Relationships between pig welfare, productivity and farmer disposition

T Jääskeläinen*, T Kauppinen†, KM Vesala and A Valros‡

1 Research Centre for Animal Welfare and Department of Production Animal Medicine, PO Box 57, 00014 University of Helsinki, Finland
2 Department of Social Research, PO Box 54, 00014 University of Helsinki, Finland
* Contact for correspondence and requests for reprints: terhi.jaaskelainen@alumni.helsinki.fi

Abstract

The aim of this study was, firstly, to investigate the connection between on-farm assessed welfare scores and production parameters for sows, and secondly, to examine how farmers perceive the connection between their disposition, animal welfare and productivity. We assessed environmental and management preconditions on animal welfare and interviewed farmers on 30 Finnish farms. We studied the relationship between welfare and production using correlation and regression analyses. The theory of planned behaviour served as an articulation of farmer disposition when studying farmer perceptions. Concerning the production data, better welfare scores from the 'health and stockmanship' category during lactation were correlated with shorter reproduction cycle and fewer stillborn piglets and it also explained some of the variation in the number of piglets per year and the length of the farrowing interval. The farmers agreed that the productivity parameters and the principles of assessing welfare used in this study were relevant. A majority of farmers considered that animal welfare affects productivity and that there are associations between farmer attitudes, animal welfare and productivity. There were no statistical relationships between farmer perceptions and animal welfare; yet on the farms with positive perceptions of attitudes to animal welfare and productivity there were slightly lower piglet mortality rates and lower stillbirth rates than on the farms with farmers holding less positive views. We conclude that actions to improve animal welfare also have an economic impact as they enhance sow production. Good stockmanship and healthier animals result in more piglets born and a shorter reproduction cycle.

Keywords: animal welfare, attitude, farmer, pig, production, theory of planned behaviour

Introduction

Animal welfare is multidimensional and can be defined in different ways. A common approach to the concept of welfare includes the Five Freedoms defined by the Farm Animal Welfare Council (1992). We share the interpretation of Appleby (1996), who represents animal welfare as a state of well-being brought about by meeting the physical, environmental, nutritional, behavioural and social needs of the animals under the care or influence of people. Husbandry and disease control that we consider to be suitable and meet the needs of an animal may satisfy physical, environmental and nutritional needs, but they do not necessarily guarantee that behavioural and social needs are met. Thus, special attention should be paid to these factors in intensive farming.

Welfare assessment can be carried out based on the animal or its environment. Environment-based measurements include space allowance, animal density and microclimate in the animal unit. Measurements of environmental parameters are based on previously collected information about the effects that the environment is known to have on the animal, but they can only identify conditions which could relate to animal welfare and should not be used to predict animal welfare per se (Keeling 2005). Though environmental measurements cannot provide direct information on welfare of an individual animal, they are widely used in on-farm welfare assessment systems because the measurements can be performed quickly and inter- and intra-observer repeatability is good (Napolitano et al 2009).

Animal-based measurements provide more detailed information on the welfare state of the animal. Human-animal interaction, abnormal behaviour, body condition score, skin condition, lameness and injuries are all animal-based measures used for on-farm welfare assessments. The main aim in the use of animal-based measurement with on-farm assessment is to establish measures that have proven validity and reliability and can be taken on a large number of animals in a reasonable time (Sevi 2009). When animal-based parameters are used they can be evaluated in different ways: i) as a percentage of all animals in the same production phase (eg A-index, [Munsterhjelm et al 2006]); or ii) detailed measures carried out on randomly selected animals from the production phase of interest (Welfare Quality® 2009), as evaluating all the individual animals on a given farm would be impossible.