100 years of innovation

Centenary Scrapbook
HOLSTEIN UK & BRITISH FRIESIAN 1909-2009
Improving breeding decisions

- Quality of livestock
- Herd life
- Profitability

www.holstein-uk.org

The Virtual Cow

Multi-breed Registrations

Breeding Bull Choice

Centre for Dairy Information

Young Breeders Club

Cow Mating Choices

www.holstein-uk.org
Why a Virtual Cow?

1. Limitations of the ‘Model Cow’
2. Need for an educational tool
3. Availability of technology
Virtual Cow is available from these web sites: www.holstein-uk.org www.thehyb.co.uk

A simple, PIN-protected login controls user access
Two Sections

The ‘Ideal’ Cow

Individual Trait Scoring

Holstein UK is Europe’s largest independent breed society. It offers a range of services to the dairy farming industry targeted at improving the genetics and profitability of the Holstein breed. British Friesians continue to be registered in the herdbook with percentages of Friesian clearly denoted.

Breed societies have traditionally been associated with registering births and ancestry, promoting the breed, and increasing the value of your livestock. But at Holstein UK, this is just the tip of the iceberg. Over the past decade, the Society has built up a portfolio of services designed to improve your breeding decisions along with the quality, profitability and herd-life of your dairy cows.

You can choose to view either the ‘Ideal Cow’ or select to view individual traits.
The Ideal Cow

16 linear trait scores
+ Locomotion
+ Body Condition

These are easily adjusted as concepts evolve to suit changing perceptions or breed preferences.

www.holstein-uk.org
The cow rotates $360^\circ$ through any axis to view all features from all perspectives.
Why not black and white?

- Two years development
- Silver provides best light and shade effects to portray a 3-dimensional object on a 2-dimensional plane
- Eliminates shading due to colour bands that hide detail
- Also means the VC can be easily adapted to other preferences or breeds

www.holstein-uk.org
Individual traits

16 Linear Type trait scores:
- Stature
- Body Depth
- Rump Angle
- Rear Legs Side
- Fore Udder Att.
- Central Ligament / Udder Support
- Udder Depth
- Rear Teat Pos.
- Teat Length
- Chest Width
- Angularity
- Rump Width
- Foot Angle
- Rear Udder Height
- Front Teat Place.
- Teat Pos. Side

+ Locomotion + Body Condition

18 traits represented in total
Example Trait: Fore Udder Attachment

Each trait is described in detail with an explanation of its own linear scores.

Moving the slider changes the feature to match the trait score. All trait scores are covered. So the effect these have on the cow’s appearance can be seen.

Direct links to bull fact sheets enable sires to be targeted who can enhance the desired objective.
Individual traits

- Each trait can be modelled in the Virtual Cow to reflect exactly how the daughters of a particular bull might look like in life.

- Any linear score can be translated into a 3-D image.
Body Condition

- Body Condition is illustrated using a series of 3D cow animations – each similar to the Ideal Cow.
- Three scores are available, at the extremes and centre of the range 1-9.
- The cow rotates and can be paused, so the impact of each score on different parts of the body can be seen easily.

[Image: Diagram showing a 3D cow with body condition scores and a link to www.holstein-uk.org]
Locomotion

- Locomotion is illustrated via a series of 30-second full-motion video clips.
- Each video depicts a specific locomotion score.
- The viewer can select a score and play, pause or repeat the video.
- The detailed meaning of each score is explained via an audio soundtrack.

E.G.: “Cow 198 scores an ‘8’ and demonstrates very good locomotion. But to score a perfect ‘9’ would need her right hind leg to track a little better.”
Benefits

- Can be used in a wide variety of locations
- Does not require large numbers of live cows
- Allows numeric scores to be visualised interactively
- Promotes better understanding of linear scores
- Breeders can assess a bull on the structure of his daughters
- Changes in traits are easy to follow
- Helps bull selection and breed improvement
- Caters for all preferences

www.holstein-uk.org
Potential Users

- Educational colleges and Universities
- Individual students and teachers
- Breeders and breeder’s families
- Milk recording organisations
- Breed associations
- Breeding advisors
- AI companies

www.holstein-uk.org
Suggestions for The Future

➢ Demonstrations on your laptop today?
➢ On-line licensing / Stand alone version
➢ Further institutions, individuals and companies
➢ User’s own “ideal cow”?
➢ Effects of trait score on herd life
Effect of Type Score on herd life

- a chart for every trait incorporated into the Virtual Cow

www.holstein-uk.org
Some current Educational & other users:

- University College Wales (Aberystwyth)
- Llyfasi College
- Scottish Agricultural College
- Institute for Animal Health
- Reaseheath College
- Greenmount College
- Royal Veterinary College
- Genus breeding
- Finnish Holstein Association
- Holstein Australia

www.holstein-uk.org
Finally:

one sector of our target audience – some Holstein Young Breeders

www.holstein-uk.org
Thank You

Paldies