



#### The Beef Shorthorn Cattle Society

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## Beef Shorthorn Cattle Society – Breed Objection Selection Indexes

The Beef Shorthorn Cattle Society now provides three selection indexes through its performance recording provider, Breedplan. A Maternal Index now joins the Self-Replacing and the Terminal Index, both of which have been updated.

### What is a Selection Index?

Breedplan calculates Estimated Breeding Values (EBVs) for a range of economically important traits. While this provides cattle producers with a comprehensive range of information regarding the genetic merit of an animal, it can result in a dilemma when trying to select animals for use in a particular breeding program. In an ideal situation, it would be desirable to select animals that excel in all traits, but rarely will an animal be superior for all the available EBVs. So which traits should producers put most emphasis on? How much emphasis should be placed on each trait?

**BreedObject** is a tool that can help solve this dilemma. BreedObject combines the Breedplan EBVs for an animal with an economic weighting (based on costs of production and returns on outputs), to produce a single Selection Index. A separate Selection Index can be produced for any particular production scenario and market. Selection Indexes enable cattle producers to make 'balanced' selection decisions, taking into account the relevant growth, carcase and fertility attributes of each animal to identify the animal that is most profitable for their particular commercial enterprise. Selection Indexes reflect both the short term profit generated by a sire through the sale of his progeny, and the longer term profit generated by his daughters in a self-replacing cow herd.

### Using Selection Indexes

Care should be used when utilising these indexes. Cattle can attain similar index values through different EBV values. For example, if selecting a bull using the Maternal Index – and calving ease direct is of particular importance in your management system – be sure to check the individual EBV. Bulls with poorer values for this trait may attain a high index value by excelling in other traits.

In other words, use the Selection Index for your initial selection before examining the individual traits.

Please note:

- The Maternal Index, in particular, places a high emphasis on fertility. This is measured by the Days to Calving EBV. This is the only EBV that collects calving regularity data. Until more herds record this data, then the spread between the highest and lowest maternal value indexes will be small. We would therefore encourage all breeders to collect the necessary data on an ongoing basis. Forms for collecting this data will be available from July 2019 onward. Back data from previous years can also be collected.
- The Terminal and the Self Replacing Indexes have been updated. Breeders will notice that animals have new index values and there will be some changes to the previous rankings.

Patron: Her Royal Highness The Princess Royal

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## Index descriptions

**Maternal** – The Maternal Index is designed for a commercial Beef Shorthorn/cross herd that is focussed on breeding herd replacements and on weaning as many and as heavy calves as possible at 8 months of age. It estimates the genetic differences between animals in net profitability per cow joined for an example Beef Shorthorn Euro cross commercial cow herd targeting the production of pasture grown calves. Steers and heifers are weaned and marketed at an average of 350kg live weight at 8 months of age for further finishing or as replacement heifers.

**Self-Replacing** – The Self-Replacing Index is designed for a purebred commercial Beef Shorthorn herd that is focusing on breeding both herd replacements and finishing all steers and surplus heifers. It estimates the genetic differences between animals in net profitability per cow joined for an example Beef Shorthorn commercial cow herd targeting the production of finishing steers (average 150 days on feed). Steers are then marketed at an average of 650kg kg live weight (355kg carcass weight) at 20 months of age. Some daughters are retained for breeding.

**Terminal** – The Terminal Index is designed for a commercial herd using the Beef Shorthorn as a Terminal Sire. It estimates the genetic differences between animals in net profitability per cow joined for an example Shorthorn Euro cross commercial cow herd targeting the production of finishing heifers and steers (average 150 days on feed). The heifers and steers are then marketed at an average of 590kg live weight (320 kg carcass weight) at 21 months of age. All progeny are slaughtered.

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