

In what sense does animal welfare have an economic value?

Improving animal welfare has an inevitable economic cost, so it is important to confront decisions about the standard of their conditions, writes John McNerney OBE BSc (Agric) Hons MA PhD NDA FRSA FRASE, Emeritus Professor of Agricultural Economics, University of Exeter, with acknowledgement to Boehringer Ingelheim

Contemporary concerns over farm animal welfare are closely associated with the image of 'intensity' and have come about largely as a result of the relentless drive to gain the benefits of increased productivity in all forms of farming. Aided by the continual flow of scientific knowledge, technology and new production methods, the progressive exploitation of the animals' biological capacity to produce economic output (as captured by Ruth Harrison's *Animal Machines*) and labels like 'factory farming' raise increasing unease about the extent to which the animals we depend on, are being stressed. Alleviating these concerns involves, to a large extent, easing back on and modifying developments in livestock husbandry, and so sacrificing existing or further potential gains in productivity.

THE WELFARE/PRODUCTIVITY CONFLICT

This can be illustrated by the following conceptual diagram, which reflects the path man has followed in developing livestock husbandry. Firstly, in domesticating animals from their 'natural' state (point A) we increased their productivity and also, we believe,¹ improved their welfare by providing food and shelter, managing their health, protecting them from predators and generally pursuing the activities considered to be good husbandry. However, that complementarity between the animals' wellbeing and our own advantage, changes into a competitive one as we pushed for further productivity beyond point B. Livestock farming is not conducted to maximise the welfare of the animals, and the possibilities provided by technical developments and commercial incentives inevitably

Conflicts between animal welfare and productivity

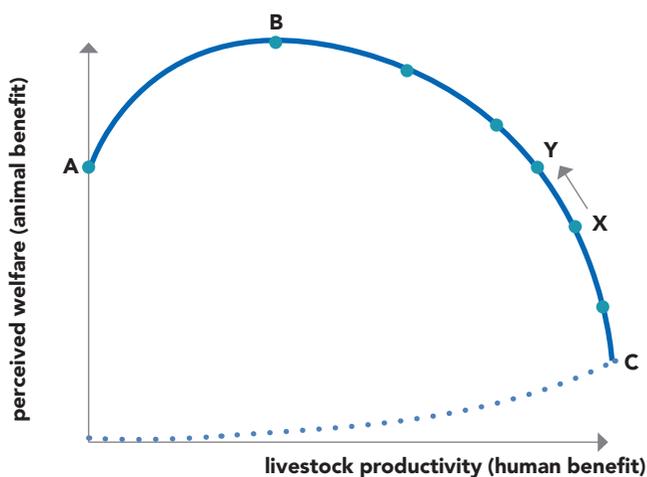


Figure 1

encourage continual pursuit of their productive capability. In this context the animals' welfare is a 'free good' and as in all such cases it is inevitably over-exploited, leading to progressive incremental gains in productivity but at increasing cost to the animal. This could theoretically continue until a point C is reached, where the animals are so over-stressed that the production system collapses – something many feel is uncomfortably close in cases such as broiler production. Differing livestock farming systems are perceived as being arrayed along the frontier between B and C, from extensive, free-range, organic and so-called 'welfare-friendly' methods, down to highly intensive beef feedlots, industrial dairy and caged laying hen systems at the other extreme. All represent a different balance – but the same overall conflict – between animal and human interests.

THE ECONOMIC CONSEQUENCES OF WELFARE CHANGE

For some years now there has been increasing recognition that our livestock production methods may have gone 'too far' (as reflected in sow stalls, veal crates, hen cages, excessive lameness and short production lives in dairy cows, and high use of pharmaceuticals, etc). All were introduced as economically beneficial developments but have had consequences for animal welfare that now cause considerable unease. If we represent this by point X in the diagram the call is to implement appropriate husbandry changes equivalent to moving back to point Y, which would bring distinct welfare benefits to the animal while necessarily incurring a cost in terms of productivity loss. This cost can generally be calculated from farm accounting data on the extra resources used and/or the output reductions consequent on adopting the 'kinder' production methods. There is nothing intrinsically wrong, of course, in taking actions that involve a cost (our whole lives are essentially programmes of consciously incurring cost of one sort or another - in terms of time, effort, energy, money, resources, etc - in gaining the things we want; that is what economic activity is). The key question is not 'what does welfare improvement cost?' but 'what is it worth?' – and does this sufficiently exceed the cost so as to make it a good thing to do?

