Searching for Genetics Online

Today's beef producer not only has the traditional methods available for sourcing new genetics of print media and word of mouth, but is also able to search through a vast depth of pedigree and performance information made available to them through the internet. Beef producers are able to use the internet to access entire herd books, view online sale and semen catalogues, plus quickly search and sort through large numbers of animals to help them pinpoint which animals will meet their breeding objectives.

The vast majority of Australian Registered Cattle Breed Societies now offer "Internet Solutions". Internet Solutions is the title given to an extensive range of web based services that have been developed by the Agricultural Business Research Institute (ABRI) in Armidale, NSW for application in the livestock industry. Using the "Internet Solutions" web based services efficiently and effectively literally puts an entire Breed Society's herd book at a beef producer's fingertips and enhances their ability to source the best genetics for their breeding program.

Accessing Internet Solutions

The "Internet Solutions" services offered by the Australian Breed Societies can be accessed through a number of different channels.

1. *Breed Society website* – using an appropriate web browser, users can log onto the Breed Society website and click on the links to the various Internet Solutions facilities such as Animal Search or EBV Search. Different Societies may display the links differently.
2. *BREEDPLAN Website* – using an appropriate web browser, users can log on to the BREEDPLAN website (http://breedplan.une.edu.au) and click on

the link titled "Database Search". This link will display a list of Breed Societies that are currently offering the Internet Solutions services. Users simply need to select the Breed Society that is of interest to them.

3. *The INSolutions Mobile App* – an iOS and Android mobile application which has been created as a companion product to Internet Solutions and allows users to view sale and semen catalogues, and lookup members, animal details and EBVs on their smart device. It is available from both the iTunes and Google Play store.

The INSolutions App for Smart Devices

Animal and EBV Enquiries

A complete electronic herdbook is made available online for each particular Breed Society. This facility provides access to member, animal and EBV information as it is recorded on the Breed Society database. A powerful search engine has also been incorporated to allow users to undertake a wide range of functions that allows the user to quickly search and sort through animals. Some examples are given on the next page.

Searching for an Animal by Name

To search for an animal by name, simply click on the Animal or EBV Enquiry tab. If you know the animal's full name you can then type it into the "Name" field. If you are unsure of the animal's name, or only know part of it place a "%" sign, known as the wildcard symbol, at the beginning and end of the name as shown below. This will bring up all animals whose names contain that word. Then click "Search". You can also search for multiple animals by placing a comma between their names. See Figure 1.

Searching for Animals in a Herd of Interest

To look up animals from a particular herd of interest, the details for the herd and animals of interest need to be entered. For example if you wanted to look up all male calves born in 2012 from stud herd "Top Stud", you would enter the herd's prefix in the name field with the wildcard symbol (%), enter a "Calving Year" of 2012, and select if "Animal is Male". You can also choose to select animals from multiple calf drops by placing a comma between the years e.g. 2012,2011. See the example in Figure 2.

There are a number of other "Select if" options available which users can use to filter their searches further. These differ between Breed Societies but can include genetic condition status, coat colour, horn/poll status, sire ident and breeder location.

Search and Sort Based on EBVs

The EBV Enquiry tab also gives users the options to search and sort animals based on their available EBVs and selection indexes. Users can choose to only select animals which meet certain EBV trait parameters which they have specified. These include the minimum and maximum values for each trait, and also EBV accuracy. The example in Figure 3 shows what you would enter if you only wanted to view animals which had below breed average Birth Weight EBVs, but above breed average 200 Day Weight EBVs.

Users can also choose to sort animals by a particular EBV or selection index, and display the animals either by their Name or Animal Identifier. In the Figure 4 animals would be sorted by 600 Day Weight and display their Animal Identifier.

Figure 1. Searching for an Animal by Name

Figure 2. Searching for Animals in a Herd of Interest

Figure 3. Search & Sort Based on EBVs

Figure 4. Animals sorted by 600 Day weight and listed by Animal Identifier

Once you have brought up a group of animals you can also choose to re-sort them on a particular trait by clicking on the trait header.

In this example the animals are sorted on their 600 Day Weight EBV, which is highlighted in grey. If you then wanted to sort the animals on their Milk EBV, you would just need to click on the Milk column header.

Sale and Semen Catalogues

The majority of Breed Societies also display sale and semen catalogues online as part of the Internet Solutions service. By clicking on the Sale Catalogue tab users can view animals that breeders have listed with their Breed Society as being for sale. These may either be catalogues for upcoming sales or private treaty sales. Similarly, by clicking on the Semen Catalogue tab, users can view animals which have been listed with the Breed Society as having semen available. Users can also choose to search/sort these catalogues in the same manner as they would in the EBV Enquiry facility by clicking on the "Search/Sort Catalogue" option on the top left hand side of the screen.

Becoming familiar with the "Internet Solutions" web based services is a must for today's beef producer when sourcing genetics for use within their breeding program. Whether it be viewing information via a computer screen or using the INSolutions mobile app, Internet Solutions provides access to an enormous amount of information concerning potential breeding animals, and in turn, a considerable opportunity to all beef producers.

To further discuss the use of the Internet Solutions tools to the use of the internet to search for genetics online, contact staff at Southern Beef Technology Services (SBTS) or Tropical Beef Technology Services (TBTS). A comprehensive "Guide to Internet Solutions" booklet can also be downloaded from the Technical area of the BREEDPLAN website.

Viewing an Individual Animal's Details

A range of information is available from the internet for each particular seedstock animal, such as pedigree, breeder, current owner, genetic condition status and latest EBVs.

Click on the Current Owner's name to view their contact details

Click on the Sire or Dam's name to view their animal details

Some animal details include a photograph of the animal

Animal ID:	BNAD145
Sex:	Male
Tattoo:	SV D145 (One Ear)
Brand:	SV D145
Birth Date:	08/09/2008
Calving Year:	2008
Status:	Active
Register:	HBR
Genetic Test Status: (Click for explanation)	AMF, NHF, CAFU, RDF, DDF
Sire:	TE MANIA AMBASSADOR A134(AI)
Dam:	LAWSONS HENRY VIII Y5(AI)
Breeder:	TUWHARETOA ANGUS
Current Owner:	Multiple Ownership
DNA on file for PV:	SNP and Microsatellite
Parent verified to:	Verified to Mating
Progeny:	[2117 - View] [View by Herd]
Pedigree:	[View]
EBV Graph:	[View]

View the animal's progeny

View the animal's full pedigree

Click to view the animals EBV Percentile Graph. Some Breed Societies also include the EBV Standard Error Graph