

PUSHING BOUNDARIES OF THE MERINO

THE COMPOSITE APPROACH

BACKGROUND

- Grew up in the Central Otago NZ
- 10yrs breeding Stabilizer Composite Bulls
- Moved back to Riverina in 2001
- Using principles of the Meat and Animal Research Center (MARC), Nebraska, in the breeding of our Merino sheep.



“OPERINA” SHEEP BUSINESS

- 2500 acre (800 acres of lazered and pivot irrigation)
- Has 1400Mgltr water allocation
- Rice grown on opportunistic basis
- ‘Yerrinbool’ 6500 acre dry land farm near Hay

**Sheep operation must compete
with potential irrigated
cropping to justify water usage**

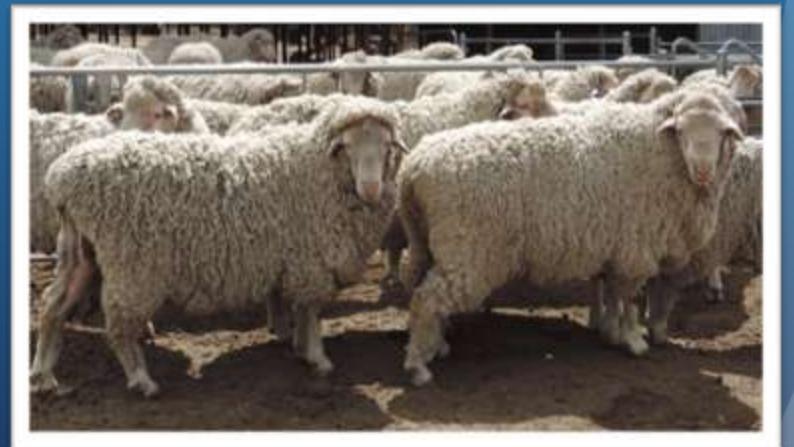
“OPERINA” SHEEP BUSINESS

- Selection criteria
- All lambs are weaned at 100 days averaging 35kgs
- Early puberty; conceive at seven months (45kg+ at condition 3+).
- Targeting 80% conception
- Lambing at 12 months of age to ensure the ewe lambs progeny are ready to join at seven months.
- 2nd joining of ewes (and all aged ewes) at a weight of 70kg at condition score 3+ (over 70% carrying multiples).
- Ewe to wean her own body weight in lambs (e.g. 70kg to wean two 35kg lambs=70kg of lambs =100% of her body weight).
- 2014 scanning results: 167% ewes marked 135% lambs (80% conception ewe lambs).
- Rams are bred out of ewes that conceive at seven months.



“OPERINA” WOOL BUSINESS

- Ewes to cut 10% of their body weight of un-skirted fleece wool (e.g. 70kg ewe cuts 7kg)
- Shearing every six months
- Current clip: 3.5kgs @ 65mm
Target: 4kgs @70mm by 2020,
and 4.5kgs @ 75mm by 2025
- Lms wool 17micron, weaners 18.5, ewes: 19/20 micron
- Skin testing for density and length. SRS; current sires: 80-95; Target 120-140.



COMPOSITES

- Understand antagonistic traits and keep them balanced
 - Low birth - high growth in cattle
 - Eye muscle - marbling
 - Density - length in wool
 - High comfort factor and constitution
 - Solution performance recording to find the outliers
- Decide what your aim is when selecting breeds or bloodlines
- By taking the composite approach you can select for multiple traits at once by selecting breeds or bloodlines for different traits.

Table 5. Characterization of Sire Breeds for Four Production Traits¹

Breed Group	Growth Rate and Mature Size	Lean to Fat Ratio	Age at Puberty	Milk Production
Hereford-Angus	XXX	XX	XXX	XX
Charolais	XXXXX	XXXXX	XXXX	X
Chianina	XXXXX	XXXXX	XXXX	X
Gelbvieh	XXXX	XXXX	XX	XXXX
Limousin	XXX	XXXXX	XXXX	X
Maine Anjou	XXXXX	XXXX	XXX	XXX
Salers	XXXXX	XXXX	XXX	XXX
Shorthorn	XXX	XX	XXX	XXX
Simmental	XXXXX	XXXX	XXX	XXXX

