



2021 Genetics Catalogue - Beef

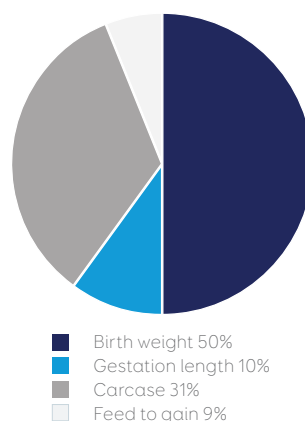
There's always room for improvement



Beef Selection Index (BSI®)

Selection indices simplify sire selection by combining a number of key traits into one value - higher values indicating more suitable sires. LIC's BSI® places emphasis on traits that are relevant to the dairy-beef supply chain, from the dairy farmer through to the consumer. The power in this index is that it can be compared across a number of beef breeds - Angus, Simmental, Charolais, and the composite Profit Maker®.

Across-breed or multi-breed evaluations are superior to within-breed analyses because direct comparisons between bulls of different breeds become possible. NZAEL operates a multi-breed evaluation for its dairy sires which allows Friesian, crossbred, and Jersey sires to be directly compared with each other. Multi-breed analyses are uncommon in the beef world, which has historically made it difficult for dairy farmers trying to pick the easiest calving or highest growth rate beef sires irrespective of breed.



| Trait | Weightings | |
|-------------------|------------|-----|
| Birth weight | 50% | 50% |
| Gestation length | 10% | 10% |
| Weaning weight | 3% | 31% |
| Yearling weight | 3% | |
| Eye muscle area | 3% | |
| Intramuscular fat | 3% | |
| Retail product | 10% | |
| Carcase weight | 9% | 9% |
| Feed to gain | 9% | |
| | 100% | |

BSI® is a selection index, not an economic index



Bulls in Rissington Cattle Company's GrowSafe system

Global multi-breed beef evaluation:

LIC's BSI® traits are outputs from a global multi-breed, genomically-enhanced evaluation run by Leachman Cattle of Colorado and Zoetis. With over 1 million animals globally across different operating systems, climates, and pressures, the combination of phenotype and genotype information in the evaluation produces robust, applicable outputs that beef seedstock producers are applying worldwide to fine tune their breeding programmes.

The New Zealand arm of the Leachman multi-breed evaluation is operated by Rissington Cattle Company in Hawkes Bay, who have been partners and close friends of the Leachman operation for over 30 years. LIC's ongoing collaboration with Rissington Cattle Company enables the publishing of the analysis' outputs and use of it to source beef bulls that are suitable for dairy use.

A unique output from the multi-breed evaluation is the trait 'feed to gain'. This trait is an indicator of feed efficiency, which is highly relevant with respect to environmental pressures and operating costs. Natural variation within the feed to gain trait has enabled selection for improved feed efficiency, and Rissington Cattle Company have increased their accuracy of selection by installing a GrowSafe system to measure feed intake and weight gain for their bulls.

BeefPrint®

What is BeefPrint?

LIC has developed the BeefPrint index to provide farmers with an indication of the predicted environmental footprint of growing a beef bull's progeny to sell as prime beef, relative to other beef genetic products.

Enteric methane emissions and urinary nitrogen excretion from cattle are two of the major contributors to the environmental impact of agriculture in New Zealand. It is extremely difficult to measure and assess actual emissions and excretion from cattle in pasture-based systems. Therefore, a modelling methodology has been used to quantify the expected emissions and excretion.

How does this model work?

The modelling uses six traits per bull to estimate the expected levels of meat yield, growth rates, and feed intake. These traits are outputs of the Leachman multi-breed evaluation (see page 2 of the beef section). They are:

- | | |
|--------------------|-------------------------|
| 1. Birth weight | 4. Mature weight |
| 2. Weaning weight | 5. Feed intake |
| 3. Yearling weight | 6. Retail product yield |

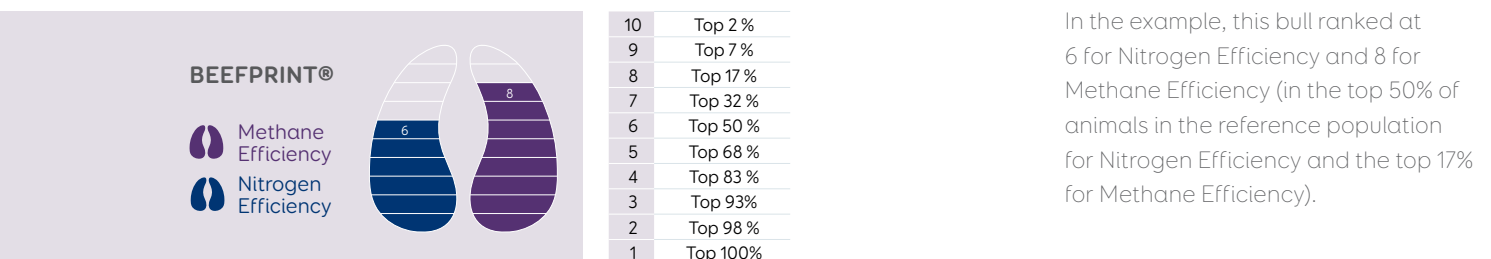
The model's calculations for energy requirements, partitioning, and emissions are based on the 'Methodology for calculation of New Zealand's agricultural greenhouse gas emissions' (the inventory)*. An understanding of an animal's energy requirements was used to estimate dry matter intake, from which emissions and excretion were calculated. In the inventory, energy requirements refers to the amount of energy needed for an animal to survive (maintenance), and for liveweight gain (production). The inventory model currently assumes the animals energy requirements are met by a pasture-only diet with no supplementary feed use.

Reference base population:

The 2021 reference population is represented by a subset of over 2,000 Leachman-evaluated animals born from 2017 to 2020. The beef bulls are rated on their emission and excretion values per kg of meat relative to this reference population.

Ranking system:

The ranking system is from 10 to 1 with 10 being the best (lowest environmental impact per kg meat product) and 1 being the poorest ranking (highest environmental impact per kg meat product). The distribution of ratings for the bulls in the reference population can be seen below.



*Ministry for Primary Industries (2020). Methodology for calculation of New Zealand's agricultural greenhouse gas emissions.

LIC's selection of beef sires

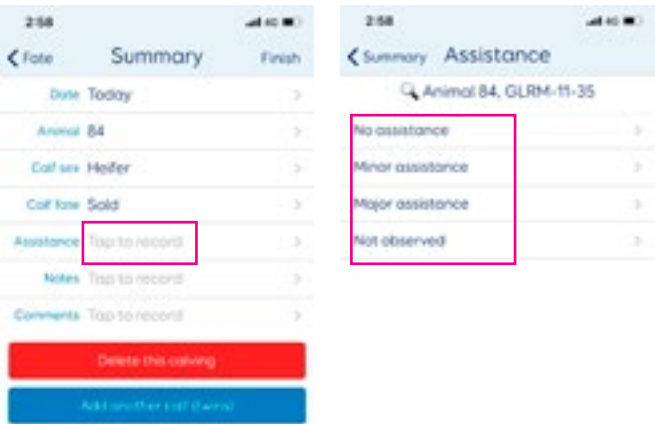
Most beef breeds are larger than dairy breeds and tend to have longer gestations and larger calves than the average dairy breed. When using beef sires it is critical that calving ease is considered to minimise risk to the calving cow and the welfare of the calf.

What information does LIC use when selecting beef bulls for use over dairy cows?

Other traits such as gestation length, growth and carcase traits are then considered. For first-time marketed beef bulls that haven't been used over dairy cows via artificial breeding, bulls are assessed on their within-breed figures.

Beef bulls that have been used at scale via artificial breeding will have NZAEL breeding values for calving difficulty and gestation length. These NZAEL BVs are the most accurate reflection of the bulls' gestation lengths and calving difficulty in dairy cows, and are monitored once they are sufficiently reliable.

These BV's are reliant on farmers recording calving assistance codes in MINDA.

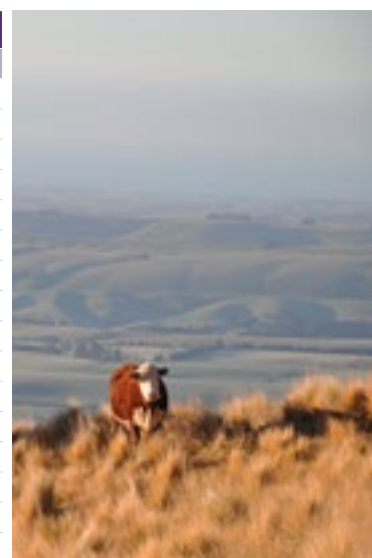


Bulls with multi-breed evaluation BVs will also have these figures assessed in conjunction with any other information available.

