an average of 0.05 more lambs at each lambing compared to daughters of average ewes. Selection on Number of Lambs Weaned EBV is expected to increase weaning rates in the flock.

[All Breeds]

- The **Scrotal Circumference (SC) EBV** (cm) may be used to improve breeding capacity in males and reproductive performance in females. Selection of animals with positive Scrotal Circumference EBV is expected to be most useful in improving reproductive performance in ewe lambs and yearlings via desirable effects on rate of sexual maturation, but may also have small positive effects on numbers of lambs born and weaned by older ewes. Scrotal circumference measurements can be recorded at postweaning, yearling, and hogget ages. However, NSIP currently produces only Postweaning Scrotal Circumference EBV for the relatively early-maturing Maternal Wool Breeds and Postweaning and Yearling Scrotal Circumference EBV for the later-maturing Western Range Breeds.

[Maternal Wool Breeds; Western Range Breeds; Hair Breeds]

- Scrotal circumference measurements can be reported at early and late postweaning ages for Maternal Wool breeds and at late postweaning and yearling ages for Western Range breeds. Reporting of body weights is not mandatory for scrotal circumference measurements, but if both are recorded, the scrotal circumference must be recorded at the same time as (or at least within ± 7 days of) the corresponding weight. In contrast to the situation for postweaning weights, only the first reported postweaning scrotal circumference measurement is used to derive EBV. Therefore, breeders should be sure that the most informative postweaning scrotal circumference measurement is also the first reported postweaning measurement. This will normally be the late postweaning measurement.

- Measures of NLB and NLW EBV in NSIP are expressed on a "per ewe lambing basis".

EBV for Parasite Resistance

- The **Worm Egg Count (WEC) EBV** (%) evaluates genetic merit for parasite resistance based on worm egg counts recorded at weaning or at early or late postweaning ages. Animals with low Worm Egg Count EBV are expected to have greater parasite resistance, and selection to reduce Worm Egg Count EBV is recommended in areas where internal parasites are a problem. Worm egg counts can also be recorded in yearlings, hoggets, or adult (2-yr-old only) ewes, but these measurements are not currently used to derive EBV. Most research would suggest that postweaning WEC EBV are the most useful genetic indicator of parasite resistance, but studies with Katahdin sheep in the USA have shown that weaning worm egg counts provide useful information on parasite resistance in young lambs. Weaning and postweaning Worm Egg Count EBV are strongly, but not perfectly, correlated and so convey slightly different information on patterns of development of parasite resistance. However, postweaning Worm Egg Count EBV are likely adequate for most selection and marketing purposes.

[Hair Breeds; Maternal Wool Breeds; Terminal Breeds]

- Postweaning worm egg counts can be reported at either the early or late postweaning age. Reporting of body weights is not mandatory for reporting worm egg counts, but if both are recorded, the worm egg count must be recorded at the same time as (or at least within ± 7 days of) the corresponding early or late postweaning weight.

In contrast to the situation for postweaning weights, only the first reported postweaning worm egg count is used to derive EBV. Therefore, breeders should be sure that the most informative postweaning worm egg count is also the first reported postweaning measurement.

NSIP/LAMBPLAN Selection Indexes

- At times in the past, Number of Lamb Borns and Number of Lambs Weaned EBV were expressed on a "per 100 ewes lambing" basis. However, they are currently expressed on a "per ewe lambing basis", and the weightings for these EBV in indexes have been adjusted to the current reporting scale (multiplied by 100).

- The **US Western Range Index (%)** was developed by NSIP to improve profitability in Targhee range flocks and is generally applicable to extensively managed Western range flocks with positive emphasis on both lamb and wool production. EBV for the Western Range Index are estimated from Postweaning Weight (PWWT), Maternal Weaning Weight (MWWT), Yearling Weight (YWT), Yearling Fleece Weight (YGFW), Yearling Fiber Diameter (YFD), and Number of Lambs Born (NLB) EBV as:

$$\text{US Range Index} = 100 + (2.20 \times \text{PWWT EBV} + 0.57 \times \text{MWWT EBV} - 0.57 \times \text{YWT EBV} + 0.14 \times \text{YGFW EBV} - 0.47 \times \text{YFD EBV} + 36 \times \text{NLB EBV})$$

This index places major positive weight on early growth and ewe prolificacy and modest positive weight on increasing ewe maternal ability, increasing fleece weight, and reducing fiber diameter. Negative emphasis on yearling weight EBV is designed to limit increases in adult ewe weight but, because of the large positive correlation between Weaning Weight and Yearling Weight EBV, is not expected to actually reduce yearling weights. The Number of Lambs Born EBV is used in preference to the Number of Lambs Weaned EBV because of potential bias in Number of Lambs Weaned EBV from predation in Western range flocks.

[Western Range Breeds]

- The **Maternal Indices (%)**, specifically the US Hair and US Maternal Wool, combine EBV for various traits into an index designed to maximize pounds of lambs weaned per ewe lambing. With the NSIP/LAMBPLAN procedures, these indices are estimated from EBV for other traits in the Hair and Maternal Wool breeds.

For all Hair breeds, this index is estimated as:

$$\text{US Hair Index} = 100 + (0.246 \times \text{WWT EBV} + 2.226 \times \text{MWWT EBV} - 3.5 \times \text{NLB EBV} + 40.6 \times \text{NLW EBV})$$

For all Maternal Wool breeds, this index is estimated as:

$$\text{US Maternal Index} = 100 + (0.583 \times \text{WW EBV} + 2.639 \times \text{MWWT EBV} - 3.5 \times \text{NLB EBV} + 40.6 \times \text{NLW EBV})$$

These Maternal Indices give substantial positive weight to Number of Lambs Weaned, Maternal Weaning Weight, and Weaning Weight EBV. Small negative emphasis on Number of Lambs Born EBV favors ewes that wean large litters without losing any lambs. A ewe that produces twins and weans them both will thus be favored over a ewe that has triplets but weans only two lambs. However, ewes that wean triplets will always have substantially higher index values than ewes that wean twins. Calculation of Maternal Indexes has changed slightly under NSIP/LAMBPLAN procedures, but the basic nature of the indexes in terms of underlying assumptions and expected selection responses in component traits is the same as it was under the original NSIP system.

[Hair Breeds; Maternal Wool Breeds]

- **Carcass Plus** was developed in Australia to improve carcass value in Australian markets. Carcass Plus EBV are calculated as:

$$\text{Carcass Plus Index} = 100 + (2.33 \times \text{WWT EBV} + 3.50 \times \text{PWWT EBV} + 11.40 \times \text{PEMD EBV} - 4.07 \times \text{PFAT EBV})$$

Even though developed for Australian markets, Carcass Plus Index scores provide a reasonable assessment of value for Terminal Sire types in the USA.

[Available for All Breeds, but mainly applicable to Terminal Sire Breeds]

Lamb	Sex	Weaning Weight	Date Weaned	Post Weaning Weight	PW Date Weighed	BT	RT	PWGain
12349	F	42	1/18/2021	82	8/9/2021	2	1	0.20
12531	F	51	1/18/2021	91	8/9/2021	.	1	0.20
12796	F	61	1/28/2021	100	8/9/2021	1	1	0.20
12516	F	43	1/18/2021	85	8/9/2021	1	1	0.21
12533	F	56	1/28/2021	96	8/9/2021	2	2	0.21
12514	F	48	1/18/2021	91	8/9/2021	1	1	0.21
12540	F	64	1/18/2021	108	8/9/2021	1	1	0.22
12535	F	44	1/28/2021	86	8/9/2021	2	2	0.22
12504	F	37	1/18/2021	82	8/9/2021	2	1	0.22
12517	F	34	1/18/2021	81	8/9/2021	1	1	0.23
12537	F	61	1/18/2021	108	8/9/2021	1	1	0.23
12507	F	52	1/28/2021	97	8/9/2021	2	1	0.23
12345	F	71	1/28/2021	117	8/9/2021	2	1	0.24
12224	F	75	1/28/2021	122	8/9/2021	2	1	0.24
12522	F	40	1/18/2021	90	8/9/2021	2	2	0.25
12519	F	58	1/18/2021	109	8/9/2021	2	1	0.25
12501	F	62	1/18/2021	114	8/9/2021	1	1	0.26
12226	F	60	1/28/2021	110	8/9/2021	1	1	0.26
12518	F	60	1/18/2021	114	8/9/2021	2	1	0.27
12525	F	60	1/18/2021	114	8/9/2021	1	1	0.27
12528	F	56	1/18/2021	110	8/9/2021	1	1	0.27
12228	F	54	1/28/2021	106	8/9/2021	2	1	0.27
12359	F	49	1/18/2021	105	8/9/2021	1	1	0.28
12360	F	41	1/28/2021	95	8/9/2021	1	1	0.28
12230	F	35	1/18/2021	93	8/9/2021	2	2	0.29
12348	F	52	1/18/2021	110	8/9/2021	1	1	0.29
12225	F	33	1/18/2021	92	8/9/2021	.	.	0.29
12350	F	60	1/28/2021	117	8/9/2021	1	1	0.30
12511	F	35	1/18/2021	95	8/9/2021	2	1	0.30
12527	M	74	1/18/2021	114	6/25/2021	1	1	0.25
12530	M	33	1/18/2021	82	6/25/2021	2	2	0.31
12515	M	60	1/18/2021	114	6/25/2021	1	1	0.34
12532	M	59	1/18/2021	113	6/25/2021	.	.	0.34
12510	M	50	1/28/2021	101	6/25/2021	1	1	0.34
12797	M	71	1/28/2021	124	6/25/2021	1	1	0.36
12503	M	54	1/18/2021	112	6/25/2021	1	1	0.37
12356	M	58	1/28/2021	114	6/25/2021	1	1	0.38
12792	M	71	1/18/2021	131	6/25/2021	2	2	0.38
12536	M	70	1/18/2021	132	6/25/2021	1	1	0.39
12347	M	63	1/18/2021	126	6/25/2021	2	2	0.40
12354	M	51	1/18/2021	114	6/25/2021	1	1	0.40
12524	M	73	1/18/2021	136	6/25/2021	2	1	0.40
12793	M	66	1/18/2021	129	6/25/2021	.	.	0.40
12357	M	61	1/18/2021	125	6/25/2021	1	1	0.41
12342	M	50	1/28/2021	110	6/25/2021	1	1	0.41
12351	M	51	1/28/2021	111	6/25/2021	2	2	0.41
12353	M	77	1/28/2021	139	6/25/2021	2	1	0.42
12512	M	65	1/28/2021	127	6/25/2021	1	1	0.42
12344	M	56	1/18/2021	123	6/25/2021	2	2	0.42
12346	M	56	1/28/2021	119	6/25/2021	2	2	0.43
12798	M	70	1/28/2021	133	6/25/2021	2	1	0.43
12513	M	42	1/18/2021	110	6/25/2021	2	2	0.43
12529	M	69	1/28/2021	133	6/25/2021	2	1	0.43
12539	M	69	1/18/2021	138	6/25/2021	2	1	0.44
12502	M	69	1/28/2021	134	6/25/2021	1	1	0.44
12509	M	43	1/28/2021	108	6/25/2021	1	1	0.44
12523	M	65	1/28/2021	130	6/25/2021	1	1	0.44
12355	M	83	1/18/2021	155	6/25/2021	1	1	0.46
12534	M	71	1/18/2021	146	6/25/2021	1	1	0.47
12229	M	74	1/28/2021	146	6/25/2021	2	2	0.49
12794	M	68	1/18/2021	147	6/25/2021	1	1	0.50
12352	M	66	1/28/2021	144	6/25/2021	1	1	0.53

