SHORTHORN BEEF PROGENY TEST PROGRAMS

TWO TIERED GENETIC EVALUATION MODEL
The two-tier structure is designed to provide two levels of progeny evaluation supporting each other. Tier 1 provides a more rigid quality control of data collection, whilst tier 2 involves commercial industry involvement co-ordinated by seedstock herds in conjunction with Shorthorn Beef.

There are several unique features included in the two tiers:

- Participation costs are expected to be comparatively low in tier 2, allowing for easier access to the program and more widespread uptake.
- Tier 2 is designed to allow seedstock herds to develop satellite evaluation herds to strengthen their herd accuracies.
- Shorthorn Beef have contracted Sapien Technology to develop software designed to automate on farm data capture. This software is also designed to support the developing LDL system as well as support processor driven value payment systems.
- Shorthorn Beef will purchase data from participants; ensuring ownership of data is clearly delineated.
- Commercial breeders participating in the program will be given the tools necessary to measure on farm genetic outcomes.
- Progeny will be assessed, not only to strengthen Shorthorn Group Breedplan accuracies, but also to support the development of a multi breed analysis base.
- Progeny will have access to Breedplan EBV’s and Shorthorn Indexes. Phenotypic data captured for various markets and female production traits will be used to provide “proof of profit” for Breedplan EBV’s and Shorthorn Indexes.
- Proof of profit to be demonstrated and publicised to ensure the wider industry has an understanding of value creation from genetic evaluation.
- GGP-HD chip will be taken on every participating sire, with panels to be stored for later genomic chip training. Samples will be stored on every progeny for later use if required.
SHORTHORN BEEF
PROGENY TEST
ELITE MODEL

PURPOSE
To identify elite Shorthorn genetics that will contribute to increased genetic gain and EBV accuracy in the Shorthorn breed through improved rates of Artificial Insemination registrations from high accuracy Shorthorn sires.

STRUCTURE
Each Spring, 6 co-operator herds consisting of 100 Shorthorn females to be Inseminated randomly to 2 Shorthorn test sires and 1 Shorthorn Reference (High accuracy sire).
(1 proven refernce sire and 2 test sires.)

TEST SIRE COST
The cost to enrol each Shorthorn test sire in the Elite program will be $2,500 plus GST.

Table 1. Creating linkages between Co-operator herds

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<th>Herd Base</th>
<th>Reference Sire</th>
<th>Progeny</th>
<th>Test Sire A</th>
<th>Test Sire B</th>
<th>Test Sire C</th>
<th>Test Sire D</th>
<th>Test Sire E</th>
<th>Test Sire F</th>
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A group, limited to 6 Shorthorn sires, will be selected for each round of the Shorthorn Beef Elite Progeny Test program. A panel of independent assessors will select each sire to be included, with their key objectives being to select sires which are:

- Assessed for structural soundness and temperament.
- Are considered to be of sufficient genetic merit to be included as mainstream semen sires for the breed.
- Have a pedigree capable of strengthening linkages within the Shorthorn breed.

Test Sires will require:

- Active registration in Shorthorn Beef Herdbook or SFA registers.
- A GGP-HD panel must be recorded for each test sire.
- 200 units of semen must be stored for each test sire, plus a further 70 straws to be dispatched to ABS Australia for use within the Shorthorn Beef Elite progeny test program only.
- Semen collected must meet minimum health protocols and quality restrictions.

