

# The National Hill Sheep Breeding Evaluation

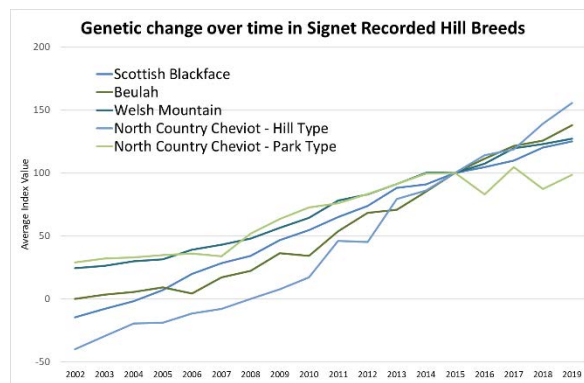


## A new genetic evaluation for hill breeds

The UK has world-leading sheep genetics, with over 1,000,000 lambs recorded over the last 25 years and high rates of gain achieved in performance-recorded flocks. We have come a long way.

In 2020, a new multi-breed analysis will be launched for hill breeds, benefits of the service include:

- Enhancing existing EBVs to make them more commercially focused
- Rebasing EBVs to aid interpretation by commercial ram buyers
- More regular breeding evaluations
- Updated breeding indexes



Research has also begun to create EBVs for new traits like lamb survival and ewe longevity.

## A new way of assessing muscle and fat in hill sheep

The UK sheep industry pioneered the use of ultrasound scanning to assess muscle and fat levels across the loin.

Historically, traits like muscle depth have been adjusted for age to identify lambs that lay down muscle at a certain age, regardless of weight.

Sheep with high Muscle Depth EBVs, might have achieved them in two ways:

- Being big, as genetically bigger sheep tend to have more muscle
- Having a high muscle depth, relative to their weight

Breeders can already select for growth rate, so a better approach is to assess muscling independently from growth i.e. a comparison of muscling/fatness at a fixed weight, rather than a fixed age.

Within the new evaluation, all carcass trait EBVs will be weight-adjusted, rather than age-adjusted.



### Commercial context

*The new approach benefits commercial farmers as it will enable them to optimise muscling and finish when lambs are drawn for slaughter at a specific weight. For hill breeds this approach has a special relevance, as it means we can increase the muscularity of hill breeds without increasing ewe mature size.*



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## Improving the recording of hill sheep



### Which breeds are involved?

The analysis currently includes all of the numerically large, well recorded hill breeds. Signet will be publishing results for the following breeds in 2020: Welsh Mountain, South Welsh Mountain, Beulah, Hardy Speckle North Country Cheviot Park, South Country Cheviot, North Country Cheviot Hill, Herdwick, Rough Fell and Hebridean

Signet will be talking to Scottish Blackface and Swaledale breeders later in the season about implementing these approaches in the near future.

### A new breeding index for hill sheep

A new breeding index has been generated by geneticist Janet Roden to help breeders and buyers to select the most profitable hill rams for commercial hill farming enterprises.

The index aims to improve the performance of hill ewes, by:-

- Increasing lamb growth rates and carcase conformation
- Improving maternal performance in terms of milk production and maternal care
- Optimising the number of lambs reared on the hill

The new hill index aims to enhance the efficiency of hill ewes; making them more productive without increasing mature size, the cost of keeping them, or compromising their survival or fitness in the hill environment.

### Updating existing EBVs

EBVs for lambing ease, birth weight, litter size, maternal ability and faecal egg count have all been updated using the latest research to make them more useful to commercial farmers.

### EBVs and Indexes set to a 2015 base

All Estimated Breeding Values are being reset to a 2015 base, making EBV interpretation easier and more relevant to commercial ram buyers. Changes to the model mean that new, unrecorded breeding stock entering the analysis now do so with a fairer starting point.

### Comparing performance between flocks

To enable the comparison of EBVs between flocks there needs to be genetic linkage between the flocks i.e. some related sheep born in each flock. New online tools are being developed to show the degree of linkage between Signet-recorded flocks to show where comparisons can be made.

## Where can I find information?

EBVs from the new analysis can be found at [signetdata.com](http://signetdata.com). The Signet website also provides lists of sheep that are currently for sale and access to Flock Finder, a listing of breeders that record their sheep.

### How can I get involved?

Signet offers a full range of online recording services, so getting started has never been easier. Contact Signet to start recording today. Email [signet@ahdb.org.uk](mailto:signet@ahdb.org.uk)