Byrns Katahdin Ewes

NSIP ID	BT/RT	Dam Lamb Prod	DAM YOB	WWT	PWWT	PFAT	PEMD	WFEC	PFEC	NLB	NLW	USA Hair
640185-2019-BYR307	2/2	5	2015	+1.8	+2.5	0.1	-0.3	-25	-36	+1	+6	103.3
640185-2019-BYR327	2/2	5	2015	+2.4	+4.0	-0.3	+0.1	-38	-58	-2	+2	103
640185-2020-BYR366	.	.	.	+1.3	+2.0	.	.	-38	-56	.	.	104.1
640185-2020-BYR368	2/2	11	2014	+0.5	+0.9	0.4	-0.6	+16	-3	+9	+11	104.9
640185-2020-BYR375	2/2	11	2014	+1.8	+3.2	-0.2	-0.5	-31	-51	+6	+14	106.8
640185-2020-BYR377	1/1	1	2019	+1.8	+3.4	.	-0.2	-19	-29	-2	+8	104.5
640185-2020-BYR381	3/3	7	2018	+1.9	+3.2	-0.2	-0.5	+63	+84	+6	+14	106.8
640185-2018-BYR808	2/2	5	2015	+2.5	+4.3	.	.	-10	-13	-0.1	0	103.2

SheepGenetics

Analysis : **USA HAIR** , Sunday, 15 August 2021

Breed 64 Flock 0185 Years 2020 to 2021

Sires

Animal ID	Inbreeding	Prog:Flks	BWT kg	MWWT kg	WWT kg	PWWT kg	PFAT mm	PEMD mm	WFEC %	PFEC %	PSC cm	NLB %	NLW %	USA MAT-HAIR	SRC$	Sire / Dam
640030-2017-FAH084	0.8%	5:1	0.3	0.4	2.3	4.9	-1.4	-0.5	-45	-52	0.1	-5	11	**105.9**	117.7	640005-2015-WVF339
FAHRMEIER		*Acc.:*	68	57	*70*	73	56	73	62	*69*	53	*53*	*50*		55	640030-2014-FAH096
640052-2017-NWT085	0.8%	60:1	0.1	0.2	1.5	1.7	0.4	-0.7	-41	-57		7	8	**103.7**	110.0	640052-2016-NWT019
HOUND RIVER		*Acc.:*	67	61	*75*	78	52	60	81	*86*		*50*	*47*		55	640052-2013-NWT518
640185-2019-BYR306	2.3%	8:1	0.1	0.3	0.8	0.8	0.1	-0.5	-84	-97		7	13	**105.7**	114.2	640052-2017-NWT085
BYRNS RANCH		*Acc.:*	54	48	*68*	71	45	52	72	*80*		*42*	*39*		47	640030-2013-FAH025

TAMU Replacement Ewe Lambs

			1/18/2021	8/9/2021	8/9/2021	Estimated Breeding Values						
ID	**Birth**	**BT/RT**	**Wean Wt**	**Post Wean Wt**	**Post Wean FEC**	**Wwt**	**PWwt**	**PWEC**	**NLW%**	**SRC**	**Sire**	**Dam Age**
12225	Nov-2020	1/1	33	92	350	+2.0	+4.3	-19.2	+2.3	114.50	175	--
12228	Nov-2020	2/1	54	106	1650	+4.7	+8.0	-19.1	+2.6	123.43	175	2
12345	Nov-2020	2/1	71	117	600	+6.6	+10.1	-21.1	+3.6	129.11	175	2
12348	Nov-2020	1/1	52	110	1350	+4.5	+8.0	-26.0	+6.9	126.75	175	3
12359	Nov-2020	1/1	49	105	1100	+3.9	+6.8	-19.2	+2.3	120.17	175	7
12501	Nov-2020	2/2	62	114	5800	+7.1	+11.1	+20.3	*	129.12	12266	3
12519	Nov-2020	2/1	58	109	1150	+5.8	+8.8	-11.0	+6.2	127.67	175	2
12537	Nov-2020	1/1	61	108	1100	+5.3	+7.9	+96.5	+2.8	120.00	12240	2
Averages			**51**	**100**	**1919**							

* Accuracy too low to report a value

Animal ID	Sex	BT/RT	Bwt	Wwt	Pwwt	Ywt	Pfat	Pemd	NLW	SRC	Sire	Dam
4060242020012225	F	1/1	-0.61	2.0	4.3	3.0			2.3	**114.50**	470LWD2017170175	
4060242020012228	F	2/1	-0.42	4.7	8.0	6.4			2.6	**123.43**	470LWD2017170175	4060242018012362
4060242020012345	F	2/1	-0.29	6.6	10.1	8.1	-0.7	1.3	3.6	**129.11**	470LWD2017170175	4060242018012234
4060242020012348	F	1/1	-0.43	4.5	8.0	6.4	-0.4	1.6	6.9	**126.75**	470LWD2017170175	4060242017002662
4060242020012359	F	1/1	-0.47	3.9	6.8	5.3			2.3	**120.17**	470LWD2017170175	4060242013009838
4060242020012501	F	2/2	-0.21	7.1	11.1	9.2				**129.12**	4060242018012266	4060242017002858
4060242020012519	F	2/1	-0.35	5.8	8.8	7.3	-0.5	1.4	6.2	**127.67**	470LWD2017170175	4060242018012225
4060242020012537	F	1/1	-0.34	5.3	7.9	6.1			2.8	**120.00**	4060242018012240	4060242018012287

TAMU Mature Rams

			Estimated Breeding Values								
ID	**Birth**	**BT/RT**	**MWwt**	**Wwt**	**PWwt**	**Ywt**	**PFAT**	**PEMD**	**PWEC**	**NLW%**	**SRC**
175	Mar-2017	2/2	+.98	+4.5	+7.4	+5.7	-0.05	+2.0	-47.0	+5.0	125.0
2506	Mar-2017	2/2	+3.5	+7.7	+12.1	+10.3	-1.00	+1.1	+75.0	+4.9	130.84
12247	Mar-2018	2/2	+1.8	+4.3	+7.4	+5.4	+0.44	+2.18	+26.4	+5.3	124.44
12290	Mar-2018	1/1	+2.5	+6.0	+9.2	+7.8	-0.47	+0.71	+56.9	+4.7	123.84
13156	Mar-2019	2/2	+1.8	+4.2	+7.0	+6.8	-1.32	+0.78	-5.0	+7.7	123.95
13170	Mar-2019	2/2	+2.3	+5.1	+9.8	+9.2	+0.14	+0.57	-1.0	+10.4	130.53
13666	Nov-2019	1/1	+2.2	+5.8	+9.6	+8.0	-0.65	+1.62	-20.8	+6.8	130.66

TAMU Mature Rams

			Estimated Breeding Values								
ID	**Birth**	**BT/RT**	**MWwt**	**Wwt**	**PWwt**	**Ywt**	**PFAT**	**PEMD**	**PWEC**	**NLW%**	**SRC**
175	Mar-201	2/2	+.98	+4.5	+7.4	+5.7	-0.05	+2.0	-47.0	+5.0	125.0
2506	Mar-201	2/2	+3.5	+7.7	+12.1	+10.3	-1.00	+1.1	+75.0	+4.9	130.84
12247	Mar-201	2/2	+1.8	+4.3	+7.4	+5.4	+0.44	+2.18	+26.4	+5.3	124.44
12290	Mar-201	1/1	+2.5	+6.0	+9.2	+7.8	-0.47	+0.71	+56.9	+4.7	123.84
13156	Mar-201	2/2	+1.8	+4.2	+7.0	+6.8	-1.32	+0.78	-5.0	+7.7	123.95
13170	Mar-201	2/2	+2.3	+5.1	+9.8	+9.2	+0.14	+0.57	-1.0	+10.4	130.53
13666	Nov-201	1/1	+2.2	+5.8	+9.6	+8.0	-0.65	+1.62	-20.8	+6.8	130.66