3 high accuracy Shorthorn sires, will be selected as reference sires, with specific attention to calving ease and birth weight, for reference sires used in co-operator heifer programs. Also, reference sires, which provide the greatest linkages within their respective breeds, will be chosen.
CO-OPERATOR HERDS

Co-operator herds will be required to:

- Provide permanent, individual ID of each participating female.
- Randomly inseminate females to one reference sire and two test sires using FTAI.
- Inseminated females to remain in a single contemporary group from joining.
- Joining details are to be recorded at joining using the Shorthorn Beef software provided.
- Calving date must be supplied.
- Calving Ease score must be supplied.
- Calf to be identified with an NLIS tag, which must be scanned into the Shorthorn software, supplied.
- Calf to have Dam ID entered into the Shorthorn software, which will correspond with joining details.
- 200 day weight to be taken on all progeny at weaning.
- Temperament score to be taken on all progeny at weaning.
- DNA samples to be collected on all progeny.
- Steer progeny must remain in a single contemporary group from weaning.
- Heifer progeny to remain in a single contemporary group from weaning.
- Steer progeny entering onto feed for finishing are to be weighed prior to entering feed system.
- Steers sold for slaughter, must have an on farm exit weight recorded.
- Steers sold as feeder steers, must have an on farm exit weight recorded.
- Steers must be slaughtered through an MSA feedback program. MSA feedback must be supplied on every steer processed.
- Steers must be slaughtered within their contemporary group.
- Heifers to have a 400-day weight taken at joining.
- Heifers to be ultrasound scanned prior to joining.
- Base herd cows must be registered with the Shorthorn Beef Commercial register for Shorthorn females or the Shorthorn Beef Appendix register for crossbred females or Shorthorn multi breed register for other breeds at no cost.
- Heifer progeny may remain on inventory with the Shorthorn Beef Commercial register for purebred females or the Shorthorn Beef Appendix register for cross bred females at no cost, provided recorded females remain within the Shorthorn Beef Elite progeny test program, for use as breeders to test further sires.
- Registered females to remain within a single contemporary group.
- Registered females must have 600-day weight recorded and submitted.
- Registered females must be joined to calve at 22-26 months.
- Registered females to have a fate code supplied if necessary.
- Mature Cow Weight to be submitted on all registered female progeny at first calf weaning.
- Joining details to be recorded and supplied using the Shorthorn Beef software supplied.
- Any progeny deemed unsuitable for joining / slaughter or feeders, must have a fate code supplied.
- Any progeny removed from contemporary group or suffering illness or accident must have a fate code supplied.
- Shorthorn Beef will pay $30/head plus GST per progeny, to a total of 10 reference sire progeny and 20 test sire progeny per herd (maximum 2 herds) per sire, at 400 days, provided all data has been supplied correctly and is applicable for use in the evaluation system.

CO-OPERATOR BENEFITS

- Semen Supplied
- Calf ID Tags supplied
- Ultrasound costs supplied
- Breedplan membership
- Freight subsidy
- $30 progeny premium
- Guaranteed feedback
- Herd performance report
TRAITS RECORDED

- Gestation Length
- Calving Ease Direct
- 200 Day weight
- Temperament Score
- 400 Day weight
- Ultrasound Fat Depth
- Ultrasound EMA
- Ultrasound IMF
- Carcass Fat Depth
- Carcass EMA
- Carcass Marbling (MSA Score)
- 600 Day Weight
- Mature Cow Weight
- GGP-HD recorded
- Days to Calving

COMMERCIALISATION STRATEGY

Shorthorn Beef have an understanding with ABS Australia to work conjunctively to raise the rate of AI registrations within the Shorthorn breed.

This has several key benefits:

- Increased rates of genetic gain.
- Decreased genetic intervals.
- Improved commercial value of Shorthorn cattle.
- Increased linkages between herds.
- Increased genetic diversity within herds.
- Improved percentage of saleable males.

To support this overall outcome, commercialisation must support this long-term strategy.

Participants would have the opportunity to enrol sires in an ABS Australia Shorthorn Young Sire Catalogue.

- Participants who enrol in the ABS SYS to supply 200 units for the ABS SYS.
- Young sires to be enrolled in ABS SYS Catalogue for a period of 1 year unless units sell prior.
- ABS Australia to promote young sires to the industry.
- Semen to be marketed at commercially attractive rates.
- Participants receive a percentage of semen sales, which supports enrolment in the program.
- Participants are required to have semen of enrolled sires in storage anyway.
- Increased uptake of sires will provide a wider proof through Seed stock herds.
- ABS Australia to have first right of refusal to market proven sires.