There are obvious difficulties in measuring welfare gains in a quantitative form to allow this question to be answered empirically. But that is no different from countless situations in our everyday lives, either at the personal or the societal level, where the values of things have to be assessed



judgementally and set against a distinct cost (eg. the merits of environmental improvement/national defence policy/scientific research/moving house/going on vacation/buying a plasma TV, etc). The important point is, to be rational, the cost incurred in such choices should be subject to some considered assessment of the value gained.

THE VALUE OF WELFARE IMPROVEMENT

If the proposed husbandry change (from X to Y) in our conceptual example is of benefit only to the animals then there is no reason to make the changes; it is not a rational economic choice for us to incur cost for no benefit. But, we do consciously pursue welfare improvements, both in relation to companion and to productive animals, at some cost to ourselves, so there must be some clear compensating value accruing to humans from enhancing welfare for animals. It is instructive to enquire what this value is and where it comes from.

It is not the case that animal welfare has some intrinsic value, as some suggest. Value is not a characteristic like chemical valency or molecular weight, but an attribute that is conferred solely by humans; it does not exist independently of people, what they know and what they like or dislike. It is a reflection of human preferences, so the value attached to something will vary across individuals, societies and cultures, is dependent on income, information, experience, awareness and a host of social and sociological factors that determine our perceptions and our preferences. That this is so is revealed by the differential emphasis (value) we seem to place on the welfare of different types of farm animals – broiler chicken as opposed to free range pigs; pet dogs and cats versus hamsters; songbirds versus fish; and to animals we class as ‘vermin’. All are sentient beings, but we seem never to treat their well-being with equal concern.

Among its other implications, this leads to the perhaps startling conclusion that ‘animal welfare’ is not something amenable to objective scientific study and assessment – because it is not actually an attribute of animals at all. It is our perception of what animals need and want that is the focus of any concern we may or may not show, and it is whether we feel good or feel unease about the conditions of their existence that determines the actions we take. In that sense animal welfare is, from a functional point of view, no more than a component of human welfare!

So, quite simply an animal welfare improvement is worthwhile if it makes us feel sufficiently good, or sufficiently relieves our feelings of guilt/discomfort about their lives, to accept the requisite cost of taking action. And it is our perceptions of the animals’ welfare, not any measured reality of it, that motivate the actions we take. Those perceptions may derive from scientific enquiry, but may equally be based in pure sentiment, ethical concerns, cartoon images, propaganda, misinformation or anthropomorphism.

VALUE, COST AND PRICE

While ‘cost’ and ‘value’ are often thought of in monetary terms this is relevant only to items that are traded. A large proportion of what gives us value in life does not feature in market processes and so does not carry a recognisable ‘price’. Nor do most of the attributes of animal welfare, except insofar as some of the simpler and more definable aspects – ‘free range’, ‘grass fed’, or the more nebulous ‘welfare friendly’ labels – get attached as distinguishing characteristics of some food products. So, explicit monetary values never get associated with the bulk of the complex individual conditions that determine the wellbeing of our farm animals. Like many of the qualitative aspects of our

economic processes they are externalities (unpriced values) that are external to, and unaccounted by, market exchange processes. In other cases, money prices are not meaningful reflections of real value anyway because they are distorted by state intervention, market power or specific circumstance (does the Picasso that fetched a price of \$106m in 2010 really offer the same value to humanity as 325,000 tonnes of wheat?).