Lambplan Averages

95%	+4.7	+8.2	+12.8	+18.5	+3.5	-60.0	+13	132.8
90%	+3.9	+7.6	+11.9	+17.8	+3.1	-53.0	+9	130.4
75%	+3.3	+6.6	+10.4	+16.5	+2.4	-42.0	+6	126.3
50%	+2.7	+5.5	+8.8	+14.8	+1.7	-35.0	+3	122.4

LAMBPLAN

Analysis : **TERMINAL** , 1 September 2021

Breed 40 Flock 6024 Years 2020 to 2021

Sires

Animal ID	Inbreeding	Prog:Flks	BWT kg	MWWT kg	WWT kg	PWWT kg	PFAT mm	PEMD mm	YWT kg	NLW %	PSC cm	PFEC %	MCP	SRC	Sire / Dam
406024-2017-002506		24:1	-0.2	3.5	7.8	12.1	-1.0	1.1	10.3	5	4.9	75	**146.9**	130.9	406024-2015-009863
TEXAS A&M		*Acc.:*	*51*	*51*	*76*	*78*	*42*	*41*	*68*				43	46	406024-2013-007795
406024-2018-012222		1:1	-0.3	1.8	5.0	8.5	-0.4	0.7	6.8	4		18	**131.3**	121.7	406024-2015-009933
TEXAS A&M		*Acc.:*	*42*	*46*	*61*	*62*	*55*	*57*	*55*				41	40	406024-2015-009952
406024-2018-012240		13:1	-0.4	3.2	4.6	6.6	-0.9	0.1	5.3	4	3.3	39	**126.2**	119.1	406024-2015-009922
TEXAS A&M		*Acc.:*	*52*	*45*	*74*	*75*	*72*	*74*	*68*				51	46	406024-2015-009940
406024-2018-012266		46:1	-0.3	1.5	5.9	9.8	0.3	0.8	8.3	9	4.3	19	**136.9**	127.5	406024-2015-009933
TEXAS A&M		*Acc.:*	*56*	*47*	*82*	*83*	*71*	*74*	*72*				54	51	406024-2014-009251
406024-2019-013156		11:1	-0.5	1.8	4.2	7.2	-0.8	2.0	6.8	8	3.8	-5	**135.6**	126.6	470LWD-2017-170175
TEXAS A&M		*Acc.:*	*52*	*46*	*73*	*74*	*69*	*72*	*71*				51	49	406024-2013-007822
406024-2019-013170		5:1	-0.4	2.2	5.2	9.8	-0.2	0.5	9.2	10	4.5	-1	**134.2**	129.9	406024-2015-009922
TEXAS A&M		*Acc.:*	*47*	*47*	*69*	*70*	*60*	*64*	*68*				46	44	406024-2013-007745
406024-2019-013683	6.2%	1:1	-0.3	2.5	6.0	9.6	-0.1	1.1	8.3	7	4.3	25	**139.5**	128.3	406024-2018-012266
TEXAS A&M		*Acc.:*	*44*	*42*	*65*	*66*	*42*	*42*	*58*				37	39	406024-2015-009862
406024-2019-013702		1:1	-0.2	3.5	7.1	12.4		0.3	11.0			-20	**140.8**	132.4	406024-2018-012221
TEXAS A&M		*Acc.:*	*40*	*35*	*62*	*63*		*40*	*54*				34	35	406024-2016-010790
470LWD-2017-170175	0.2%	105:1	-0.5	1.0	4.5	7.4	-0.5	2.0	5.7	5	3.9	-47	**136.2**	125.0	470044-2008-085005
LEWIS WD		*Acc.:*	*70*	*64*	*89*	*90*	*82*	*83*	*86*				67	64	470LWD-2013-130152

Production Scenarios

Ranch # 1: Moderate rainfall area that does experience the occasional year of 35"+. Sheep are managed on native and improved pastures year-round. This operation produces seedstock for other producers in this region and their customers are predominantly looking for low-input, maternal replacement ewes that do not require much supplementation. This operation and their neighbors both are dealing with significant losses to parasites and drench protocols are becoming less and less effective. Everyone in the region spring lambs.

Ranch # 2: Low to Moderate rainfall area. Sheep rotate between native prairie grass pastures in the spring, on irrigated coastal under a pivot in the summer, and crop residue in the fall/winter. This producer lambs in the fall to take advantage of high spring lamb prices. The ewe base are crossbred hair females that were purchased through a sale barn and replacements are purchased at auction rather than raised. The lamb crop are completely sold at weaning.

Ranch # 3: High rainfall area, grass Is plentiful almost year-round. This operation sells direct to consumer product and has a number of restaurants as clients who really like carcasses from 70 - 90 lb. lambs that require little fat trim. This operation is struggling to keep up with the growing demand for their product. They are limited in acreage and high land values make it restrictive to purchase or lease more. All replacement ewe lambs are raised on the farm.

TEXAS A&M

REID REDDEN

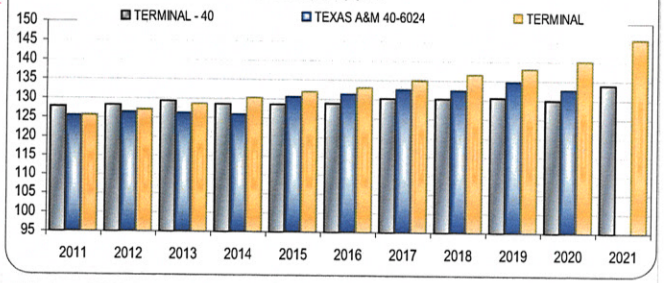
40-6024

SHEEP GENETICS

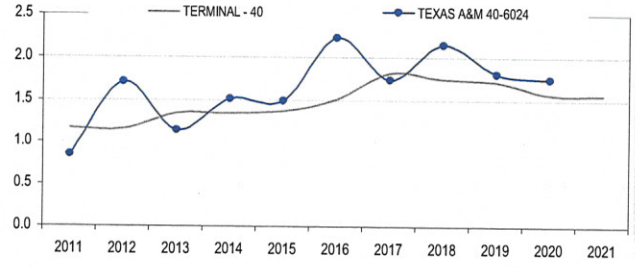
mla

Analysis : ***TERMINAL - 40*** Dated : **1-Sep-21**

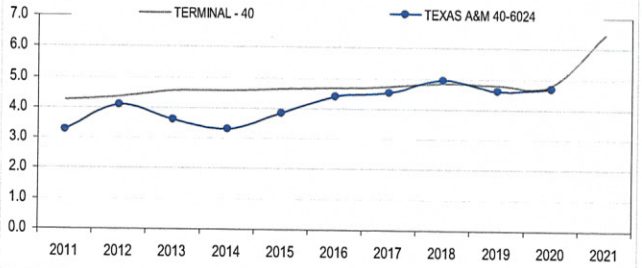
Maternal Carcase Production Index averages by year



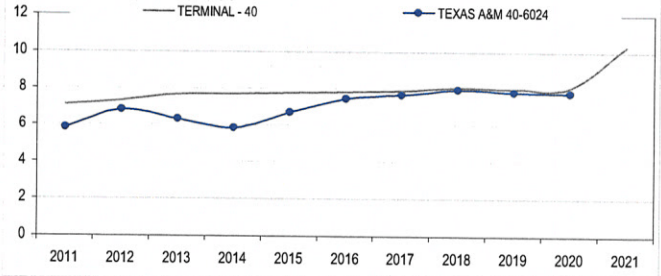
Maternal Weaning weight averages by year



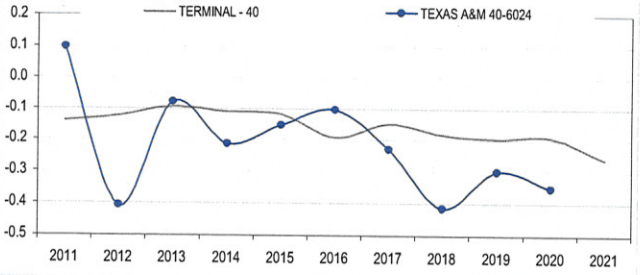
Weaning weight averages by year



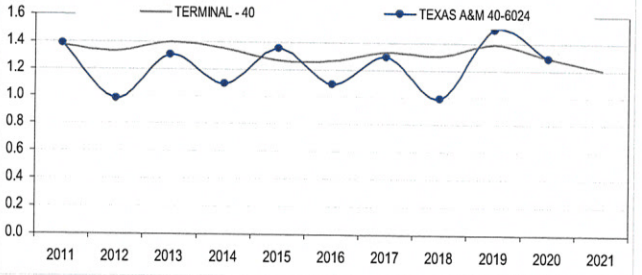
PW - 9 month Weight averages by year



PW - 9 Month Fat averages by year



PW - 9 month Emd averages by year



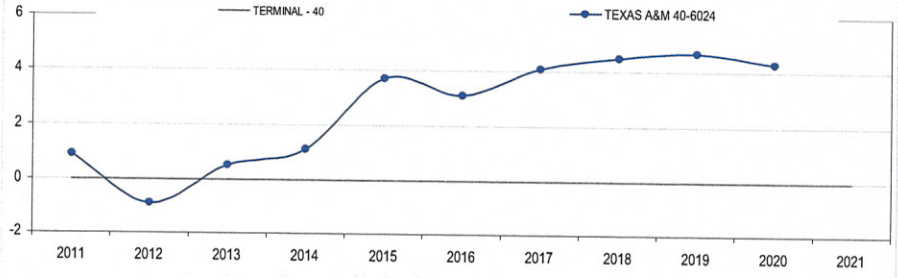
TERMINAL - 40

	WWT	PWWT	PFAT	PEMD	AWT	MWWT	NLW%	YNLW%	PWEC	MCP	Counts
2012	4.4	7.3	-0.1	1.3	5.7	1.2	0.0	1.3	0.0	128.4	4230
2013	4.6	7.7	-0.1	1.4	5.8	1.2	0.0	1.6	0.0	129.5	4396
2014	4.6	7.7	-0.1	1.4	6.5	1.3	0.0	1.1	0.0	128.7	4706
2015	4.7	7.8	-0.1	1.3	6.6	1.3	0.0	1.3	0.0	128.6	5708
2016	4.7	7.8	-0.2	1.3	6.7	1.4	0.0	1.3	0.0	129.0	5884
2017	4.7	7.9	-0.1	1.3	6.8	1.5	0.0	1.4	0.0	130.3	5706
2018	4.9	8.1	-0.2	1.3	6.8	1.8	0.0	1.8	0.0	130.4	5460
2019	4.8	8.0	-0.2	1.4	7.1	1.8	0.0	1.5	0.0	130.7	4857
2020	4.8	8.1	-0.2	1.3	7.1	1.7	0.0	2.0	0.0	130.1	4709
2021	6.5	10.3	-0.3	1.2	7.2	1.6	0.0	4.7	0.0	134.0	521

