

WORK PACKAGE 2.2: LIVESTOCK PRODUCTION, HEALTH, WELFARE AND DISEASE CONTROL

The aim of Work Package (WP) 2.2 is the production of healthy animals that can be managed sustainably to produce food.

Livestock health and welfare plays a fundamental role in the sustainable management and productivity of Scottish livestock agriculture. This will be achieved by improving animal characteristics, health management and welfare assessment. Ultimately, more efficient livestock production will reduce waste, reduce greenhouse gas emissions and improve global food security.

The science is useful to a broad range of end-users, from government to businesses in all parts of the livestock supply chain. It will have national and international impact.

Building on previous Strategic Research Programmes, and the mechanisms of knowledge exchange developed in them, new opportunities for communication with stakeholders and enhancing impact will be exploited.

WP 2.2 will deliver knowledge, technologies, and tools which will have impact through:

- The application of genetics and genomics to increase productivity in the beef and sheep sectors.
- Exploration of the pathogenic mechanisms underlying endemic diseases.
- The design and development of new diagnostic tests which are specific, sensitive, affordable and speedy.
- The design and development of new vaccines which are safe, effective, practical and affordable.
- Improving baseline measurements of disease and health status.
- Epidemiological studies, which will identify the dynamics of endemic disease transmission, assess their impact on livestock health and evaluate methods for control both within and between farms.
- Validation of existing and new methods of assessing animal welfare, and improvement of practical, on-farm methods of livestock husbandry.
- Research exploring the relationships between diet, grazing behaviour, genetics, metagenomics and greenhouse gas emissions, to meet requirements for sustainable production of Scottish livestock.

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