

Summer-active perennials lift ovulation rates

By Jo Curkpatrick
FFI CRC

Perennial pastures help increase fertility in sheep.

Grazing summer-active perennials on the *EverGraze* Proof Site at Wagga Wagga, New South Wales has increased Merino ewe ovulation rates by up to 22 per cent, despite low pasture availability.

This result is encouraging because ewe conception rate is a key profit driver for livestock producers.

Site Leader Dr Michael Friend said *EverGraze* may have found yet another good reason for growing summer-active perennials.

"Growing lucerne and chicory spreads feed availability across the year and provides the added advantage of deep roots intercepting groundwater recharge. But it looks like they also have an impact on reproductive potential," Dr Friend said.

"We compared four pasture-based nutritional treatments including senesced (dry) phalaris as the control treatment, phalaris + 500 g uncracked lupins/head/day, and green lucerne and chicory."

The 400 five-year-old Merino ewes were oestrus synchronised with ewes grazing the pastures for nine days until oestrus in 2006 and for nine days until two days before oestrus in 2007.

"After measuring the ovulation rates in early March 2006, we found that only lucerne caused an increase. In 2007 we observed an increase in ovulation and multiple ovulation (twinning) rates with chicory and lupin pastures (see Table 1)," Dr Friend explained.

A possible explanation for the increase caused by lucerne is that it was the only treatment with low feed on offer two days before ovulation. This suggests that higher levels of feed intake in the two days before ovulation could be overriding any flushing effect. There may be implications for use of this technology in unsynchronised flocks and *EverGraze* is suggesting it needs further investigation.

The 2007 results indicate that in synchronised ewes, timed feeding of lupins or access to green chicory increased ovulation rate compared with ewes grazing mature phalaris. While ewes grazing lucerne also tended to have a greater ovulation rate than ewes grazing dry phalaris pastures, the difference was lower than in 2006.

TABLE 1. Multiple ovulation percent and ovulation rate in response to summer-active perennials

Percentage of ewes with multiple ovulations				
	Chicory (%)	Lucerne (%)	Phalaris + lupins (%)	Phalaris (%)
2006	42	51	36	42
2007	37	23	31	13
Average number of ovulations per ewe				
2006	1.5	1.6	1.4	1.5
2007	1.4	1.2	1.3	1.1

EverGraze researchers are mindful that achieving multiple ovulations needs to be balanced with ewe management and lamb survival.

EverGraze will continue to develop future farm systems and at Wagga Wagga and other Proof Sites by investigating new livestock systems, including the potential of woody perennials to improve the survival of twin lambs. ↓

More information

Michael Friend, CSU
T: (02) 6933 2285
E: mfriend@csu.edu.au

More lamb twins are on the cards if the recent *EverGraze* Proof Sites results prove correct.