TEXAS A&M 40-6024

	WWT	PWWT	PFAT	PEMD	AWT	MWWT	NLW%	YNLW%	PWEC	MCP	Counts
2012	4.1	6.8	-0.4	1.0	4.7	1.7	-0.9	-0.4	0.0	126.4	104
2013	3.6	6.3	-0.1	1.3	4.5	1.1	0.5	0.4	21.3	126.2	108
2014	3.3	5.8	-0.2	1.1	3.6	1.5	1.1	0.6	14.4	126.0	88
2015	3.9	6.7	-0.2	1.4	4.6	1.5	3.7	2.6	29.4	130.7	101
2016	4.4	7.4	-0.1	1.1	5.7	2.2	3.1	2.1	22.3	131.4	115
2017	4.5	7.7	-0.2	1.3	6.0	1.7	4.1	3.0	28.8	132.6	127
2018	5.0	7.9	-0.4	1.0	6.4	2.1	4.5	3.0	24.5	132.6	57
2019	4.6	7.8	-0.3	1.5	6.0	1.8	4.7	3.5	13.1	134.8	264
2020	4.7	7.7	-0.4	1.3	6.1	1.7	4.3	3.1	6.8	132.9	69
2021	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0

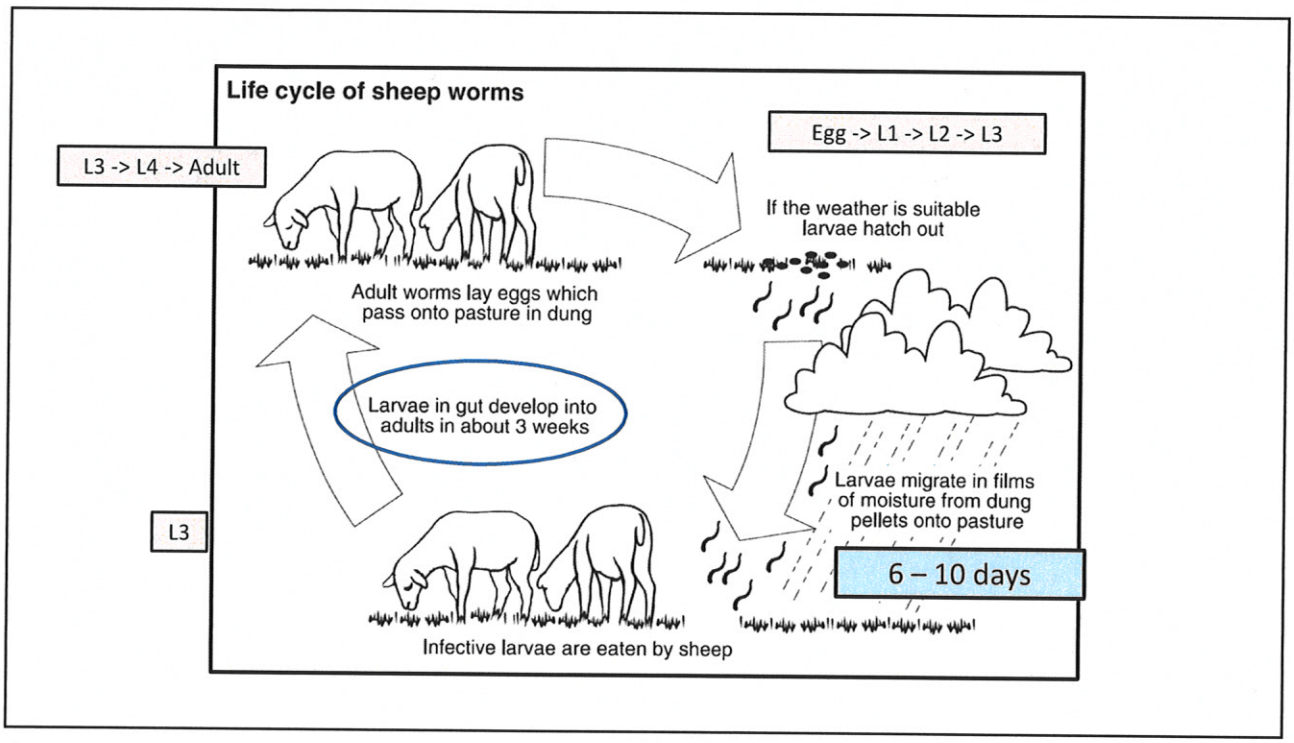
Number of Lambs Weaned % averages by year



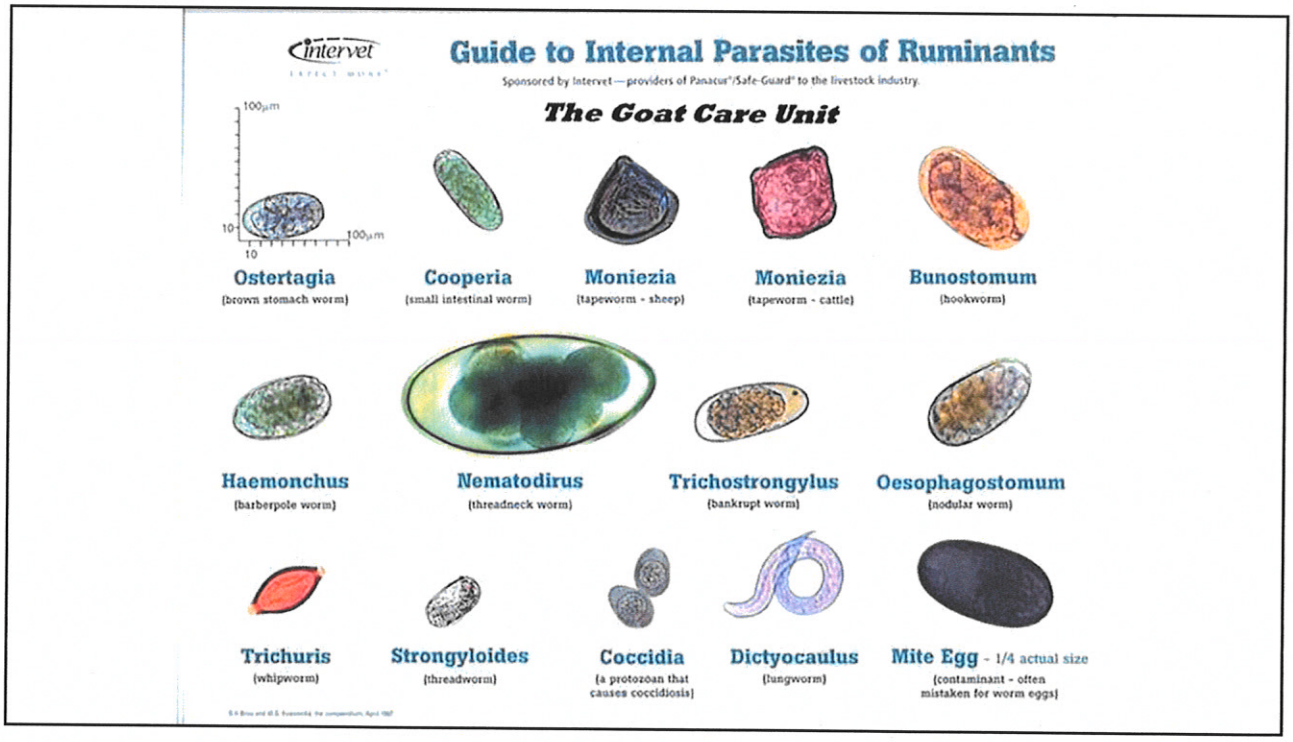
TEXAS A&M 40-6024	
Fleece	No
Weights	Yes
Carcase	Yes
FEC	No
Reproduction	No

