THEME	PROJECT TITLE	OBJECTIVE	LEAD PROVIDER	LEAD INVESTIGATOR	LEAD FUNDER	START	END	SECTOR
AW Assessment	Welfare benchmarking and management for the beef cattle industry (P.PSH.0807)	This project will develop a welfare risk assessment and benchmarking framework for use throughout the production system to measure and manage the welfare performance of an enterprise. The framework will enable benchmarking of animal welfare and generate knowledge that will provide the basis for development of welfare assurance schemes. This will benefit primary producers and suppliers by enabling new products to be developed based on welfare and will enable the livestock industries to meet market demands for welfare assured products	CSIRO	C Lee	Animal Welfare Strategic Partnership and MLA	2017	2022	Beef
Mgment, Housing & Husbandry	Reducing mortality rates in beef and sheep enterprises (P.PSH.0817)	The purpose of this project is to reduce mortality rates of cattle and sheep using new technologies and prediction models for early warning and detection of the risk of mortality of individuals and groups.	USYD	L Gonzalez	Animal Welfare Strategic Partnership and MLA	2017	2022	Beef
Mgment, Housing & Husbandry	Risk factors, treatment and prevention options for pink eye disease in cattle (B.AHE.0319)	Estimate pink eye prevalence on farms and in feedlots, identify risk factors, evaluate the efficacy of prophylactic and treatment measures.	USYD	N Dhand	MLA	2018	2021	Beef

THEME	PROJECT TITLE	OBJECTIVE	LEAD PROVIDER	LEAD INVESTIGATOR	LEAD FUNDER	START	END	SECTOR
Pain Assessment & Mgment	Development of a single shot immune-contraceptive vaccine for cattle B.AWW.0260)	Spaying of cows has been shown to significantly improve productivity in extensively managed beef herds where continuous mating is common practice, and reduce farm deaths in cull cows. This project aims to investigate the possibility of using a vaccination to stimulate an immune mediated contraceptive effect.	UQ	M Holland	MLA	2017	2020	Beef
AW Assessment	Automating welfare measurements and interventions for northern Australia (P.PSH.1100)	This project will evaluate the potential for Automated Livestock Management Systems (ALMS) and auto drafters to be used on extensive beef properties with a specific focus on monitoring stock welfare and segregating calves to improve their management and welfare.	CQU	K Pattison	Animal Welfare Strategic Partnership and MLA	2017	2019	Beef
Mgment, Housing & Husbandry	Development of an accreditation scheme for lay spayers using the Dropped Ovary Technique (DOT) (L.PDN.1701)	Develop accreditation Rules including processes to clarify grounds for and categories of complaints and appeals. Consider provisional accreditation of Lay Spayer's and a database for Lay Spayer accreditation. The project will identify and resolve issues related to accreditation criteria, processes, records, costs and integrity register.	AGFORCE	P Smith	MLA	2017	2019	Beef

THEME	PROJECT TITLE	OBJECTIVE	LEAD PROVIDER	LEAD INVESTIGATOR	LEAD FUNDER	START	END	SECTOR
Pain Assessment & Mgment	Pink Eye in Long Haul Cattle Voyages (W.LIV.0181)	The objectives of this project are to review current literature on pink eye in cattle, gather epidemiological data from the livestock export trade, identify the microorganisms associated with the current syndrome and develop strategies for prevention.	MURD	M Laurence	Livecorp/MLA	2014	2019	Beef

THEME	PROJECT TITLE	OBJECTIVE	LEAD PROVIDER	LEAD INVESTIGATOR	LEAD FUNDER	START	END	SECTOR
AW Assessment	Auto monitoring and data collection: sheep wellbeing	To develop remote sensing methodologies in monitor sheep welfare on farm	MURD	D Miller	Sheep CRC	2016	2020	Cross-sector
Mgment, Housing & Husbandry	The welfare of bobby calves in the meat supply chain (P.PSH.0860)	The goal is to measure the health and welfare status of bobby calves within the supply chain, and to identify variations in calf hydration, glucose levels, and colostral immunity in relation to breed, bodyweight, time off feed and transport distance. The project will then include research on-farm (and onwards in the supply chain) to validate the optimal calf preparation strategies indicated by the initial research. This will provide objective data on industry performance, as well as forming the basis of updated advice to farmers on areas of calf preparation on which to focus for ensuring optimal calf welfare. Together, these outcomes can contribute to a greater resilience of the industry in response to current concerns around calf welfare.	AWSC UoM	A Fisher	Animal Welfare Strategic Partnership and MLA	2017	2020	Cross-sector

