

Cow simulator to teach vet students

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Veterinary student, Helen Wilson using the Breed'n Betsy. Credit: Tracy Dewey, University of Bristol

How do you teach vet students where things are in an animal, when they can't see what they are touching? In the past vet students were taught using cows. Now thanks to a simple and effective training aid, Breed'n Betsy, practical teaching of the internal anatomy of a cow can be achieved using this rectal simulator.

Bristol University's School of Veterinary Sciences has purchased two of the simulators following donations from the Ernest Cook Trust, the Royal College of Veterinary Surgeons (RCVS) Spencer Hill Trust and the Universities Federation for Animal Welfare (UFAW).

The simulators are metal frame structures that have a latex "back-end" of a cow through which students may insert a gloved, lubricated hand and feel latex model uteri, ovaries and cervixes.

Breed'n Betsy enables many students to continually practise different techniques. Students can learn, with the aid of the model uteri, pregnancy diagnosis from six weeks to five months, artificial insemination (AI) and embryo transfer.

The simulators are so simple to use, that students can teach themselves with the aid of guidance posters and have the freedom to practice whenever they want.

Mike Steele, Teaching Fellow in the School of Veterinary Sciences, said: "Many of our students come in to try out the simulators and as a result, the first rectalling class with a new group of students is much more successful. No student is in a cow for more than five minutes now and up to 90 per cent leave the first session having felt a uterus, most differentiating whether pregnant or not."

As a direct result of these simulators, academics have found that students are more competent at an earlier stage and that the cows are affected to a minimal degree.

Mike Steele added: "We measured milk yield drop over a year of teaching classes with a 250 [cow](#) group. In this time, only four cows were seen to drop yield by two litres in the first milking session after the class and no adverse fertility effects were observed. "

The University's Breed'n Betsy's have also been set up with ultrasound scanner probes, so that students may try holding a linear probe and putting it next to an ovary. This is a difficult skill and the simulators provide invaluable practice in this area.

The Betsy's come with model cervixes that only allow an AI straw (or intra-uterine antibiotic straw) through if manipulated in the correct manner. This has given academics the added benefit of being able to

teach good AI technique and correct administering of intra-uterine antibiotic.

A more recent development on this [simulator](#) is the addition of a water-filled acrylic tube, which recreates an “in-cow” temperature environment to practice. This model can also allow the attachment of real specimens obtained from abattoir material to complete the realistic experience.

Provided by University of Bristol

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