LAMBPLAN ASBV

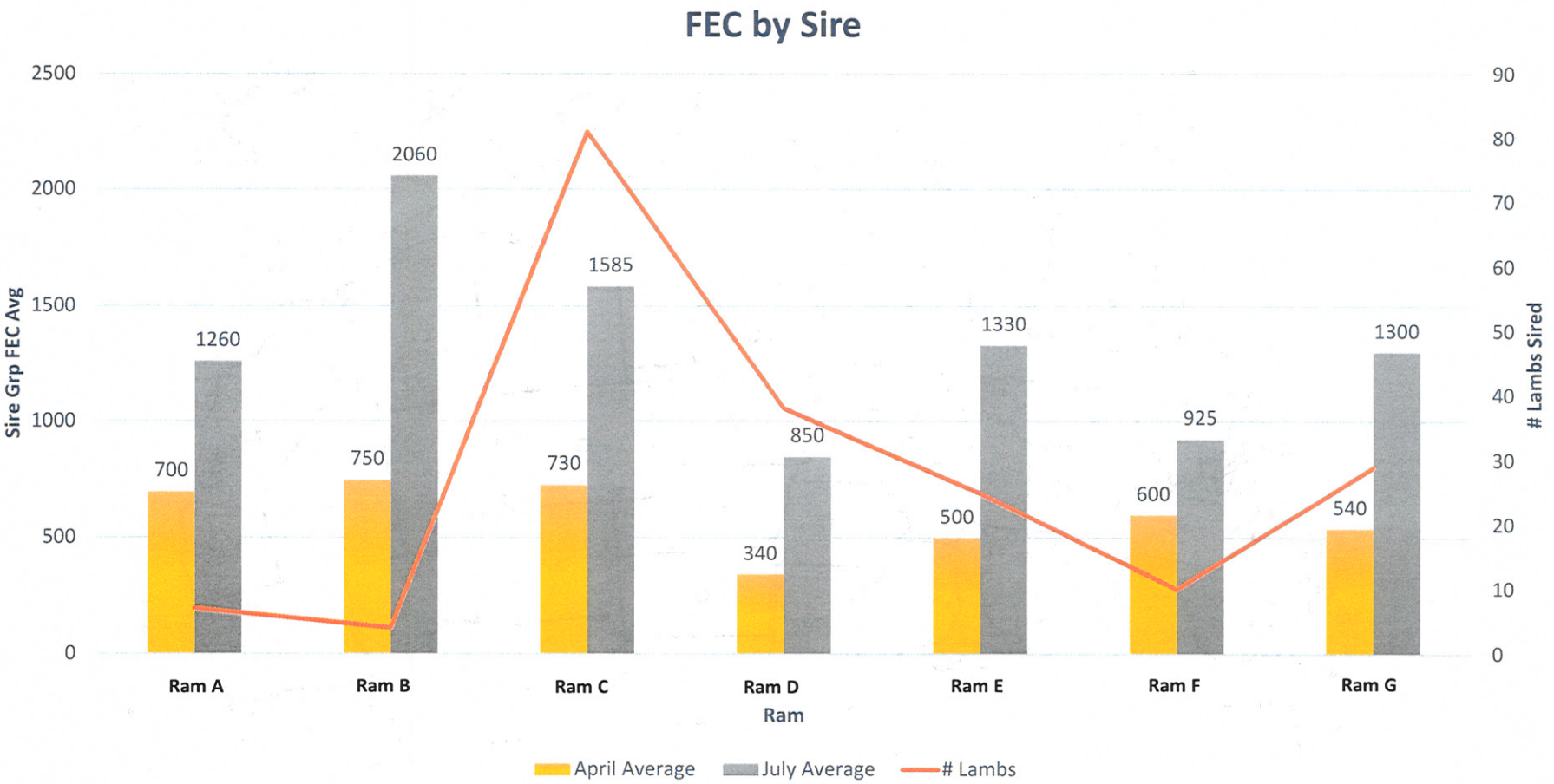
5 September 2021


Life cycle of sheep worms
L3 -> L4 -> Adult
Egg -> L1 -> L2 -> L3
If the weather is suitable larvae hatch out
Adult worms lay eggs which pass onto pasture in dung
Larvae in gut develop into adults in about 3 weeks
L3
Larvae migrate in films of moisture from dung pellets onto pasture
6 – 10 days
Infective larvae are eaten by sheep

1


intervet
Guide to Internal Parasites of Ruminants
Sponsored by Intervet — providers of Panacur®/Safe-Guard® to the livestock industry.
The Goat Care Unit
100µm
10
100µm
10
Ostertagia
(brown stomach worm)
Cooperia
(small intestinal worm)
Moniezia
(tapeworm - sheep)
Moniezia
(tapeworm - cattle)
Bunostomum
(hookworm)
Haemonchus
(barberpole worm)
Nematodirus
(threadneck worm)
Trichostrongylus
(bankrupt worm)
Oesophagostomum
(nodular worm)
Trichuris
(whipworm)
Strongyloides
(threadworm)
Coccidia
(a protozoan that causes coccidiosis)
Dictyocaulus
(lungworm)
Mite Egg - 1/4 actual size
(contaminant - often mistaken for worm eggs)

2


FEC by Sire
Sire Grp FEC Avg
Lambs Sired
2500
2000
1500
1000
500
0
90
80
70
60
50
40
30
20
10
0
700
1260
750
2060
730
1585
340
850
500
1330
600
925
540
1300
Ram A
Ram B
Ram C
Ram D
Ram E
Ram F
Ram G
Ram
April Average
July Average
Lambs

Percentile Report

Analysis **Ter-Shedders** Dated **15/08/2021**

Animals born in 2020 **Count** 15138

Band	Bwt kg	Wwt kg	PWwt kg	Ywt kg	Pfat mm	Yfat mm	Pemd mm	Yemd mm	Ysc cm	Hsc cm	Pfec %	Yfec %	MWwt kg	NLW %	LMY %	IMF %	Dress %	ShrF5 N	LEQ TCP		MCP Trade$		EQ SRC		Export$
0	-0.87	11.9	17.2	16.6	3.4	3.3	4.0	3.7	4.6	3.2	-82	-72	4.7	27	5.4	0.2	4.2	-5.5	157.9	152.0	113.6	160.0	147.8	151.0	113.6
1	-0.63	9.3	14.5	14.1	1.3	1.4	3.0	2.8	4.2	3.2	-69	-60	3.5	20	3.2	-0.1	3.8	-3.8	146.8	141.1	110.8	147.9	138.6	140.0	109.2
2	-0.60	8.9	13.9	13.4	1.0	1.2	2.8	2.6	4.0	3.1	-66	-55	3.3	18	3.0	-0.1	3.7	-3.4	145.5	139.1	110.4	145.9	136.4	138.3	108.5
3	-0.57	8.5	13.5	13.0	0.9	1.1	2.7	2.5	4.0	3.1	-64	-53	3.2	15	2.9	-0.2	3.6	-3.2	144.5	137.9	110.1	144.8	135.0	137.2	108.0
4	-0.56	8.3	13.1	12.7	0.8	1.0	2.6	2.4	3.9	3.0	-62	-51	3.1	14	2.7	-0.2	3.6	-2.9	143.8	137.0	109.9	143.9	133.7	136.4	107.6
5	-0.54	8.2	12.8	12.4	0.7	0.9	2.5	2.3	3.8	3.0	-60	-50	3.0	13	2.7	-0.2	3.6	-2.7	143.2	136.4	109.8	143.1	132.8	135.8	107.2
10	-0.50	7.6	11.9	11.4	0.5	0.6	2.2	2.0	3.7	2.9	-53	-43	2.8	9	2.4	-0.3	3.4	-2.0	140.9	134.1	109.2	140.6	130.4	133.5	105.9
15	-0.47	7.2	11.2	10.7	0.3	0.5	2.0	1.8	3.5	2.8	-50	-40	2.6	8	2.2	-0.3	3.3	-1.4	139.3	132.6	108.9	138.8	128.7	131.8	105.0
20	-0.45	6.9	10.8	10.1	0.2	0.4	1.9	1.7	3.4	2.7	-45	-37	2.5	7	2.1	-0.4	3.2	-1.0	138.0	131.2	108.6	137.4	127.4	130.3	104.3
25	-0.43	6.6	10.4	9.6	0.2	0.3	1.8	1.6	3.3	2.6	-42	-36	2.3	6	2.0	-0.4	3.2	-0.8	136.7	129.9	108.3	136.1	126.3	128.9	103.7
30	-0.41	6.4	10.0	9.2	0.1	0.2	1.7	1.5	3.2	2.5	-40	-35	2.2	5	1.9	-0.4	3.1	-0.5	135.7	128.8	108.0	135.0	125.4	127.7	103.0
35	-0.39	6.2	9.7	8.8	0.0	0.2	1.6	1.4	3.2	2.4	-38	-34	2.1	4	1.8	-0.5	3.0	-0.3	134.8	127.7	107.8	134.0	124.6	126.5	102.4
40	-0.37	6.0	9.4	8.5	0.0	0.1	1.5	1.2	3.1	2.4	-37	-33	1.9	4	1.7	-0.5	3.0	-0.1	134.0	126.6	107.6	133.0	123.8	125.5	101.8
45	-0.35	5.8	9.1	8.2	-0.1	0.0	1.4	1.1	3.0	2.3	-36	-31	1.8	3	1.6	-0.5	2.9	0.1	133.2	125.7	107.4	132.1	123.1	124.5	101.2
50	-0.33	5.5	8.8	7.9	-0.2	0.0	1.3	1.0	3.0	2.2	-35	-30	1.7	3	1.5	-0.6	2.8	0.2	132.4	124.7	107.2	131.2	122.4	123.6	100.6
55	-0.31	5.3	8.6	7.6	-0.2	-0.1	1.2	1.0	2.9	2.2	-33	-30	1.5	2	1.4	-0.6	2.8	0.4	131.6	123.8	107.0	130.2	121.7	122.8	100.0
60	-0.28	5.1	8.3	7.4	-0.3	-0.1	1.1	0.8	2.8	2.2	-32	-29	1.4	2	1.3	-0.7	2.7	0.6	130.8	122.9	106.8	129.3	121.1	121.9	99.4
65	-0.26	5.0	8.0	7.1	-0.3	-0.2	1.0	0.7	2.8	2.1	-30	-28	1.2	1	1.3	-0.7	2.6	0.7	129.9	122.0	106.6	128.3	120.4	121.2	98.7
70	-0.22	4.7	7.7	6.8	-0.4	-0.3	0.9	0.6	2.7	2.0	-29	-26	1.0	1	1.2	-0.8	2.5	0.9	129.1	121.3	106.3	127.3	119.7	120.5	98.0
75	-0.16	4.5	7.5	6.5	-0.5	-0.3	0.8	0.5	2.6	2.0	-27	-24	0.8	0	1.1	-0.9	2.2	1.1	128.2	120.4	106.1	126.2	119.1	119.6	97.1
80	-0.06	4.3	7.2	6.1	-0.5	-0.4	0.6	0.4	2.5	2.0	-24	-22	0.6	0	1.0	-1.0	1.8	1.4	126.9	119.4	105.8	125.1	118.2	118.6	96.0
85	0.04	4.0	6.8	5.6	-0.6	-0.5	0.5	0.3	2.4	1.8	-21	-20	0.4	-1	0.8	-1.1	1.4	1.6	125.2	118.1	105.5	123.4	117.3	117.3	94.5
90	0.12	3.7	6.4	5.0	-0.8	-0.7	0.3	0.1	2.2	1.8	-17	-16	0.2	-2	0.7	-1.2	1.2	2.0	122.4	116.3	104.9	120.6	116.2	115.6	92.3
95	0.22	3.2	5.7	4.1	-1.0	-0.9	0.0	-0.2	2.0	1.7	-12	-11	-0.1	-4	0.4	-1.4	0.9	2.5	118.2	113.5	103.7	115.7	114.5	113.0	88.8
96	0.24	3.0	5.5	3.8	-1.0	-0.9	-0.1	-0.2	1.9	1.7	-9	-10	-0.2	-5	0.3	-1.4	0.9	2.6	117.1	112.9	103.2	114.6	113.9	112.3	87.6
97	0.27	2.9	5.3	3.5	-1.1	-1.0	-0.2	-0.4	1.9	1.7	-7	-8	-0.3	-5	0.2	-1.5	0.8	2.8	116.0	112.0	102.6	113.1	113.1	111.5	86.0
98	0.30	2.6	4.9	3.0	-1.2	-1.1	-0.3	-0.5	1.8	1.7	-5	-4	-0.5	-7	0.1	-1.5	0.7	3.1	114.6	110.7	101.6	111.2	111.9	110.1	83.3
99	0.35	2.3	4.3	2.4	-1.3	-1.3	-0.5	-0.7	1.4	1.5	2	1	-0.7	-8	-0.2	-1.6	0.5	3.5	109.9	106.9	100.2	106.0	108.3	106.6	77.9
100	0.56	-0.3	-1.1	-3.7	-2.0	-2.4	-1.6	-1.7	0.2	1.5	26	23	-1.6	-11	-1.7	-1.9	-0.3	5.8	81.4	86.9	91.2	76.8	86.7	87.0	-6.5

