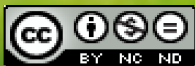


# Establishment of lucerne (*Medicago sativa*) sown on five dates with four inoculation treatments



**Kathryn Wigley**, Derrick Moot, Qakathekile Khumalo and Annamaria Mills



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Note:

This presentation was made on 8 Nov 2012 in Gore at the New Zealand Grassland Association Annual Conference.

It is associated with the following scientific publication:

Wigley, K. Moot, D.J., Khumalo, Q., Mills, A. 2012. Establishment of lucerne (*Medicago sativa*) sown on five dates with four inoculation treatments. *Proceedings of the New Zealand Grassland Association*, **74**, 91-96. Online access: [http://www.grassland.org.nz/publications/nzgrassland\\_publication\\_2275.pdf](http://www.grassland.org.nz/publications/nzgrassland_publication_2275.pdf)



# Objective

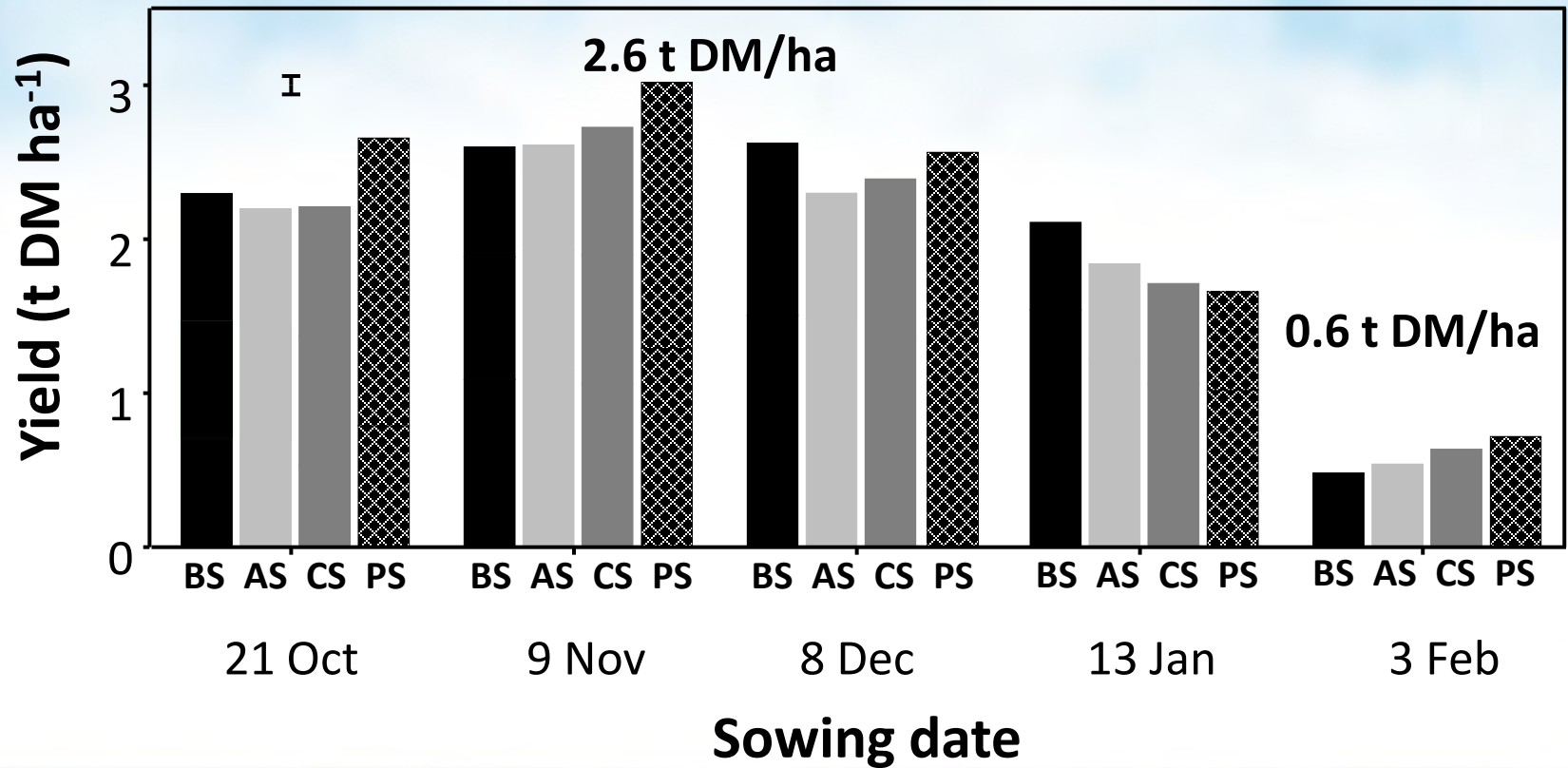
Compare effectiveness of 3 commercially available inoculation treatments with a bare seed control on 5 sowing dates

