

The Holstein Breed – Revolution not Evolution

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UK Breeding is a dynamic and ever evolving industry. Holstein UK, as Europe's largest independent breed society, holds a unique responsibility to monitor, invest-in and shape the future direction of the Holstein and British Friesian breeds. This responsibility has always been taken extremely seriously by the Board of Trustees and staff alike and over the years the direction and indeed shape of the Holstein breed in particular, has adapted to the changing needs of both today's and tomorrow's modern Dairy producer.

During the early 1990's cattle breeding in the UK entered a 'scientific renaissance' with new technologies being implemented such as high 'index' breeding. This technology was poorly branded as it isn't the fault of the 'index' which was simply a way of combining a number of desirable traits together and weight them to create an index list of the most desirable bulls, it was the value and desirability of those component parts which made up the whole. At that time, producers were looking for milk, fat and protein – hence the delivery of 'PIN' or Profit Index Number. This 'index' focused on these profitable and very heritable traits, which in itself came at a price.

Breeding is all about balance, just like a see-saw, if you put weight on one trait, you will see a response in another – it's a bit like a bog-off deal = buy one, get one free. At that time, in order for the cow to give more milk and hence the sire index for PIN be high, the cow must above all be 'angular' and dairy and have fine, flat bones. Due to this desirability during the mid-late 90's, the breed responded, providing the type of animals which were desirable by farmers at that time – tall, angular, feminine females.

Since then, things have changed. Due to the increased accuracy of recording of important health traits such as fertility and mastitis, farmers and the breed society have recognised that this drive for 'dairyness' by the majority of producers had further consequences such as reduced fertility 'on average'. As with anything in life, you still have exceptions to the rule and there are many cows that are both extremely dairy, high producers and have exceptional fertility – the challenge, as with everything in livestock management was keeping the feeding and management of these higher yielding cows in line with their genetic potential.

The Holstein breed's image as a whole suffered to a degree because of mis-management. Some producers bred high yielding cows back to higher yielding bulls for several generations and this seemed an easy thing to do, because even without a change to the diet or environment the next generation would on average produce more milk under the same management regime. Of course this is where problems began to occur when some producers found themselves feeding an 9,000kg cow on a 6,000kg ration and wondering why the wheels were falling off the wagon! Needless to say the breed got the blame and began to be branded the 'tall thin hat rack'. Along with this branding came a highly damaging misconception; this was that cows were not living as long. This is entirely untrue and in fact cows are lasting longer in herds now that they were in the 1960's and giving upwards of twice the volume of milk. That is surely the definition of feed and energy efficiency coupled with profitability.

For the past 15+ years Holstein UK and the vision of the breed has changed dramatically and as new traits have been developed such as locomotion and condition score, which the UK was the first country in the world to measure, we have introduced these into the modern breeding indexes. Coupled with this other vital new breeding tools and values have evolved and been released to farmers such as Somatic Cell Count PTA's, the Fertility Index, and Calving Ease. Since the introduction of these new and important tools, the UK has seen a halt and indeed increases in the genetic trend for first, Somatic Cell Count and more recently for fertility.

The UK now has two main indexes; Type Merit, which is a desired gains index, solely based on Type traits which have been carefully balanced to maximise the longevity, health and welfare of the Holstein cow and PLI; which is economically derived and balances important traits of fertility, calving ease and udder health with production traits too.

Type traits are the building blocks and foundation of a good herd of cows. My granddad always told me that it cost the same to feed a bad'un as a good'un, and the good'un will stick around longer and give you more back! This simple but very practical approach to breeding is one I strongly believe in and indeed the type traits can have a huge influence on the longevity of the cow and indeed her production health and fertility. Remember every trait is connected – you don't get one without a change in another, so balancing those traits carefully to build the right type of cow to suit your system is fundamental to profitability.

To counter another common misconception, this CAN be achieved within the Black and White breed. Within the hundreds of bulls present on the available bull list, you can always find one to suit your type of system, be that small, tall, wide, angular or plain 'balanced', there is something for everyone. Knowing how to gain access to truly independent and free bull information is vital. Holstein UK offers a simple to use tool, which will shortlist any bull on the available bull list that meets your own specific needs. Every company puts their available bulls to buy onto the list so you have the complete freedom of choice. The *Bull Selector* tool is open and offered to the entire industry on behalf of Holstein UK – you don't have to be a member or pedigree, just know how to type in a web address www.holstein-uk.org However if you want to rank by PLI or Type Merit first, you can do that too and if you are Pedigree and wish to go that one stage further and calculate the inbreeding coefficient of any potential cross, this can also be done free of charge through the *WebMate* programme.

It has always been the case that a reputation can be lost in a heartbeat and can take a lifetime to re-build and unfortunately a lot of untruth and misconception in the past has damaged the image of the Holstein breed. These misconceptions take no account of the current breeding objectives and change in appearance of the modern Holstein cow, whom is a world away from the extreme appearance of the early 90's cow.

Technology, experience, and the ability to make a significant difference to the direction and structure of the breed in the UK, is considered to be both a great honour and responsibility by Holstein UK. However, things inevitably move on and new challenges and technologies are developing such as Genomics, which have the ability to change the face and direction of the breed more rapidly than ever.

Like any new technology, Genomics will offer options, with the significant advantage of the ability to identify new bloodlines more easily; helping to promote further genetic diversity.

However, with the potential to almost halve the generation interval by using this technology comes a stark warning to all utilising and promoting this new tool. You can go a long way very quickly in the wrong direction and as we have seen from the past, it can take many years to correct mistakes made in haste. Its far better to be slow and right than fast and wrong in breeding – although applied intelligently, Genomics will provide huge advantages in increasing the reliability of the traits we consider of high importance such as health and fitness traits.

Holstein UK will continue to lead the way for the breed and are looking forward to the challenges we face in the next 15 years, which will inevitable contain key elements of efficiency and environmental sustainability.