

\$ indexes and web based search facilities for bull buyers

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Session 6c

\$ Indexes

For Angus cattle there are currently EBVs available for 18 traits. Considering all of these traits when selecting bulls can quickly lead to information overload and it's difficult to find animals that are superior in all traits. A selection index is a way of combining EBVs for traits of economic importance into a single figure so that animals are selected on a "total merit" basis for a particular market purpose. In an ideal situation we would be able to select animals for breeding that excel in all traits. But in reality it is nearly always necessary to make some compromises in balancing the strengths and weaknesses among animals available. \$Indexes are also helpful in that they can weight inferiority in one trait against superiority in another.

All performance recorded registered Angus cattle now have available \$ Index values for four standard markets or breeding objectives through the Angus Society website. These are the long-fed Japanese market, the Certified Australian Angus Beef market, grass-finished production for the Domestic Supermarket trade, and the Northern Terminal index. Many other breeds have Indexes available for their particular target markets too. For example performance recorded registered Hereford cattle now have available \$ Index values for the Hereford Prime market.

\$ Indexes are expressed as net profitability per cow joined. For example if bull A has a \$ Index value of +\$60 and bull B has a \$ Index value of +\$30 then the expected difference in profit from the bull's progeny would be:

$$\begin{aligned} &= \frac{1}{2} \times \$ \text{ Index difference } (60 - 30) \\ &= \$15 \text{ per cow joined} \end{aligned}$$

If the bulls were joined to 200 cows during their herd life, the potential extra profit from bull A is $200 \times \$15 = \$3,000$. \$ Indexes are useful to help you determine how much extra money a certain bull is worth when you're purchasing your herd sires

As mentioned above, the Angus breed have \$ Index values for four standard markets. For example:

- The Angus domestic supermarket index specifies that you be selecting a bull for a self-replacing herd in temperate Australia targeting grass-finished production for the domestic supermarket trade with no requirement for marbling.
- The Angus CAAB index is suitable for a self-replacing herd in temperate Australia targeting the production of steers for the Certified Australian Angus Beef program. Cargill require cattle in the 360 – 460 kg liveweight range to be grainfed for 150 days. Carcase targets are 340 – 420 kg marble score 2 with 15 – 20 mm fat.

But what if these scenarios don't suit your situation?

A software program called BreedObject is available at the web address www.breedobject.com. It is fully customisable. For example you can specify whether the bull you're shopping for will be used in a self-replacing herd or as a terminal sire or whether it will be used in temperate or tropical Australia, price penalties for unfinished cattle etc.

Use \$ Indexes and...

1. Visual Appraisal

It is important to note that not all traits of economic importance have EBVs available and therefore not all traits of economic importance are included in the \$ Indexes. For example, structural soundness, maturity type, and temperament EBVs aren't available for most beef bulls and shouldn't be neglected when making selection decisions. Look at both the animals in the figures below.

2. EBVs of particular importance to you

Bulls with the same or similar \$ Index rankings may be very different genetically as indicated in Figure 6c-1.

2003 Armidale Feeder Steer School

|  | Birth Weight (kg) | 200D Growth (kg) | 400D Growth (kg) | 600D Growth (kg) | Milk (kg) | Carcase Weight (kg) | EMA (sq cm) | Rib Fat (mm) | Rump Fat (mm) | Retail Beef Yield (%) | IMF % | CAAB Index |
|---|-------------------|------------------|------------------|------------------|-----------|---------------------|-------------|--------------|---------------|-----------------------|-------|------------|
| V1 | +3.9 | +24 | +46 | +59 | +9 | +25 | +1.2 | +1.4 | +1.5 | -0.9 | +0.9 | +34 |
| V2 | +5.4 | +37 | +60 | +76 | +9 | +32 | +1.0 | -0.5 | -0.4 | +0.1 | +0.1 | +35 |

Figure 6c-1.

A \$ Index value doesn't give you information on specific traits. For example if feedback from cattle that you have sent through the Certified Australian Angus Beef program shows that your steers growth performance is excellent however marbling performance is extremely poor then bull V1 with a higher IMF% EBV is more valuable to you than V2. Use \$ Indexes and minimum and maximum standards for traits of particular importance to you.

Internet Database Search Facilities for Bull Buyers

Many of the breed society websites have a database enquiry facility, "EBV Enquiry", which allows you to search for and sort animals that meet certain EBV and or \$ Index criteria. Refer to Figure 6c-2.

Figure 6c-3 is a list of bulls that meet the search requirements specified in the example search screen: bulls for sale with a minimum IMF% EBV of 0.4 and minimum CAAB \$Index of 40, ranked by CAAB \$ Index.

Clicking on any of the bull's names in the list produced will provide you with further details on that animal including EBV accuracies, traits for which performance information on that animal have been submitted to BREEDPLAN, the number of progeny which have had performance information submitted to BREEDPLAN, and the number of herds the performance data has been collected from (refer Figure 6c-4).

If you click on the graph picture on the left of the EBV box you'll get the EBVs displayed graphically. This also shows how that animal's EBVs rank against all performance recorded animals of that breed (in percentiles) (refer Figure 6c-5).

Sale catalogues listed on some breed society websites can also be searched and sorted online to find animals that meet your particular EBV requirements. These online services have the potential to save you substantial time and paper.

Summary

\$ Indexes are useful for bull buyers because they:

1. Allow you to calculate the difference in value of bulls and therefore help you in making more rational purchase decisions.
2. \$ Indexes simplify bull selection.
3. \$ Indexes facilitate a "balanced" breeding program.
4. \$ Indexes facilitate 'market focused' breeding objectives.

Online database search and sort facilities can make your bull shopping more efficient.

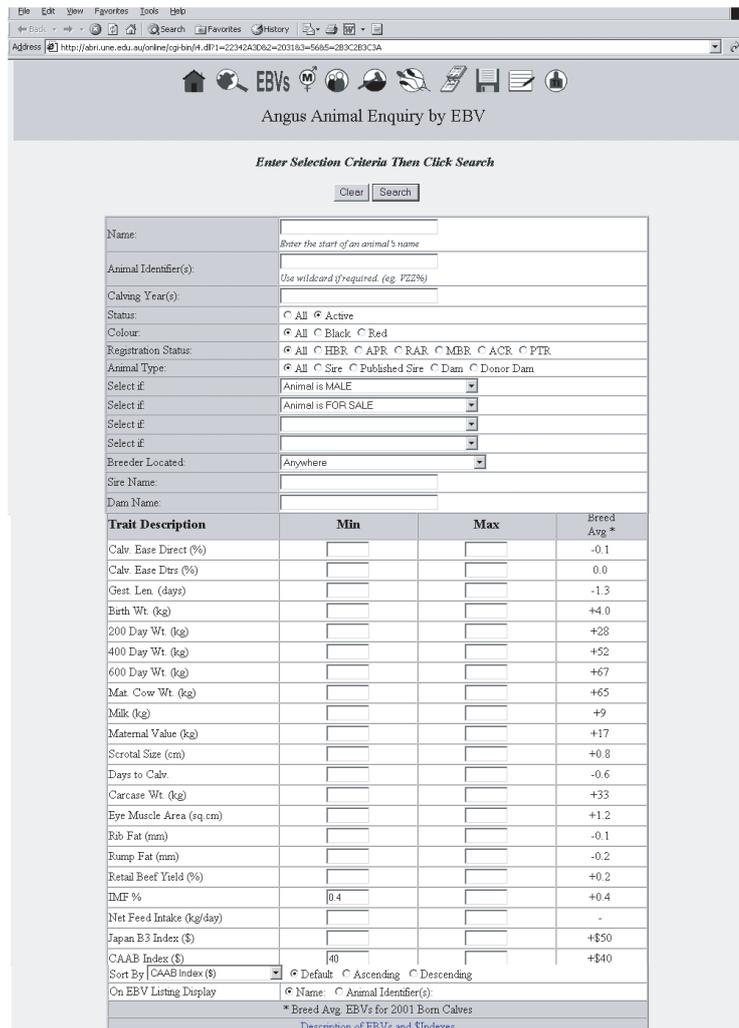


Figure 6c-2.

File Edit View Favorites Tools Help

Back Forward Stop Search Favorites History

Address http://abri.une.edu.au/online/cgi-bin/i4.dll?1=22342A3D&2=23375F&3=56&5=2B3C2B3C3A&8=4853&9=50595950