# Emergence populations

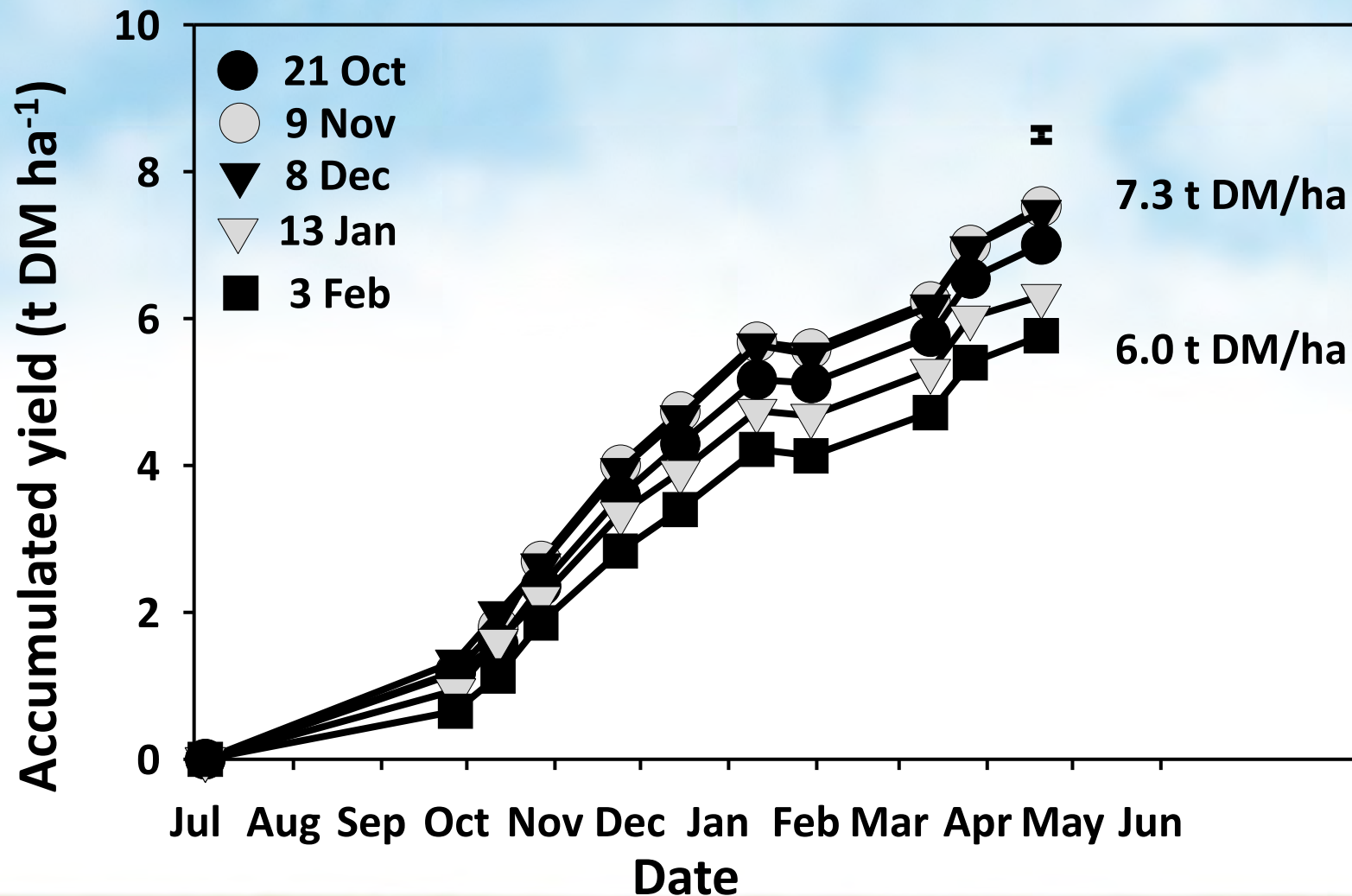
- Coated seed 300 plants m<sup>2</sup>
- ALOSCA<sup>®</sup>
- Peat Slurry 200 plants m<sup>2</sup>
- Bare seed

