

Completion Report for BSAS Scholarships

Name and affiliation:

Priya Motupalli, Harper Adams University

Award Name and value of the award:

Murray Black Award, £1200.00

Was any additional funding secured to support the activity?

(If yes, please state the value and source of funding):

Yes.

International Society for Applied Ethology conference fund: £450.00

British Grassland Society: £500

Start/end date of the award:

June 2, 2013- June 6 2013

Summary of the award (Briefly describe the objectives and how was it undertaken):

(approximately 300 words)

My objectives upon receiving this award were to attend the International Society for Applied Ethology's annual meeting in Florianopolis, Brazil. Here I hoped to attend presentations and poster sessions regarding animal behavior and welfare for a variety of species as well as present my own work looking at dairy heifer preference to be indoors or at pasture, and adaptation to grazing. Additionally, I wanted to use this conference as a way to network and create future job opportunities.

The conference was well organized, successful and informative. Seventy-five speakers covered a variety of topics from research methods to evaluate cognitive ability to reducing aggression in sows, to indicators of fear in rabbits and much more. There were also more than 70 poster presentations covering topics that included the use of proximity loggers to understand social networks in sheep, modifications to free-stalls for dairy cows, and using milk intake as a sign of early calf vigor. The majority of topics had direct relevance to on-farm application. One of the things I enjoyed the most was looking at research methods that were used on different species and seeing how those methods might be implemented in my own research or dairy cow welfare research in general. It was incredibly useful to take insight from other schools of thought, and as I attended the majority of the sessions I was able to do this often.

My own presentation, entitled "dairy heifer preference for pasture is affected by previous experience," was well received and generated lots of thoughtful and relevant discussion. A particular point of interest was the fact that I found that an adaptation period to grazing does exist when heifers have never been exposed to pasture before—this caused many people to think about the fact that farmers

often put naive heifers out on pasture without considering this adaptation period. It was really after my presentation had generated a lot of interest that I was able to fulfill my networking objective. I met a lot of researchers that were either interested directly in the topic, or were interested in how and where I was going to continue my work.

Benefits of the Award:

This is the main part of the report and the two sections below should be approximately 1000 words in total. You may focus on benefits to yourself, to the animal science community, or both – depending on the nature of the activity undertaken.

Benefit of the award to you (e.g. new knowledge or skills, new contacts and collaborations):

By attending this conference, I gained both new knowledge and new contacts that will potentially affect the rest of my career.

New knowledge:

There were a number of interesting talks that were particularly relevant to dairy cow behavior and welfare and provided me with information that I both did not know before, and seemed quite relevant to UK farmers.

1) Researchers at the University of Guelph in Canada developed an essential- oil based (geranium, lemongrass, sunflower) fly repellent for particular use on organic farms. This fly repellent not only significantly reduced the prevalence of flies, but it actually increased grazing time in treated cows, and treated cows travelled longer distances on pasture than untreated cows. This organic fly repellent would be particularly useful during summers like we've had this year in the UK, where the fly-load is very high and may have a detrimental impact on grazing time and subsequently milk yields. It was

obviously developed for organic farmers, but it would be just as useful for farms that turn-out their animals in the summer and have not found success with traditional fly-repellents such as Spot-On.

2) One of the most interesting and informative talks came from researchers at the University of British Columbia in Canada. Their research was able to show that dairy calves exhibit cognitive bias. Cognitive bias research has been particularly popular in the last decade or so in order to help us understand the emotional states of animals---a very difficult thing to do via evidence-based measures. The idea behind cognitive bias in humans is that depressed or anxious humans will judge ambiguous events negatively. The same has been shown in some species, but not in farm animals. This research demonstrated that after a painful event (disbudding), dairy calves judged an ambiguous stimuli in a “pessimistic” way—suggesting that they became depressed after this painful event. This exploration of the emotional experience of pain has been very poorly understood in the literature thus far since it is such a difficult thing to measure. Research has largely been focused on sensory aspects of pain. Particularly in farm animals this research has been neglected and is very important since farm animals are the largest group of animals used by humans, and are often subjected to painful events. I am also hoping to try and move into cognition and learning research after my PhD, so this was a really useful talk for me.

3) Although there were numerous other talks that filled some gaps in my knowledge, perhaps the most pertinent talk to my current research came from a fellow PhD student from the University of British Columbia. She presented work looking at motivation of dairy cows for access to pasture. Using the consumer demand technique, where animals are asked to “pay a price” to gain access to what we already know to be a preferred resource, she asked dairy cows to push a gate with increasing weight to gain access to pasture. It was reported that cows were willing to push up to 32 kg to gain access to pasture, which was the SAME amount that they were willing to push to gain access to fresh TMR. This indicated that they were as motivated for access to pasture as they were for fresh TMR. This was an incredibly interesting result as my own research asked them to walk different distances to gain access to pasture. I reported the same result, that cows were willing to pay a price to gain access to pasture however, my results showed that they were willing to “pay the price” at night, but not during the day.

New contacts:

I made a number of new contacts with relevance to my work. I found that researchers at the University of British Columbia, The University of Guelph, Agri-Food Canada, and Michigan State University had the most relevance to my current work and we will hopefully collaborate in the future. Finding contacts that could enhance my knowledge and teach me new skills was a particular benefit of attending this conference.

Benefit of the award to the animal science community, academic and industrial:

Attending this conference really helped me understand how research was being undertaken globally, what the main issues in behavior and welfare across a number of species are, and how we can use this work in an applied way. This will have numerous benefits for the animal science community as I can disseminate this information within my own group and with other researchers in Europe.

Additionally, a number of early-stage researchers attended this conference and we were able to discuss our work in a friendly environment, debate about current methods, and establish some innovative ideas as to how to move the field forward.

Finally with respect to the industry, I've mentioned above a few studies with direct benefits to the farming community.

None of this could have been achieved or learnt without the Murray Black award!

Other supporting information: