Farm Animal Welfare: Some Economic Considerations

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There has been increasing public concern in the U.K. and other European countries about some of the intensive methods of livestock production used in modern agriculture. The battery system of egg production, which produces almost all of the eggs consumed in Britain, has aroused particular opposition, but there is also strong feeling about housing systems which effectively immobilize

their inhabitants, such as certain types of veal calf and pig rearing units. In a test-case in West Germany recently, an egg producer was charged with "continuous cruelty" to his 60,000 strong battery flock. A high court decided that it was cruel to deprive the birds of the ability to follow their behavioral instincts to scratch, preen and stretch their wings. This ruling cannot, however, be regarded as final.

The effects of such production techniques on the quality of life of the animals involved have led some interest groups to campaign for changes in the British Ministry of Agriculture, Fisheries and Food Codes of Practice relating to animal welfare. More restrictive codes are sought which would limit the methods of production available to the farmer by preventing the use of certain currently popular intensive systems. It is generally agreed that the costs of producing livestock products affected by these proposed restrictions would rise, although it is not clear by how much. It is not difficult to understand how this increase in costs might come about.

Farmers, just like other businessmen, attempt to produce a saleable product at the least possible cost to themselves. In this way they hope to assure themselves of some profit, and hence to earn a living. In itself this profit motive cannot be criticized, but in attempting to maintain their profits, farmers have adopted more intensive systems of animal production. In turn, the benefits from farmers using these new techniques have accrued to consumers in the form of relatively less expensive food. Clearly, by restricting the use of factory farming methods (which are associated with lower unit costs of production) there may be significant effects on the cost of producing food and, ultimately, on the price paid for food by the consumer.

Estimating the total net change in production costs which would result from a switch to less intensive systems is not easy. Various contradictory claims have been made by both farmers and welfare groups, focusing attention on the more obvious costs of change—how much it costs to produce a free range or a strawyard egg as opposed to a battery egg. But whatever the size of any direct increase in costs in the changeover from one system to another, this is only one facet of the total economic cost. There are also likely to be significant changes in the structure and pattern of resources used in U.K. agriculture as a result of the adoption of less intensive systems of livestock production. The indirect costs associated with these latter changes need to be fully recognized and understood before any changes in the Codes of Practice relating to animal welfare are implemented.

The farming sector of the U.K. has, over time, responded to a particular range of prices and available technology. Farmers have made decisions about the choice and scale of production based upon the different levels of profit associated with different production systems. It is this process of innovation and adoption of new technology in response to competition between farmers that has resulted in the prevalence of factory farming techniques, especially in the pig and poultry sectors. If, however, the welfare codes are revised, farmers would then have to base their production decisions on a different set of prices and technology, and the effect on the structure of the U.K. agricultural industry may be dramatic. For instance, extensive 'outdoor' systems of pig production approved by the welfare groups require less capital, but more land and probably more labor, than an intensive piggery. There may also be significant diseconomies of size, especially for labor, associated with less intensive systems

of egg production e.g. the strawyard system proposed as an alternative to battery egg production. All this suggests that the growth of larger and more capital intensive units in U.K. agriculture may be seriously questioned by radical changes in the animal welfare codes. There may even be a reversal of the outflow of labor from agriculture seen in recent decades.

A move to less intensive systems could affect the use of energy by the farming sector. In these energy-conscious times the increase or decrease in energy used as a result of changing the production process in farming needs to be recognized and assessed in relation to the overall use of energy by society.

Environmental aspects of animal production should be considered as well. More extensive production systems with a shorter period of animal housing and probably lower stocking densities generally, may reduce problems of environmental pollution resulting from animal waste disposal or utilization. Similarly the problem of smell nuisance arising from some intensive units may also be reduced.

Another important consideration is that even if the costs of alternative intensive and less intensive systems of production do not differ greatly, there may, nevertheless, be significant costs in adjusting from a production structure based upon one method of animal production to another based upon revised animal welfare regulations. These adjustment costs may be so high that any proposed changes would, if effected immediately, place a substantial cost burden on existing producers. If the various welfare groups wish to obtain the support of farmers they should recognize this problem of the adjustment costs facing producers and either press for compensation on their behalf or accept that any proposed changes in the relevant Codes of Practice would have to be phased in over a period of years. This latter alternative of gradual change is also likely to be more acceptable to foreign suppliers of food imports to the U.K.

It should be clearly recognized by all concerned that the imposition of stricter animal welfare regulations in the U.K. would require, for consistency and effectiveness, the banning of imports of the relevant farm products from countries with lower welfare standards. Since the U.K. is a relatively large importer of food, this action would have important implications for international trade relations, especially within the European Economic Community. The assessment of the full impact would require considerable further analysis. An immediate ban would obviously reduce the quantity and increase the price of imported foodstuffs available to the U.K. consumer. Again, it is likely that such a policy would only be accepted by all affected groups if introduced gradually.

We hope that this brief discussion of the impact of animal welfare considerations on the producers and consumers of food has identified the factors that should be included in any objective analysis of what is often an extremely emotional subject. Welfare groups, consumers and politicians alike should be made aware that farmers, by using the least cost intensive methods of animal production available to them, do so in response to competition among themselves (and with foreign producers). This process of competition has resulted in the particular structure of farming observed in the U.K. today. If society considers that these least private-cost methods impose too high a social cost, in terms of public anxiety, environmental pollution etc., and that farmers should be prevented from using them, then significant costs are likely to be incurred. Amongst these is the direct cost to the consumer of an increase in the price of

food. Apart from this, there are likely to be large adjustment costs borne by producers (at home and abroad) as existing production systems are discarded in favor of those advocated by the welfare groups. Furthermore, the adoption of these less intensive forms of farming may result in a completely different pattern of labor and capital use in the U.K. farming sector.

The subject of animal welfare is undoubtedly one of great public concern. However, it is also one of great complexity, and if changes in the regulations governing animal production methods are to be made, those changes should take full account of the implications for producers, consumers and society in general. The farming industry should not interpret the interest in animal welfare as a threat to its livelihood nor should consumers dismiss lightly the likely changes in costs or structure of farming that may result from a revision of the Codes of Practice relating to animal welfare. The appropriate animal welfare policy for society will be identified only when all the interested parties become fully aware of the consequences of their actions.

[Ed. Note: Independent of any proposed changes in the British Codes of Practice, the U.K. veal calf industry (Quantock Veal) has taken the initiative of switching from individual crate rearing to the use of straw-filled group pens. According to the company's marketing director, the system is working out to be cheaper for the farmer. (See *Int J Stud Anim Prob 1*(5):283-284, 1980.) Also, for further discussion see V.R. Eidman and D.D. Greene, "An Economic Analysis of Three Confinement Hog Finishing Systems", University of Minnesota Agricultural Experiment Station Bulletin #535, Minneapolis, MN, 1980. The authors conclude from their comparative analysis that more intensive housing systems do not in and of themselves constitute a clear-cut economic advantage for producers; rather, "The 'right' system for an individual producer depends ultimately on the producer's preferences, managerial ability, and financial situation."*]*