Breed Averages and Polled Quick-Select

This page displays information that can be used as a guide when considering different breeds. The gestation lengths and birthweights displayed below are not those of the LIC beef product range. For information on the gestation lengths of a particular LIC beef product, consult the relevant page or ask your Agri Manager for assistance.

| Beef Breed Averages | | | |
|---------------------|--------------------|---------------------------------|---------------------------|
| | Breed | Average Gestation Length (Days) | Average Birth Weight (kg) |
| Beef | Angus | 280 | 34 |
| | Belgian Blue | 283 | 47 |
| | Blonde D'Aquitaine | 288 | 36 |
| | Charolais | 285 | 41 |
| | Hereford | 284 | 38 |
| | Limousin | 289 | 39 |
| | Murray Grey | 283 | 34 |
| | Profit Maker® | 282 | 34 |
| | Simmental | 284 | 39 |
| | Speckle Park | 283 | 34 |
| | Stabilizer® | 282 | 35 |
| | Wagyu | 286 | 32 |
| Dairy | Friesian | 281 | 37 |
| | Jersey | 281 | 29 |
| | Crossbred | 281 | 33 |
| | Ayrshire | 281 | 35 |



Note: There are a number of information sources contributing to this table and variation will occur. This table should be used as a guide only.

| Quick-select list for polled LIC beef products (for DNA-tested bulls only) | | | | | | | |
|--|--------------|---------------------------------|---------------|----|---------------------|---------------|------|
| Breed | Product Type | Pack/Bull | Polled Status | | Always marks calves | Price +gst | Page |
| | | | PP | Pp | | | |
| Angus | Pack | No-choice SGL pack | ✓ | | | \$12.90 | 12 |
| | | No-choice beef pack | ✓ | | | \$10.20 | |
| | | 721305 Rissington 190275 | ✓ | | | | |
| | Individual | 718115 Rissington 160043 | ✓ | | | \$18.00 | 13 |
| | | 717054 Rissington C200 | ✓ | | | | 7 |
| Hereford | Pack | No-choice SGL pack | | ✓ | ✓ | \$12.90 | 9 |
| | | No-choice beef pack | ✓ | | ✓ | \$10.20 | 10 |
| | | 720002 NZHA Cooper | ✓ | | ✓ | \$30.00 | |
| | Individual | 819113 Shrimptons Hill 170053 | ✓ | | ✓ | \$18.00 | 9 |
| | | 819111 Shrimptons Hill 170045 | | ✓ | ✓ | | |
| Speckle Park | Pack | No-choice white beef pack | ✓ | | | \$18.25 | 20 |
| | | 718032 Maungahina Maximus | ✓ | | | | 21 |
| | | 720060 Premier Platinum | ✓ | | | | |
| | Individual | 719022 Maungahina Northern Star | | ✓ | | \$20.00 | |
| | | 721406 Maungahina Quicksilver | | ✓ | | | |
| Simmental | Pack | No-choice beef pack | | ✓ | | \$10.20 | 14 |
| | Individual | 719024 Rissington AF182 | | ✓ | | \$16.00 | 15 |
| | | 721342 Rissington 190162 | | ✓ | | | |
| Profit Maker® | Pack | No-choice beef pack | | ✓ | | \$10.20 | 16 |
| | Individual | 720250 Leachman Docs Remedy | ✓ | | | \$16.00 | 17 |
| | | 721323 Rissington 190535 | | ✓ | | | |
| Stabilizer® | Pack | No-choice beef pack | ✓ | | | \$16.45 | 24 |
| | Individual | 719070 Beef Maker (red) | ✓ | | | \$18.20 | 25 |
| | | 720073 Focus Optimizer (black) | ✓ | | | | |
| Charolais | Pack | No-choice beef pack | ✓ | | ✓ | \$10.20 | 18 |
| | Individual | 716012 Kakahu Gerry | ✓ | | ✓ | \$12.90 | 19 |

How to Read an Individual Beef Sire Page

How to Read an Individual Beef Sire Page

The polled gene is dominant and carriers are born without horns. Homozygous polled ("100% polled") bulls will always produce polled offspring and heterozygous polled ("50% polled") sires will pass the polled gene onto half of their progeny.

Angus, Simmental, Hereford, Speckle Park, and Charolais sires will display within-breed BREEDPLAN information. This cannot be compared across breeds (e.g. Angus with Hereford) and should only be used if comparing two animals within the same breed.

Calving ease (%) EBVs are based on calving difficulty scores, birth weights and gestation lengths of pure beef progeny. More positive EBVs are favourable and indicate easier calving.

Gestation length (days) EBVs estimate the length of pregnancy for a sire's progeny. Lower EBVs indicate shorter gestation lengths.

Birthweight (kg) EBVs are based on the recorded birthweights of a sire's purebred progeny. Lower EBVs indicate lighter calves and lower the likelihood of a difficult birth.

200 day, 400 day, and Carcase weight (kg) EBVs are based on a sire's purebred progeny weights at these ages/stages in the animal's life. Higher values for 200 day (roughly weaning time in beef systems) and 400 day (rough yearling age) weights indicate heavier progeny (faster growth). Higher EBVs for carcase weight indicate a heavier carcase at slaughter.

Retail beef yield (%) EBVs estimate genetic differences between sires' progeny for retail yield %. Progeny of sires with higher EBVs are expected to have higher-yielding carcasses.

Feed to Gain (kg) indicates feed efficiency for beef production. The EBV predicts the difference in amount of feed that a bull's progeny will eat to produce 1 kg of liveweight gain. More negative values indicate less feed required for weight gain and a better feed efficiency.

718115 Rissington 160043

Breeder: Rissington Cattle Company

Commentary:

BSI

1224

Individually \$18.00^{+gst}



Proven Progeny Averages

Gestation Length 276.8 days Birthweight 32.8 kg



50% Polled



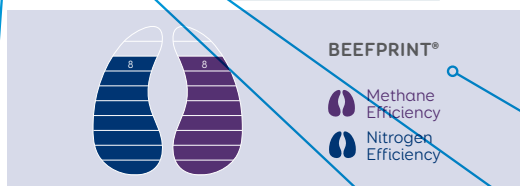
Red Carrier



Dilution Carrier

Within-breed Evaluation

| Dairy Significance | EBV | 99 th | 75 th | 50 th | 25 th | 1 st | %rank |
|--------------------|-------|------------------|------------------|------------------|------------------|-----------------|-------|
| Calving Ease | 12.4 | Hard | | | | Easy | 1 |
| Gestation Length | -12.8 | Long | | | | Short | 1 |
| Birthweight | -2.1 | Heavy | | | | Light | 1 |
| Beef Significance | EBV | 99 th | 75 th | 50 th | 25 th | 1 st | %rank |
| 200 Day Weight | 40 | Light | | | | Heavy | 80 |
| 400 Day Weight | 74 | Light | | | | Heavy | 80 |
| Carcase Weight | 61 | Light | | | | Heavy | 55 |
| Eye Muscle Area | 3.0 | Small | | | | Large | 85 |
| Retail Beef Yield | -0.2 | Less | | | | More | 75 |
| Intramuscular Fat | 4.3 | Less | | | | More | 5 |



Multi-breed Evaluation

| Dairy Significance | EBV | 99 th | 75 th | 50 th | 25 th | 1 st | %rank |
|--------------------|------|------------------|------------------|------------------|------------------|-----------------|-------|
| Birthweight | -1.8 | Heavy | | | | Light | 1 |
| Beef Significance | EBV | 99 th | 75 th | 50 th | 25 th | 1 st | %rank |
| Weaning Weight | 19 | Light | | | | Heavy | 70 |
| Yearling Weight | 39 | Light | | | | Heavy | 40 |
| Carcase Weight | 370 | Light | | | | Heavy | 15 |
| Eye Muscle Area | 2.5 | Small | | | | Large | 50 |
| Retail Beef Yield | 0.3 | Less | | | | More | 50 |
| Intramuscular Fat | 1.2 | Less | | | | More | 1 |
| Feed to Gain | -0.2 | Less | | | | More | 5 |

Weaning, yearling, and carcase weight (kg) EBVs estimate genetic differences in sires' progeny at these points in the animal's life. Higher (more positive) values for weaning and yearling weights indicate heavier progeny (faster growth) and higher (more positive) EBVs for carcase weight indicate a heavier carcase at slaughter.

See page 2 of Beef Section

Average gestation lengths of dairy beef progeny will be displayed for bulls that have been used in the national dairy herd and have reliable NZAEL gestation length BVs or average gestation lengths from the B+LNZ Genetics Dairy Beef Progeny Test

For bulls that have been used in the B+LNZ Genetics Dairy Beef Progeny Test, the average birthweights from their dairy beef progeny will be shown

Red coat colour is recessive so bulls can carry the red colour without expressing it. Red carrier bulls will be identified by this icon. If carrier bulls are used over carrier cows then a red calf may be born.

Charolais, Simmental, Profit Maker®, and Stabilizer® bulls can carry the dilutor gene which is dominant and dilutes black coats to grey/silver and red coats to gold/yellow.

% rank indicates how good or bad a sire is for a trait. Lower values indicate superior bulls. A % rank of 5 indicates that they are in the top 5% for that trait, and better than the remaining 95% of sires. The percentile bars show graphically what % rank the sire has. Bars furthest to the right (closest to top 1%) indicate the better-ranking sires.

See page 3 of Beef Section

Eye muscle area (sq cm) EBVs estimate muscling. Higher EBVs indicate progeny are likely to be more muscled.

Intramuscular fat (%) EBV (also known as marbling) estimates the genetic difference in the % of intramuscular fat at the 12/13th rib site in a standard carcase. Higher values are usually favoured.

Angus, Simmental, Profit Maker®, some Charolais, and Stabilizer® sires will have multi-breed evaluations as well. Only the Angus, Simmental, Profit Maker® and Charolais sires are directly comparable across-breeds.



Dairy Beef Progeny Test

Beef + Lamb New Zealand (B+LNZ) Genetics and LIC have joined forces to fulfil growing demand for quality beef genetics suitable for New Zealand dairy cows and support a continued focus on animal welfare.

The B+LNZ Genetics Dairy Beef Progeny Test aims to improve the quality of dairy beef animals in the industry by identifying and enabling wider use of elite bulls for producing dairy beef. Beef breeders can nominate their best bulls to be tested and access a potential path to the dairy market for the first time by working with LIC.

The progeny test aims to identify and prove bulls that are easier-calving, short gestation length, have excellent growth rates, and high intramuscular fat (marbling). Over 20 beef bulls are selected each year and AB mated to >1,500 crossbred dairy cows, with the resulting calves grown out for analysis. Below are some of the elite beef bulls that have been proven as suitable for use over dairy cows through the progeny test scheme.

