Epidémiol. santé anim., 1997, 31-32

FARM ANIMAL WELFARE: ECONOMICS AND EPIDEMIOLOGY

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Economic theory has an important role to play in studies of farm animal welfare. Within an economic approach there is also a role for epidemiology, as there are significant linkages between economics and epidemiology in the field of farm animal welfare. The effects of farm animal diseases and other welfare problems means that they have resource use implications. Thus it is important that animal welfare is incorporated within an economic framework. The costs of reduced animal welfare may be paid for by the farmer, or by the consumer. Alternatively, poor animal welfare can be viewed as a cost borne by the animals themselves in the form of suffering. To assess the importance of a disease or other welfare problem a 'welfare parameter' for an animal population can be calculated, facilitating the comparison of animal production methods.. However, this raises important ethical considerations.

INTRODUCTION

Economic theory has an important role to play in studies of farm animal welfare. Within an economic approach there is also a role for epidemiology, as there are significant linkages between economics and epidemiology in the field of farm animal welfare.

THE IMPORTANCE OF ECONOMICS IN FARM ANIMAL WELFARE STUDIES

The effects of farm animal diseases and other welfare problems means that they have resource use implications. Thus it is important that animal welfare is incorporated within an economic framework. The costs of reduced animal welfare may be paid for by the farmer, in the form of veterinary bills and lost production, or by the consumer in the form of higher market prices. Alternatively, poor animal welfare can be viewed as a cost borne by the animals themselves in the form of suffering. There are a number of ways in which it may be possible to quantify this cost.

A ROLE FOR AN EPIDEMIOLOGICAL / ECONOMIC APPROACH

To assess the importance of a disease or other welfare problem a 'welfare parameter' for an animal population can be calculated. The negative contribution to welfare being equal to the incidence multiplied by the duration multiplied by the average intensity of discomfort (Willeberg, 1991). This can facilitate comparisons of animal production methods. Obviously there are difficulties associated with quantifying the average intensity of discomfort. In the case of disease studies this may be achieved by using physiological and behavioural measurements. For other factors which negatively affect welfare it is possible to use economic theory in behavioural research (Kagel, Battalio, Rachlin, & Green, 1981).

ETHICAL CONSIDERATIONS

Using this methodology the proportions of animals raised under different systems will determine the population welfare. As Willeberg (1991) notes, there are important ethical considerations to be taken into account when trading-off the degree of suffering experienced by individuals within a population. Additional ethical questions are raised when attempts are made to compare the degree of population suffering between farm animal species. Singer (1976) states that it is a morally important fact that animals experience pain, so calculations of society's welfare should include the costs of animal suffering. If this ethical view is accepted, then the task facing economists is to quantify these costs in such a way as to enable assessment of the social cost:benefit trade-offs facing society.

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