THEME	PROJECT TITLE	OBJECTIVE	LEAD PROVIDER	LEAD INVESTIGATOR	LEAD FUNDER	START	END	SECTOR
Mgment, Housing & Husbandry	Enhancing the profitability and productivity of livestock farming through virtual herding technology	Develop virtual herding technology and assess welfare impacts for the dairy, beef cattle and sheep industries.	CSIRO	C Lee	Commonwealth Dept	2016	2020	Cross-sector
Attitudinal Effects	Monitoring public attitudes to livestock industries and livestock welfare	To develop a tool to monitor public perceptions and sources of knowledge relating to animal welfare in the primary industry sector. This will identify trends in community attitudes and behaviour and will assist in the development of communication strategies designed to inform the community on welfare related developments in the livestock industries. Funders - APL, AMPC, MLA, AgriFutures, Livecorp	AWSC UoM	G Coleman	NAWRDE	2018	2019	Cross-sector
Mgment, Housing & Husbandry	Identification of resilient sheep	To identify key measures of resilience in sheep	CSIRO	C Lee	Sheep CRC	2016	2019	Cross-sector

THEME	PROJECT TITLE	OBJECTIVE	LEAD PROVIDER	LEAD INVESTIGATOR	LEAD FUNDER	START	END	SECTOR
Mgment, Housing & Husbandry	Developing nutritional strategies for early lactation (First 100 days) DEDJTR	Aims to deliver early lactation feeding strategies for individual cows that increase feed intake and peak milk yield, while minimising the incidence of metabolic diseases.	AgVic	B Wales	State	2017	2023	Dairy
Mgment, Housing & Husbandry	Feeding cool cows DEDJTR	Will investigate nutritional opportunities to alleviate the impacts of hot weather on animal performance, health and welfareand explore the potential interactions between nutritional and genetic interventions.	AgVic	L Marett	State	2017	2023	Dairy
Pain Assessment & Mgment	Characterisation of the welfare and performance responses of calves to disbudding and castration procedures	PhD Fellowship between Teagasc and the University of Melbourne. This research will deliver practical pain management strategies as a part of standard industry practice at the time of disbudding and castration of calves.	AWSC UoM	A Fisher	Other	2018	2021	Dairy
Education, Training & Ext	Dairy Farm Risk Management and Industry Resilience DEDJTR	More dairy farmers will apply improved biosecurity and animal welfare practices in line with codes of practice.	AgVic	B Davidson	State	2017	2020	Dairy
AW Assessment	Precision livestock robotics	Aims to provide proof of concept of a novel technology to accurately and autonomously detect dairy cow lameness in real time using non-invasive, remote camera observations and machine learning. Development and vaildation within the Australian Dairy Industry's Genetic Information commercial herds.	USYD	J Underwood	DA	2016	2019	Dairy

THEME	PROJECT TITLE	OBJECTIVE	LEAD PROVIDER	LEAD INVESTIGATOR	LEAD FUNDER	START	END	SECTOR
Mgment, Housing & Husbandry	What causes smothering in commercial free-range laying hens?	An understanding of the relationships between environmental characteristics and flock characteristics (e.g. such as physical conditions and behavioural characteristics such as fear and exploration during rearing and in adulthood) and smothering events is likely to lead to benefits for both hen welfare and farm productivity. This project aims to quantify the extent to which smothering is occurring on layer farms. It is an epidemiological study that will identify factors associated with smothering events that can be used to predict future occurrences. This information will then be able to be used to design interventions to reduce the incidence of smothers. Working with collaborators from the University of New England (UNE), Investigators: Paul Hemsworth, Andrew Fisher, Mark Stevenson and Peta Taylor (UNE).	AWSC UoM	P Hemsworth	AEL	2018	2021	Eggs
Mgment, Housing & Husbandry	Hen ranging behaviour in relation to light and ultraviolet intensity	To provide knowledge on how range use may be impacted by weather parameters related to sun exposure.	CSIRO	D Campbell	AEL	2018	2021	Eggs

THEME	PROJECT TITLE	OBJECTIVE	LEAD PROVIDER	LEAD INVESTIGATOR	LEAD FUNDER	START	END	SECTOR
AW Assessment	Development of practical measures of hen welfare	The objectives of this project are to enhance the use of microRNAs as a measure of poultry welfare. The two aims are to, firstly, further develop an existing stress assay so that it can be applied non-invasively using eggs as the source of the microRNAs, and secondly, identify microRNAs that can identify negative and positive affective (emotional) states in chicken.	DEAK	T Crowley	AEL	2018	2020	Eggs
Mgment, Housing & Husbandry	Resilient plants to entice hens outdoors on free range farms	A three year project: firstly, a series of case study free range farms across different climatic zones with fixed ranges will be studied to see how they maintain vegetation on the range (trees and ground cover); secondly, compile agronomic information on what, how, when to plant on the range; thirdly, "a proof of concept trial" testing whether a fast growing shrub and perennial pasture plant combination sown on the outer range area will attract more hens to utilise this area. The main output will be a guideline package on the maintenance of range vegetation.	UoA	C DeKoning	AEL	2017	2020	Eggs
Mgment, Housing & Husbandry	Early enrichment of free range laying hens	To determine effective enrichment strategies during rearing to better prepare free-range birds for outdoor access.	CSIRO	D Campbell	Poultry CRC	2017	2019	Eggs