716012 Kakahu **Gerry**

Breeder: Kakahu Stud

Commentary:

From one of New Zealand's most well-respected studs, Kakahu Gerry's dairy-cross progeny are delivering as much as the beef progeny. His progeny are currently holding the number one spots for growth to weaning age along with the heaviest weights at 200, 400, and 600 days of age in the Dairy Beef Progeny Test. Gerry's calves will always be polled and inherit the dilutor gene and be a solid white-grey colour, or from jersey's a silvery red colour which makes them easy to distinguish from replacement dairy calves.

Individually \$12.90_{+gst}

See page 19 for EBVs



718115 Rissington **160043**

Breeder: Rissington Cattle Company

Commentary:

This well-proven bull came through as one of the top five bulls in the Dairy Beef Progeny Test for calving ease as expected based on his excellent calving ease, gestation, and birthweight traits across both his within- and multi-breed analyses. He offers extreme levels of intramuscular fat (marbling) too. 160043 is homozygous for polled, so all of his calves will be polled at birth, and homozygous for the black coat so he will not produce any red calves, even when crossed over Jerseys or crossbred cows.

Individually \$18.00_{+gst}

See page 13 for EBVs



717054 Rissington **C200**

Breeder: Rissington Cattle Company

Commentary:

This Angus bull ranked in the top five graduates of the Dairy Beef Progeny Test for low birthweight and short gestation out of the first three cohorts of bulls put through. C200 was selected using a combination of within-breed and multi-breed information which lends to our confidence in utilising multi-breed beef data for the selection of dairy-suitable beef sires. C200 is also homozygous for polled, so all of his calves will be polled at birth, and homozygous for the black coat so he will not produce any red calves, even when crossed over Jerseys or crossbred cows.

Individually \$18.00_{+gst}



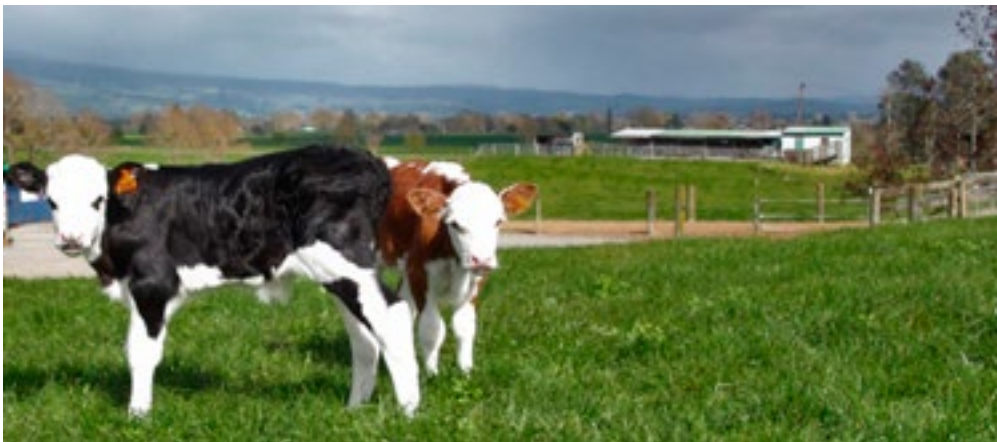
Hereford



- British in origin, Herefords mature earlier than most European beef breeds
- The Herefords' distinctive white face makes for easy calf identification*
- Homozygous polled bulls and packs available in SGL and non-SGL offerings
- LIC has the shortest gestation Hereford bull ever used via AB in the dairy industry to date (page 9)
- LIC's SGL Hereford product is sourced exclusively from Australasia's leading short gestation Hereford stud – Shrimpton's Hill Herefords – who specialise in breeding Herefords for dairy use
- LIC's no-choice beef pack sires are selected in partnership with the New Zealand Hereford Association

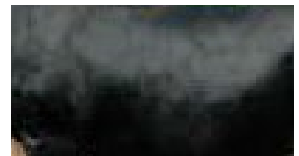
Product options:

- No-choice Hereford beef pack - \$10.20 + GST
- No-choice SGL Hereford pack - \$12.90 + GST
- Your choice of SGL Hereford bull - \$18.00 + GST (page 9)
- Your choice of Hereford beef bull - \$30.00 + GST (page 10)



Four-day-old SGL Hereford calves from KiwiCross® dams

Coat Colour Possibilities:



**While the white face is dominant the amount of white may vary.*



819112 Shrimptons Hill 170046 grazing at LIC (-6.3 days NZAEL gestation length BV) who is heterozygous polled and part of the no-choice SGL Hereford pack

819111 Shrimptons Hill **170045** (ET)

Breeder: Shrimpton's Hill Herefords

Commentary:

With his first dairy-born calves born in 2020, this bull has proved to be the shortest gestation AB Hereford bull to have been used in the dairy industry to date with a NZAEL gestation length BV of -8.9 days relative to a 282 day dairy gestation base.

Individually

\$18.00
+gst

Proven Progeny Averages

Gestation Length

277.6 days

50%
PolledRed
Carrier

Within-breed Evaluation

| Dairy Significance | EBV | | 99 th | 75 th | 50 th | 25 th | 1 st | %rank |
|--------------------|-------|-------|------------------|------------------|------------------|------------------|-----------------|-------|
| Calving Ease | 10.5 | Hard | | | | | Easy | 5 |
| Gestation Length | -10.5 | Long | | | | | Short | 1 |
| Birthweight | 1.4 | Heavy | | | | | Light | 15 |
| Beef Significance | EBV | | 99 th | 75 th | 50 th | 25 th | 1 st | %rank |
| 200 Day Weight | 33 | Light | | | | | Heavy | 50 |
| 400 Day Weight | 60 | Light | | | | | Heavy | 35 |
| Carcass Weight | 59 | Light | | | | | Heavy | 25 |
| Eye Muscle Area | 3.8 | Small | | | | | Large | 40 |
| Retail Beef Yield | 1.5 | Less | | | | | More | 15 |
| Intramuscular Fat | 0.5 | Less | | | | | More | 45 |

819113 Shrimptons Hill **170053**

Breeder: Shrimpton's Hill Herefords

Commentary:

With his first dairy-born calves born in 2020, LIC is excited to offer this homozygous polled bull to provide you extra days in milk and the welfare advantage that polled brings. His NZAEL gestation length BV is -4.6 days relative to a 282 day dairy gestation base.

Individually

\$18.00
+gst

Proven Progeny Averages

Gestation Length

279.7 days

100%
PolledRed
Carrier

Within-breed Evaluation

| Dairy Significance | EBV | | 99 th | 75 th | 50 th | 25 th | 1 st | %rank |
|--------------------|------|-------|------------------|------------------|------------------|------------------|-----------------|-------|
| Calving Ease | 9.3 | Hard | | | | | Easy | 10 |
| Gestation Length | -8.9 | Long | | | | | Short | 1 |
| Birthweight | 3.3 | Heavy | | | | | Light | 35 |
| Beef Significance | EBV | | 99 th | 75 th | 50 th | 25 th | 1 st | %rank |
| 200 Day Weight | 37 | Light | | | | | Heavy | 25 |
| 400 Day Weight | 63 | Light | | | | | Heavy | 25 |
| Carcass Weight | 66 | Light | | | | | Heavy | 10 |
| Eye Muscle Area | 4.8 | Small | | | | | Large | 20 |
| Retail Beef Yield | 1.9 | Less | | | | | More | 5 |
| Intramuscular Fat | 0.4 | Less | | | | | More | 55 |

No-choice SGL Hereford pack
(heterozygous polled*)\$17.85 (+GST)
fresh (incl tech)**\$16.85 (+GST)
fresh (DIY)**\$12.90 (+GST)
frozen

Within-breed ranking (can only be compared to other Herefords)

| Calving Ease | Gestation Length | Birth Weight | Yearling Weight | Carcass Weight | Eye Muscle Area | Intramuscular Fat |
|--------------|------------------|--------------|-----------------|----------------|-----------------|-------------------|
| Top 10% | Top 1% | Top 20% | Top 70% | Top 60% | Top 55% | Top 70% |

*The pack contains a mixture of horned, heterozygous polled, and homozygous polled bulls

** contributes to Premier Sires sliding scale

720002 NZHA **Cooper** 18 274

Breeder: Colin & Sue Corney

Commentary:

Cooper is a well-rounded young Hereford with impressive trait EBVs from calving ease through to meat quality. His first dairy-born calf crop is due 2021. Cooper's straw price includes cost of his progeny's registration to the New Zealand Hereford Association.

Individually

\$30.00
+gst

Proven Progeny Averages

Gestation Length

Due 2021

100%
PolledRed
Carrier

Within-breed Evaluation

| Dairy Significance | EBV | | 99 th | 75 th | 50 th | 25 th | 1 st | %rank |
|--------------------|------|-------|------------------|------------------|------------------|------------------|-----------------|-------|
| Calving Ease | 10.6 | Hard | | | | | Easy | 5 |
| Gestation Length | -2.9 | Long | | | | | Short | 10 |
| Birthweight | 0.9 | Heavy | | | | | Light | 10 |
| Beef Significance | EBV | | 99 th | 75 th | 50 th | 25 th | 1 st | %rank |
| 200 Day Weight | 33 | Light | | | | | Heavy | 50 |
| 400 Day Weight | 65 | Light | | | | | Heavy | 20 |
| Carcase Weight | 65 | Light | | | | | Heavy | 15 |
| Eye Muscle Area | 2.5 | Small | | | | | Large | 80 |
| Retail Beef Yield | 0.2 | Less | | | | | More | 85 |
| Intramuscular Fat | 1.1 | Less | | | | | More | 15 |

No-choice Hereford beef pack
(homozygous polled)

\$10.20 (+GST)

Within-breed ranking (can only be compared to other Herefords)

| Calving Ease | Gestation Length | Birth Weight | Yearling Weight | Carcase Weight | Eye Muscle Area | Intramuscular Fat |
|--------------|------------------|--------------|-----------------|----------------|-----------------|-------------------|
| Top 20% | Top 70% | Top 25% | Top 65% | Top 60% | Top 50% | Top 40% |



Wagyu

Wanting another income option? LIC, in conjunction with First Light, are offering 10-day-old, 90kg, or breed-to-finish contracts for male and female Wagyu offspring.

