

Nitrogen Excretion by lactating dairy cows in grazing pasture system in Australia

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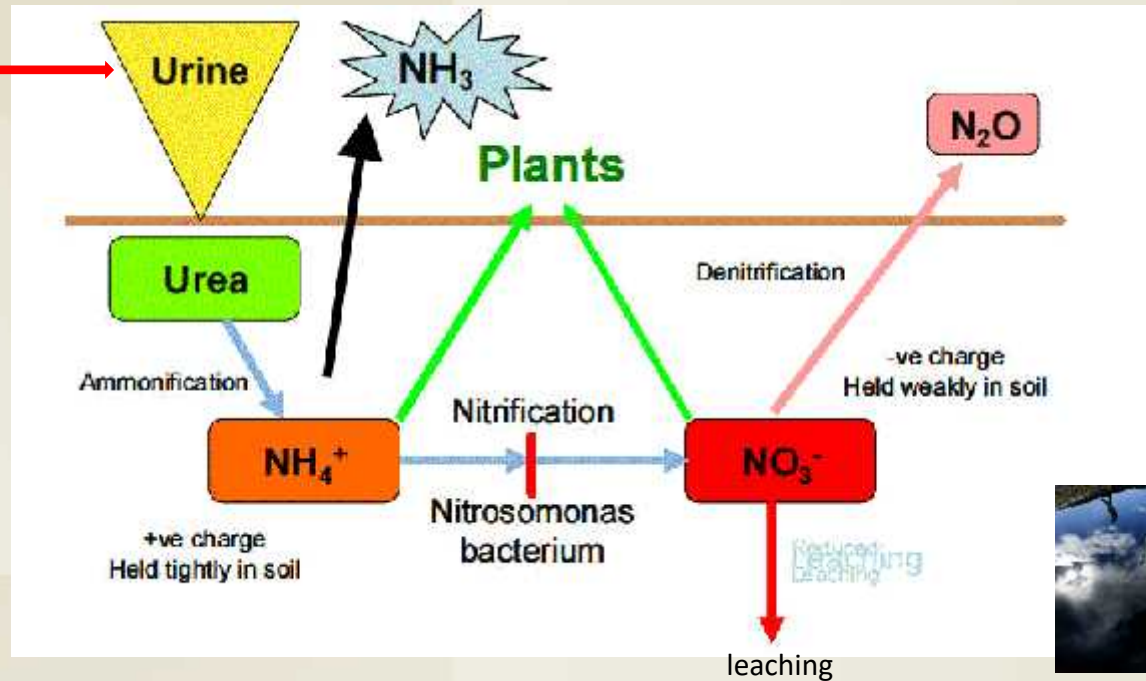
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Importance of N excretion by dairy cows

Urine of grazing animals is the greatest contributor to leaching of nitrogen (N) to ground water and gaseous losses to the atmosphere.



