NAV Bull Search is getting even better!

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NAV Bull Search was introduced on summer 2014. It has received positive feedback from farmers as well as breeding advisors and other professionals working with dairy cattle breeding. New features that make the search page even better have now been implemented.

Good user experiences

> "I can sort the bulls according to traits that are important to me. I also like that I can search for sons or grandsons of certain bull. It is also good to see on which traits the bull has genomic evaluation and on which traits the bull already has results from daughters."
> – Janne Pietikäinen, dairy farmer, Finland

> "The last occasion I have visited the page I was curious on the new index for youngstock survival and I was reading the information box to understand how it was calculated and looked a bit on differences between bulls. Previously I have also looked at how much an individual bull changed his breeding value in the last compared to previous evaluation. To be able to see the breeding value optimum for conformation traits such as udder and body traits is also a nice feature."
> – Eva Hultman, breeding advisor, Sweden

> "I use NAV Bull Search page as my primary source of information on individual bulls. It is a big advantage that you can find information about all bulls with a Nordic herdbook number in one single place. The search page is flexible and I can limit my search criteria on various indices and sort the bulls just after the index I want. With one click I can get a nice print of the 50 best bulls in my search. When choosing an individual bull I get a good overview of the most important information. Clicking the arrow next to the main index, gives you access to all indices. Sub-indices might only be relevant for the most interested, but for me it is for example nice to know that VH Grafit actually has a cell count index of 111, though his udder health index is 96."
> - Kenneth Byskov, Sire Analyst, VikingGenetics Denmark.

> "For me it is useful to look at breed proportions, sons after a specific bull and also to look specifically at some of the breeding values that are included in a sub-index. Also it is a good feature to see herd book number on bulls also from Denmark and Finland."
> – Mia Sjögren, Sire Analyst, Viking Genetics Sweden.

New features

In November 2014 index for youngstock survival was published for the first time. This index and the breeding values it is based on are now available on NAV Bull Search. So far the index is available only for daughter proven bulls. The plan is that genomic bulls will get the index later this year.

Also the breeder of the bull is now available for bulls that have been born in Denmark or Finland. The breeder isn't yet available for bulls born in Sweden but the plan is to include that in the future.

Did you know that it is possible to search for sons or maternal grandsons of certain bull? You just need to type the herdbook number and the tick boxes for these search options appear (picture 1). There are also a lot of other search possibilities to find the bulls you need.

Picture 1. You can search for sons or maternal grandsons of certain bull.

What breeding values mean in practice?

Ever wondered what breeding values mean in expected daughter performance in kilos, days or conformation points?

All NAV breeding values are on standardized scale with an average of 100 (NTM 0) and a standard deviation of 10. Regardless of trait this makes it easy to judge if an animal has a genetic merit that is lower (<100) or higher (>100) than the population average and also if the animal is among for example the top 16 % (breeding value >110) or top 2 % (>120).

However, to understand what effect you can expect in practice in the actual trait by using a certain bull there is a need to know how breeding values correspond to phenotypic values.

Now there is a new function on NAV Bull Search where you can see the expected effect a certain bull has in average on his daughters compared to the population average.
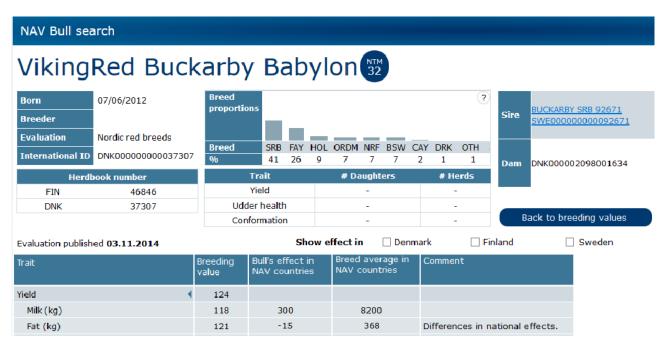
First there will be phenotypic values (bull effects and breed averages) for single conformation, temperament and claw health traits expressed across the first three lactations. The figures can be seen on Nordic level or on individual country level (picture 2). To get the expected performance of an average daughter after a certain bull, bull effect should be added to the breed average.

As an example, if taking two Swedish bulls from the toplist on NTM among daughter proven bulls we find VR Buckarby on place 1 and VR Gobel on place 8. In the index for udder we look at their breeding value for teat thickness and what that would mean in the unit the trait is measured in, see the table. So between these two bulls the 5 units' difference in breeding values correspond to a phenotypic difference of 0.14 points for teat thickness. The scale is the one used by classifiers.

Bull	Value per breeding value unit	Breeding value	Bull effect (Value per breeding value unit * breeding value deviation)	Breed average	Expected performance in daughters
VR Buckarby	0.05328	101	+0.027	5.078	5.11
VR Gobel	0.05328	96	-0.106	5.078	4.97

During 2015 more traits will be added. The idea with the function is to give a clearer picture of what breeding values means in practice. Hopefully it can also lead to a more sound use of breeding values due to a better understanding of the value in practice of different breeding values. Sometimes a difference that seems large in breeding values isn't that large in practice.

You can find the NAV Bull Search from NAVs homepage (http://www.nordicebv.info) or from your breeding organizations homepage or use this direct address: http://www3.mloy.fi/NAV/

Picture 2. Presenting of phenotypic values on NAV Bull Search (note that this picture is from a preliminary test page and the phenotypic values for bull effect and breed average are not the real ones).