Lambing ewes on dual-purpose wheat

What can we learn from producer’s experiences?
What is the benefit of dual-purpose wheat?

- Winter feed!!!
Energy content of wheat forage

Metabolisable Energy (MJ/kg DM)

- Wheat: * (Balldale Field Trial 2010)
- Grass dominant: # (Lifetime Wool)
- Clover dominant: # (Lifetime Wool)
Protein & Fibre content

% DM

Crude Protein

Fibre (ADF)

Wheat (cv. Wedgetail)*

Grass dominant pasture (early) 

Clover dominant pasture (early) #

*(Salldale Field Trial 2010)

#(Lifetime Wool)
Why are producers not lambing onto dual-purpose wheat?

Reasons given for not grazing late-pregnant or lambing ewes on dual-purpose wheat

No. of producers

- No d-p wheat: 60
- Other livestock: 10
- Ewe losses: 10
- Lamb losses: 10
- Lambing date: 20
- Recommended: 10
- Other: 10

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Nutrient profile of dual-purpose wheat (cv. Wedgetail)

- Calcium
- Magnesium
- Sodium

% Dry Matter:
- Wheat content *
- Ewe requirements (late pregnancy) #
- Ewe requirements (lactation) #

* (Balidale Field Trial 2010)
# (CSIRO, 2007)
Pregnancy toxaemia

- Net energy deficit in late pregnancy
- Risk factors include body condition and number of foetuses
- Stress factors, temporary inappetance
- Ca and Mg deficiencies
Hypocalcaemia

- Ca deficiency, due to inadequate absorption (G-I tract) or resorption (bone)

- Ca resorption from bone maximum from 3 weeks pre-lambing

- May develop during hypomagnesaemia
Grass tetany

- Often associated with hypomagnesaemia
- Ruminants need regular intake of Mg
- 1st 4-6 weeks after lambing
- Risk factors include older ewes rearing twin lambs, high production
Field Trial 2010

- Lambing merino ewes on dual-purpose wheat
- Benefits of providing a basic mineral supplement
Field Trial 2010

- No clinical cases of metabolic disease
- Small increase in growth rate in twin-born lambs only
Mail-out survey

- When and where are problems occurring?
- 200+ responses
- 85 producers had grazed ewes on dual-purpose wheat in period
- Of these, 25 had experienced at least one incidence of “abnormally” high losses between 2005-2010
Causes of death 2010

Number of producers identifying losses in each cause of death category

- grass tetany
- hypocalcaemia
- pregnancy toxaemia
- nitrate poisoning
- lambing problems
- parasites
- foot abscess
- other/unknown

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Comparative survey

- Follow-up with some of the respondents

- 27 producers

- Problems (21) vs. No Problems (23)

- What they did, When they did it
Questions included

- Reasons for deaths
- Timing of operations around grazing wheat and lambing
- What ewes were grazing before put onto crop
- Supplements used
- Age and condition of ewes
- Agronomic
Reasons for losses

- **Metabolic**: 57% (*significant difference (p<0.05)*)
- **Dystocia**: 38% vs. 39%
- **Foot abscess**: 26%

* "Problems" & "No Problems"

* Significant difference (p<0.05)
Body Condition Score

- Average BCS lower in “Problem” vs. “No Problem”

- Low BCS a risk factor for metabolic disease

- Industry recommendation: target BCS 3 at lambing (3-3.3 for twin-bearing ewes)
Death category – singles vs. multiples

- Single-bearing: 5% problems, 10% no problems
- Multiple-bearing: 38% problems, 14% no problems
- Single & multiple: 0% problems, 14% no problems

* Significant difference (p<0.05)
Single vs. multiple

- Case had higher correlation with multiple bearing ewes
- Higher demand in multiple-bearing ewes
- Risk factor in metabolic diseases
Supplementation

* Significant difference (p<0.05)

"Problems"
"No Problems"

* Significant difference (p<0.05)
Feeding grain prior to grazing

- 90% of “Problem” cf. 50% of “No Problem”
- Not expected to be important
- Perhaps relates to drought conditions/BCS
Breed

- No differences detected for ewe or ram breed

- Are crossbred ewes more susceptible to grass tetany? Breed or management?

- Field trial this year using crossbred ewes
The weather

- 6 producers noted a bad weather event associated with losses (5 case, 1 control)
- Trend to higher % wet days in “Problem” group
- Effect on plant composition?
- Animal stress?
Preliminary Conclusions

- Dual-purpose wheat may be a valuable stock feed for lambing ewes during winter
- Deficiencies and link to metabolic diseases are recognised - supplement
- Other risk factors may exacerbate imbalance
- High ewe losses have occurred, but can manage the risk factors (especially BCS)
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Reference List

- Lifetime Wool website www.lifetimewool.com.au
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