

Feed quality of stubble

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Key Points

- The feed quality of pasture and stubble varies markedly from year to year.
- Stubble quality after drought can be higher if less energy and protein was transferred from the stem and leaf to the grain.
- While stubble may be higher in quality, they are still insufficient to maintain animals and supplements will still be needed.
- Large differences exist between the quality of stem and leaf.

While stubble can provide valuable roughage and some energy, it is generally considered a low quality feed that will not maintain animals. Samples taken over a range of summers can give us an indication of the likely quality (Table 1). The feed quality values for 1999 and 2000 are typical of a 'normal' season. However, the quality of the stubble varies markedly from year to year.

During drought, stubble may contain more nutrients than usual. If the crop died quickly, rather than slowly ripening, less energy and protein will have been deposited into the grain and more will be left in the stem and leaf.

The samples taken in 1997 (a drought year) show feed qualities higher than normal. Very high temperatures in late September – October resulted in rapid haying off and low yielding crops. As a result, more nutrients were retained in the stubble and the feed value was higher. This was especially true of the Cunningham wheat which was sown at the later end of the sowing window and suffered more stress and lower yield than the Janz (sown early in window).

The samples taken in 2002 and 2006 were split into stem and leaf and then tested. The results highlight the large differences between the quality of stem and leaf.

The self sown cereal and stubble samples included fresh green material plus dry straw material hence the higher feed quality. The very high protein level for the self sown wheat is a result of mineralisation of nitrogen over the summer.

Table 1: Analysis of crop and stubble samples.

Sample Type	DDM %	CP %	ME
Wheat stubble (Cunningham) (1997)	51.1	10.7	7.7
Wheat stubble (Janz) (1997)	45.9	5.0	6.9
Canola stubble (1999)	31.0	3.3	4.0
Triticale stubble (1999)	34.0	1.4	4.4
Wheat stubble (1999)	35.2	2.4	4.6
Oat stubble (2000)	35.2	2.2	4.6
Wheat stubble (Diamond bird) (2000)	34.2	1.1	4.5
Self sown oats and stubble (2000)	52.0	13.2	7.3
Self sown wheat and stubble (2000)	48.1	10.8	6.7
Wheat stubble (Diamondbird) (2001)	38.6	1.6	5.2
Self sown wheat – green (Diamondbird) (2001)	70.7	27.9	10.3
Wheat stubble – stem only (Diamondbird) (2002)	49.7	4.7	6.9
Wheat stubble – leaf only (Diamondbird) (2002)	68.7	8.0	10.0
Triticale – stem only (2006)	43	1.7	5.7
Triticale – leaf only (2006)	63	16.6	8.8

A feed test is available from the NSW Department of Primary Industries feed testing service at the Wagga Wagga Agricultural Institute.

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Disclaimer: The information contained in this publication is based on knowledge and understanding at the time of writing (November 2006). 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.