# DM yield in Year 0

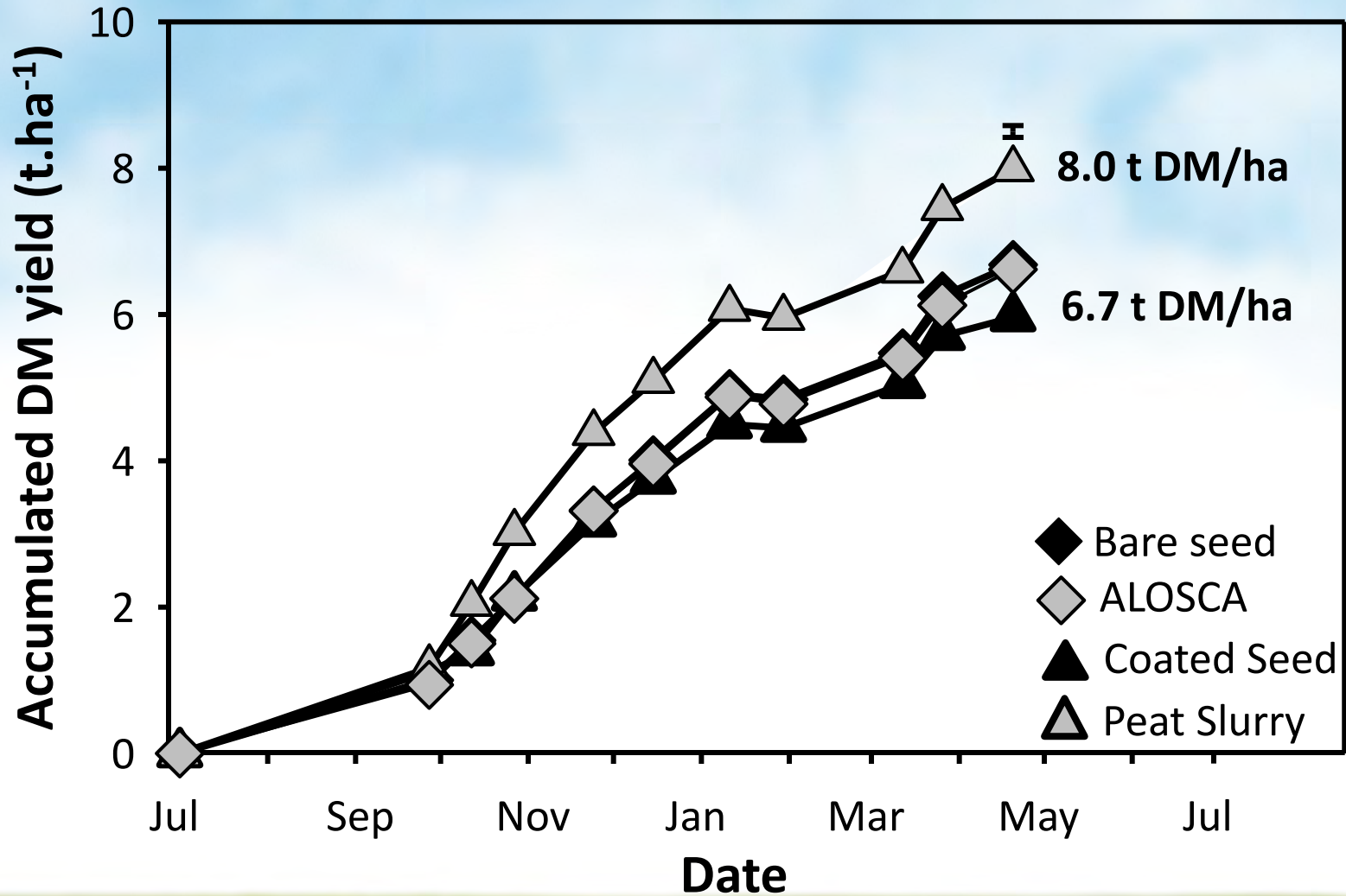
(Sowing – 30<sup>th</sup> June 2011)