THEME	PROJECT TITLE	OBJECTIVE	LEAD PROVIDER	LEAD INVESTIGATOR	LEAD FUNDER	START	END	SECTOR
Attitudinal Effects	Animal welfare and values	This project, funded by Australian Eggs Limited is working with a panel of experts in animal welfare science, veterinary science and social science to identify and describe values-based elements that arise in the context of the available frameworks for animal welfare, allowing for rational assessment and productive engagement on hen welfare issues. Working with collaborators from the University of Adelaide (UA), the University of Western Australia (UWA) and a private consultant, this project will conclude in 2019.	AWSC UoM	A Fisher	AEL	2018	2019	Eggs

THEME	PROJECT TITLE	OBJECTIVE	LEAD PROVIDER	LEAD INVESTIGATOR	LEAD FUNDER	START	END	SECTOR
Mgment, Housing & Husbandry	Early stress experiences and stress resilience and emotionality in pigs	Stress has substantial implications on the productivity, health and welfare of farm animals and thus farm profitability. This project aims to examine stress resilience in pigs. This project will generate new knowledge on early life management to endow stress resilience in pigs, with expected benefits for animal welfare, farm productivity and profitability.	AWSC UoM	P Hemsworth	ARC	2019	2024	Pork
AW Assessment	A lab on a chip for real time pain and animal welfare biomarker measurement.	This project aims to measure multiple biomarkers at the same time. From a single blood sample a lab on a chip could measure a couple of key cells in the immune system like tumour necrosis factor α and Interleukin 10, several specific miRNA markers (developed in APL project 2016/077) and a steroid hormone. This would provide the user with multiple markers that could be used to assess the welfare state of the animal on farm. A microfluidic lab on a chip would enable the industry to drive continuous improvement in animal welfare using on farm objective measures.	SARDI	R Terry	APRIL	2018	2019	Pork

THEME	PROJECT TITLE	OBJECTIVE	LEAD PROVIDER	LEAD INVESTIGATOR	LEAD FUNDER	START	END	SECTOR
T'port, Euth & Slaughter	Reducing the impact of on-farm euthanasia on stockpeople through the development of practical protocols and the validation of a new method.	There is a clear need to develop procedures and methodologies that reduce the impact on stockpeople, reduce the potential variation and error in conducting euthanasia.	Sunpork	B Gleeson	APL	2017	2019	Pork
Mgment, Housing & Husbandry	Addressing seasonal effects on piglet birth weight and within litter variation	The project will confirm if producers need to take in to account seasonal influences on birth weight variation which can lead to increased mortalities, and poorer growth. Additionally, the project may provide producers with a simple dietary solution to counteract this effect of season.	Sunpork	K Plush	APL	2017	2019	Pork
AW Assessment	Novel biomarkers of Animal Welfare; microRNA, immunobiology and on farm application	To develop a kit of miRNA and immune based novel biomarkers to assess the welfare of pigs.	SARDI	R Terry	APL	2016	2019	Pork
AW Assessment	Optimising sow body condition throughout gestation and understanding how changes in metabolic status influence reproductive performance	To develop management practices that can adequately maintain body weight and condition during a reproductive cycle have the potential to improve welfare	Sunpork	T Muller	APL	2016	2019	Pork
Mgment, Housing & Husbandry	Development of nutritional strategies to reduce initiation of the stress response by suppression of relevant neurotransmitters	To develop novel nutritional methods (e.g. use of dietary supplements) to reduce weaning stress	MURD	J Pluske	APL	2016	2019	Pork

THEME	PROJECT TITLE	OBJECTIVE	LEAD PROVIDER	LEAD INVESTIGATOR	LEAD FUNDER	START	END	SECTOR
AW Assessment	Novel detection of chicken welfare using machine vision	Novel detection of chicken welfare using machine vision	USQ	C McCarthy	AgriFutures	2017	2019	Poultry
Mgment, Housing & Husbandry	Resilient plants for free range chicken meat farms	The project is being conducted at Blanchetown, South Australia. The main aims are to identify forage plants with increased resilience to chicken activity and determine if chickens access the range more often when provided resilient herbage cover. Perennial grasses, grazing tolerant lucerne and chicory have been established on the range.	SARDI	C de Koning	AgriFutures	2016	2019	Poultry

