

Insight

Turkey economics

In the news last week were resource consent applications for 16 intensive dairy farm developments in the South Island's Mackenzie Basin. These would house nearly 18,000 cows indoors for much of the year in vast stables of "cubicles" or stalls. The government stated that it does not support "factory farming", which it considers has no place in New Zealand. Amongst the objections raised by opponents are concerns about the welfare of animals kept in such systems¹.

Economic framework for animal welfare

Animal welfare is traditionally seen as a field for vets and other scientists, plus the odd activist. But economics, as the science of society's preferences and values and how it uses its resources to meet its needs and desires, can also usefully contribute to the debate. In particular, considering animal welfare within an economic framework can assist in determining the extent to which government has a role in safeguarding animal welfare and where this is more a matter for individual members of society as consumers of animal products².

Farm animals are bred, fed and tended not for their own sake, but for our benefit. Like a tractor or other farm machinery, they are a resource used to provide outputs of economic value to humans, such as milk, meat and wool. Like a tractor, they must be used with appropriate care, and not abused, if they are to remain productive. Unlike a tractor, however, society attaches an additional value to the welfare of animals used to meet its needs. We derive value or comfort from believing that farm animals are treated appropriately or, at least, feel a loss of value or some distress if we believe that animals are suffering unduly in providing us with food.

Few of us are able to observe directly the welfare of the animals that become or provide our food. Animal welfare is therefore, in effect, one of the characteristics of the food we buy and impacts on our demand for food and our willingness to pay more for products produced using farming methods that, we believe, support higher levels of animal welfare.

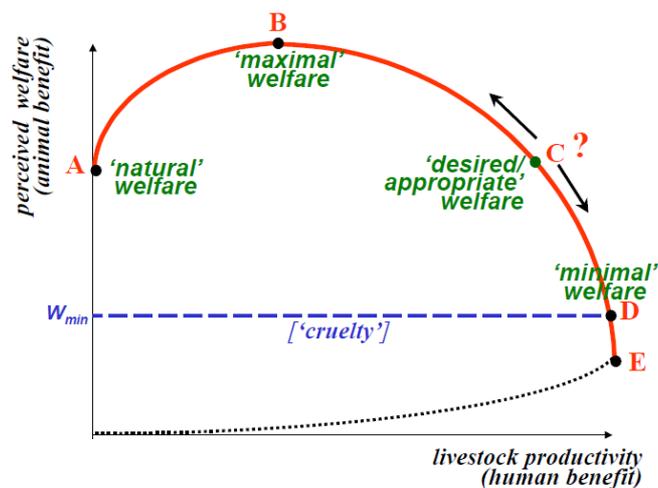
¹ Opponents have also expressed concerns about potential impacts on the local environment and on New Zealand's international image as "clean and green" and a source of products from predominantly grass-fed animals. In this article, we focus on animal welfare.

² This economic framework is taken from MacImerney, J. (2004) *Animal Welfare, Economics and Policy*, report to DEFRA, <https://statistics.defra.gov.uk/esg/reports/agri.asp>

Balancing welfare against productivity

Using higher welfare farming methods tends to involve forgoing some productivity and therefore incurring higher costs of production. Figure 1 shows a generalised relationship between farm animal productivity and welfare.

Figure 1 Farm animal welfare-productivity trade off



Source: MacInerney (2004)

Farming can provide some improvement in animal welfare over the “natural state” in which animals would otherwise live – point A in Figure 1. Farm animals are waited on hand and hoof, with regular servings of feed and water and protection from diseases and predators (other than us). And this improved health and security has a positive effect on their productivity.

But many people may consider highly intensive farming systems, such as broiler chicken and caged egg production, to be worse than life in the wild and to lie close to the legal limits of “minimum acceptable” welfare, such as point D. Beyond point E, any deterioration in conditions would undermine animal welfare so much as to impact negatively on the animals’ productivity. More extensive farming systems, ranging from housed beef, through outdoor pigs and free range poultry, to hill cattle and sheep, may be located progressively further up the curve, towards points C and B. There are unlikely to be any commercial farming systems located at point B, as we do not farm exclusively for the animals’ benefit. Point C represents some “optimal” balance between productivity and welfare. Clearly, attitudes to animal welfare vary widely and different people will have different opinions on the precise location of point C.

