



**BVA OVERSEAS TRAVEL GRANT REPORT 2010
CLAIRE COOMBE-JONES - INDIA**

***INVESTIGATING THE CHALLENGES FACED WHEN ESTABLISHING
A NEW, HIGH QUALITY DAIRY HERD IN THE PUNJAB***

Arriving in Delhi the same day that the monsoon rains hit the city was a fitting welcome from a country of such extremes as India. Stepping out of the airport to be greeted by torrential downpours, bustling streets, screeching horns and an aroma of street food mixed with flooded sewers (not to mention navigating the maze of roadworks in preparation for the commonwealth games), I was beginning to envisage just some of the problems that might be encountered when establishing a new, high quality dairy herd in this challenging region. Flooding in the Punjab as a result of the monsoons meant the train tracks from Delhi to Ludhiana were two metres underwater the week I was due to travel, but fortunately services were up and running again within a few days and I was able to make my way east to Macro Dairy Ventures Ltd (MDVL) in Ludhiana as planned.

The MDVL herd was established 18 months ago and at the time of my visit consisted of approximately 1000 Holstein Friesian dairy cows spread over 4 sites. MDVL aims to produce a safer alternative to the raw milk sold widely in the community by promoting the health benefits of the pasteurized milk it has to offer. The company have community interests at their heart, with animals being in the ownership of local women from the poorest sections of the local community (those with a household income of less than \$20 USD a month). They also support local arable farmers by offering contracts on fodder crops for the cattle and once the project is running at capacity the company expects to employ in excess of 6000 local people, supporting the economy and bringing much needed money into the region. The company also claims to promote good animal welfare and intend to establish a 'disease-free herd', which I was very keen to see for myself in such challenging conditions.

Of course there are many challenges in establishing and maintaining a disease-free dairy herd anywhere in the world, particularly on such a large scale as MDVL, where cattle numbers are hoped to reach 20,000 across 40 sites in the next few years. However, setting up a herd in the Punjab brings additional challenges, not least the extremes of weather, severe endemic diseases and local customs.

During the monsoon, temperatures frequently reached in excess of 43°C with very high humidity, and I was interested to find out whether the cows coped with these conditions better than I did! It was certainly a challenging climate in which to run a highly productive dairy herd and yields dropped off significantly during the monsoons. Despite careful shed design and the use of fans and foggers to cool the animals, without any air conditioning heat stress proved to be a significant problem amongst

both the adult cattle and the calves. The high humidity also promoted infections of any wounds or abrasions, further decreasing yields.

Local culture and religion are also a huge challenge to establishing a dairy herd in the Punjab and I began to wonder if perhaps a highly productive herd is not best suited to a land where the cow is sacred. Culling is illegal in the Punjab, and despite the herd being young, there was already a growing group of dry, non-pregnant animals (a significant proportion of had contracted Foot and Mouth disease previously) who were draining the resources. Although it was pointed out that all of MDVLs direct competitors faced the same restrictions, I struggled to see how this situation could be made economically viable, especially as the herd ages. Education of the local employees is also essential, as the concept of bacteria and viruses as a causal link to disease was typically not intuitive to them, many having been brought up to understand disease in more of a religious than scientific context. Getting them to understand how somatic cell counts could relate to milk quality, and how these might be improved with good husbandry practices is vital to their following such practices, as well as involving them more in the business. Given the total number of local people that MDVL intends to involve in the running of the herd I don't think there could ever be too much staff training and education which is essential in establishing a successful, high quality herd, with all of the units being run to a similar standard.

Purchasing of stock is a huge challenge when establishing a new herd, as it can be difficult to be certain of both their health and reproductive status, and implementing an effective quarantine for large numbers of animals acquired from different sources proved even more of a challenge. It is also difficult to ensure that an adequate supply of good quality feed can be supplied to the herd, especially as it increases in number. At MDVL the rapid rate of expansion made successful quarantine difficult, and disease outbreaks in the main herd seemed to be an accepted consequence. Despite a strict vaccination and quarantine policy they have experienced three Foot and Mouth outbreaks in the past 18 months. Babesia, Anaplasma, Theileria, Haemorrhagic septicaemia and Brucella also cause lost production in the herd. It was very difficult to maintain tight biosecurity with so many employees and fodder vehicles entering the site and traveling between units, as well as wandering goat herds, water buffalo and stray dogs which could sometimes be seen roaming the premises. Disease control should be slightly easier once the herd is fully established as a closed herd, breeding its own replacements through AI and embryo transfer programmes, but a thorough herd health plan should be developed by MDVL to include disease monitoring, surveillance and treatment.

My stay in India was a fascinating experience and I am extremely grateful to the BVA Overseas Group for providing me with the opportunity to visit MDVL. I now have a far better understanding of the international dairy industry and some of the challenges involved in establishing a new dairy herd. It has helped me to appreciate the importance of mastering good animal husbandry on farms, keeping relevant and accurate records and both educating and motivating the staff, which are all essential to maintain a high quality herd. The MDVL herd has a promising future, however early problems should be recognized and addressed promptly before they escalate as the herd increases in size, and I would be very interested to return in several years to see how the project has developed.

