

United Kingdom South Devon Selection Indexes: Technical Specifications



The South Devon Herd Book Society (SDHBS) currently reports two different selection indexes. These are the:

- Quality Beef Index
- Suckler Replacement Index

All of the selection indexes described above have been derived using [BreedObject](#) software. The BreedObject selection index development process involves four major steps. These steps are:

1. A detailed description of the input costs and value generation of the commercial herd and target production system.
2. Once the target production system is described, the BreedObject software evaluates how each trait influences profitability and the economic value of improving each trait.
3. The BreedObject software then assesses what emphasis needs to be applied to each Estimated Breeding Value (EBV) trait to achieve the maximum profitability in the production system and for the market end point for which that index was designed. This step includes evaluating the selection response expected from direct selection on the individual EBVs and the correlated responses expected from selection on related EBVs.
4. The importance placed on each EBV results in the selection index value that is calculated for each animal.

Each selection index describes a different production system/market scenario and relates to a typical commercial herd using South Devon bulls. As is the case for EBVs, each selection index can be used to rank and compare animals on their genetic merit. Producers are advised to use the selection index that most closely aligns to their production system. See the [Using United Kingdom South Devon Selection Indexes](#) tip sheet, available in the [Help Centre](#) on the BREEDPLAN website, for further information on the identification and utilisation of the most applicable selection index for your herd.

All selection indexes are reported in units of net profitability per cow mated (£) for the production system/market scenario they describe. Selection indexes account for both sides of the profit equation (costs as well as income), and also reflect the relative short and long term profit associated with possible selection decisions. For example, short term profit can be generated by a bull through the sale of his progeny, and the longer term profit generated by his daughters in a self-replacing cow herd.



Each of the selection indexes are focused on efficient beef production while also targeting the following specifications:

Quality Beef Index - Estimates the genetic differences between animals in net profitability per cow mated for a typical commercial herd targeting the EU market with no marbling requirement. All progeny target 600-700 kg live weight (335 -380 kg carcass weight) at 14 - 20 months of age. Some inclusion of calving ease and gestation length to maintain reasonable calving experience.

Suckler Replacement Index - Estimates the genetic differences between animals in net profitability per cow joined for a typical commercial herd selecting their own females as replacements while producing males and excess heifers to target the EU market with no marbling requirement. All males target 660 kg live weight (355 kg carcass weight) at 18 months of age. The South Devon Suckler Replacement Index has emphasis on calving ease and maternal traits whilst also looking to finish males for slaughter using a pasture based production system supplemented with extra rations during the finishing phase.

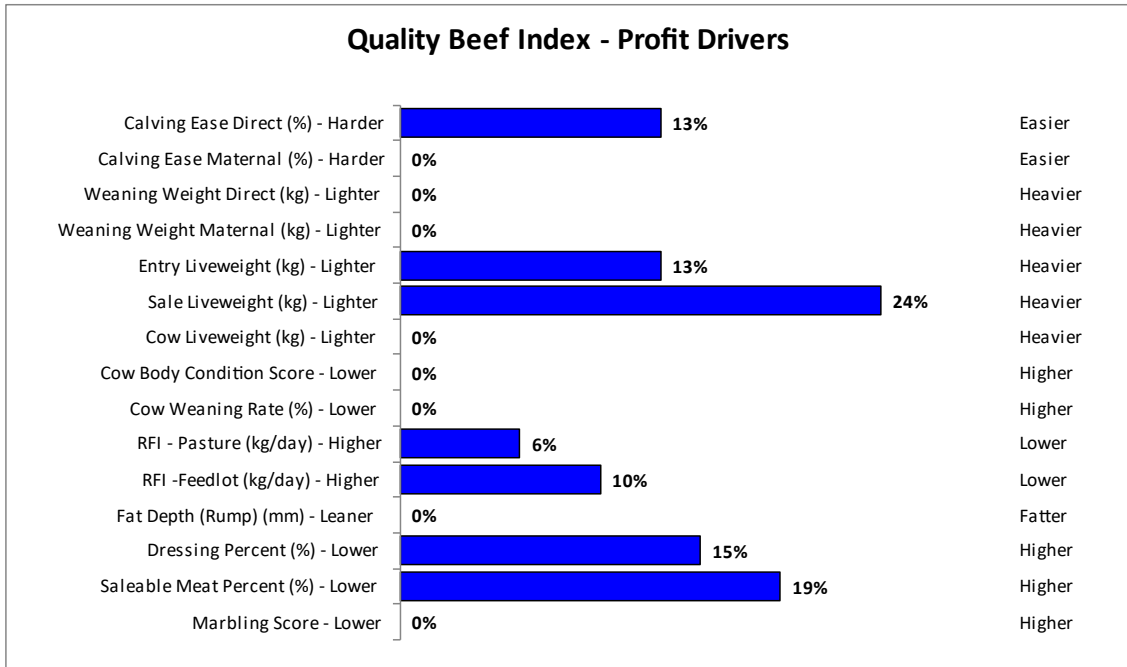
More detailed information regarding each selection index is provided on the following pages.

If you have any further queries regarding the United Kingdom South Devon Selection Indexes, please do not hesitate to contact staff at the SDHBS office on +44 01392 447494.