Wagyu is a Japanese beef breed, often considered to be the 'Rolls-Royce' of beef. The breed is renowned for its highly marbled meat which creates a succulent, tender, nutty flavour profile and an enjoyable eating experience.

| | |
|---------------|----------|
| Frozen | \$17.30* |
|---------------|----------|

**minimum insemination numbers apply. InvestaMate and volume discounts may apply.*

Dairy Beef Contract Opportunities

| Type of calf, 2022-borns | Spring calving | Autumn calving |
|---|---------------------------------|----------------|
| Fully reared, male or female, at least 90kg liveweight | POA - Contact your Agri Manager | |
| Partially reared, male or female, 10-day-old | | |
| Breed-to-finish, male or female, farmer-reared to slaughter | | |

Farmers who re-sign the contract for a second, or subsequent consecutive season receive an additional re-sign bonus payment of \$40 per calf on top of the purchase price.

For 2021-born calves (i.e. contracts already in-place): 2021-born calf prices apply.



For non-contract Wagyu options, refer to page 27 of the beef section

Angus



- Homozygous polled – lack of horns in dairy-cross progeny can be helpful in identifying calves
- Low birthweight and short gestation for a beef breed
- British in origin – earlier-maturing than European beef breeds
- LIC's SGL Angus are supplied by Rissington Cattle Company in the Hawkes Bay who specialise in producing high-quality carcasses with a focus on eye muscle area (muscling) and intramuscular fat (marbling), as well as recording the feed efficiency of their beef bulls
- LIC's SGL Angus have all been evaluated on both within-breed and multi-breed analyses

Product options:

- No-choice Angus beef pack - \$10.20 + GST
- No-choice SGL Angus pack - \$12.90 + GST
- Your choice of SGL Angus bull - \$18.00 + GST (page 13)

No-choice Angus beef pack (homozygous polled)

\$10.20 (+GST)

Within-breed pack average ranking (can only be compared to other Angus)

| Calving Ease | Gestation Length | Birth Weight | Yearling Weight | Carcase Weight | Eye Muscle Area | Intramuscular Fat |
|--------------|------------------|--------------|-----------------|----------------|-----------------|-------------------|
| Top 15% | Top 70% | Top 15% | Top 60% | Top 80% | Top 55% | Top 55% |

No-choice SGL Angus pack (homozygous polled)

\$12.90 (+GST)

Within-breed pack average ranking (can only be compared to other Angus)

| Calving Ease | Gestation Length | Birth Weight | Yearling Weight | Carcase Weight | Eye Muscle Area | Intramuscular Fat |
|--------------|------------------|--------------|-----------------|----------------|-----------------|-------------------|
| Top 10% | Top 10% | Top 5% | Top 60% | Top 50% | Top 20% | Top 20% |

Multi-breed pack average ranking*

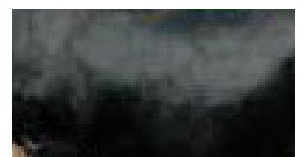
| BSI | \$Feeder | Birth Weight | Yearling Weight | Carcase Weight | Eye Muscle Area | Intramuscular Fat |
|------|----------|--------------|-----------------|----------------|-----------------|-------------------|
| 1142 | Top 8% | Top 4% | Top 28% | Top 11% | Top 12% | Top 5% |

*can compare to Simmental, Charolais, and Profit Maker® multi-breed information



Rissington yearling Angus bulls grazing at LIC

Coat Colour Possibilities:



Note: it is not uncommon for Angus x Dairy calves to have some white on them, usually around the navel.

718115 Rissington **160043**

Breeder: Rissington Cattle Company

Commentary:

BSI

1224

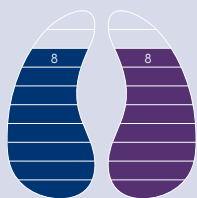
This well-proven bull was one of the top five bulls in the Dairy Beef Progeny Test, as expected based on his EBVs. He has extreme intramuscular fat and is a great choice when low birthweight is needed.

Individually **\$18.00**
+gst**Proven Progeny Averages**

| Gestation Length | Birthweight |
|------------------|-------------|
| 276.8 days | 32.8 kg |

**100% Polled****Not a Red Carrier****Within-breed Evaluation**

| Dairy Significance | EBV | 99 th | 75 th | 50 th | 25 th | 1 st | %rank |
|--------------------|-------|------------------|------------------|------------------|------------------|-----------------|-------|
| Calving Ease | 12.4 | Hard | | | | Easy | 1 |
| Gestation Length | -12.8 | Long | | | | Short | 1 |
| Birthweight | -2.1 | Heavy | | | | Light | 1 |
| Beef Significance | EBV | 99 th | 75 th | 50 th | 25 th | 1 st | %rank |
| 200 Day Weight | 40 | Light | | | | Heavy | 80 |
| 400 Day Weight | 74 | Light | | | | Heavy | 80 |
| Carcase Weight | 61 | Light | | | | Heavy | 55 |
| Eye Muscle Area | 3.0 | Small | | | | Large | 85 |
| Retail Beef Yield | -0.2 | Less | | | | More | 75 |
| Intramuscular Fat | 4.3 | Less | | | | More | 5 |

**BEEFPRINT®**

Methane Efficiency
 Nitrogen Efficiency

Multi-breed Evaluation

| Dairy Significance | EBV | 99 th | 75 th | 50 th | 25 th | 1 st | %rank |
|--------------------|------|------------------|------------------|------------------|------------------|-----------------|-------|
| Birthweight | -1.8 | Heavy | | | | Light | 1 |
| Beef Significance | EBV | 99 th | 75 th | 50 th | 25 th | 1 st | %rank |
| Weaning Weight | 19 | Light | | | | Heavy | 70 |
| Yearling Weight | 39 | Light | | | | Heavy | 40 |
| Carcase Weight | 370 | Light | | | | Heavy | 15 |
| Eye Muscle Area | 2.5 | Small | | | | Large | 50 |
| Retail Beef Yield | 0.3 | Less | | | | More | 50 |
| Intramuscular Fat | 1.2 | Less | | | | More | 1 |
| Feed to Gain | -0.2 | Less | | | | More | 5 |

721305 Rissington **190275**

Breeder: Rissington Cattle Company

Commentary:

BSI

1095

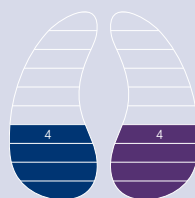
This young bull is an all-rounder in the Angus space, being homozygous polled, short gestation, easier-calving, with balanced growth and carcass traits in both within- and multi-breed evaluations.

Individually **\$18.00**
+gst**Proven Progeny Averages**

| Gestation Length |
|------------------|
| Due 2022 |

**100% Polled****Not a Red Carrier****Within-breed Evaluation**

| Dairy Significance | EBV | 99 th | 75 th | 50 th | 25 th | 1 st | %rank |
|--------------------|------|------------------|------------------|------------------|------------------|-----------------|-------|
| Calving Ease | 8.9 | Hard | | | | Easy | 10 |
| Gestation Length | -7.7 | Long | | | | Short | 10 |
| Birthweight | 2.5 | Heavy | | | | Light | 15 |
| Beef Significance | EBV | 99 th | 75 th | 50 th | 25 th | 1 st | %rank |
| 200 Day Weight | 51 | Light | | | | Heavy | 30 |
| 400 Day Weight | 96 | Light | | | | Heavy | 20 |
| Carcase Weight | 77 | Light | | | | Heavy | 10 |
| Eye Muscle Area | 7.2 | Small | | | | Large | 25 |
| Retail Beef Yield | 0.6 | Less | | | | More | 45 |
| Intramuscular Fat | 2.7 | Less | | | | More | 20 |

**BEEFPRINT®**

Methane Efficiency
 Nitrogen Efficiency

Multi-breed Evaluation

| Dairy Significance | EBV | 99 th | 75 th | 50 th | 25 th | 1 st | %rank |
|--------------------|------|------------------|------------------|------------------|------------------|-----------------|-------|
| Birthweight | -0.2 | Heavy | | | | Light | 10 |
| Beef Significance | EBV | 99 th | 75 th | 50 th | 25 th | 1 st | %rank |
| Weaning Weight | 28 | Light | | | | Heavy | 5 |
| Yearling Weight | 52 | Light | | | | Heavy | 5 |
| Carcase Weight | 372 | Light | | | | Heavy | 10 |
| Eye Muscle Area | 4.1 | Small | | | | Large | 10 |
| Retail Beef Yield | 0.5 | Less | | | | More | 20 |
| Intramuscular Fat | 1.1 | Less | | | | More | 1 |
| Feed to Gain | 0.3 | Less | | | | More | 99 |

Simmental



- LIC's Simmental are supplied by Rissington Cattle Company who are specialists in producing easier-calving, high-growth, quality-carcase genetics
- LIC's Simmental sires are all polled (heterozygous or homozygous)
- Higher carcase weights than British breeds
- LIC's beef pack sires are all red with white faces, however variable markings should be expected from Simmental sires

Simmental are one of the most popular European beef breeds, known for their excellent growth and meat traits. The Rissington Cattle Company Simmental herd has nearly 50 years of calving ease, growth rate, carcase, and feed efficiency recording. Empowered by the widespread adoption of artificial breeding and embryo transfer, Rissington's elite herd continues to produce excellent, reliable genetics.

