

European Network on Livestock Phenomics (EU-LI-PHE): an international initiative to boost high throughput phenotyping for applications in precision livestock farming and animal breeding

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The acquisition of relevant animal phenotypes is fundamental to routine and daily management of livestock populations in order to optimise reproduction strategies, disease control and welfare of the animals. Phenotyping is also increasingly recognised as a limiting factor in all applications of animal breeding that rely on the availability of accurate and specific phenotype data. Phenomics applied to livestock production systems has one major aim: to systematically describe the animal phenome, referred to as the physical and molecular traits of an animal. EU-LI-PHE constitutes a Europe-centred multidisciplinary, interconnected and inclusive community of experts aiming to boost scientific collaboration, catalyse developments, and transfer of livestock phenomics concepts and applications to improve the sustainability and competitiveness of the European livestock production sector. EU-LI-PHE is focused on i) phenotyping technologies and infrastructures for applications in livestock phenomics, ii) novel approaches and methods for genome to phenome integration in livestock species, iii) computational resources and data analysis methods needed for this big data discipline, iv) the regulatory framework and the societal vision for livestock phenomics and v) the development of a training environment for the benefit of the next generation of researchers in this field.