If farmers are able to charge for the productive output from their animals, but not for animal welfare outcomes, animal welfare becomes what economists call an “externality”. Raising animal welfare increases production costs to the farmer, without any associated increase in returns. Animal welfare will therefore be “undersupplied” unless some mechanism exists for consumers to express how much they value animal welfare.

Consumer choice

One such mechanism are markets for higher welfare products. Some consumers are willing to pay more for animal products from farming systems that support higher levels of animal welfare. Some consumers are not. With understanding of the effects on animal welfare of different farming methods and clear and reliable labelling of foods for these welfare characteristics, individual consumers are free to choose for themselves and to express their preferences through their spending. If some consumers are willing to pay more for higher welfare products, the producers of these products will earn more revenue to cover their higher production costs.

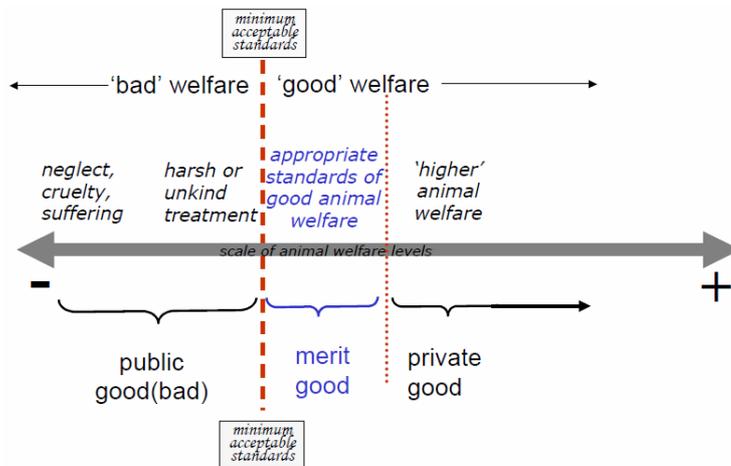
This consumer choice approach has a number of limitations. The effects of different farming methods on animal welfare are complex and can be difficult to determine. They may not be easily conveyed to or understood by consumers. The animal welfare characteristics of food products are a “credence good”. That is, consumers cannot identify these characteristics by looking at a product before they buy it or even by eating a product after they have bought it. Food labelling can assist consumer choice, but if labels are to be reliable, they must be supported by some sort of validation and/or enforcement regime, so that consumers know that they are getting what they think they are paying for. With some exceptions, such as free range eggs, animal welfare characteristics are often difficult to capture and reveal in higher prices paid for higher welfare products. Markets have therefore been slow to develop.

Role for government

A more fundamental deficiency of this consumer choice approach is that it cannot address the “public good” (or bad) aspects of animal welfare. Consumers care not only about how the food that they consume is produced, but also that all food produced and consumed within their society does not involve less than the level of animal welfare considered the “minimum acceptable” to that society. Ensuring that such minimum standards are met is a role for government.

This suggests a continuum of animal welfare, as depicted in Figure 2. To the left are levels universally considered unacceptable to society, which warrant the government setting and enforcing minimum standards, as a “public good”. To the right are higher levels demanded by some consumers, who can exercise their consumer choice individually by paying more for higher welfare products, as a “private good”. In the middle ground lies the question of whether there is a case for government intervention to represent the values to which the majority of society aspire. And this middle ground may shift to the right over time, as food security, incomes and information increase and awareness and attitudes change.

Figure 2 Animal welfare as a public and private good



Source: MacInerney (2004)

The proposed intensive dairy farms currently hogging the debate may fall in this middle ground. These farming systems may exceed minimum acceptable standards of animal welfare by a considerable margin. But if there is widespread public discomfort about such practices, the government may feel a responsibility to impose higher “appropriate standards of good animal welfare”, in representing the values we want to protect, in the type of society in which we want to live. If not, this should be a matter of individual consumer choice (including in our export markets). The first priority of government should remain enforcing minimum acceptable standards as widely as possible. It may, however, also assist consumer choice through researching and informing consumers about effects on animal welfare and facilitating product differentiation through reliable labelling, so that consumers can make informed decisions and exercise their choice effectively.

NZIER would like to take this opportunity to wish season’s greetings to all Insight readers. Goodwill to all people. And to all beasts of the field (and stable).