# Effect of sowing date on yield in Year 1

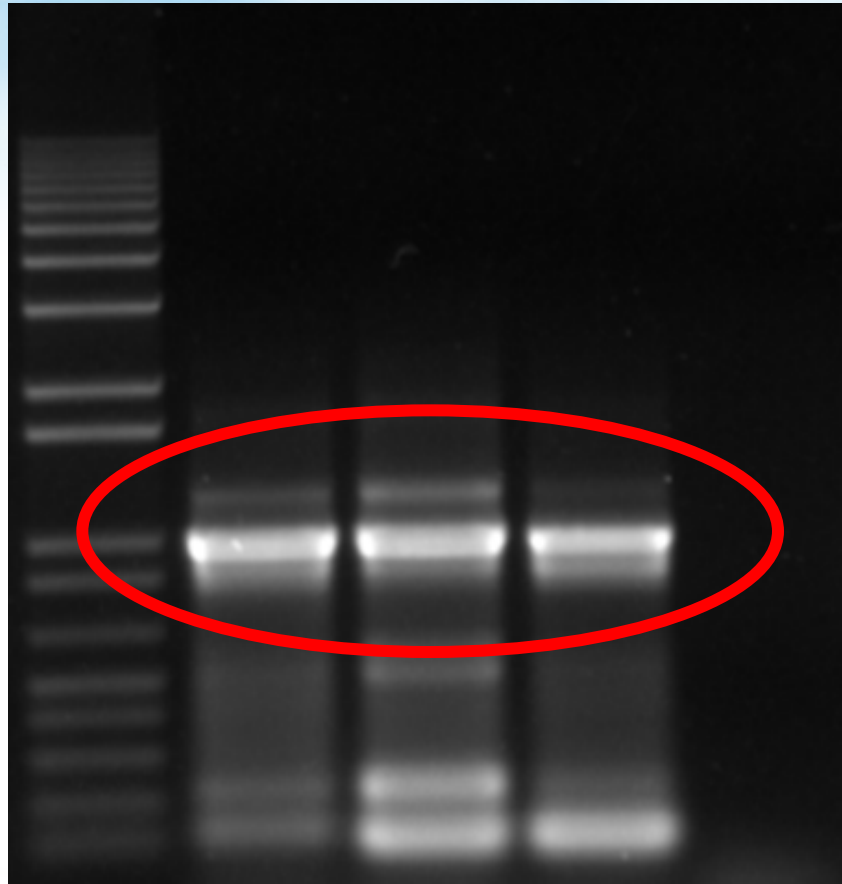


# Effect of seed treatment on yield in Year 1





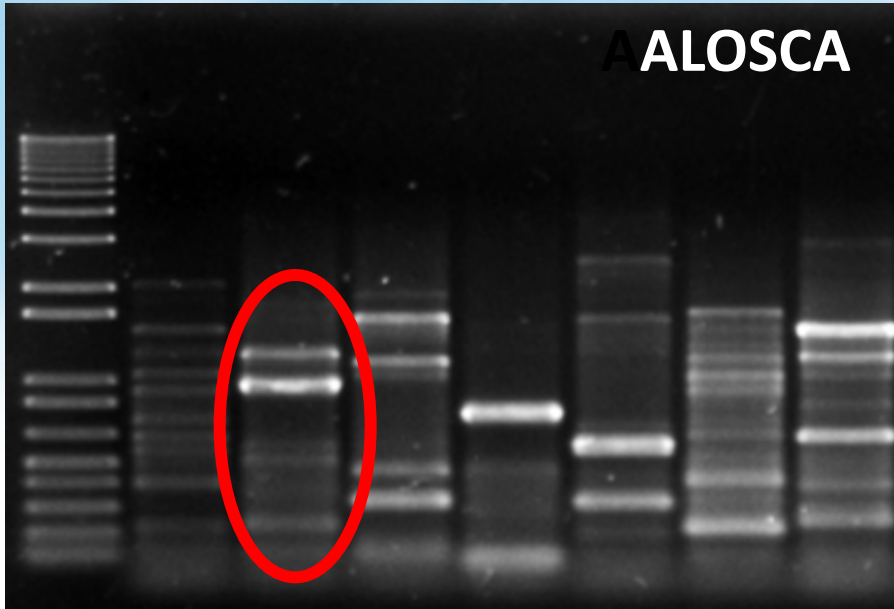
# *Ensifer meliloti* in commercial inoculants