THEME	PROJECT TITLE	OBJECTIVE	LEAD PROVIDER	LEAD INVESTIGATOR	LEAD FUNDER	START	END	SECTOR
AW Assessment	Objective, robust, real-time animal welfare measures for the Australian red meat (P.PSH.0819)	This project will determine these behaviours which will then form objective measures of cattle welfare from birth to slaughter	USYD	C Clarke	Animal Welfare Strategic Partnership and MLA	2017	2022	Redmeat
AW Assessment	Linking life-time objective welfare and slaughter measurement data to optimise meat quality (P.PSH.0872)	This project will link carcass quality information at slaughter with life-time animal management, health and production data to identify risk factors associated with sub-optimal animal welfare as well as carcass quality at identified critical control points.	USYD	R Bush	Animal Welfare Strategic Partnership and MLA	2017	2022	Redmeat
AW Assessment	Animal Welfare Indicators Pilot for the Live Export Industry (W.LIV.3047)	Develop and pilot a range of possible indicators across the livestock export supply chain to better measure animal welfare. A comprehensive data recording system and dashboard will also be developed.	MURD	T Collins	Livecorp/MLA	2017	2021	Redmeat
Attitudinal Effects	Identifying public and producer attitudes to sheep and cattle animal welfare to inform education strategies (P.PSH.0804)	Will provide the tools for the red meat industry 1. assess public and producer attitudes to animal welfare issues, their knowledge of the issues and their key opinion leaders and 2. to utilise validated education strategies to address misinformation on practices and disseminate research results on best-animal welfare practice addressing the specific contentious welfare issue in question.	AWSC UoM	G Coleman	Animal Welfare Strategic Partnership and MLA	2017	2021	Redmeat

THEME	PROJECT TITLE	OBJECTIVE	LEAD PROVIDER	LEAD INVESTIGATOR	LEAD FUNDER	START	END	SECTOR
Pain Assessment & Mgment	Improving welfare – pain relief (P.PSH.0818)	Investigating options for practical administration of analgesics, the potential for long-acting analgesics to provide prolonged therapy and self-medication strategies for use in extensive farming systems. The outcome will provide producers with an affordable, efficacious and practical protocol for delivering pain relief on farm.	USYD	P.White	Animal Welfare Strategic Partnership and MLA	2017	2021	Redmeat
AW Assessment	Immune fitness as a measure of animal health welfare and productivity (P.PSH.0816)	Immunocompetent animals fare better in the face of physiological challenges such as exposure to infectious diseases. Additionally, management-related stressors can impact on an animal's ability to thrive, as it is known that stress can suppress immune responses. This project will investigate the overall well-being of red-meat animals from the perspective of their immune fitness, aligned with susceptibility to disease and response to common external stressors encountered during production. We aim to develop simple immune measure(s) as a correlate of physiological health and well-being for use as a benchmarking tool for overall herd health and welfare	USYD	A Purdie	Animal Welfare Strategic Partnership and MLA	2017	2020	Redmeat

THEME	PROJECT TITLE	OBJECTIVE	LEAD PROVIDER	LEAD INVESTIGATOR	LEAD FUNDER	START	END	SECTOR
Mgment, Housing & Husbandry	Phasing out of Mulesing: cost, benefits and opportunities (B.AWW.0006)	This project will examine the benefits and costs of ceasing Mulesing in prime lamb systems and will examine the key drivers for farmer behaviour and attitudes towards continuation of mulesing prime lambs' dams, and barriers for behavioural change towards mulesing-free systems. Outcomes will inform future extension programs and approaches to encourage phasing out of mulesing in prime lamb enterprises.	AWSC UoM	A Fisher	MLA	2018	2021	Sheepmeat
Mgment, Housing & Husbandry	New approaches to the understanding of underlying causes for neonatal lamb mortality (P.PSH.0808)	While increased twinning rates have led to higher weaning rates in both Merino and Maternal cross ewes, the rate of lamb mortality has remained unchanged. This project will focus on the incidence of dystocia, and the understanding of underlying causes. This in turn will lead to better understanding of the problem to better inform future control efforts.	CSIRO	S Schmoelz	Animal Welfare Strategic Partnership and MLA	2017	2021	Sheepmeat

THEME	PROJECT TITLE	OBJECTIVE	LEAD PROVIDER	LEAD INVESTIGATOR	LEAD FUNDER	START	END	SECTOR
Pain Assessment & Mgment	Gap Evaluation of Pain Alleviation Research	This project is to provide a stocktake of published research into the welfare impacts of castration, tail docking and mulesing; alternatives to these procedures; and potential pain relief strategies. The project report will include a gap analysis and recommendations as to future research directions.	CSIRO	A Small	AWI	2018	2019	Wool