



2025 Study Tour Visit to SRUC (Scottish Rural College)

(Richard Dewhurst & Holly Ferguson)

Edinburgh - Beef

Aberdeen -Vets (New Vet School & Vet Nurse training)

Barony Campus – Dairy, plans to have 3 herds of 100 cows on one site with research on an outdoor and a fully indoor system. The Barony College is involved in education, research and consultancy. The longstanding Langhill breeding program will continue at Barony (top 5% of Genetics)

Research programmes:

Holo Ruminant (3.5 to 5 years), Microbiomes, a Horizon project

Digital Dairy Chain (digitaldairychain.co.uk)

Biorefining

Soil organic amendments (SCA) under a 'Dairy Nexus' programme

Kendal Nutricare – baby formula

Dairy Cubicle House

Completed in 2015

Dairy Power rope cleaning system

Each feed bunker serves 2 animals

Feed Station that will test gas emissions, dispenses feed every 30 seconds to keep cows in for 4 to 5 minutes. Cows burp every 30 seconds.

Research on heat stress

Humidity a big factor, cows would tend to bunch in the darker parts of the shed

How happy are your cows? are they living a good life?

Red light in the evening

Mobile 'Green Fields' onto commercial farms to measure emissions

Milk infra red testing to identify low methane emitting cows ('cool cows'). This work also involves the use of Genomics (DNA profiling) of cows and bulls, in vitro fertilisation etc.

Strandhill Farm Robert Veitch (owner) & Gary France (manager)

Land owned = 210 acres, land rented = 141 acres

They did a trial comparing a 'Feed Kitchen' versus Total Mixed Ration (TMR). The cows fed via the feed kitchen milked 6 litres less per day due to inadequate mixing of the feed and sorting.

Some milk processors require cows to be grazing for 120 days.

Cows are in a 'close up group' for 2 to 3 weeks pre calving. Cows out grazing don't transition as well because their stomach at calving will be somewhat smaller. Some cows can be milking 54 litres within 8 days of calving.

Average yield 12,500 litres (13,800 litres for 2nd lactation and higher). Cows weigh 700 -800 kg.

Heifers calve down from 23 months of age.

3.2 lactations per cow on average with a 417-day calving interval. They are happy if cows in their first lactation milk for 15 months (= a calving interval of 510 days assuming a 60-day dry period). The replacement rate is just over 25%. Milk is paid on volume, currently 42.5 pence per litre, typically 3.7% BF and 3.2% protein.

Approximately 20 cows calve each month.

Two labour units operate the farm (one full time and a few part time workers)

4 Lely A4 robots for 200 cows: average of 3.3 milkings per day (range 1.8 to 5 with a maximum of 6). Average yield of 43 litres/cow/day but the best cows can yield up to 74 litres/day. Maximum 55 cows per robot (Jersey 70 to 75). The annual service cost is £7,000 per robot, they are serviced every second month.

Up to 13kg ration per head per day is fed through the robot but typically 6kg is fed. Ration level is increased for 60 days post-partum and then it remains stable and is yield dependent. Neck collars will give rumination alerts. The dairy ration can contain 'C16' supplement, protected fat and sea weed although the latter is expensive. Brewers grains cost £90/tonne.

Wagon silage, 5 cuts are taken with 5 weeks between each cut. Slurry can be spread at any time during the year. A splash plate is allowed where the herd size is less than 80 cows. The autumns are too wet for maize but some wholecrop is grown.

110,000 to 120,000 SCC, if milking 5 times per day it means the teats are open 5 times per day

Cows are vaccinated for BVD, IBR & Blue Tongue. TB test every 4th year.

Pedigree herd, can't reach excellent status until the 3rd lactation. Their top cow scored 96 in linear classification. Cows 300 days in milk and not in calf will be culled unless their pedigree is very good. Normally each year they will have 12 to 15 calves from embryo transfer. One cow has produced over 100 tonne of milk. 50% of the herd is bred to dairy AI

Cubicle House

Cost £2m including the robots

320 x 180 feet, insulated sheets on the roof (the robots will work down to -18 degree Celsius)

The slurry is aerated in two by 1 hour sessions each night and is separated once per week.

The cubicle beds are hand raked, the sawdust is topped up every two days.

Formalin footbath twice per day. Other treatments include Tylan powder and bandage.

Ve-Tech Concrete Ltd. (www.vetech-concrete.co.uk), owned by Robert Veitch

Produce on site volumetric (batch) concrete since 2005, 70 workers including those involved in shed fabrication.

The mixing machine can do up to 8m³ and the company has 10 trucks. Washed pebble stone is used- edges have been smoothed off. Each truck (machine) is calibrated every 1.5 weeks to BSI standards. The trucks are kept for 4 years. Auger wear plates are changed once per month. A small or partial load of concrete can be delivered with no added cost.

Dye addition costs £1.25 per cubic metre. Air entrainment can be done. Normally the machine is loaded in the morning (less weight on belts). Each truck takes 2.5 buckets each of chips and sand. The mixed concrete costs 130 to £150 per cubic metre. This system is £2 to £3 more expensive than traditional ready mix.