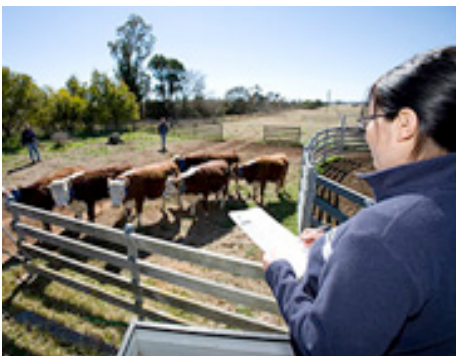

Scientists work to make livestock happier—even if it must die

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Courtesy of CSIRO
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Scientists have embarked on a new research program aimed at ensuring farm animals live more happily—even if they're doomed to be killed and eaten.

The aim is to enhance animal well-being when possible, researchers say, but the benefits are also meant to be redirected back to humans. More content animals are more productive, some scientists argue: even in death, for example, happier cows produce tastier meat.



CSIRO Livestock Industries scientist Caroline Lee monitors cattle at Armidale, New South Wales, Australia. (CSIRO)

“With increased public concern about the welfare of animals, and consumers seeking ‘animal welfare-friendly’ products, Australia’s livestock industries are focused on improving farming practices to meet changing expectations,” said researcher Caroline Lee of Australia’s national science agency, the Commonwealth Scientific and Industrial Research Organisation.

Lee and others at the agency’s Livestock Industries division are studying “scientific” methods of assessing animals’ emotional state that go beyond traditional, and limited, techniques.

In a study published in the Sept. 10 online issue of the journal *Psychoneuroendocrinology*, for instance, Lee and colleagues reported on a technique for assessing “pessimistic” outlook in sheep. The animals were trained to expect that approaching a bucket would lead either to a positive or negative event—a food reward, or the appearance of a sheep dog—depending on the bucket’s location. Later, buckets were placed in additional, “ambiguous” locations; the sheep were assessed regarding their confidence in approaching the bucket.

“The challenge is to gain insights – in a scientifically rigorous way – into how animals’ minds work,” Lee said. Traditional methods largely focus on quantifying biological indicators of stress, she noted – for example, via blood tests that show changes in animals’ physiology or immune systems. Studies of animal behaviour have also been used to indicate obvious emotional states such as pain or discomfort, or preferences for different foods. But all of these studies provide relatively limited information, Lee argued.

“Until now the major gap in our ability to assess animal welfare has been our capacity to understand the emotional states of animals in different farming situations, such as in intensive finishing systems or during droughts,” said Lee. Some of her research has also examined sheeps’ responses to, and potential alternatives to, mulesing—a practice in which a piece of flesh is cut off the rump to prevent deadly maggot infestations.

It’s “internationally recognised that we must quantify not only the biological cost but also the emotional cost of animals used for production of food and fibre,” Lee said. “This requires new

methods to benchmark the welfare of animals in their on-farm environment.”

But for scientists involved in the research, the welfare of the animals themselves is a motivation only up to a point.

Scientist Drewe Ferguson of the Livestock Industries division told the Brisbane, Australia-based Courier Mail newspaper that meat from unhappy cows is “dark, firm and dry in appearance, with a tough texture,” because of low acidity levels. “It also has a reduced shelf life because of the bacterial growth,” he added.