EBVs

Angus Animal Listing

Entries: 1 ~ 114 of 114 are shown Sorted by: CAAB Index (\$) - descending

Hide EBVs Show EBV Acc Hide \$Index Values Show Entries by Page

Selection Criteria: Status: Active, Animal is MALE, Animal is FOR SALE, IMF % >= 0.4, CAAB Index (\$) >= 40,

| Name/ID | Calv. Esc Direct (%) | Calv. Esc Dms (%) | Gest. Len. (days) | Birth Wt. (kg) | 200 Day Wt. (kg) | 400 Day Wt. (kg) | 600 Day Wt. (kg) | Mat. Cow Wt. (kg) | Milk (kg) | Maternal Value (kg) | Scrotal Size (cm) | Days to Calv. | Carcass Wt. (kg) | Eye Muscle Area (sq.cm) | Rib Fat (mm) | Rump Fat (mm) | Retail Beef Yield (%) | IMF % | Net Feed Intake (kg/day) | Japan B3 Index (\$) | CAAB Index (\$) | Super market Index (\$) | Northern Terminal Index (\$) |
|---|----------------------|-------------------|-------------------|----------------|------------------|------------------|------------------|-------------------|-----------|---------------------|-------------------|---------------|------------------|-------------------------|--------------|---------------|-----------------------|-------|--------------------------|---------------------|-----------------|-------------------------|------------------------------|
| WILSON DOWNS NEW DESIGN W55 (AI) (ET) | - | - | -3.8 | +5.4 | +40 | +79 | +107 | +96 | +16 | - | +2.0 | -1.1 | +57 | +4.1 | -0.9 | -0.9 | +1.8 | +1.8 | - | +\$101 | +\$76 | +\$62 | +\$72 |
| NAROOLA WALNUT W44 (AI) | - | - | -5.1 | +3.2 | +41 | +75 | +95 | +72 | +20 | - | - | - | +54 | +2.4 | -0.6 | -0.8 | +1.3 | +0.5 | - | +\$84 | +\$69 | +\$64 | +\$55 |
| NORANDA WATERMAN W117 (AI) | - | - | -2.6 | +6.1 | +37 | +65 | +85 | +75 | +16 | - | +2.5 | -6.1 | +40 | +2.3 | +1.4 | +1.8 | -0.9 | +2.0 | - | +\$93 | +\$69 | +\$52 | +\$51 |
| ROSELEIGH WADE W34 | - | - | - | +5.1 | +40 | +85 | +103 | +94 | +12 | - | +2.5 | - | +63 | +3.0 | -0.2 | -0.3 | +0.6 | +0.9 | - | +\$82 | +\$66 | +\$60 | +\$59 |
| ROBONBEL WATSON W56 (AI) | -2.2 | -0.5 | -0.5 | +6.8 | +42 | +77 | +104 | +93 | +15 | - | +1.9 | +1.4 | +54 | +1.6 | -1.6 | -1.8 | +1.7 | +1.3 | - | +\$85 | +\$65 | +\$56 | +\$65 |
| LITTLE MEADOWS WINNING DESIGN W17 (AI) (ET) | -0.4 | +0.8 | -2.6 | +4.6 | +36 | +65 | +83 | +62 | +15 | - | +0.6 | -1.3 | +44 | +2.9 | -0.7 | -0.6 | +1.7 | +0.9 | - | +\$81 | +\$65 | +\$55 | +\$54 |
| NAROOLA WARSAW W39 (AI) | - | - | -4.5 | +3.9 | +41 | +72 | +90 | +71 | +16 | - | - | - | +48 | +1.5 | -0.9 | -1.2 | +0.9 | +0.7 | - | +\$78 | +\$63 | +\$56 | +\$51 |
| ROBONBEL WARBURTON W82 | - | - | - | +4.2 | +34 | +62 | +91 | +74 | +13 | - | +0.3 | - | +44 | +0.8 | -0.2 | -0.3 | +0.3 | +1.1 | - | +\$84 | +\$63 | +\$54 | +\$52 |
| ROBONBEL WARREN W80 (APE) | - | - | - | +4.2 | +37 | +71 | +92 | +94 | +15 | - | +2.7 | - | +50 | +1.0 | -0.6 | -0.5 | +0.7 | +1.4 | - | +\$81 | +\$63 | +\$54 | +\$56 |
| ROBONBEL WALTER W07 (AI) | -0.6 | +0.5 | -2.4 | +4.1 | +33 | +60 | +80 | +56 | +15 | - | +1.3 | +0.4 | +34 | +1.2 | +0.4 | +1.1 | -0.1 | +2.1 | - | +\$90 | +\$62 | +\$47 | +\$52 |
| NORANDA WILLOBURN W24 (AI) | +1.8 | - | -2.7 | +3.8 | +34 | +62 | +84 | +76 | +12 | - | +0.8 | -0.1 | +49 | +3.5 | +0.2 | -0.2 | +0.4 | +1.7 | - | +\$84 | +\$62 | +\$51 | +\$54 |
| NORANDA WAGNER W32 (AI) | - | - | -5.5 | +4.6 | +43 | +77 | +95 | +81 | +9 | - | +3.0 | -4.4 | +49 | +0.1 | -0.8 | -1.4 | +0.3 | +0.7 | - | +\$76 | +\$62 | +\$53 | +\$50 |
| ROSELEIGH WARRAGAMBA W13 (AI) | +4.0 | - | -3.8 | +1.3 | +30 | +62 | +78 | +76 | +14 | - | +0.4 | -0.2 | +52 | +3.5 | +0.5 | +0.3 | 0.0 | +1.8 | - | +\$84 | +\$62 | +\$52 | +\$50 |
| NAROOLA WRAITH W90 (AI) (ET) | -0.1 | - | -2.8 | +4.2 | +35 | +69 | +83 | +72 | +16 | - | +1.0 | -2.6 | +48 | +3.0 | +0.9 | +0.9 | -0.6 | +1.9 | - | +\$85 | +\$61 | +\$49 | +\$50 |
| ROBONBEL WATERHOUSE W61 | - | - | -2.1 | +4.3 | +34 | +67 | +85 | +77 | +12 | - | +0.3 | -0.1 | +49 | +2.1 | -1.4 | -2.1 | +1.7 | +0.9 | - | +\$77 | +\$61 | +\$54 | +\$54 |
| NAROOLA WEAPON W16 (AI) | - | - | -4.0 | +2.8 | +35 | +65 | +78 | +66 | +15 | - | - | - | +45 | +1.8 | +0.5 | +0.7 | 0.0 | +1.5 | - | +\$80 | +\$60 | +\$50 | +\$47 |
| ROBONBEL WILCANIA W88 (AI) | - | - | -3.2 | +4.0 | +33 | +60 | +80 | +65 | +13 | - | +0.8 | -2.1 | +40 | +2.0 | -0.2 | +0.2 | +0.9 | +1.0 | - | +\$77 | +\$60 | +\$51 | +\$49 |

Figure 6c-3.

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Address http://abri.une.edu.au/online/cgi-bin/i4.dll?1=22342A3D&2=232F5F&3=56&5=2B3C2B3C3A&6=5D5A5E26275922212289=50595950

EBVs

Angus Animal Details

WILSON DOWNS NEW DESIGN W55 (AI) (ET)

First Previous Next Last

Identifier: WIMW55
 Sex: Male
 Tattoo: WDA W55 (I) (Both Ears)
 Birth Date: 23/02/2001
 Calving Year: 2001
 Status: Active
 Registration Status: HBR
 Sire: B/R NEW DESIGN 036
 Dam: IMRAN CHAMPAGNE U02 (AI) (ET)
 Breeder: MCKAY FAMILY
 Current Owner: MCKAY FAMILY
 Progeny: [View All] [View by Herd]
 Pedigree: [View]

* Animal Currently For Sale *
 Lot: 1 - Wilson Downs Annual Sale 2003

| January 2003 ANGUS GROUP BREEDPLAN EBVS | | | | | | | | | | | | | | | |
|--|-------------------|----------------|------------------|------------------|------------------|-------------------|-----------|-------------------|---------------|------------------|-------------------------|--------------|---------------|-----------------------|-------|
| | Gest. Len. (days) | Birth Wt. (kg) | 200 Day Wt. (kg) | 400 Day Wt. (kg) | 600 Day Wt. (kg) | Mat. Cow Wt. (kg) | Milk (kg) | Scrotal Size (cm) | Days to Calv. | Carcass Wt. (kg) | Eye Muscle Area (sq.cm) | Rib Fat (mm) | Rump Fat (mm) | Retail Beef Yield (%) | IMF % |
| EBV | -3.8 | +5.4 | +40 | +79 | +107 | +96 | +16 | +2.0 | -1.1 | +57 | +4.1 | -0.9 | -0.9 | +1.8 | +1.8 |
| Acc | 57% | 62% | 66% | 66% | 66% | 61% | 57% | 69% | 53% | 62% | 58% | 60% | 60% | 59% | 57% |
| Breed Avg. EBVs for 2001 Born Calves (Click for Percentiles) | | | | | | | | | | | | | | | |
| EBV | -1.3 | +4.0 | +28 | +52 | +67 | +65 | +9 | +0.8 | -0.6 | +33 | +1.2 | -0.1 | -0.2 | +0.2 | +0.4 |

Traits Observed: 200WT, 400WT, 600WT, SS, FAT, EMA, IMF
 Hide \$Index Values

| SELECTION INDEX VALUES | | |
|------------------------------|------------------------------|-------|
| Market Target | \$ Index Value Breed Average | |
| Japan B3 Index (\$) | +\$101 | +\$50 |
| CAAB Index (\$) | +\$76 | +\$40 |
| Super market Index (\$) | +\$62 | +\$38 |
| Northern Terminal Index (\$) | +\$72 | +\$37 |

Explanation of \$Index Values

Figure 6c-4.

