

YOUNG SCIENTISTS ADDRESS BIG DAIRY ISSUES

Dairy's top young researchers are tackling some of the big challenges likely to face the industry in the coming years including climate change, fertilisers and animal health and welfare. These were the topics of the three place-getters in the 2015 Emerging Scientists' program which was run in conjunction with the University of Sydney's Dairy Research Foundation annual symposium.

Sponsored by Howard Australia, the program involved the students preparing a written paper and presenting their findings to symposium delegates. The best presenter awards were determined by the audience which comprised mostly dairy farmers and industry people.

Adam Langworthy, from the University of Tasmania took out the award for best presenter about his research on heat tolerant dairy pastures for south east Australia.

Runner up presenter was Jessica Andony from Murdoch University for her study of on-farm tests for sub-clinical ketosis.

Ruairi McDonnell from the Department of Agriculture in WA was awarded best paper for his assessment of potassium fertiliser needs of annual ryegrass pastures.

Philip Myers from Howard Australia said this year saw a record number of entries, all of a very high standard.

"It's very exciting to see the high calibre of our next generation of dairy researchers and their connection with the industry," he said.



The 2015 Emerging Scientists: Jessica Andony (Murdoch University), Adam Longworthy (University of Tasmania) and Ruairi McDonnell (Department of Agriculture, WA).

Best presenter....

DAIRY PASTURES THAT BEAT THE HEAT

Adam Langworthy (University of Tasmania)

Dairy pastures in south east Australia are predominantly perennial ryegrass, which has a low tolerance to heat stress. With climate change expected to result in more frequent heat waves in southern Australia, more heat resilient pastures may be required to replace perennial ryegrass. Adam Langworthy compared the recovery of 10 perennial pasture species to a combination of heat stress and moisture deficit. Chicory proved to be most tolerant, recovering the best after medium (12 days) and long (18 days) periods of heat and soil moisture stress.



Adam Langworthy, best presenter in the 2015 Emerging Scientist Awards.

Runner up best presenter....

COMPARISON OF TESTS FOR SUB-CLINICAL KETOSIS IN EARLY LACTATION DAIRY COWS

Jessica Andony (Murdoch University, WA)

Sub-clinical ketosis erodes dairy farm profit through reduced milk production and cow fertility. Jessica



Andony assessed the accuracy of a convenient, on-farm blood test for sub-clinical ketosis using a meter developed for humans, to monitor diabetes and ketosis (Optium Xceed). This meter proved to be rapid, reliable and repeatable and the results were consistent with blood samples assayed in the laboratory using the 'gold standard' test (colorimetric laboratory assay). While the study was limited to 174 Holstein cows from five herds, the results provide the foundation for a future, larger study to more accurately define and document the prevalence of ketosis in Australian dairy herds, using cow-side (on farm) tests. Ultimately it may pave the way for using the Optium Xceed by dairy farmers, to test, identify and treat cows in their herds affected by sub-clinical ketosis.

Jessica Andony, Runner up best presenter in the 2015 Emerging Scientist Award.

Best paper....

POTASSIUM FERTILISER NEEDS OF ANNUAL RYEGRASS

Ruairi McDonell, Dept Agriculture, WA

The intensification of dairying in Western Australia has seen a transformation in pastures which are now highly reliant on annual ryegrass with very little clover content. As clover is very sensitive to potassium (K) deficiency, fertiliser recommendations previously allowed for the clover content. Ruairi McDonell's research investigated the potassium (K) requirements of swards dominated by annual ryegrass. The results suggest that farmers may be able to reduce the application of K fertiliser to annual and Italian ryegrass pastures without compromising dry matter production. This would also reduce the risk of adverse impacts on cow health caused by excessive K levels in pasture.

His research also demonstrated the effectiveness of plant tissue testing as an alternative to soil testing to determine potassium application rates.

Ruairi McDonell, won the best paper in the 2015 Emerging Scientist Awards.



Media contact: This media has been released by Monks Communication on behalf of the FutureDairy project.

Lee-Ann Monks ph 07 5450 0946 or 0419 349 244 email: media_releases@monkscom.com.au..