



## WAGYU BREEDOBJECT \$INDEX BACKGROUND INFORMATION

- BreedObject \$Indexes can help you breed more profitable cattle. They help you target the type of commercial herd performance you need for a given production system by identifying appropriate seedstock.
- BreedObject \$Indexes draw together the BREEDPLAN Estimated Breeding Value (EBV) figures of animals into a single EBV. The \$Index, describes how the animals will influence the profitability of a particular production system.
- BreedObject \$Indexes are intended for use by both stud and commercial beef producers. If you are interested in more than one type of commercial production purpose, you will be interested in more than one \$Index.

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## THE PROFIT TARGET FOR BREEDING

The commercial beef animal has to be profitable for the whole supply chain. It consequently makes sense that the factors which should guide breeding decisions are those which affect profit in the commercial production system. Ultimately, seedstock need to be able to produce commercial beef animals that can make money wherever it is that they are asked to perform.

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*There is considerable similarity in the profit target for breeding irrespective of whether this is viewed from the perspective of the bull breeder or from that of the beef producer buying bulls.*

*In both cases, it is profitability over the whole commercial production system that needs to be the target. The profitability of the cow herd and that of the calf, from birth to slaughter, are involved. The genes that control all these aspects of performance are contained in every animal and BreedObject Indexes help select favourably for these.*

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The beef producer who buys bulls will place greater emphasis on commercial production system profitability. Factors which affect commercial production system profitability will guide trait emphasis in bull choice. BreedObject \$Indexes consider profitability across the whole commercial production system, for Wagyu, these are:

1. A Self-replacing breeding herd, where female progeny is retained for breeding and surplus female and steer progeny are feedlot finished.
2. A commercial Fullblood or Purebred producer, where all female and male are feedlot finished.
3. A commercial F1 producer who uses Fullblood Wagyu bulls over non-Wagyu females, where all progeny, female and male, are feedlot finished.

### HOW BREEDOBJECT \$INDEXES WORK

1. BreedObject requires a detailed description of the input costs and value generation of the commercial herd and target market system to allow the development of the \$Index.
2. Once the targeted system has been described, a trait-level analysis of which production traits affect profit is performed.
3. The BreedObject software assesses what emphasis is then justified (to address the target) on the different BREEDPLAN EBVs that are available for the breed.
4. The importance placed on each EBV results in the \$Index value that is calculated for each animal.

\$Indexes, despite having market-oriented names, are just as much concerned with costs of production as they are with market returns. Both costs and returns are considered, as they need to be, when the focus is commercial production system profitability. Differences in the \$Index values describe how animals are expected to benefit profitability in the described production system. The \$Index is an EBV for profit for the specified production system and ranking seedstock on their \$Index sorts them for their progeny's expected profitability for the targeted production system.

BreedObject \$Indexes assess genetic potential for progeny performance. They tell you what to expect from progeny on average. They don't describe how bulls themselves will perform, for example during joining. Issues of structural and reproductive soundness need to be considered by visually inspecting the animal.

### USE OF WAGYU \$INDEXES

There are three Wagyu BreedObject \$Indexes developed. These are:

1. SRI – Wagyu Self-Replacing Breeding \$Index: ranks animals based on profitability for a commercial Fullblood or Purebred self-replacing herd that retains heifers for breeding and sells steers and surplus females as feeders for feedlot finishing.
2. FTI – Wagyu Fullblood Terminal \$Index: ranks animals based on profitability for a commercial Fullblood or Purebred herd in which all progeny are sold as feeders for feedlot finishing.
3. F1 Index – Wagyu F1 Terminal \$Index: ranks animals based on profitability for an F1 production system using Wagyu bulls and non-Wagyu females, where all progeny are sold as feeders for feedlot finishing.

Each \$Index is targeted specifically to an individual production scenario and members should identify and use the index that best describes their supply chain and use that \$Index. It is not appropriate to compare animals across different \$Indexes as each \$Index is based on different production models.

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*It is not the \$Index with the highest \$ value that you should use, it is the \$Index that best reflects your production system.*

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### DEVELOPMENT OF BREEDOBJECT

The BreedObject technology was developed by the Animal Genetics and Breeding Unit (AGBU), a joint venture of NSW Agriculture and the University of New England, with financial assistance from Meat and Livestock Australia. 'BreedObject on the web' is an AGBU-led project backed by a consortium that includes the Agricultural Business Research Institute, breed societies through the Performance Beef Breeders' Association, Meat and Livestock Australia and NSW Agriculture.

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