



DAIRY SCIENCE 2007

Meeting the challenges for pasture-based dairying

Pasture consumption rates in different dairy production systems in Southwest Victoria, Australia

J. THARMARAJ, D.F CHAPMAN, J. HILL, L.WATSON,
R.GRENDON, AND A. FERGUSSON

The University of Melbourne, Australia



DAIRY SCIENCE 2007

Meeting the challenges for pasture-based dairying

The study: 2 farmlets (36 cows each)

Aim: to maximise consumption of homegrown forage

	RYEGRASSMAX	COMPLEMENTARY FORAGE
Stocking rate	2.25	2.88
Effective pasture area (ha)	16.4	10.5
Crop area (ha)	0	2
Nitrogen (kg/ha)	144	172
Pasture types	Perennial ryegrass <ul style="list-style-type: none">▪ >4 yr old▪ 2 yr old▪ 1st yr	Perennial ryegrass (47%) <ul style="list-style-type: none">▪ >4 yr old▪ 2 yr old▪ 1st yr PRG oversown to Italian (22%) Tall fescue (32%) <ul style="list-style-type: none">▪ >5 yr old▪ 1st yr



DAIRY SCIENCE 2007

Meeting the challenges for pasture-based dairying

Main points of the results

- *< avg rainfall – dry late spring and summer*
- *1 t/ha greater consumption from CF (6.7 + 0.6 t) than RM (5.0 + 1.2 t)*
- *Greater CF consumption in winter (3 t) than RM (1.7 t)*
- *Similar consumption in spring and summer*
- *Greater contribution from tall fescue in summer but compensated by poor growth of O/S paddocks*
- *Greater apparent N response rate (kg DM/kg N) from CF (29) than RM (15)*

Conclusion

- *Perennial ryegrass is capable of supporting at least 2.25 cows/ha*
- *By integrating different pasture types into PRG,*
 - *more flexibility to manage seasonal variations*
 - *maximise pasture consumption efficiency*
 - *support greater stocking rate*