New Year, new base, new PTAs for the Friesian breed
By Gordon Swanson – MDC Evaluations

Background
In the early 1970s when interest in the Holstein was starting in earnest separate evaluations were carried out for Friesians and Holsteins. Over time as the number of Holsteins increased throughout the UK, there was increasing pressure on the MMB from Holstein breeders to merge all bulls into one evaluation. In 1979 all Holsteins and Friesians were evaluated as one breed and this remains the situation to this day.

Little genetic progress for production was made in the 1970s hence the interest in the higher production Holstein animals. Selection of bulls and cows from Canada in particular, using conversion formulae, enabled a significant increase in genetic level to be introduced into the UK.

Over time, with further importations from other countries such as the USA, the rate of genetic progress for production in the UK increased to match that of our competitors. The result was that the updates of the genetic base, agreed Internationally at 5 year intervals e.g. 1990,1995 and 2000 were substantial.

As a consequence of this, Friesians, which had made less progress for production than Holsteins, struggled to produce large numbers of animals with positive PTAs or £PIN against the genetic base used in the evaluation system. Over time the situation for Friesian breeders has got worse and a further considerable increase in the genetic base in 2005 would have exacerbated matters.

Although Friesian breeders can use PTAs to make improvements, e.g. –100 is better than –200, this can be very difficult to accept. Marketing of Friesian breeding stock becomes very difficult when all information is negative.

Following meetings involving MDC Evaluations, MDC, The British Friesian Breeders Club (BFBC), Holstein UK and all Milk Recording Organisations a solution was agreed and with MDC funding is now well underway. The final results will be seen in February when Friesian PTAs will be published separately using a Friesian base.

New Breed Code For Friesians
The first essential step was to identify pure Friesian bulls and cows and ensure that they could be easily recognised as such. This was achieved by changing the breed code used within the UK as part of the identity from 01 to 20. A major effort was made by all Organisations involved to change the identities of Friesians in their databases and files prior to the November PTA update carried out by MDC Evaluations. The breed code of 20 can now be seen on all Breed Society Registration certificates for Friesians, Milk Recording Organisation stationary and MDC Evaluations bull and cow prints.

All new registrations of pure Friesians within Holstein UK will be allocated a breed code of 20 as part of the identity. Non registered Friesians should be identified as such on the farm and the Milk Recording Organisation notified.
Overall initial indications based on the number of animals where the breed code has been changed to 20 suggest that the work has been successful. However the work is ongoing and inevitably some animals, particularly cows, may have been missed or are incorrect. Please help if you notice any such animals by informing Holstein UK and/or your Milk Recording Organisation.

**Friesian Type Evaluations**
The next stage of the project was for Holstein UK to produce Friesian linear and composite type evaluations for the first time. This commenced with the need to determine whether it was possible to include type classification records collected for Friesians in the current evaluation system. A series of analyses to estimate heritabilities etc confirmed that it was acceptable to merge the classification data. Linear and composite type evaluations were produced and sent to Interbull for inclusion in the September 2004 test run. No problems were found when the results were returned. This means that from February 2005 Friesian type evaluations will be available not only within the UK but also internationally.

**New Friesian Genetic Bases**
As a final step in the process of producing type evaluations for publication in the UK a suitable Friesian genetic base was identified. The base to be used for the linear and composite type evaluations is the average breeding value of Friesian bulls born in the 15 year period between 1984 and 1999. This will introduce significant change to virtually all traits with the largest being found in Stature, Body Depth, Angularity, Rear Udder Height and the composite traits. Preliminary results are currently being assessed by the BFBC and Holstein UK and this may mean some changes will be made before the official update in February.

Similarly within MDC Evaluations work is in progress to determine the most suitable base for Friesian Production, SCC and Lifespan evaluations. Preliminary results suggest that the best base is the average PTA of cows born in 1995. On the basis of the average PTAs of this group of cows the following changes will be made to the current PTAs of Friesian bulls and cows in February.

<table>
<thead>
<tr>
<th>Milk</th>
<th>Fat</th>
<th>Protein</th>
<th>Fat%</th>
<th>Protein%</th>
<th>SCC</th>
<th>Lifespan</th>
<th>PIN</th>
</tr>
</thead>
<tbody>
<tr>
<td>+380</td>
<td>+12.5</td>
<td>+11.0</td>
<td>-0.05</td>
<td>-0.03</td>
<td>+6</td>
<td>0</td>
<td>+30</td>
</tr>
</tbody>
</table>

For example, a Friesian bull which has PTAs of 0 Milk, 0 Fat and 0 Protein against the current Holstein base will be +380 Milk, +12.5 Fat and +11.0 Protein against the new Friesian base ie the average PTA of Friesian cows born in 1995. While there is an improvement for yield PTAs and PIN the opposite effect is found for the percentage PTAs and SCCs. There will be no change to Lifespan PTAs.

In May of this year, the genetic bases of all other breeds will be updated from the average PTAs of cows born in 1995 to the average PTAs of cows born on 2000. The Friesian base will not be updated again in May.
The Future
With significant changes being made to the published PTAs due to the base changes and with Friesians being treated as a separate breed rather than being submerged within the Holstein evaluation a clear opportunity exists for the Friesian breed to move forward. This will enable Friesian breeders to consider and put into practice sound breeding plans and link this to improved efficiency of progeny testing young Friesian bulls.

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