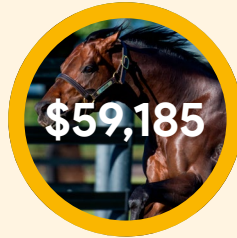


Industry update

Vol. 1 No.5



16
Current
projects



\$59,185
RD&E
investment
July -
September
2019



\$1.4 M
RD&E
investment
committed
from 1 October
2019

Thoroughbred Horses Advisory Panel

- Prof. Nigel Perkins (Chair)
- Dr Catherine Chicken (Deputy Chair)
- Derek Field
- Jacqueline Stewart
- Dr Craig Suann
- Tas Reilley
- Annelies McGaw (AgriFutures Australia Manager, Research)

AgriFutures Advisory Panels

AgriFutures Australia is committed to working with industry to deliver the research and development outcomes rural Australia needs. We work closely with advisory panels to decide on research priorities and to make investment decisions each year.

Members of AgriFutures Australia's Advisory Panels are identified following an open call process which involves a competitive skills based assessment and/or consultation with key industry bodies and stakeholders.

AgriFutures Australia is committed to cultural, age and gender diversity.

To learn more visit agrifutures.com.au/advisory-panel

Project spotlight: A novel device for the on-farm assessment of stallion sperm fertility

Project ID: PRJ-011712

Principal investigator: Zamira Gibb, The University of Newcastle

This project aims to help the thoroughbred horse breeding industry by developing ways to improve reproductive performance by investigating stallion fertility.

Post-breeding 'dismount' semen samples from thoroughbred stallions are routinely collected throughout the season to do basic semen assessments. While conventional sperm assays, such as sperm concentration, motility and morphological assessments are a valuable first way of identifying sub-fertile stallions, they provide only moderate information on the functional competence of sperm cells.

The major objective of this project is to develop, test and validate a device which can measure the metabolic rate of sperm in a dismount semen sample, to identify samples which are unlikely to produce a pregnancy. This will allow stallion managers to schedule the mare to be re-bred on the same cycle if needed, to increase the chance of a positive pregnancy outcome. By increasing per-cycle conception rates, mares will conceive earlier in the breeding season, resulting in earlier foals which will attract higher prices at yearling sales and be more competitive in age-related races. The findings from this study will be pivotal in guiding both device modifications; and stallion and mare management strategies.

Project spotlight: Rapid diagnosis of infectious agents of equine reproductive loss

Project ID: PRJ-011628

Principal investigator: Cheryl Jenkins, NSW Department of Primary Industries

Equine reproductive loss due to infectious agents impacts significantly on Australian thoroughbred breeders. A range of bacterial agents and one particular viral agent are involved. Some of these also pose a significant occupational health risk to workers in this industry. Accurate detection of the infectious agents is important for the management of affected mares. While nucleic acid testing is considered the 'gold standard', testing is normally only performed by well equipped veterinary diagnostic laboratories with molecular capabilities. This restriction means significant delays before diagnostic results are available. This project will develop and evaluate rapid nucleic acid tests for two important causes of equine reproductive loss in Australia, Equine Herpes Virus1 (EHV1), a recognised cause of equine abortion, and Chlamydia psittaci, an emerging cause of reproductive loss as well as zoonotic disease of veterinarians and stud workers. Read more agrifutures.com.au/

Current projects

Project ID	Project Name	Finish	Principal Investigator	Research Organisation
PRJ-011357	Postgraduate Scholarship - UoA Laura Nath	1/12/2019	Nath, Laura	The University of Adelaide
PRJ-011628	Rapid diagnosis of infectious agents of equine reproductive loss	30/01/2020	Jenkins, Cheryl	NSW DPI
PRJ-011237	Computational modelling of limb loads from galloping horses on different tracks	30/04/2020	Whitton, Chris	The University of Melbourne
PRJ-011268	PhD Understanding, reducing the effects of heat stress on TB stallion fertility	1/07/2020	Swegen, Aleona	The University of Newcastle
PRJ-011248	The uterine microbiome- key to equine infertility?	31/08/2020	Krekeler, Natali	The University of Melbourne
PRJ-011159	Non-invasive ventilatory support for foals	31/10/2020	Raidal, Sharanne	Charles Sturt University
PRJ-011233	Improved bacterial identification and antimicrobial susceptibility testing	31/12/2020	Raidal, Sharanne	Charles Sturt University
PRJ-011758	Coxiella burnetii infection in association with equine abortion	31/12/2020	Devlin, Joanne	The University of Melbourne
PRJ-011192	Improving jockey safety through virtual reality and biomarkers of concussion	15/05/2021	Wright, Brad	La Trobe University
PRJ-011777	Science fact not fiction: Detecting gene edited racehorses	16/06/2021	Hamilton, Natasha	Racing Australia Limited
PRJ-011191	Improving the detection of parasitic infections and control strategies of horses	30/11/2021	Jabbar, Abdul	The University of Melbourne
PRJ-011188	Maintaining welfare and integrity in Australian Racing	20/12/2021	Noble, Glenys	Charles Sturt University
PRJ-011271	Wellbeing: Racing demographics, reasons for retirement & post racing destinations	30/12/2021	Flash, Meredith	The University of Melbourne
PRJ-011628	Rapid diagnosis of infectious agents of equine reproductive loss	30/01/2020	Jenkins, Cheryl	NSW DPI
PRJ-011402	Understanding the epidemiology of Chlamydia psittaci infections in mares	31/12/2021	Timms, Peter	University of the Sunshine Coast
PRJ-011712	A Novel Device for the On-farm Assessment of Stallion Sperm Fertility	31/05/2022	Gibb, Zamira	The University of Newcastle
PRJ-011748	Developing a novel diagnostic test for early pregnancy in the mare	31/12/2022	Swegen, Aleona	The University of Newcastle
PRJ-011251	Wellbeing from pregnancy to racing- horse demographics	12/09/2029	Flash, Meredith	The University of Melbourne