The Rissington herd is polled, and made up of white-faced, solid red, and solid black animals.

Product options:

- No-choice Simmental beef pack (white-faced) - \$10.20 + GST
- Your choice of Simmental bull - \$16.00 + GST (page 15)

| No-choice Simmental beef pack (heterozygous polled*) | | | | | | \$10.20 (+GST) |
|---|------------------|--------------|-----------------|----------------|-----------------|-------------------|
| Within-breed pack average ranking (can only be compared to other Simmental) | | | | | | |
| Calving Ease | Gestation Length | Birth Weight | Yearling Weight | Carcase Weight | Eye Muscle Area | Intramuscular Fat |
| Top 10% | Top 15% | Top 25% | Top 5% | Top 10% | Top 15% | Top 15% |
| Multi-breed pack average ranking** | | | | | | |
| BSI | \$Feeder | Birth Weight | Yearling Weight | Carcase Weight | Eye Muscle Area | Intramuscular Fat |
| 1078 | Top 2% | Top 89% | Top 3% | Top 1% | Top 1% | Top 88% |

* the pack contains a mixture of heterozygous and homozygous polled bulls

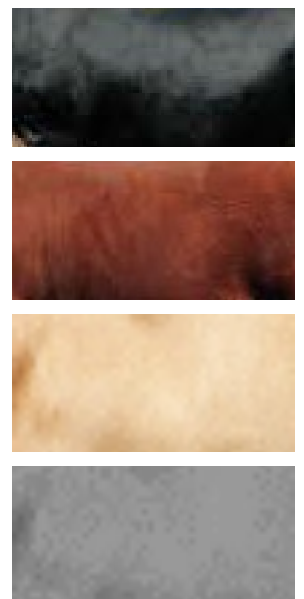
**can compare to Angus, Charolais, and Profit Maker® multi-breed information



Yearling Rissington Simmental bulls at LIC

Note: The white face of the Simmental is not always dominant.

Coat Colour Possibilities:



721342 Rissington 190162

Breeder: Rissington Cattle Company

Commentary:

BSI

1113

This red Simmental bull is extremely hard to fault with him sitting in the top 10% or better for the breed for the majority of his traits. Rissington Cattle Company have also used him in their breeding programme because of his quality.

Individually \$16.00_{+gst}

Proven Progeny Averages

Gestation Length

Due 2022



50% Polled



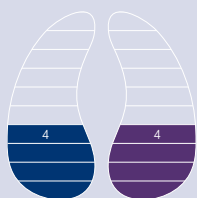
Red Carrier



Dilution Carrier

Within-breed Evaluation

| Dairy Significance | EBV | | 99 th | 75 th | 50 th | 25 th | 1 st | %rank |
|--------------------|------|-------|------------------|------------------|------------------|------------------|-----------------|-------|
| Calving Ease | 10.7 | Hard | | | | | Easy | 5 |
| Gestation Length | -5.4 | Long | | | | | Short | 5 |
| Birthweight | -1.5 | Heavy | | | | | Light | 15 |
| Beef Significance | EBV | | 99 th | 75 th | 50 th | 25 th | 1 st | %rank |
| 200 Day Weight | 29 | Light | | | | | Heavy | 10 |
| 400 Day Weight | 64 | Light | | | | | Heavy | 5 |
| Carcass Weight | 45 | Light | | | | | Heavy | 5 |
| Eye Muscle Area | 4.8 | Small | | | | | Large | 5 |
| Retail Beef Yield | -0.7 | Less | | | | | More | 90 |
| Intramuscular Fat | 0.8 | Less | | | | | More | 10 |



BEEFPRINT®

Methane Efficiency
Nitrogen Efficiency

Multi-breed Evaluation

| Dairy Significance | EBV | | 99 th | 75 th | 50 th | 25 th | 1 st | %rank |
|--------------------|------|-------|------------------|------------------|------------------|------------------|-----------------|-------|
| Birthweight | 1.1 | Heavy | | | | | Light | 75 |
| Beef Significance | EBV | | 99 th | 75 th | 50 th | 25 th | 1 st | %rank |
| Weaning Weight | 31 | Light | | | | | Heavy | 1 |
| Yearling Weight | 55 | Light | | | | | Heavy | 1 |
| Carcass Weight | 409 | Light | | | | | Heavy | 1 |
| Eye Muscle Area | 9.4 | Small | | | | | Large | 1 |
| Retail Beef Yield | 1.3 | Less | | | | | More | 1 |
| Intramuscular Fat | 0.1 | Less | | | | | More | 95 |
| Feed to Gain | -0.2 | Less | | | | | More | 5 |



February Data



March Data

719024 Rissington AF182

Breeder: Rissington Cattle Company

Commentary:

BSI

980

In the top 1% for 200 day, 400 day, eye muscle area, and carcass weight EBVs, this bull is hard to beat. He is in the top 5% for calving ease within-breed, making him one of the most suitable Simmentals for use over dairy cows.

Individually \$16.00_{+gst}

Proven Progeny Averages

Gestation Length

283.0 days



50% Polled



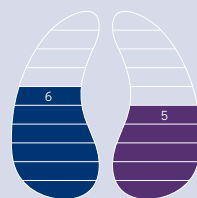
Red Carrier



Not a Dilution Carrier

Within-breed Evaluation

| Dairy Significance | EBV | | 99 th | 75 th | 50 th | 25 th | 1 st | %rank |
|--------------------|------|-------|------------------|------------------|------------------|------------------|-----------------|-------|
| Calving Ease | 10.2 | Hard | | | | | Easy | 5 |
| Gestation Length | -3.3 | Long | | | | | Short | 15 |
| Birthweight | -0.8 | Heavy | | | | | Light | 20 |
| Beef Significance | EBV | | 99 th | 75 th | 50 th | 25 th | 1 st | %rank |
| 200 Day Weight | 36 | Light | | | | | Heavy | 1 |
| 400 Day Weight | 68 | Light | | | | | Heavy | 1 |
| Carcass Weight | 51 | Light | | | | | Heavy | 1 |
| Eye Muscle Area | 8.3 | Small | | | | | Large | 1 |
| Retail Beef Yield | 1.3 | Less | | | | | More | 20 |
| Intramuscular Fat | 1.1 | Less | | | | | More | 5 |



BEEFPRINT®

Methane Efficiency
Nitrogen Efficiency

Multi-breed Evaluation

| Dairy Significance | EBV | | 99 th | 75 th | 50 th | 25 th | 1 st | %rank |
|--------------------|-----|-------|------------------|------------------|------------------|------------------|-----------------|-------|
| Birthweight | 2.4 | Heavy | | | | | Light | 99 |
| Beef Significance | EBV | | 99 th | 75 th | 50 th | 25 th | 1 st | %rank |
| Weaning Weight | 33 | Light | | | | | Heavy | 1 |
| Yearling Weight | 54 | Light | | | | | Heavy | 1 |
| Carcass Weight | 403 | Light | | | | | Heavy | 1 |
| Eye Muscle Area | 9.9 | Small | | | | | Large | 1 |
| Retail Beef Yield | 1.9 | Less | | | | | More | 1 |
| Intramuscular Fat | 0.5 | Less | | | | | More | 50 |
| Feed to Gain | 0.4 | Less | | | | | More | 99 |



Profit Maker®

- Supplied by Rissington Cattle Company
- Polled (heterozygous and homozygous)
- Solid-coloured (black or red)
- Breed content is predominantly Simmental and Angus
- Improved growth rates compared to purebred Angus

Both LIC and Rissington Cattle Company embrace crossbreeding and the value of hybrid vigour. Profit Maker® is a composite of Angus, Red Angus, Simmental, Gelbvieh, and South Devon. This composite combines the fleshing ability, marbling, and moderate size of the British breeds with the muscle, milk, and growth of the European breeds. Originally developed by the Leachman Cattle Company in the USA, the selection of breeds that make up this composite are based on research by the United States Department of Agriculture at the Meat Animal Research Centre located in Nebraska.

Rissington Profit Maker® bulls are selected through the Leachman multi-breed evaluation.

Product options:

- No-choice Profit Maker® beef pack - \$10.20 + GST
- Your choice of Profit Maker® bull - \$16.00 + GST (page 17)

No-choice Profit Maker® beef pack

(heterozygous polled*, contains black and red bulls)

\$10.20 (+GST)

Multi-breed pack average ranking**

| BSI | \$Feeder | Birth Weight | Yearling Weight | Carcase Weight | Eye Muscle Area | Intramuscular Fat |
|------|----------|--------------|-----------------|----------------|-----------------|-------------------|
| 1121 | Top 6% | Top 6% | Top 38% | Top 1% | Top 1% | Top 25% |

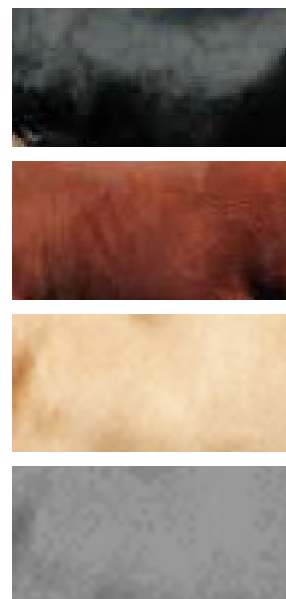
* the pack contains a mixture of heterozygous and homozygous polled bulls

**can compare to Simmental, Charolais, and Angus multi-breed information



No-choice Profit Maker® beef pack yearling bull

Coat Colour Possibilities:



720250 Leachman Docs Remedy

Breeder: Leachman Cattle Company

Commentary:

BSI

1181

Docs Remedy is one of the all-time highest indexing composite sires that has ever been evaluated on the Leachman multi-breed analysis. He continues to be used extensively in pure beef operations to add significantly to the bottom line of the farmers that have utilised him. Being homozygous black and homozygous polled, Docs Remedy makes the production of quality dairy beef a whole lot easier.