The conclusion to draw from this discussion is that to ask “is higher animal welfare worth it?” or “will it pay to provide it?” is an empty question – about as meaningful as asking whether it is worth buying a Mercedes or keeping pigs. To some consumers and producers it will be, while to others it will not, and it is a matter that can only be resolved by the market. Individual consumers for whom welfare attributes of food products are important, and individual livestock producers who believe they have a commercial advantage, can thereby resolve the issue according to the nature and extent of their preferences and their opportunities. In a sense, an answer to the question is revealed at any point in time but cannot be determined in advance.

REGULATION AND THE VALUE OF WELFARE

We have said that the value people place on different animal welfare levels is a matter of information, awareness, individual circumstance and personal preference; for some, concern for animals figures highly in their value system while for others it has no importance. We have also argued that there is inevitably some cost associated with raising welfare levels². The danger of leaving animal welfare conditions to be resolved solely in the market, therefore, is that some (many?) individuals, whether as livestock farmers or food consumers, may be content with livestock products produced under abysmally low welfare standards. This then raises the question as to whether people should be forced to pay for certain welfare standards regardless of their personal preferences or how much they value the wellbeing of animals. In most developed societies there are legally enforceable minimum standards governing the treatment of animals, but the policy question is how far should they go and how much should be left to free choice.

It is helpful to think of welfare lying on a continuous ordinal scale from ‘bad’ to ‘very good’. At the lower end of this scale the treatment of animals would be generally regarded as being ‘cruel’ or ‘inhumane’, not acceptable in the context of a civilised society, and prohibited by a legally enforced minimum standard. There is a collective or societal value attached to the welfare of animals up to this point that everyone is compelled to provide or pay for, regardless of their own personal preferences and valuations. Some element of animal welfare is therefore a ‘public good’, provided for everyone and not subject to any individual choice, and it is a matter of constant appraisal and policy discussion as to where this minimum standard should be defined. Any further increment in animal welfare beyond this minimum socially acceptable welfare standard, however, is logically a private good - open to the free choice of individuals, and those for whom it has no value should not

be forced to accept (and pay for) them. This has implications for welfare regulation and policy.

High welfare conditions for farm animals are widely advocated nowadays by many groups and public bodies, but at the upper levels only a small minority would value them sufficiently highly to be prepared to incur the necessary costs; livestock products produced to these standards are very definitely personal private goods that should not be urged or imposed on everyone.

But, between the minimum socially acceptable standards and the luxury welfare levels that some would like to see, are what economists define as merit goods – standards that are desirable, though not compulsory, for people to embrace and should be encouraged for the general benefit of society. The general tenor of animal welfare advocacy nowadays is to treat animal welfare as a merit good and persuade people to value it more highly.

WELFARE STANDARDS AND FOOD PRICES

The fact that higher welfare implies higher livestock production costs is often used to argue that consumers ‘couldn’t afford them’, but this is greatly over-stated. It is true that, from an economic point of view, the crucial implication of raising farm animal welfare is its impact on retail food prices (and in this sense the effect on farm level production costs is incidental) but a little thought reveals that the outcomes are likely to be minor. First, most husbandry changes required for higher welfare methods affect only a subset of the overall resource structure of livestock production (eg. stocking density, housing provision, feeding regimes, health management, transportation standards, etc) leaving all the other costs unchanged; so while some components of production costs may as much as double (unlikely) the resulting impact emerges as perhaps just, say, a 10% increase in overall production cost.

Then, since the farm gate component represents on average only about one quarter of the price of the final food product - consider all the added elements of marketing, slaughter, processing, manufacturing, distribution, portioning, packaging and final retail sale in the extended food supply chain - this 10% cost increase at farm level materialises as, say, a 2.5% increase in the retail cost of a particular high-welfare food product. Individual items on the supermarket shelf typically vary by this much on a regular basis depending on season, local conditions, wider market prices, etc and so should represent no serious basis for concern.³

And, if we consider the proportion that any one food product occupies in the typical household budget, one can only conclude that most of the animal welfare improvements advocated by moderate opinion would cost consumers merely pennies per week extra in contributing a substantial additional economic value to the collective preferences of society.

It is important to place economic changes into perspective, rather than focusing simply on the fact that monetary costs may increase.