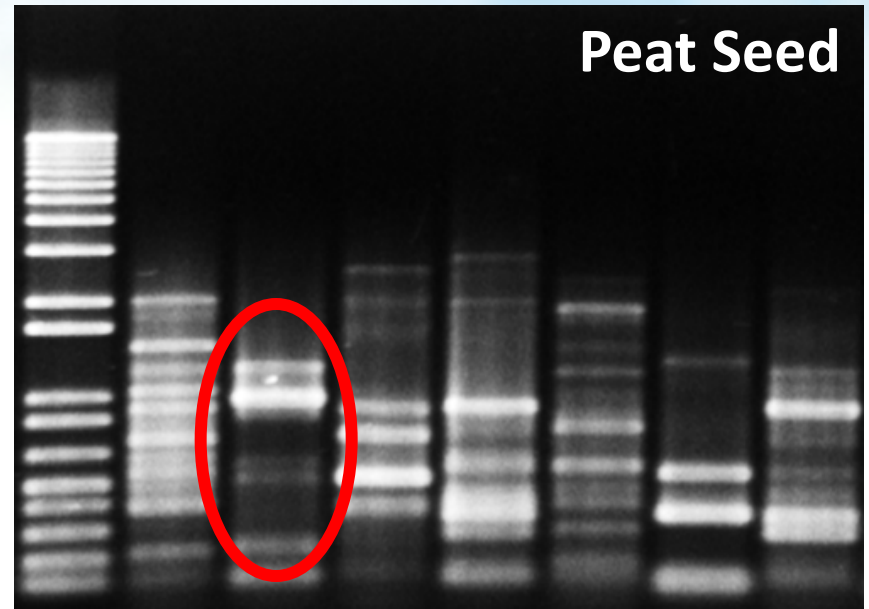


# *E. meliloti* in nodules

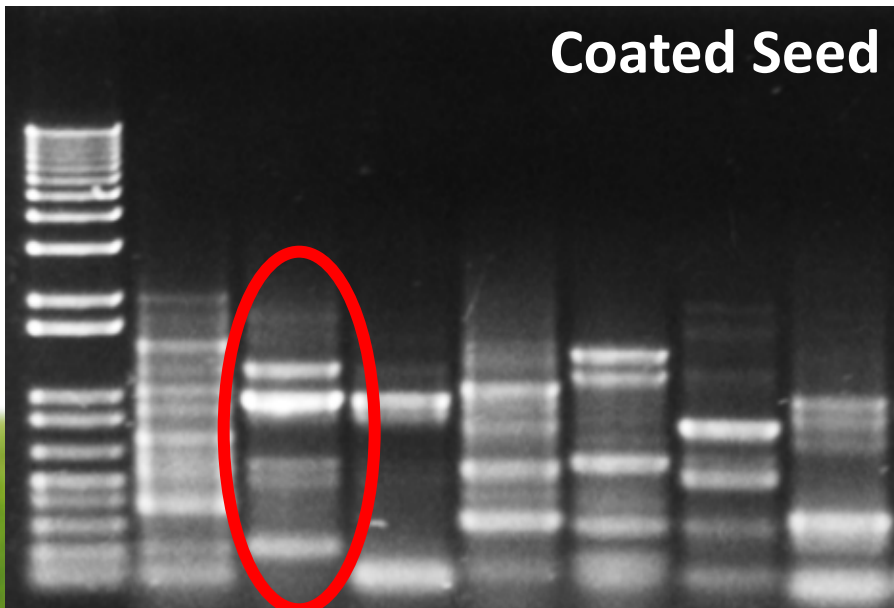
AALOSCA



Peat Seed



Coated Seed



# Rhizobia

Genotype	Treatment			
	BS	AS	CS	PS
<i>Rhizobium</i> sp.	29	25	22	8
<i>Ensifer meliloti</i>	0	4	23	19
<i>Rhizobium</i> sp.	2	1	3	1
<i>Pseudomonas</i> sp.	0	3	1	2
<i>Pseudomonas</i> sp.	3	0	1	2
<i>Serratia</i> sp.	2	4	0	0
<i>Rhizobium</i> sp.	0	2	0	2

# Conclusions

- Adequate populations from all seed treatments
- Sowing after the longest day reduced the yield
- Possible yield advantage from peat slurry treatment





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