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### LOW-INPUT OUTDOOR AND ORGANIC POULTRY PRODUCTIONS: HOW TO IMPROVE ANIMAL WELFARE IN THESE SYSTEMS?

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Although low-input outdoor and organic poultry production systems allow natural expression of poultry behaviour and are expected to support a high level of animal welfare, health and welfare issues are still observed (van de Weerd and al. 2009). In order to improve animal welfare in these systems, they must first be characterised and qualified because the diversity of practices applied in these systems can lead to a range of welfare problems. Our methodology enabled us to highlight the major animal welfare challenges and concerns in low-input outdoor and organic poultry production systems at the European level. Firstly, standards, regulations and labelling schemes imposing practices in these systems were gathered and described. Secondly, relevant peer-reviewed articles, congress proceedings and on-going research projects were reviewed to ensure state-of-the-art information on practices and their impacts on animal welfare. Thirdly, interviews with key-informants were conducted in Italy, Finland, France and the United Kingdom to acknowledge any gaps in identification of the animal welfare challenges and related solutions. The study identified close to 50 systems, which differed in their characteristics. For instance, variations in space allowance, application of mutilations and free range access differed substantially between identified systems. The screening of grey literature and articles enabled to check innovative solutions related to ethics, behaviour, health and management issues such as the use of genetic strains, phytobiotics and enrichment of the range. The results of the interviews enlighten the perception of stakeholders regarding animal welfare in these systems. In fact, items such as “the 5 freedoms” and “Animal needs” or “Consumers perception” were systematically raised whereas “Regulation” was qualified as a component of animal welfare definition only by stakeholders from Finland and Italy. Besides providing a shortlist of systems, our study allowed us to inventory the issues and the barriers and levers related to them in a database. A comprehensive inventory of current and prospective production practices in poultry low-input outdoor and organic systems helps us to understand the diversity of farming systems and the barriers and levers to animal welfare observed in these systems.

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