PHENOTYPE

- Frame score
- Growth pattern

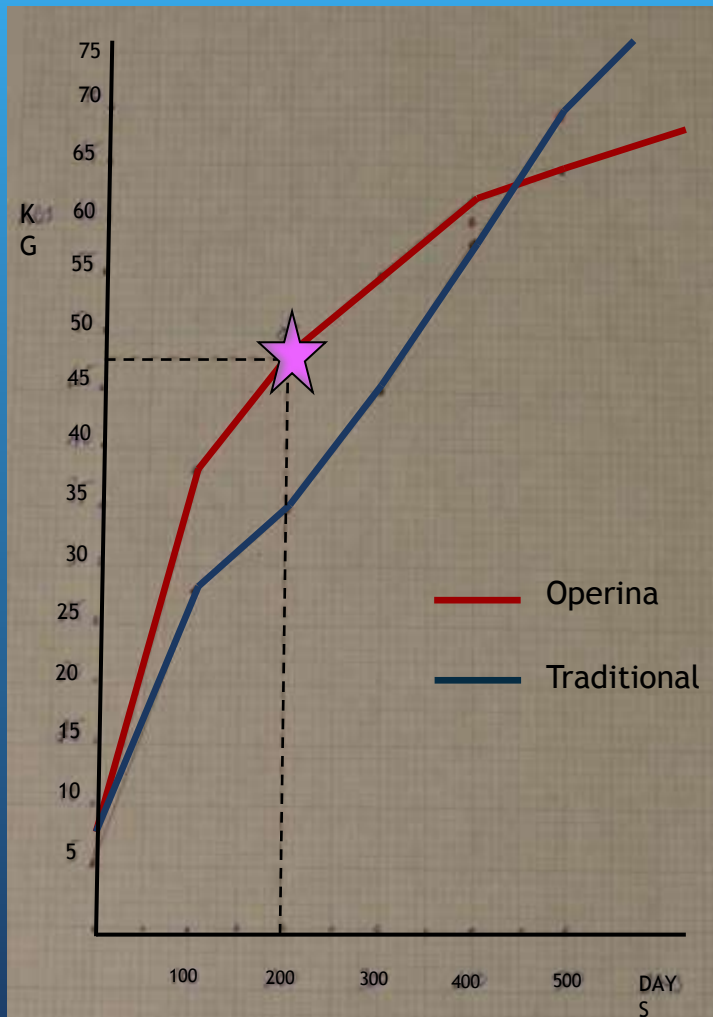


Each of these illustrations show 3 x 16.3kg Y grade lambs with variations in conformation from within the same draft and breed.

Variation in Eye Muscle Area at 12th rib between left carcass A (lower meat yield) and right carcass C (higher meat yield) is 24.6%.



CURVE BENDERS



- Breeding maternal curve bending Dams that will give your flock more selection pressure

★ Important target for for ewe lamb joining and a high yielding carcass.

MANAGEMENT

- Scanning to ID twin rearing ewes
 - Our year starts at weaning
 - 75% likely to twin again
 - All twin scanning ewes ear marked
- Ewe lambs to joining weight by 7 months
- Use of Regulin in rams
 - Reduces the number of empties
- Tighter joining periods
 - Back up with terminals



GETTING THE ELEMENTS RIGHT

- Soil - fertility - pasture
- Genetics
- Management
- Understanding your feed supply growth curve
- Decide if you are a wool producer or a grass grower



TAKE HOME MESSAGES

- Low cost producers will always survive. Bringing in replacement heifers or ewe lambs is one of the biggest hidden costs of production!
 - Solution; feed them and breed them
- Kilograms of lambs weaned per kilogram of ewe exposed
- Link ewe wool cut to ewe bodyweight, CS is the best way to maintain high fertility (e.g. 7kg from 70kg at CS3+)
- Linking ewe bodyweight to lamb weaning weight keeps a lid on mature ewe bodyweight. Aiming for 100% (e.g. 70kg ewe weaning two 35kg lambs =70kg).
- TRADITION, EMOTION, EVOLUTION
- ITS AS SIMPLE AS GUTS, NUTS AND BUTTS!

Three generations of breeding... 'the composite approach'