SHEEP GENETICS

mla

Katahdin Percentile Report

September 2021

2020-2021 born lambs with genetic linkages

Percentile	BWT	MWWT	WWT	PWWT	PFAT	PEMD	WFEC	PFEC	PSC	NLB	NLW	US Hair Index	YWT	HWT	MBWT
100	1.25	2.16	4.86	9.48	-1.66	2.14	-100.45	-112.41	0.00	0.43	0.37	116.42	11.14	0.00	0.70
99	0.68	1.54	3.52	6.52	-1.27	1.44	-98.49	-100.00	0.00	0.27	0.26	111.99	6.59	0.00	0.47
98	0.62	1.39	3.28	6.04	-1.19	1.20	-97.06	-99.86	0.00	0.25	0.25	111.06	6.08	0.00	0.40
97	0.57	1.30	3.16	5.76	-1.12	1.07	-95.17	-99.50	0.00	0.23	0.23	110.57	5.71	0.00	0.37
96	0.54	1.24	3.05	5.51	-1.03	0.93	-93.36	-99.13	0.00	0.22	0.22	110.24	5.48	0.00	0.34
95	0.52	1.18	2.95	5.32	-0.97	0.88	-91.59	-98.68	0.00	0.22	0.22	109.97	5.25	0.00	0.33
90	0.45	0.99	2.63	4.71	-0.83	0.51	-84.30	-95.27	0.00	0.19	0.19	108.82	4.57	0.00	0.26
85	0.40	0.86	2.42	4.30	-0.72	0.30	-77.55	-90.91	0.00	0.17	0.17	108.02	4.09	0.00	0.21
80	0.37	0.75	2.26	3.95	-0.66	0.15	-69.86	-86.21	0.00	0.15	0.16	107.46	3.63	0.00	0.18
75	0.33	0.66	2.11	3.68	-0.59	0.03	-62.87	-81.60	0.00	0.14	0.15	107.00	3.31	0.00	0.15
70	0.30	0.58	1.98	3.41	-0.53	0.00	-55.84	-74.69	0.00	0.13	0.14	106.59	3.01	0.00	0.12
60	0.25	0.43	1.72	2.93	-0.43	0.00	-43.52	-60.52	0.00	0.11	0.12	105.83	2.41	0.00	0.06
50	**0.21**	**0.29**	**1.49**	**2.45**	**-0.32**	**-0.05**	**-30.92**	**-47.01**	**0.00**	**0.09**	**0.11**	**105.08**	**1.77**	**0.00**	**0.00**
40	0.16	0.11	1.25	1.98	-0.17	-0.26	-17.91	-31.26	0.00	0.07	0.09	104.34	1.03	0.00	-0.01
30	0.11	0.00	1.00	1.51	0.00	-0.42	-3.60	-12.78	0.00	0.05	0.08	103.52	0.03	0.00	-0.06
20	0.05	-0.03	0.70	0.95	0.00	-0.63	3.40	1.01	0.00	0.03	0.06	102.60	0.00	0.00	-0.12
10	-0.02	-0.29	0.29	0.09	0.15	-0.91	29.29	36.33	0.00	-0.01	0.03	101.26	0.00	0.00	-0.21
0	-0.43	-1.78	-2.13	-4.49	2.31	-2.47	464.92	956.71	0.00	-0.19	-0.11	94.14	-5.41	0.00	-0.92
Units	kg	kg	kg	kg	mm	mm	%	%	cm	%	%		kg	kg	kg
Number of Lambs	9027	9027	9027	9027	2428	2428	5467	5467	0	8627	8627	9027	9027	0	9027

Kaya Dorper and White Dorper rams - DSSA National Dorper and White Dorper Sale - Dubbo - 4th Sept 2020

Kaya has been performance testing our flock since inception in 1996 - Our main traits that we consider important in the production of prime lamb are;
Growth - represented by BWT, WWT, **PWWT** - we want rapid growing lambs
Fat - represented by **PFAT** - animals with good fat survive better and have better fertiltiy and rearing ability
Number of lambs weaned - represented by **NLW** - the more we breed the more we sell

								Growth and Reproduction Traits							Eating quality traits						
Lot	Visual Id	Sex	Birth Date	Sire	Dam	Breed	Weight	BWT	WWT	PWWT	PFAT	PEMD	NLW	MWWT	IMF	SHRF5	DRESS	LMY	SRC	MCP	LEQ
24	180186	M	14/04/2018	160634	150705	WD	100	-0.68	4.01	8.32	0.05	1.46	-7.7%	3.03	0.07	-6.28	2.83	0.81	118.94	125.58	145.33
25	180163	M	13/04/2018	160634	150705	WD	113	-0.54	5.44	10.33	-0.22	1.13	-7.7%	2.85	-0.13	-3.82	2.97	1.66	121.29	130.82	145.25
26	180896	M	23/08/2018	160363	160344	WD	128	-0.30	7.26	11.81	-1.02	0.52			-0.57	0.16	2.66	2.89	121.70	132.46	137.77
27	180998	M	31/08/2018	143973	151445	WD	104.5	-0.41	5.52	9.95	-0.70	0.28	-8.2%	2.74	0.00	-4.09	2.48	1.07	116.73	118.03	140.33
28	180591	M	11/07/2018	160676	150664	WD	115	-0.27	5.46	8.91	0.02	0.42	-6.2%	2.83	0.05	-3.67	2.33	0.83	117.66	121.93	138.01
29	180668	M	19/07/2018	140712	161025	WD	107	-0.46	3.58	6.43	-0.30	0.90	-9.6%	2.20	-0.66	-2.02	2.37	1.61	111.12	123.59	128.30
30	180973	M	27/08/2018	160521	150367	D	118	-0.15	7.68	11.71	-1.49	0.08	7.2%	2.59	-1.30	2.95	2.69	2.37	130.16	134.20	118.94
31	180524	M	4/07/2018	160474	150579	D	136	-0.20	6.87	10.86	-0.10	0.31			-0.96	1.48	2.38	0.32	123.80	117.82	113.75
32	180990	M	31/08/2018	160521	151064	D	109.5	-0.37	6.99	10.70	-0.39	1.69	6.3%	2.22	-1.28	3.60	3.41	2.22	131.07	142.26	120.58
33	180946	M	12/08/2018	160521	151231	D	106.5	-0.40	6.80	10.47	-0.52	0.85	8.5%	0.81	-1.15	2.46	2.61	1.69	128.52	132.89	118.29
34	180403	M	17/06/2018	160521	120882	D	121	-0.43	6.29	10.38	-0.35	0.87	13.0%	0.58	-1.13	0.99	2.98	0.88	131.19	130.92	119.14
35	180824	M	10/08/2018	160086	150720	D	117	-0.34	6.03	10.06	-0.47	1.16	5.9%	3.18	-1.18	0.78	2.93	1.57	129.99	135.16	119.71
36	180702	M	23/07/2018	134077	150736	D	100	-0.42	4.54	8.08	0.70	0.67		1.61	-0.59	0.23	2.41	-0.68	119.21	122.84	113.14
37	181037	M	14/09/2018	160521	150879	D	99.5	-0.27	6.90	10.30	-0.98	0.30	4.9%	0.73	-1.34	3.16	2.52	1.77	123.01	125.45	112.74
38	181054	M	4/10/2018	160521	132469	D	100	-0.34	5.35	8.35	-0.80	0.83	5.7%	2.05	-1.10	1.67	2.46	1.27	124.52	127.84	115.34
39	180470	M	30/06/2018	160921	150012	D	99.5	-0.69	4.54	7.94	-0.41	1.32	5.2%	0.43	-1.05	1.68	2.67	1.37	121.11	122.54	113.51
41	181061	M	7/11/2018	160474	160154	D	84.5	-0.28	7.19	11.60	-0.85	0.98		2.05	-1.39	2.44	3.03	2.37	131.58	136.52	120.15
42	190063	M	25/02/2019	161078	150681	D	90.5	-0.42	5.23	9.17	-0.65	1.83	1.6%		-1.42	2.34	3.28	2.72	123.03	136.92	119.81