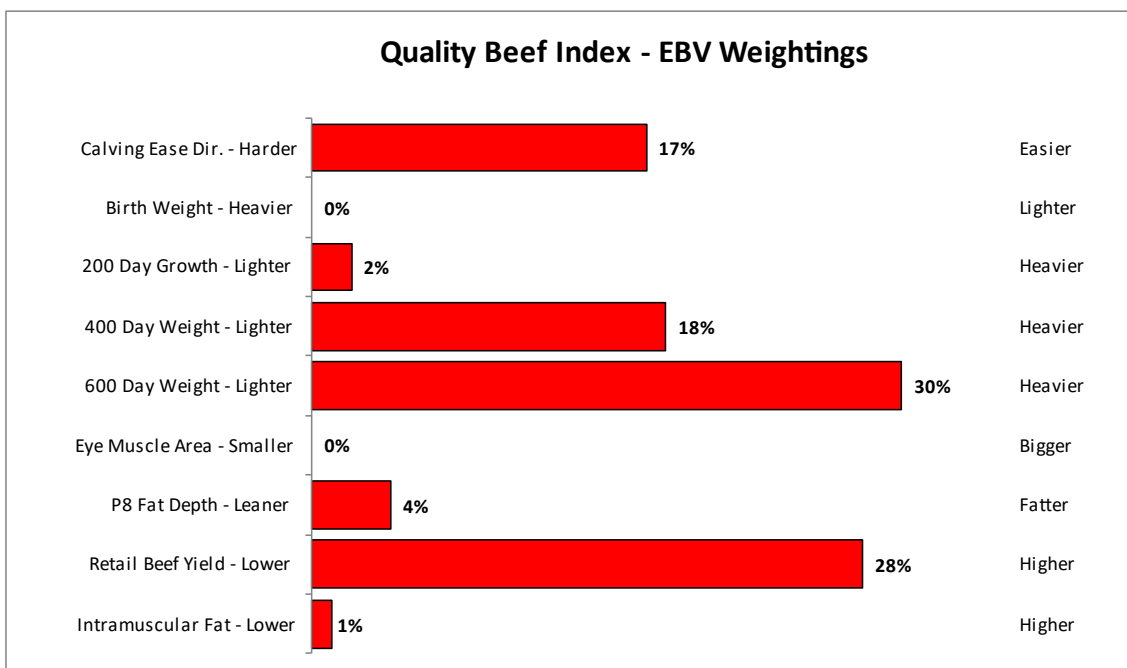


Quality Beef Index

The following bar graph shows the **key economic traits**, as determined by the BreedObject software, that are important in this selection index. The different trait emphases reflect the **underlying profit drivers in a commercial operation** targeting the described production system/market.

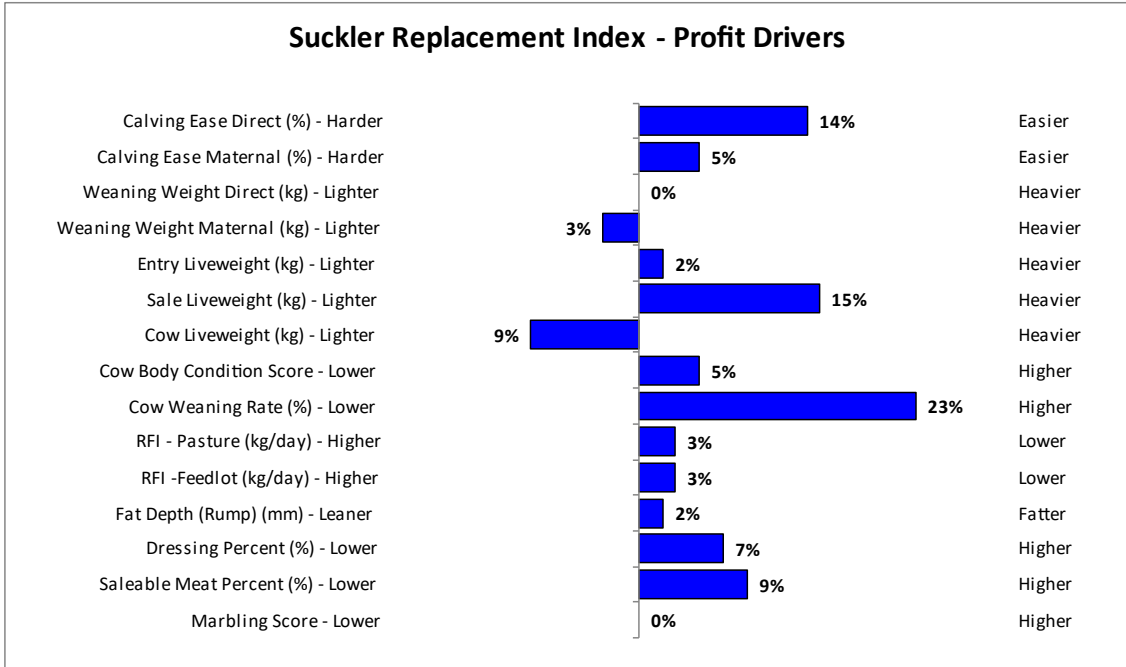


The bar graph below illustrates the magnitude and direction of emphasis that has been placed on each **BREEDPLAN EBV** within this selection index. These weightings represent the **most profitable combination of EBVs**, as determined by the BreedObject software, for the described production system/market.



Suckler Replacement Index

The following bar graph shows the **key economic traits**, as determined by the BreedObject software, that are important in this selection index. The different trait emphases reflect the **underlying profit drivers in a commercial operation** targeting the described production system/market.



The bar graph below illustrates the magnitude and direction of emphasis that has been placed on each **BREEDPLAN EBV** within this selection index. These weightings represent the **most profitable combination of EBVs**, as determined by the BreedObject software, for the described production system/market.

