SusTradeOff

UNDERSTANDING TRADE-OFFS BETWEEN HEALTH AND EFFICIENCY TO IMPROVE COMPETITIVENESS AND SUSTAINABILITY OF ANIMAL PRODUCTION BY BREEDING AND MANAGEMENT

CHALLENGE

It is hypothesised that intense selection for traits such as live weight gain and egg/milk yield in production animals has resulted in resources being allocated within the animals to production, at the expense of other physiological processes such as immune function.

OBJECTIVES

This project aims to develop cutting edge technologies to study the allocation of different dietary proteins between production and immune function in sheep and poultry, and how this allocation is affected by stage of production, disease, vaccination or genetics.

EXPECTED RESULTS

Biological materials and proteomics technologies will first be developed to study these trade-offs at the individual animal level. This will facilitate the identification of protein sources and/or targeted protein supplementation to enhance or maintain immune functions in the face of high production programmes demands. Population studies on experimental and commercial lines will investigate trade-offs between resilience, immunocompetence and production, providing additional genotypes and phenotypes to select in balanced breeding programmes.

POTENTIAL IMPACT

Data integration and modelling will provide prediction models for trade-offs and decision making tools that will then be validated at the production level with breeding industry partners under commercial conditions using industry standard operational scenarios. Integrated animal health and production management strategies will improve the competitiveness and sustainability of animal production.

EUROPEAN RESEARCH AREA ON SUSTAINABLE ANIMAL PRODUCTION

ERA-NETSUSAN

SUSTRADEOFF CONSORTIUM

Country	Consortiumpartners	Funded by
FR	Institut National de la Recherche Agronomique – Génétique Animale et Biologie Intégrative	ANR
	Institut National de la Recherche Agronomique – Génétique Physiologie et Systèmes d'Elevage	
	Institut de l'Elevage	
	Institut Technique Aviculture	
DK	Aarhus University	DAFA
	Okologisk landsforening	
NL	Wageningen University and Research	NWO
	Hendrix Genetics	
	Cobb-vantress	
UK	University of Edinburgh	DEFRA
	Moredun Research Institute	

RUNNING TIME

From 1 April 2017 until 31 March 2020

FUNDING

The research is funded as a part of the ERA-Net Cofund SusAn (grantnr 696231) through a virtual common pot model with EU top-up and received 835.000 €.

CONTACT:

INRA-GABI

Dr. Marie-Hélène Pinard-van der Laan

marie-helene.pinard@inra.fr

WEBSITE:

www.era-susan.eu