Represents the top 10% of all shedding breeds in that trait
Represents the top 30% of all shedding breeds in that trait
Represents the top 50% of all shedding breeds in that trait

SRC Index - MCP index - index to represent growth and reprodcution traits
LEQ Index - index to represent carcase composition and eating quality

Dorper Embryo Donors - Dec 2019

Visual Id	Sex	Birth Date	Sire	Dam	BWT	PWWT	PFAT	PEMD	PFEC	NLW	MWWT	SRC	MCP
120555	F	23/05/2012	101114	90630	-0.14	10.30	0.25	-0.04	-11.46	6.8%	3.43	129.68	137.94
150012	F	24/03/2015	130064	81740	-0.59	7.23	0.66	1.13	0.78	6.3%	0.71	121.24	123.09
150200	F	10/04/2015	132437	100469	-0.27	10.17	-0.37	1.60	-1.73	-2.2%	1.73	123.04	138.14
150784	F	4/06/2015	121034	101148	-0.23	9.67	-1.12	0.62	-9.20	10.7%	2.22	131.03	135.47
150925	F	18/06/2015	130553	120555	-0.16	9.60	0.17	1.03	-0.43	4.5%	2.93	127.89	143.45
151231	F	7/08/2015	120054	80989	-0.62	9.88	0.97	1.74	-25.40	8.3%	-0.41	127.74	135.19
160084	F	25/05/2016	140069	130933	-0.35	10.67	-0.19	1.59	1.04	4.0%	1.10	127.10	139.16
160234	F	30/05/2016	121414	121040	-0.31	11.82	-0.75	0.99	-15.34	5.7%	2.35	132.13	135.39
161156	F	26/08/2016	121414	110397	-0.34	10.92	-0.56	1.72	-30.24	4.6%	3.10	133.54	143.49
170045	F	9/01/2017	121414	140569	-0.35	11.57	-0.60	1.35	-7.87		1.86	129.54	140.21
170659	F	15/05/2017	151070	150153	-0.37	10.01	0.15	1.93	-3.81	3.2%	1.48	127.38	141.40
170903	F	9/06/2017	150941	150200	-0.22	10.73	0.35	2.14	19.35		2.05	129.88	141.45
171055	F	14/07/2017	151135	151080	-0.18	11.59	0.33	1.82	8.41		1.94	131.65	141.14
171183	F	29/06/2017	151135	121403	-0.27	10.15	0.39	0.92				124.58	130.98
171400	F	29/06/2017	151291	140168	-0.34	9.84	0.54	2.23	4.35			130.11	138.55
171567	F	1/09/2017	150941	150596	-0.11	12.28	-0.53	1.04	-4.32	8.3%	3.10	136.03	140.91
171918	F	12/04/2017	150612	140128	-0.35	9.77	0.01	0.91	-11.87	2.6%	1.09	123.51	130.63

Highlighted Blue - Top 10% in that trait, all shedding breeds
Highlighted Green - Top 30%
Highlighted Yellow - Top 50%

AMARULA DORPER RAMS 1-80

LOT 1 AMARULA 198279 RAM 4/8/19

NIEMUR SMILEY 140182
Sire: AMARULA LFG 176596
AMARULA 123731

TUCKEROO RUSTY 140103
Dam: 176997
165721

	BWT	WWT	PWT	PEMD	PFAT	PWEC	DRESS	LMY	IMF	SFS	SRC	MCP
ASBV	-0.3	5.1	7.9	1.1	-0.2	4.1	3.0	1.7	-1.6	4.2	-99.0	131.0
	54%	66%	66%	69%	67	0%	54%	57%	51%	48%	38%	44%

Note: Very good ram

Purchaser:..... $.....

LOT 2 AMARULA 198420 RAM TWIN 5/11/19

TUCKEROO RUSTY 140103
Sire: AMARULA OXYDIZE 166147
AMARULA 144610

AMARULA STAMPYCAT 134191
Dam: 155644
113049

	BWT	WWT	PWT	PEMD	PFAT	PWEC	DRESS	LMY	IMF	SFS	SRC	MCP
ASBV	-0.4	5.0	8.6	1.0	-0.3		2.8	0.9	-1.0	0.2	-99.0	123.8
	45%	64%	63%	63%	61	0%	47%	53%	35%	34%	36%	41%

Note:

Purchaser:..... $.....

LOT 3 AMARULA 198076 RAM TWIN 26/4/19

TUCKEROO RUSTY 140103
Sire: AMARULA DUSTY 176783
AMARULA 165903

AMARULA WETHERBY 123593
Dam: 155127
113289

	BWT	WWT	PWT	PEMD	PFAT	PWEC	DRESS	LMY	IMF	SFS	SRC	MCP
ASBV	-0.4	4.8	7.6	0.3	-0.9	14.0	2.4	1.5	-1.1	1.6	-99.0	123.1
	52%	67%	67%	69%	67	0%	54%	58%	50%	47%	38%	45%

Note:

Purchaser:..... $.....

Top 10% Top 30%

AMARULA DORPERS

LOT 4 AMARULA 198181 RAM TWIN 14/6/19

TUCKEROO RUSTY 140103
Sire: DROUGHTBREAKER 176569
AMARULA 144973

NIEMUR SMILEY 140182
Dam: 176422
155209

	BWT	WWT	PWT	PEMD	PFAT	PWEC	DRESS	LMY	IMF	SFS	SRC	MCP
ASBV	-0.4	4.8	8.1	0.7	-0.2	-21.4	2.7	0.8	-1.2	1.2	-99.0	126.5
	44%	62%	59%	53%	52	0%	41%	48%	33%	34%	33%	36%

Note:

Purchaser:..... $.....

LOT 5 AMARULA 198300 RAM 6/8/19

TUCKEROO RUSTY 140103
Sire: AMARULA CRUSTY 176849
AMARULA 144748

BELLEVUE JOEL 120502
Dam: 177142
113262

	BWT	WWT	PWT	PEMD	PFAT	PWEC	DRESS	LMY	IMF	SFS	SRC	MCP
ASBV	-0.3	6.7	10.4	0.9	-0.3	-1.9	3.0	1.7	-1.2	1.6	-99.0	132.8
	52%	67%	68%	70%	68	0%	54%	58%	40%	40%	39%	46%

Note: AMARULA DEMON - Joined to the Amarula Sale Ewes.

Purchaser:..... $.....

LOT 6 AMARULA 198410 RAM 6/9/19

AMARULA 155390
Sire: TUCKEROO TANK 170133
TUCKEROO 150103

TUCKEROO RUSTY 140103
Dam: 187281
AMARULA 123731

	BWT	WWT	PWT	PEMD	PFAT	PWEC	DRESS	LMY	IMF	SFS	SRC	MCP
ASBV	-0.5	4.2	6.5	1.2	0.5	-17.8	3.0	0.7	-1.1	0.8	-99.0	130.6
	44%	63%	63%	64%	62	0%	45%	51%	33%	33%	35%	41%

Note: Amarula Rio - Rio's Legacy Charity Ram

Purchaser:..... $.....

AMARULA DORPER EWES

LOT 155 AMARULA 198463 EWE 20/11/19

NIEMUR SMILEY 140182
Sire: AMARULA LFG 176596
AMARULA 123731

WHYNOT DAVE 160128
Dam: 187632
165788

LAMBPLAN ASBV	BWT	WWT	PWT	PEMD	PFAT	PWEC	DRESS	LMY	IMF	SF5	SRC	MCP
	-0.5	2.4	5.3	1.7	-0.4	14.5	3.1	1.7	-1.6	2.2	-99.0	132.2
	52%	65%	66%	68%	66	0%	52%	56%	49%	46%	37%	44%

Note: Joined to Amarula Demon 198300 (Lot 5) on the 19/1/21

Purchaser:..... $.....

LOT 156 AMARULA 198462 EWE 21/11/19

NIEMUR SMILEY 140182
Sire: AMARULA LFG 176596
AMARULA 123731

AMARULA COOLAMINYAH 165984
Dam: 187454
155328

LAMBPLAN ASBV	BWT	WWT	PWT	PEMD	PFAT	PWEC	DRESS	LMY	IMF	SF5	SRC	MCP
	-0.3	5.1	7.6	2.0	-0.4	2.5	3.2	2.4	-2.0	4.2	-99.0	138.8
	51%	63%	61%	57%	56	0%	49%	53%	52%	49%	34%	38%

Note: Joined to Amarula Demon 198300 (Lot 5) on the 19/1/21

Purchaser:..... $.....

