



# DAIRY SCIENCE 2007

*Meeting the challenges for pasture-based dairying*

## Replacing N with Maize Silage to reduce N leaching



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## Modelling tools

- Nutrient budgeting model Overseer™
- Whole Farm Model (Dexcel Ltd.)

## Treatments

- **200** kg N/ha/year
- **150** kg N/ha/year + 500 kg Maize Silage
- **100** kg N/ha/year + 1000 kg Maize Silage



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	Pasture	Pasture plus maize silage	
<b>N fertilisation rate (kg/ha/year)</b>	<b>200</b>	<b>150</b>	<b>100</b>
<b>Milk production (kg MS/ha/year)</b>	1154	1155	1175
<b>N leached (kg N/ha/year)</b>	61	47	38
<b>Extra Costs (\$/ha/year compared to HN)</b>	-----	72	91
<b>Farm operating profit (\$/ha) (=EFS)</b>	-----	-5%	-6%
<b>Mitigation Cost (\$/kg N saved)</b>	-----	4.9	3.5