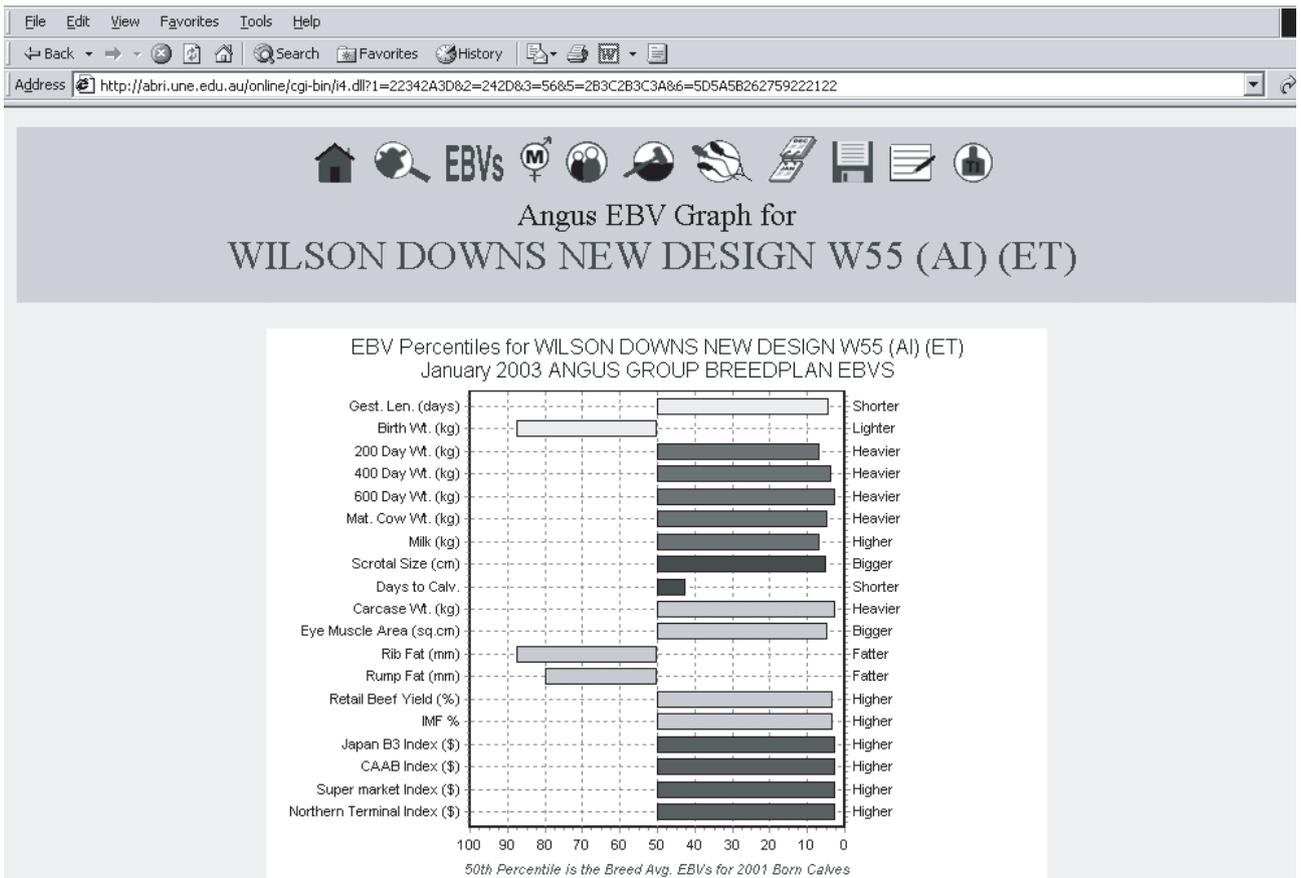


Figure 6c-5.

To EBV or not to EBV?

| BREEDPLAN EBVs | | | | |
|-------------------|-------------------|---------------------|---------------------|---------------------|
| BIRTH Weight (kg) | 200-DAY Milk (kg) | 200-DAY Growth (kg) | 400-DAY Weight (kg) | 600-DAY Weight (kg) |
| | | | | |

OR

Figure it out with BREEDPLAN