The commercialisation strategy has several key benefits:

- Increases competition for, and awareness of, AI sires available.
- Provides increased data collection on each sire.
- Improves linkages within the breed.
- Ensures that sires generate highest accuracies sooner, reducing genetic intervals and increasing genetic gain.

COMMUNICATION STRATEGY

A series of Field Days to be run at Co-operator herds, which will demonstrate the performance from the sire groups as well as promote further understanding of the benefits of genetic improvement and genetic analysis to members. New technologies and techniques will also be able to be promoted from this platform.

Creation of an annual magazine, to continue the messages to the wider industry, who may not be able to attend the field days.
SHORTHORN BEEF
PROGENY TEST
COMMERCIAL PROGRAM

Shorthorn Beef Commercial Progeny Test program is designed to assist seed stock breeders develop progeny test programs within their commercial breeders network. Data captured flows back into the overall Shorthorn Beef analysis, allowing the Shorthorn Breed to develop greater accuracy in prediction.

Commercial producers are encouraged to develop a deeper understanding of genetic progress within their systems. This understanding will assist them with a move towards value based payment systems within the Beef industry. Software development allows commercial breeders to capture data automatically during routine management practices. As the LDL system becomes operational, Shorthorn Beef software provides the on farm collection segment, allowing for capture of whole of life data.

Commercial producers will be required to use a high accuracy reference sire before test sires can be analysed. Shorthorn Beef retains the right to refuse entry to any sire into the program.

TEST SIRE COST
The cost per each test sire enrolled will be $785 plus GST.

Test Sires will require:
• Active registration in Shorthorn Beef Herdbook or SFA registers.
• A GGP-HD panel must be recorded for each test sire.

Co-operator herds will be required to:
• Provide permanent, individual ID of each participating female.
• Randomly inseminate 50 females to one reference sire.
• Cows to remain in recorded contemporary group from joining
• Joining details are to be recorded at joining using the Shorthorn Beef software provided.
• Calving week must be supplied.
• Calf to be identified with an NLIS tag, which must be scanned into the Shorthorn software, supplied.
• Calf to have Dam ID entered into the Shorthorn software, which will match up against joining details.
• 200 day weight to be taken on all progeny at weaning.
• Temperament score may be taken on all progeny at weaning.
• Steer progeny to remain together within a contemporary group from weaning.
• Heifer progeny to remain together within a contemporary group from weaning.
• Steer progeny entering onto feed for finishing are to be weighed prior to entering feed system.
• Steers sold for slaughter, must have an on farm exit weight recorded.
• Steers sold as feeder steers, must have an on farm exit weight recorded.
• Steers must be slaughtered through an MSA feedback program. MSA feedback must be supplied on every steer processed.
• Steers must be slaughtered within their contemporary group.
• Heifers to have a 400-day weight taken prior to joining.
• Heifers must be ultrasound scanned prior to joining.
• Heifer progeny may remain on inventory with the Shorthorn Beef Commercial register for purebred females or the Shorthorn Beef Appendix register for crossbred females at no cost, provided recorded females remain within the Shorthorn Beef Elite progeny test program, for use as breeders to test further sires.
• Base herd cows must be registered with the Shorthorn Beef Commercial register for Shorthorn females or the Shorthorn Beef Appendix register for crossbred females or Shorthorn multi breed register for other breeds at no cost, provided recorded females remain within the Shorthorn Beef Elite progeny test program.
• Any progeny deemed unsuitable for joining / slaughter or feeders, must have a fate code supplied.
• Any progeny removed from contemporary group or suffering illness or accident must have a fate code supplied.
• Shorthorn Beef will pay $10/head plus GST per progeny, to a total of 30 head reference sire progeny and 40 head per test sire progeny, per herd (maximum 1 herd) per sire, at 400 days, provided all data has been supplied correctly and is applicable for use in the evaluation system. Only commercial herds will be eligible for rebate.