Individually

\$16.00*
+gst

*straw size is maxi



Proven Progeny Averages

Gestation Length

Due 2021



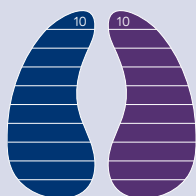
100% Polled



Not a Red Carrier



Not a Dilution Carrier



BEEFPRINT®

Methane Efficiency

Nitrogen Efficiency

Multi-breed Evaluation

| Dairy Significance | EBV | 99 th | 75 th | 50 th | 25 th | 1 st | %rank |
|--------------------|------|------------------|------------------|------------------|------------------|-----------------|-------|
| Birthweight | -1.2 | Heavy | | | | Light | 1 |
| Beef Significance | EBV | 99 th | 75 th | 50 th | 25 th | 1 st | %rank |
| Weaning Weight | 19 | Light | | | | Heavy | 65 |
| Yearling Weight | 40 | Light | | | | Heavy | 35 |
| Carcase Weight | 379 | Light | | | | Heavy | 1 |
| Eye Muscle Area | 7.9 | Small | | | | Large | 1 |
| Retail Beef Yield | 0.5 | Less | | | | More | 25 |
| Intramuscular Fat | 0.7 | Less | | | | More | 25 |
| Feed to Gain | -0.1 | Less | | | | More | 20 |

721323 Rissington 190535

Breeder: Rissington Cattle Company

Commentary:

BSI

1167

This young composite bull is homozygous black so won't throw red calves even over crossbred or jersey dairy cows. His combination of predominantly Simmental and Angus genetics means that he can offer the best of both worlds - growth and carcass weights from the Simmental and calving ease, and speed to maturity from the Angus. Compared to the American Angus population, this bull's calves are expected to be born at lighter weights - yet grow faster - than calves from the average Angus sire.

Individually

\$16.00
+gst

Proven Progeny Averages

Gestation Length

Due 2022



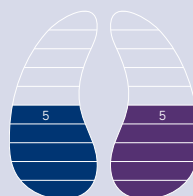
50% Polled



Not a Red Carrier



Not a Dilution Carrier



BEEFPRINT®

Methane Efficiency

Nitrogen Efficiency

Multi-breed Evaluation

| Dairy Significance | EBV | 99 th | 75 th | 50 th | 25 th | 1 st | %rank |
|--------------------|------|------------------|------------------|------------------|------------------|-----------------|-------|
| Birthweight | -1.2 | Heavy | | | | Light | 1 |
| Beef Significance | EBV | 99 th | 75 th | 50 th | 25 th | 1 st | %rank |
| Weaning Weight | 22 | Light | | | | Heavy | 40 |
| Yearling Weight | 39 | Light | | | | Heavy | 40 |
| Carcase Weight | 376 | Light | | | | Heavy | 1 |
| Eye Muscle Area | 4.8 | Small | | | | Large | 20 |
| Retail Beef Yield | 0.5 | Less | | | | More | 25 |
| Intramuscular Fat | 0.8 | Less | | | | More | 15 |
| Feed to Gain | 0.0 | Less | | | | More | 20 |

Charolais



- Rapid growth to higher liveweights
- Extreme muscling and carcass conformation
- LIC's Charolais bulls are all homozygous polled
- Colour-mark all calves by diluting coat colour (see examples on page 19)

This European breed of cattle originated from the Charolles area in France and is renowned for its excellent muscling ability and carcass conformation. LIC's Charolais offering is homozygous polled, meaning that every Charolais-sired calf will be naturally hornless. Although Charolais traditionally have a longer gestation length than the British beef breeds (i.e. Angus), these bulls have been selected for gestation length as well as calving ease, and the individually-available sire 716012 Kakahu Gerry delivers calving ease and a moderate gestation length (short for the breed), proven over NZ crossbred dairy cows (see page 7). The majority of no-choice beef pack sires are supplied by Rissington Cattle Company. These beef pack bulls have been considered for their suitability over dairy cattle using the within-breed and multi-breed data that was available for them, with key selection pressure placed on low birthweight, high calving ease, short gestation, and above breed-average growth.

Product options:

- No-choice Charolais beef pack - \$10.20 + GST
- Your choice of Charolais bull - \$12.90 + GST (page 19)



Yearling Kakahu Charolais bulls showing the breed's distinctive colouring

No-choice Charolais beef pack (homozygous polled)

\$10.20 (+GST)

Within-breed pack average ranking (can only be compared to other Charolais)

| Calving Ease | Gestation Length | Birth Weight | Yearling Weight | Carcass Weight | Eye Muscle Area | Intramuscular Fat |
|--------------|------------------|--------------|-----------------|----------------|-----------------|-------------------|
| Top 5% | Top 10% | Top 10% | Top 25% | Top 30% | Top 65% | Top 10% |

716012 Kakahu Gerry

Breeder: Kakahu Stud

Commentary:

Gerry's dairy beef progeny hold the number one spots for growth to weaning age and heaviest 200, 400, and 600 day weights in the Dairy Beef Progeny Test. His calves will always be polled and inherit the dilutor gene which makes them easy to tell apart from others.

Individually

\$12.90_{+gst}

Proven Progeny Averages

| Gestation Length | Birthweight |
|------------------|-------------|
| 282.9 days | 38.7 |



100% Polled



Red Carrier



Dilution Carrier

Within-breed Evaluation

| Dairy Significance | EBV | | 99 th | 75 th | 50 th | 25 th | 1 st | %rank |
|--------------------|------|-------|------------------|------------------|------------------|------------------|-----------------|-------|
| Calving Ease | 19.2 | Hard | | | | | Easy | 1 |
| Gestation Length | -7.5 | Long | | | | | Short | 1 |
| Birthweight | -2.8 | Heavy | | | | | Light | 10 |
| Beef Significance | EBV | | 99 th | 75 th | 50 th | 25 th | 1 st | %rank |
| 200 Day Weight | 21 | Light | | | | | Heavy | 5 |
| 400 Day Weight | 47 | Light | | | | | Heavy | 1 |
| Carcass Weight | 32 | Light | | | | | Heavy | 5 |
| Eye Muscle Area | 2.1 | Small | | | | | Large | 30 |
| Retail Beef Yield | -1.8 | Less | | | | | More | 99 |
| Intramuscular Fat | 1.0 | Less | | | | | More | 5 |



Dairy calf by Kakahu Gerry



Dairy calves sired by Gerry showing the range of diluted coat colour



Dairy calves sired by Gerry showing the classic silver coat. Calf photos on this page thanks to Simon and Beck Riordan.



Speckle Park

- LIC is supplied Speckle Park genetics by Maungahina Stud in Masteron
- All Speckle Park beef pack bulls are homozygous polled and white-coated for maximum colour marking of progeny
- All bulls in the Speckle Park pack are homozygous black for their speckling (no red gene carriers)
- Debutant bull 721406 Maungahina Quicksilver (page 21) was born 10 days early and is by popular sire Maungahina Legacy

Maungahina Stud is home to one of New Zealand's largest Speckle Park herds. With over a century of beef stud cattle breeding in their family, the McKenzies apply intense selection pressure on the performance and structure of their cattle to produce high-performing genetics. The breed is new relative to traditional beef breeds, and its genetic base comprises a mixture of British White Park, Shorthorn, and Angus. The breed is renowned for its intramuscular fat, which at individual bull level rivals Wagyu animals for their marble score.

Product options:

- No-choice white Speckle Park beef pack - \$18.25 + GST
- Your choice of Speckle Park bull - \$20.00 + GST (page 21)

No-choice white Speckle Park beef pack (homozygous polled)

\$18.25 (+GST)

Within-breed ranking (can only be compared to other Speckle Park)

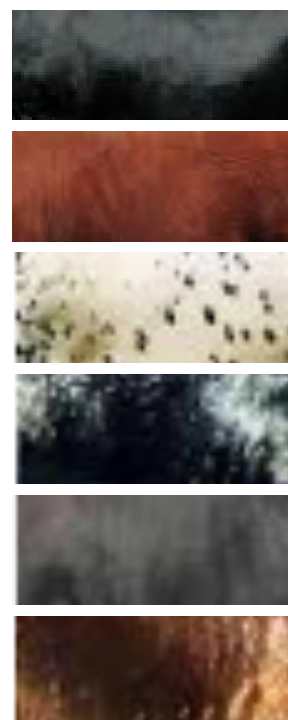
| Gestation Length | Birth Weight | Yearling Weight | Carcase Weight | Eye Muscle Area | Intramuscular Fat |
|------------------|--------------|-----------------|----------------|-----------------|-------------------|
| Top 40% | Top 50% | Top 25% | Top 15% | Top 60% | Top 25% |

Note: 716061 Kidmans Cove Pp (leopard), 720062 Maungahina Norgate Pp (white), and 710028 SPKNZ Empire King (speckled) are also available individually (see page 27 of the beef section).



Speckle Park cross dairy calves. Photo courtesy of Brad and Laura Morton.

