



Role for silage in Australian grazing systems

Silage Note
No. 1

Silage production in Australia has more than doubled since the early 1990's. ABARE statistics for the dairy industry show that average silage production per dairy farm rose from 64 tonnes in 1991/92 to 170 tonnes in 2004/05. Hay production over the same period did not keep pace, rising from 97 tonnes per dairy farm to 142 tonnes.

ABS statistics show that in 2006 (a drought year) 708,000 t of silage and 1,069,000 of hay were made in NSW. Silage and hay production across Australia were 2,857,000 t and 5,155,000 t respectively.

Silage provides an opportunity to store high quality forage that can maintain high levels of animal production, increase enterprise flexibility and create new marketing opportunities.

The need for producers to increase productivity and reduce costs has been a driving force behind the increased use of silage. On many farms silage making is now a regular annual operation.

Prolonged drought and concerns about climate change are causing other producers to consider the advantages of silage for longer term storage.

Improvements in silage-making technology and the availability of efficient silage-handling machinery have encouraged the adoption of silage on many farms.

Improved silage technology

Technological advances have enabled farmers to more consistently and more easily produce high quality silage to feed to their livestock. These include:

- advances in knowledge that have improved silage-making practises (e.g. the importance of rapid wilting and ensuring an airtight seal);
- improvements in silage-making technology (e.g. plastics, inoculants);
- machinery developments to improve the efficiency of silage production (e.g. mowers, mower conditioners, tedders, precision chop forage harvesters);
- more storage options (chopped, baled, bulk or individual sealing) that provide producers with greater flexibility of their silage system;
- improved mechanisation of silage feedout systems which can significantly reduce labour requirements and wastage; and
- availability of machinery that allows silage to be fed in mixed rations.

- Silage production is increasing as farmers gain experience in silage-making and silage-feeding technology and new machinery developments.
- Silage is a profitable feed source provided feed quality is high and wastage is low.
- Silage offers greater flexibility, reduced risk of quality and dry matter loss and increased pasture utilisation compared to hay.

Potential benefits of silage

The reasons a farmer makes silage will vary between farms and include personal preferences. The main reasons include:

- the need to improve pasture utilisation and increase productivity per hectare;
- the valuable role for silage as a pasture management tool;
- reduced reliance on irrigation water and the need to maximise production per megalitre used;
- capacity to cut earlier in the season and produce a higher quality product compared to hay production;
- ability to spread the harvesting period over a longer period than for hay;
- reduced losses of dry matter and quality during field and harvesting operations and reduced susceptibility to adverse weather compared to hay;
- market demand for consistency of supply and quality of animal product (e.g. milk, meat);
- silage can be a high quality supplement for 'out-of-season' production;
- ability to grow a variety of crops for silage production (e.g. maize, sorghum, cereals); this diversity can increase farm productivity to levels higher than possible with pasture alone; and
- suitability of silage for long-term storage of high quality feed for drought or flood reserves;
- potential to salvage high quality forage from drought or frost affected crops (eg. canola, winter cereals).



The Role of Silage in Livestock Enterprises

The potential roles for silage in different livestock enterprises have been summarised in the table below. The role for silage will vary between enterprises and individual properties.

production enterprises. Use realistic cost and production figures to evaluate the role of silage in your livestock enterprise and consider the impact of a silage system on the 'whole farm' operation`.

The variation in benefits and costs of silage between systems can be large, even when comparing similar

Role for silage in various livestock enterprises

Silage use	Dairy	Beef	Lamb	Wool
Improve animal product quality or market compliance	x	xxx	xxx	xx
Improve capacity to supply 'out-of-season' product	xxx	xxx	xxx	
Provide opportunity to access new markets	x	xxx	xxx	x
Provide opportunity to develop complementary enterprises	x	xxx	xxx	x
Increase stocking rate	xxx	xxx	xxx	xx
Supplement to increase production/head	xxx	xxx	xxx	x
Change calving or lambing time (and calving or lambing %)	xx	xx	xx	xx
Improve weaner survival or growth of replacement animals	x	xx	x	xx
Drought or flood reserve	xx	xx	xx	xx
Improve pasture management and utilisation	xxx	xxx	xxx	xx
Weed management/control	x	xx	xx	xx
Reduce dependence on irrigation	xxx	x	x	x
Reduce dependence on purchased feed	xxx	xx	x	x

xxx Very important xx Moderately important x Important on some farms

Note: Silage is not likely to be important in the more extensive beef or wool enterprises in Australia.

The information in this Silage Note is taken from the *Successful Silage* manual

Disclaimer: The information contained in this publication is based on knowledge and understanding at the time of writing (May 2008). However, because of advances in knowledge, users are reminded of the need to ensure that information upon which they rely is up to date and to check currency of the information with the appropriate officer of New South Wales Department of Primary Industries or the user's independent adviser.

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