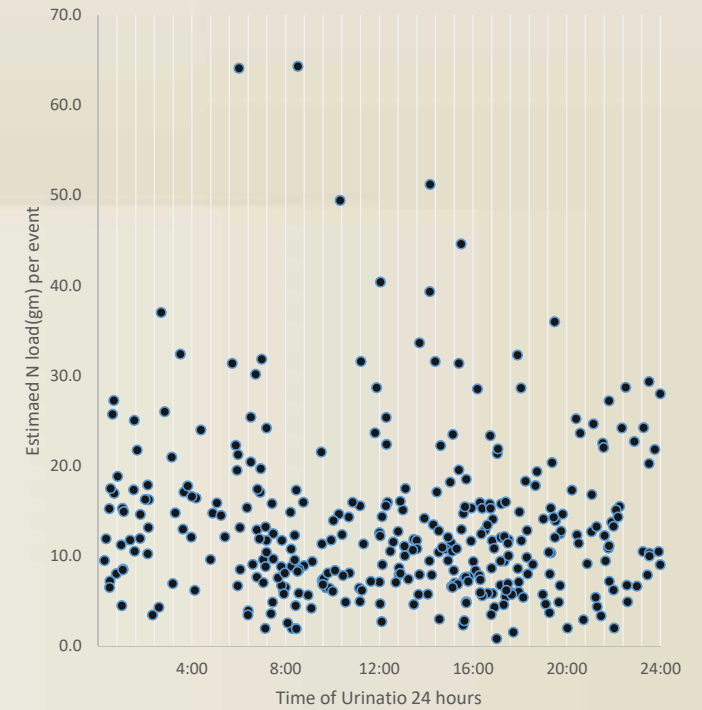
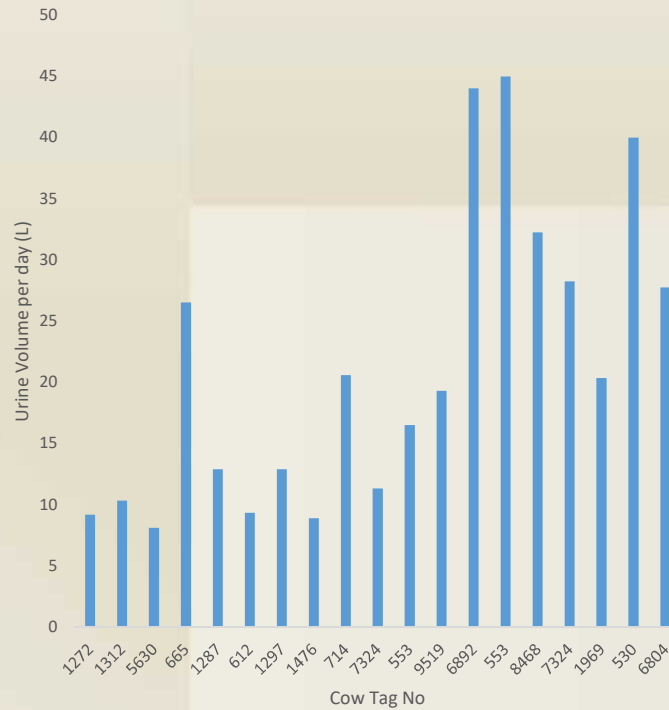
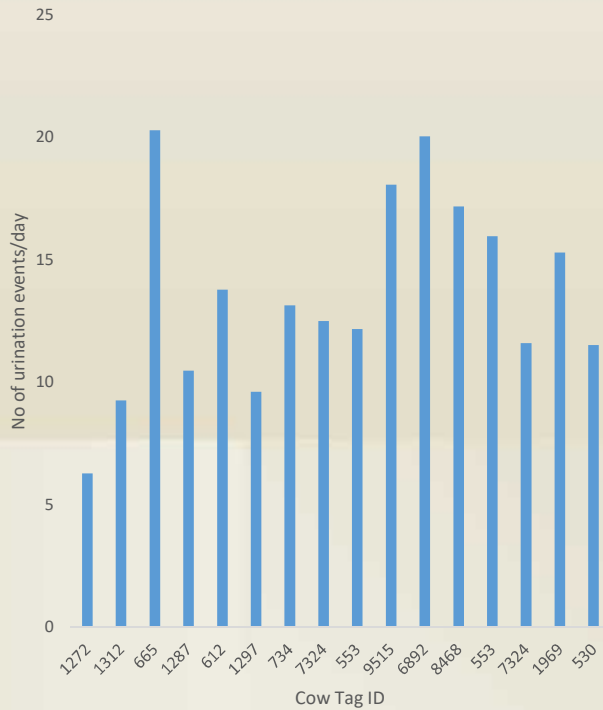
Agresearch Urine Sensor

Measures:

- Estimated Urine volume.
- Estimated No of urination events.
- Estimated N concentration.



Results



	No of urination events/day	Urine Volume (L)/day	Urine N concentration (gm/L)	Urine N load (gm)/event	N Output(gm)/day
Average	11	21	7.2	13.4	156
Range	4 - 18	8.2 - 43	1.2 - 15.7	0.86 - 64.32	84 - 309

Conclusion

Urine volume, frequency and N concentration of individual events are reported for the first time for lactating cows grazing Australian pastures.

The urine sensors enabled non-invasive assessment of urinary N excretion, and provided data that can be used to model N losses in these grazing systems.

Thanks.....