Coat Colour Possibilities:



718032 Maungahina **Maximus**

Individually \$20.00_{+gst} Breeder: Maungahina Stud



Proven Progeny Averages

Gestation Length

282.0 days



Within-breed Evaluation

| Dairy Significance | EBV | 99 th | 75 th | 50 th | 25 th | 1 st | %rank |
|--------------------|------|------------------|------------------|------------------|------------------|-----------------|-------|
| Gestation Length | -0.5 | Long | | | | Short | 20 |
| Birthweight | 0.9 | Heavy | | | | Light | 25 |
| Beef Significance | EBV | 99 th | 75 th | 50 th | 25 th | 1 st | %rank |
| 200 Day Weight | 12 | Light | | | | Heavy | 65 |
| 400 Day Weight | 20 | Light | | | | Heavy | 55 |
| Carcase Weight | 13 | Light | | | | Heavy | 70 |
| Eye Muscle Area | -0.5 | Small | | | | Large | 99 |
| Retail Beef Yield | -1.6 | Less | | | | More | 99 |
| Intramuscular Fat | 0.7 | Less | | | | More | 5 |

721406 Maungahina **Quicksilver**

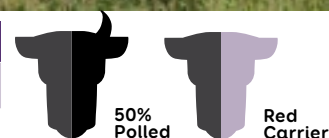
Individually \$20.00_{+gst} Breeder: Maungahina Stud



Proven Progeny Averages

Gestation Length

Due 2022



Within-breed Evaluation

| Dairy Significance | EBV | 99 th | 75 th | 50 th | 25 th | 1 st | %rank |
|--------------------|------|------------------|------------------|------------------|------------------|-----------------|-------|
| Gestation Length | -0.2 | Long | | | | Short | 40 |
| Birthweight | 3.0 | Heavy | | | | Light | 95 |
| Beef Significance | EBV | 99 th | 75 th | 50 th | 25 th | 1 st | %rank |
| 200 Day Weight | 24 | Light | | | | Heavy | 5 |
| 400 Day Weight | 37 | Light | | | | Heavy | 5 |
| Carcase Weight | 28 | Light | | | | Heavy | 10 |
| Eye Muscle Area | 1.0 | Small | | | | Large | 20 |
| Retail Beef Yield | 0.9 | Less | | | | More | 5 |
| Intramuscular Fat | -0.3 | Less | | | | More | 90 |

719022 Maungahina **Northern Star**

Individually \$20.00_{+gst} Breeder: Maungahina Stud



Proven Progeny Averages

Gestation Length

285.7 days

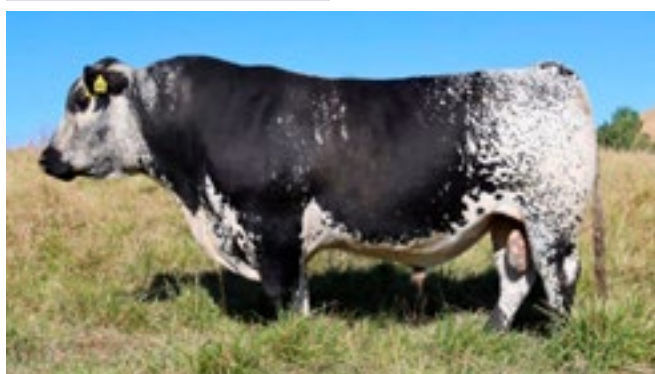


Within-breed Evaluation

| Dairy Significance | EBV | 99 th | 75 th | 50 th | 25 th | 1 st | %rank |
|--------------------|------|------------------|------------------|------------------|------------------|-----------------|-------|
| Gestation Length | 0.5 | Long | | | | Short | 80 |
| Birthweight | 1.4 | Heavy | | | | Light | 45 |
| Beef Significance | EBV | 99 th | 75 th | 50 th | 25 th | 1 st | %rank |
| 200 Day Weight | 12 | Light | | | | Heavy | 65 |
| 400 Day Weight | 18 | Light | | | | Heavy | 65 |
| Carcase Weight | 16 | Light | | | | Heavy | 55 |
| Eye Muscle Area | 0.5 | Small | | | | Large | 55 |
| Retail Beef Yield | -1.1 | Less | | | | More | 95 |
| Intramuscular Fat | 1.1 | Less | | | | More | 5 |

720060 Premier **Platinum**

Individually \$20.00_{+gst} Breeder: Premier Cattle Company



Proven Progeny Averages

Gestation Length

Due 2021



Within-breed Evaluation

| Dairy Significance | EBV | 99 th | 75 th | 50 th | 25 th | 1 st | %rank |
|--------------------|------|------------------|------------------|------------------|------------------|-----------------|-------|
| Gestation Length | -1.1 | Long | | | | Short | 10 |
| Birthweight | 1.4 | Heavy | | | | Light | 45 |
| Beef Significance | EBV | 99 th | 75 th | 50 th | 25 th | 1 st | %rank |
| 200 Day Weight | 26 | Light | | | | Heavy | 5 |
| 400 Day Weight | 43 | Light | | | | Heavy | 1 |
| Carcase Weight | 39 | Light | | | | Heavy | 1 |
| Eye Muscle Area | 1.2 | Small | | | | Large | 10 |
| Retail Beef Yield | 0.3 | Less | | | | More | 30 |
| Intramuscular Fat | 0.3 | Less | | | | More | 20 |



Polled Belgian Blue

- LIC's polled Belgian Blue genetics are NZ-bred and sourced from Woodleigh Belgian Blues
- Belgian Blue can colour-mark calves
- LIC offers traditional horned Belgian Blue genetics as well as polled
- The gestation length of LIC's no-choice horned pack is 282 days
- Belgian Blue genetics can improve carcase conformation and muscling

LIC is excited to offer NZ-bred polled Belgian Blue genetics from Woodleigh Belgian Blues, championed by Sir Lockwood Smith. Woodleigh's focus has been on performance over and above phenotype, which has led their breeding programme to produce easier, naturally-calving animals that grow rapidly to the yearling mark and beyond.

Belgian Blues have a distinctive 'double-muscled' phenotype which they are renowned for, characterised mostly by a convex shape of the rump. Purebred Belgian Blues yield extremely high quantities of saleable beef as a proportion of their carcase, and pass on some of this improved yield and carcase conformation to their dairy cross progeny. The double-muscling is caused by a naturally-occurring mutation in a gene responsible for muscle growth. As a consequence, the muscles and subsequent cut size of purebred animals is larger than other beef breeds, and also quite different in composition with reduced fat content (including intramuscular fat). Belgian Blues are known for their blue roan colouring, however there is an enormous range of coat colour that occurs in the breed, from solid black through to solid white, with pied blue (blue and white) and pied black (black and white) being common too.

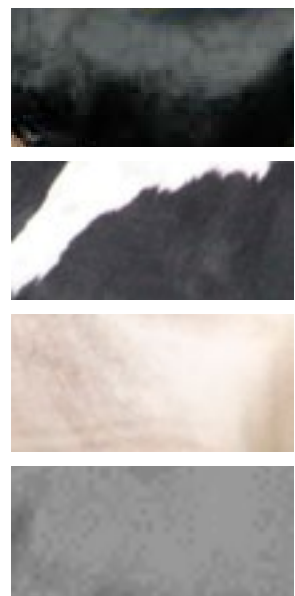
Product options:

- No-choice Belgian Blue beef pack (horned) - \$10.20 + GST
- No-choice Belgian Blue beef pack (polled) - \$12.90 + GST
- Your choice of polled Belgian Blue bull - \$14.90 + GST (page 23)



Woodleigh Belgian Blue cows and calves at pasture in Ruawai.

Coat Colour Possibilities:



Note: Variation outside of these possibilities is expected.

721401 Woodleigh **Zircon**

Breeder: Woodleigh Belgian Blues

Commentary:

Woodleigh Zircon has been used for five years as a key herd sire in the Woodleigh herd, testament to the quality of calves he continues to produce. Zircon's dam is still in the Woodleigh herd and will be calving down as an 11-year-old in 2021. Although Belgian Blues are considered a horned breed, all of Zircon's purebred calves to date have been polled. His calves are born at moderate birthweights for the Belgian Blue breed, with his first four years of calf crops weighing in at 41.3kg, 41.0kg, 42.5kg, and 41.3kg averages. 2021 will be Zircon's first year of use across dairy cows, and he is recommended for use over mature cows.

Individually **\$14.90**
+gst



Woodleigh Zircon



Purebred 19-month-old son of Zircon



Purebred 19-month-old son of Zircon

721402 Woodleigh **Crown**

Breeder: Woodleigh Belgian Blues

Commentary:

Woodleigh Crown is one of the younger herd sires at Woodleigh Belgian Blues. He was used for the second time over Woodleigh's yearling heifers in 2020, and his second calf crop is due in 2021. Crown himself weighed 37kg at birth, and despite his low birthweight for the breed has proved himself to have exceptional growth potential, with his own growth performance ranking him in the top 15 of the Woodleigh herd out of nearly 100 yearlings at 400 days of age. Crown's rising 6-year-old dam is also in the herd. 2021 will be Crown's first year of use in dairy cows, and he is recommended for use over mature cows.

Individually **\$14.90**
+gst



Woodleigh Crown



Woodleigh Crown at pasture in Ruawai



Woodleigh Crown with purebred yearling Belgian Blue heifers



Stabilizer®

- Low birthweight for beef cattle (approximately 33kg in Focus Genetics' Stabilizer® calves)
- Solid-coloured animals (red or black)
- Stabilizer® have an average gestation length of 282 days when used in dairy
- Stabilizer® calves wean earlier at heavier weights relative to purebred Angus
- No-choice pack bulls are either heterozygous or homozygous polled
- Individually-available bulls are homozygous polled

Stabilizer® are a multi-breed composite comprising mostly Simmental and Angus genetics, with Gelbvieh and South Devon in smaller amounts. The formation of the composite was based on over 30 years of research at Nebraska's Meat Animal Research Centre. To keep things simpler and to avoid the need for complicated rotational crossing systems, the Stabilizer® was developed, achieving 75% hybrid vigour retention relative to that achieved in the first cross.

