



BREEDPLAN

BREEDPLAN is a modern genetic evaluation system for beef cattle breeders. Developed in Australia, it is now used in most of the world's prominent beef producing countries. BREEDPLAN is the national beef recording scheme in Australia, New Zealand, Thailand, Hungary, Namibia and the Philippines. Its use is increasing in the United States, Canada, United Kingdom, Argentina, Brazil, South Africa and Botswana.

The BREEDPLAN genetic evaluation software is integrated with the pedigree software provided by the Agricultural Business Research Institute (ABRI).

BREEDPLAN technology can be used at a number of levels eg. within-herd analyses for individual breeders, across-herd analyses for members of a breed association or breeding group or international genetic evaluations where breed associations from a number of countries pool their data for analysis.

A Wide Range of Traits

BREEDPLAN has for many years provided an estimation of expected performance for the following production traits....

Growth/Efficiency	Fertility	Carcase
Birth weight 200-day milk 200, 400 and 600-day weight Mature cow weight Net_Feed_Intake	Scrotal Size Days to Calving Gestation length Calving Ease	Carcase weight Eye Muscle area Fat thickness Meat Yield %
		

The figures for these traits are expressed as “**Estimated Breeding Values**” (EBVs). Included in the calculation of EBVs are the animal's own performance, the performance of all known relatives, the heritability of each trait and the relationship between the traits. EBVs are expressed in actual units of measurement and reported as being “positive” or “negative” relative to the breed base for each trait. EBVs for Net Feed Intake and Docility have been introduced recently.

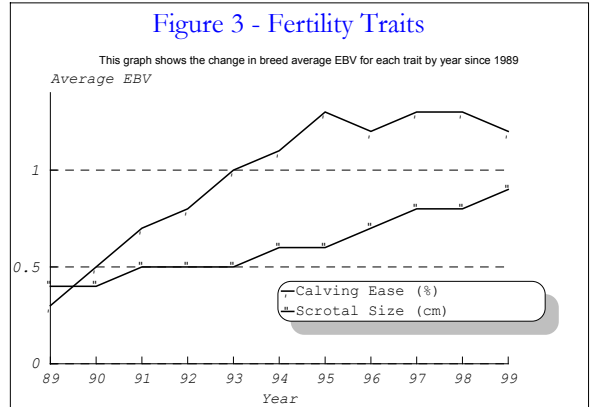
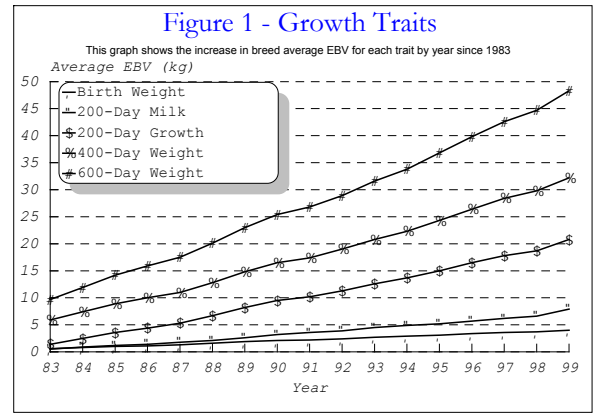
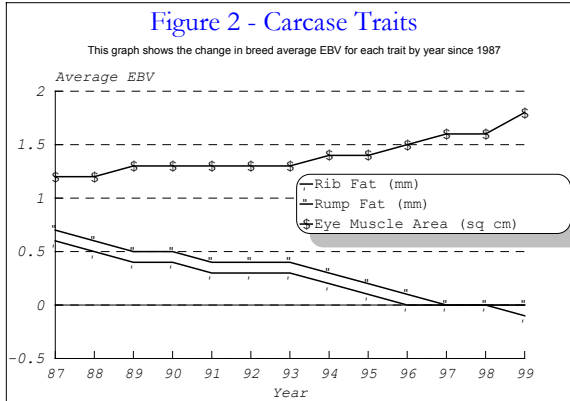
What research and development is behind BREEDPLAN?

Around R9.0 M per year is being invested in upgrading the BREEDPLAN evaluation procedures. This keeps the system on the leading edge internationally. Recently, a detailed evaluation of over 10 million performance records was undertaken to calculate heritabilities and adjustment factors that are specific to the main breeds. These new factors have been included in the BREEDPLAN system to maximise the accuracy of the calculations.

BREEDPLAN herds are also closely involved in major meat quality and breeding herd efficiency research projects. These have been collaboratively funded by the Australian Government, the Australian beef industry and four of Australia's research organisations to the tune of R420 M over the current seven years. These exciting projects will provide important new technologies for inclusion in the BREEDPLAN services of the future.

Outstanding Genetic Progress

Since the mid 1980s Hereford cattle breeders in Australasia have been using BREEDPLAN for their performance recording. Figure 1 shows the outstanding genetic gains for growth traits since 1983. More recently the recording programs have given greater emphasis to carcase and fertility traits. Figure 2 shows how EBVs for eye muscle area have been increased and rib and rump fat decreased. In combination this increases beef yield. Figure 3 shows that scrotal size in bulls has been increased (indicating higher fertility) and calving ease has been improved as well.



How to use BREEDPLAN

Use of the BREEDPLAN service is easy. The minimum requirements are:

- Record birth dates
- Tag calves
- Record sire and dam of each calf
- Weigh calves at least once, usually around 200 days.

That is, the fourth step is the only work additional to keeping normal breeding records.

Please note that it is not necessary to weigh calves at birth and BREEDPLAN can be used effectively by **both stud and commercial breeders**.

Of course, you can go a lot further and record the following optional information:

- Birth weight and calving ease
- Yearling and 18 month old weights
- Live animal fat and muscle scans
- Scrotal circumference
- Date bull introduced to breeding cows
- Carcase data from abattoirs

In summary, BREEDPLAN is an inexpensive breeding tool that helps to put more money in your pocket - irrespective of whether you are breeding stud or commercial cattle or both. That's what's so good about it. That's why it's been such a success internationally.

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