LOT 157 AMARULA 198466 EWE 24/11/19

NIEMUR SMILEY 140182
Sire: AMARULA LFG 176596
AMARULA 123731

PRIESKA HOUDINI 150166
Dam: 187557
166107

LAMBPLAN ASBV	BWT	WWT	PWT	PEMD	PFAT	PWEC	DRESS	LMY	IMF	SF5	SRC	MCP
	-0.3	4.8	7.6	1.5	-0.4	19.5	3.1	2.0	-1.7	4.0	-99.0	136.0
	52%	65%	66%	68%	66	0%	52%	56%	49%	46%	37%	44%

Note: Scanned in lamb to Amarula Awesome 198030

Purchaser:..... $.....

Top 10% Top 30%

LOT 24 - AMARULA THUNDER

LOT 81 - AMARULA COOPER

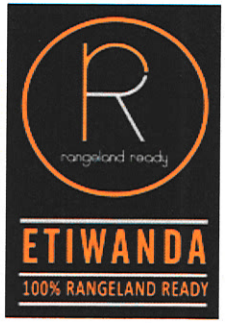
ETIWANDA
100% RANGELAND READY

Lot	Visual Id	Birth Date	Sire	Dam	Maternal Grand Sire	No.Born	WWT	PWWT	PFAT	PEMD	NLW	MCP
26	204776	1/08/2020	Matchless 150440	171053	Etiwanda Multi	2	6.5	10	-0.3	0.8	6.80%	137.7
27	204708	1/08/2020	Bellevue 180314	160766	Etiwanda Multi	2	5.1	7.5	0	1.6		132.8
28	204478	1/08/2020	Saltbush 180339	160568	Amarula WD 140488	1	7.7	11.7	-0.6	0.6	1.40%	137.2
73	204583	1/08/2020	Matchless 150440	159444	Etiwanda 138382	2	6.4	9.9	0.1	2.3	2.90%	143.1
74	204270	1/08/2020	Saltbush 180339	160408	Etiwanda 138382	1	8	11.4	-0.3	0.6	2.50%	136

Top 5% of Lambplan database

Top 10% of Lambplan database

Top 20% of Lambplan database



Lot	Visual Id	Birth Date	Sire	No.Born	Maternal Grand Sire	WWT	PWWT	AWT	PFAT	PEMD	NLW	MWWT	MCP	LEQ	Comments
L001	193025	1/08/2019	160518	1	159902	5.8	9.5	8.5	0.2	1.9	0.0%	1.9	136.1	130.6	
L002	193235	1/08/2019	160623	3	90743	6.4	10.5	7.9	0.3	1.8	-2.3%	1.4	137.7	129.4	
L003	193230	1/08/2019	160623	2	126957	7.5	11.9	12.0	0.0	0.9	1.7%	2.2	135.3	128.1	
L004	193755	20/09/2019	NAM001	1	126957	6.1	10.1		0.3	1.6	-0.2%		136.0	130.1	
L005	193069	1/08/2019	160613	2	110422	6.3	10.2	8.9	1.1	2.7	-1.7%	2.4	142.3	136.2	
L006	193068	1/08/2019	160613	2	110422	6.9	10.9	9.7	1.0	2.5	-1.5%	2.4	142.9	136.4	
L007	193343	1/08/2019	150440	1	138382	6.4	10.0	8.7	-0.1	1.4	0.1%	1.7	134.1	131.5	
L008	193162	17/08/2019	NAM001	2		5.9	9.2		-0.4	-0.2			125.2	0.0	
L009	193515	23/08/2019	NAM001	1	126957	6.2	9.6		0.2	1.0	-1.2%		127.8	124.9	
L010	193187	1/08/2019	150440	1	110422	8.0	12.0	10.4	-0.3	2.0	1.6%	1.5	143.2	137.9	Etiwanda to retain a half semen share in this ram. Semen to be collected after the sale & before delivery.
L011	193355	16/08/2019	NAM001	1	138382	6.3	9.2		0.3	1.8	0.0%		135.4	128.6	
L012	193193	1/08/2019	150440	2	E5605	6.9	10.8	9.9	-0.6	0.7	-1.8%	1.2	129.1	129.2	
L013	193762	15/10/2019	NAM001	1	160518	6.1	9.7		0.4	1.8			138.3	130.1	
L014	193391	1/08/2019	150440	1	110422	6.5	9.9	8.8	0.3	1.4	-0.1%	1.0	132.3	130.6	
L015	193570	1/09/2019	NAM001	1	138382	6.1	9.7		0.7	2.5	1.6%		141.8	134.0	
L016	193743	27/09/2019	NAM001	1	110422	6.0	9.4		-0.1	1.0	1.7%		130.9	126.5	
L017	193102	1/08/2019	160613	1	110422	5.7	8.7	7.3	0.6	2.3	1.3%	1.9	138.2	131.8	
L018	193125	1/08/2019	171480	1	G6340	5.3	9.1	7.3	0.2	1.1	2.0%	1.6	133.0	124.6	
L019	193757	30/09/2019	NAM001	1	126957	7.1	11.8		0.1	1.2	0.9%		138.2	133.0	
L020	193096	1/08/2019	150440	1	126957	7.6	11.6	11.5	-0.2	0.8	-2.2%	1.5	130.7	131.7	Etiwanda to retain a semen share in this ram. Semen to be collected after the sale & before delivery.
L021	193166	1/08/2019	150440	2	D5005	6.9	10.1	10.3	-0.4	1.0	1.9%	1.0	129.8	126.4	
L022	193017	1/08/2019	160623	1	159902	7.3	11.1	11.0	-0.2	0.9	-0.6%	2.5	133.6	126.4	
L023	193746	20/09/2019	NAM001	1	110422	6.2	9.4	7.1	0.1	1.9	-3.1%		137.7	131.2	
L024	193733	20/09/2019	NAM001	1		4.8	8.4		0.8	2.5			139.7	0.0	
L025	193223	1/08/2019	150440	2	110422	7.7	11.6	10.1	-0.4	1.4	0.7%	1.2	138.2	135.3	
L026	193760	15/09/2019	NAM001	1	160518	7.5	11.1		0.3	1.6			139.8	130.6	
L027	193106	1/08/2019	160623	1	126957	7.9	11.8	12.0	-0.3	1.4	-2.5%	2.3	135.3	129.4	
L028	193048	1/08/2019	160613	2	138470	6.1	9.4	9.0	0.5	2.7	-0.2%	2.6	140.6	133.6	
L029	193061	1/08/2019	160613	2	126957	6.5	10.7	10.4	-0.2	0.2	0.9%	2.0	128.8	126.5	
L030	193389	1/08/2019	150440	1	110422	7.4	10.8	9.5	-0.3	1.3	-1.4%	1.3	134.1	132.2	

Flock54 Test Results

BDI#	Sample ID	Animal ID	OPP	Resist Scrapie
121036756	AF01480361	1	5.5	QR
121036757	AF01480362	2	4.5	QR
121036758	AF01480363	3	8	QR
121036759	AF01480364	4	5.5	QR
121036762	AF01480367	5	4.5	QR
121036763	AF01480368	6	5.5	QR
121036764	AF01480369	7	5.5	QR
121036765	AF01480370	8	8	QQ
121036766	AF01480461	9	8	RR
121036438	AF02131715	10	8	RR
121036439	AF02131716	11	5.5	QR
121036441	AF02131718	12	8	QR
121036442	AF02131719	13	6	QR
121036443	AF02131720	14	4.5	QQ
121036444	AF02131721	15	4.5	QQ
121036445	AF02131722	16	6	QQ
121036446	AF02131723	17	3.5	RR
121036447	AF02131724	18	8	QQ
121036449	AF02131726	19	4.5	RR
121036450	AF02131727	20	8	RR
121036451	AF02131728	21	3.5	QQ
121036452	AF02131729	22	8	QQ
121036453	AF02131730	23	4.5	QR
121036454	AF02131731	24	8	QQ
121036455	AF02131732	25	8	QQ
121036456	AF02131733	26	8	QR
121036459	AF02131736	28	8	RR
121036460	AF02131737	29	5.5	RR

Additional Genetic Tests:

Spider Lamb
Batten's disease
Callipyge
Chondrodysplasia
Dermatosparaxis
Epidermolysis bullosa, junctionalis
Fecundity, Booroola
Fecundity, GDF9
Gaucher disease
Glycogen storage disease V
GM1
Hypotrichosis
Lissencephaly and cerebellar hypoplasia
Motor neuron disease
Myotonia
Neuronal ceroid lipofuscinosis
Polled/Horns
Porphyria cutanea tarda
Rickets
Vitamin-K-dependent blood coagulation factors deficiency

Production Worksheet

	% Lamb Crop Born	% Lamb Crop Weaned	Average Weaning Weight	Post Wean Gain lbs/day	% Death Loss (Lambs)	% Death Loss (Ewes)
Current						
Goal						

What sheep production traits do I currently measure well? _____

_____

What can I be better at measuring? _____

_____

To meet my goals, which EBVs do I need to emphasize the most in my breeding program?

Most Important

1) _____

2) _____

3) _____

Financial Breakdown:

A) How much annual gross revenue does my flock currently produce? _____

Considerations: 1) Number of lambs I produce_____

2) Value of each lamb I produce _____

3) Cost of death loss _____

B) How much annual gross revenue would my flock produce if I met my goals? _____

Annual opportunity cost of not reaching my goals (Line B minus Line A) _____