The breeds involved in the composite combine the fleshing, marbling, and moderate size of the Angus and South Devon with the muscle and growth of the European Gelbvieh and Simmental. Stabilizer® are farmed globally and Focus Genetics' herd is evaluated on its own multi-breed evaluation conducted by Colorado State University in the USA. It allows Focus Genetics to objectively measure and compare the merit of their sires with over 100,000 other animals, which in turn has links into a larger multi-breed database that has in excess of 1 million beef cattle evaluated across it.

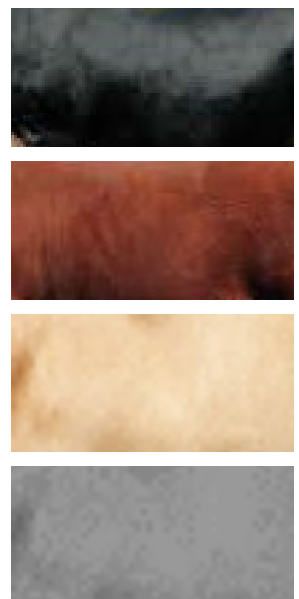
Product options:

- No-choice Stabilizer® beef pack - \$16.45 + GST
- Your choice of Stabilizer® bull - \$18.20 + GST (page 25)



Focus Stabilizer® bulls at grazing

Coat Colour Possibilities:



719070 Focus **Beef Maker**

Breeder: Focus Genetics

Commentary:

Highly proven (in beef) homozygous polled red bull with exceptional carcase values including trait-leading eye muscle area (muscling) and intra muscular fat for eating quality. Beef Maker scanned one of the highest physical eye muscle areas of his cohort so lives up to his name with progeny weaning early and heavy.

Individually **\$18.20**
+gst

**Proven Progeny Averages****Gestation Length**

284.2 days

**100% Polled****Red Carrier****Not a Dilution Carrier****Multi-breed Evaluation**

| Dairy Significance | EBV | | 99 th | 75 th | 50 th | 25 th | 1 st | %rank |
|--------------------|------|-------|------------------|------------------|------------------|------------------|-----------------|-------|
| Calving Ease | 7.2 | Hard | | | | | Easy | 15 |
| Gestation Length | -4.6 | Long | | | | | Short | 5 |
| Birthweight | 0.1 | Heavy | | | | | Light | 10 |
| Beef Significance | EBV | | 99 th | 75 th | 50 th | 25 th | 1 st | %rank |
| 200 Day Weight | 31 | Light | | | | | Heavy | 50 |
| 400 Day Weight | 62 | Light | | | | | Heavy | 45 |
| Carcase Weight | 26 | Light | | | | | Heavy | 90 |
| Eye Muscle Area | 8.9 | Small | | | | | Large | 1 |
| Intramuscular Fat | 2 | Less | | | | | More | 1 |

720073 Focus **Optimizer**

Breeder: Focus Genetics

Commentary:

Highly proven (in beef) homozygous polled black bull whose calves have performed exceptionally well at weaning. Trait leader in eye muscle area (muscling) means that calves will should attract premiums for carcase values. Exceptionally docile progeny are a drawcard.

Individually **\$18.20**
+gst

**Proven Progeny Averages****Gestation Length**

Due 2021

**100% Polled****Red Carrier****Not a Dilution Carrier****Multi-breed Evaluation**

| Dairy Significance | EBV | | 99 th | 75 th | 50 th | 25 th | 1 st | %rank |
|--------------------|------|-------|------------------|------------------|------------------|------------------|-----------------|-------|
| Calving Ease | 15.2 | Hard | | | | | Easy | 1 |
| Gestation Length | -5.9 | Long | | | | | Short | 1 |
| Birthweight | -1.5 | Heavy | | | | | Light | 1 |
| Beef Significance | EBV | | 99 th | 75 th | 50 th | 25 th | 1 st | %rank |
| 200 Day Weight | 35 | Light | | | | | Heavy | 45 |
| 400 Day Weight | 65 | Light | | | | | Heavy | 40 |
| Carcase Weight | 35 | Light | | | | | Heavy | 65 |
| Eye Muscle Area | 11.4 | Small | | | | | Large | 1 |
| Intramuscular Fat | 1 | Less | | | | | More | 15 |



Young Stabilizer® bulls grazing

Sexed Beef

LIC is excited to offer a number of breeds available for male-sorted frozen sexed beef semen:

Short gestation Hereford \$30.90 + GST

Short gestation Angus \$30.90 + GST

Polled Belgian Blue \$30.90 + GST

Polled Speckle Park \$36.25 + GST

Polled Hereford \$30.90 + GST

Polled Profit Maker® \$28.20 + GST

Polled Simmental \$28.20 + GST

Quantities are limited so contact your Agri Manager to place your order as soon as possible. Frozen sexed beef semen is a no-choice product.



Sexing Technologies are contracted to sex-sort LIC's top dairy and beef sires, and their state-of-the-art equipment optimises the staining of cells, removes dead sperm cells during the process, and utilises specialty media to ensure the best possible chances of conception.

LIC frozen sexed semen straws contain 4 million sperm cells per straw and achieve an average of 90% gender accuracy.

The use of female sex-sorted dairy semen across your top animals, and selective use of beef semen over cows that shouldn't be contributing replacement heifers can accelerate rates of genetic gain and progress toward any goal. Along with that, the use of beef semen presents an opportunity to reduce the number of lesser-value surplus calves leaving the farm.



Note: Users of frozen sexed semen are required to sign a disclaimer to acknowledge they may experience lower NRR results than expected

Single AI Use Provision: The customer agrees that each straw of sorted semen purchased or otherwise acquired by LIC shall only be used by the customer for the single use artificial insemination of one female bovine with the intent to produce a single offspring, and not for in vitro fertilization or embryo transfer unless specifically approved on an individual customer basis by Inguran d/b/a Sexing Technologies (Navasota, Texas, USA) in writing.

Additional Beef Bulls

Additional Beef Bulls

| Code | Breed | Name | Sire | Dam | Price (+GST) |
|--------|-------------------|---------------------------------------|--------------------------------|------------------------------|--------------|
| 716005 | Dexter | Jimaris Oakley Cruise | Whare Ra Cruise | Summer Wine Elleen Og | \$20.00 |
| 719032 | Galloway (Belted) | Ben 17-47 (Black) | Flemington Monty | Flemington Tina 3rd | \$35.00 |
| 711052 | Galloway | Tullamore Dusky Joe 93 (Dun) | Tullamore Dusky Lad 130 | Colvend Lizzy 348 | \$40.00 |
| 719117 | Galloway | Tekooa Lewis (White) | Tekooa Banner | Moonshine Lucky | \$35.00 |
| 717007 | Gelbvieh | Tawera Rau U822 (AI) | Double U Freedom Fog 201M (AI) | Tawera Mere PM213 (AI) | \$16.00 |
| 716016 | Hereford | Craigmore Opium 10214 Polled | Ardo Wairoa 5218 (BM) Polled | Craigmore Lydia 04074 Polled | \$20.00 |
| 702004 | Maine Anjou | Thanet Francois | HRS Patriot | Thanet Pandora | \$20.00 |
| 504574 | MRI | Glenmark Laurie | Crosslea Julius | Crosslea Hazel | \$12.00 |
| 504575 | MRI | Redford Manus 41 | Jasiri Ivan | Crosslea Ina | \$12.00 |
| 703097 | Red Angus | Rissington Lion King | Rissington Red | Rissington Red Sarah | \$12.00 |
| 715049 | Red Devon | Red Rocket 08/49 | - | - | \$18.00 |
| 717040 | Red Devon | Waiuku Fire 48/16 | Tinopai TO 1359 (P) | Tinopai IQ Helen 1256 (P) | \$16.00 |
| 703046 | Red Poll | Willowlea Super Sire | Oakwood Super Sire | Willow Lea Christina R15 | \$8.00 |
| 716004 | Santa Gertrudis | Blue Stone CJ 174 | Gyranda Crackerjack V532 | Bluestone Anne A506 | \$10.00 |
| 714033 | Scottish Highland | Harry PBW4 (Black) | - | - | \$25.00 |
| 715139 | Scottish Highland | Balmoral of Berwick (Red) | Campbell Og of Killara | Isabella of Berwick | \$25.00 |
| 719034 | Scottish Highland | Ice of Strathburn (Cream) | | | \$25.00 |
| 711016 | Simmental (Red) | Rissington New Standard AN158 (Solid) | Puketawa New Level | Rissington AN398 | \$16.00 |
| 716061 | Speckle Park | Maungahina Kidmans Cove (Leopard) | SPKNZ Falcon | Mainstream E12 | \$20.00 |
| 720062 | Speckle Park | Maungahina Norgate N268 (White) | Maungahina Kidmans Cove | Maungahina H61 | \$20.00 |
| 710028 | Speckle Park | SPKNZ Empire King (Speckled) | Star Bank Lacerta 68L | River Hill Cinder 5M | \$20.00 |
| 719035 | Wagyu | Will 16-1006 | Longford FE02H | Dam 29 NZ Purebred | \$14.00 |
| 719036 | Wagyu | Winston 16-1008 | - | - | \$14.00 |

Order in quantities of x5 straws per bull.

Beef Options

Beef bulls are selected predominantly for calving ease and gestation length within breed.

You may purchase pack semen from any of the following breeds (you have no choice of bulls within each breed):

| | | | |
|--------------------|---------------|--------------|---------------|
| Angus | Charolais | Murray Grey | Profit Maker® |
| Belgian Blue | Limousin | Piedmontese | Stabilizer® |
| Beef Shorthorn | Lowline Angus | Hereford | Simmental |
| Blonde D'Aquitaine | Romagnola | Speckle Park | |

Order in quantities of x5 straws per pack

*InvestaMate discounts may apply if all discount criteria are met

Per straw from **\$10.20***
+gst

LIC

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