

## RSPCA Australia Scholarship for Humane Animal Production Research – Annual Report 2007-08

**Humane Animal Production Scholar 2007:** Samantha Bickell, University of Western Australia

**Project title:** Investigating the effects of temperament on post parturient ewe and lamb behaviour without human interaction

### Progress report 2007-08

#### Project description

In sheep, maternal behaviour and temperament are closely related but the mechanisms linking temperament and ewe-lamb bonding are unclear. I am investigating the ‘natural’ undisturbed behaviour of the ewe and lamb after parturition so we can understand the effects temperament can have on the behaviour of the ewe and lamb during the establishment of the ewe-lamb bond. I am using ewes from each temperament line (“calm” and “nervous”) and observing the behaviour of the ewes and lambs without any human intervention to replicate the true farming situation at lambing – most farmers do not intervene during lambing. Following a preliminary study conducted last year this type of behavioural observation needs to be recorded with remote controlled recording devices which allows us to record the behaviour of the animals from a distance. This technology has never been used before and it allows the animals the full freedom of choice of lambing site and undisturbed lambing behaviour. Using this technology, I am able to demonstrate which specific behaviours are exhibited by the calm ewes and lambs that assist in the bonding process (e.g. staying on birth site, licking lambs, suckling, keeping twins together or caring for twins).

#### Start date

This project started in January 2008 when ewes were selected and their ovulation was synchronised to ensure mating occurred over a 3 week period.

The collection of the behavioural observation data commenced in July 2008 when lambing started and has just been completed on the 25<sup>th</sup> July.

#### Tasks started/completed so far

Selection and preparation of ewes for lambing:

**100% Complete**

Selection of 175 Calm ewes

Selection of 200 Nervous ewes

Insertion/removal of all ewes with CIDRs

Joining of ewes with rams from the same temperament line

Pregnancy scanning

Preparation of observational tower and paddock for lambing **100% Complete**

Maintenance of the observational tower

Preparation of lambing paddocks

Collection of recorded behavioural observation data from: **100% Complete**

32 Calm experienced ewes

30 Nervous experienced ewes

22 Calm maiden ewes

17 Nervous maiden ewes

Extraction of behavioural variable from the recorded observations: **25% Complete**

Analysis of behavioural variables **0% Complete**

### **Timeline for next 6 months**

All behavioural observations have been collected and recorded. During the next 6 months I plan to watch the recorded observations and extract the required behavioural variables. Once all variables have been extracted statistical analyses can be performed on the data and following this the results will be written up for publication in a scientific journal as well as be included in my doctoral thesis. A copy of the manuscript submitted to the scientific journal will be sent to the RSPCA.

### **Dissemination**

The data for this project has only just been collected and therefore no results have been available to disseminate. However, in September I am visiting the Scottish Agricultural Collage in Edinburgh, where I will present results from this work to the researchers in the department of Animal Health and Welfare.