



Plant Research (NZ) Ltd
Advanced Plant Breeding



“The name that keeps cropping up”



BULLION

A new triticale for greenfeed, grain or whole grain silage

Bullion is a new triticale for New Zealand released by Plant Research (NZ) Ltd. Experience with the cultivar points to its use in the livestock industries as an autumn-sown cereal specifically for winter grazing, or alternatively as a summer whole-grain silage or grain crop.

Initial findings

Very quick early growth
Good recovery after sequential cuttings
Good winter growth
Excellent tolerance to frost and disease
Large plump grains
High grain to stover ratio (1.5:1)

Autumn sowing

In initial trial work at Lincoln, **Bullion** has shown remarkable early vigour when sown in late March, surpassing other cereals that are commonly used for winter grazing.

Nutritive value, energy and protein, for triticale is similar to that expected from other cereal greenfeeds at the same growth stage, and comparable to a good pasture.

In our Canterbury trials (winter 2001) **Bullion** recovered well from two and

even three cuts, when sown in late March with a first cut in mid-June.

This is providing that about 8cm above ground is left to recover (equivalent to a light grazing) and growing conditions are not too severe. During the winter of 2001, **Bullion** was not damaged or severely checked by frosty periods. Alternatively it can be left for use as a single break-fed crop. After grazing is completed, the ground worked and appropriate fertilizer applied a second crop of **Bullion** may be sown (say July or August) for a silage crop in December.

August sowing

When sown in Canterbury in late August 2001, **Bullion** headed late November, about the same time as Omaka barley and ten days ahead of Sapphire wheat. With Bullion around 60% of the yield was present in the grain (the energy source for livestock) compared to reported levels of 40-50% for most wheats and triticales.

Husbandry

As this cultivar does not require vernalisation, is day-neutral and grows under cool conditions, it can be sown from early autumn through to late spring. It is large-grained; so sowing rates should be within the range of 110-120 or more kg/ha, depending on the circumstances.

Fertiliser

All cereals require adequate fertilizer to perform to potential. Adequate available nitrogen, especially during early growth and development is important for all cereal crops both for greenfeed and grain. More N is required if there is stubble present or the soil is cold. Excessive nitrogen can be a danger in rapidly growing cereals in winter, when they are checked by severe frosts—nitrite poisoning. For whole-grain silage crops this cultivar should be treated in the same way as any high-yielding feed-grain or silage wheat.

When autumn sown, there has been no problem to date with lodging. Because of an anticipated high yield in our first spring-sown crop, a growth regulator was used.

Disease resistance

Historically triticales have very good disease resistance. In the exposure that **Bullion** has had to date there has been no evidence of significant disease.

Grazing

Take care not to overgraze in winter if several grazings are the objective. Grazing to the ground and heavy treading will put good recovery at risk.

Grain/whole crop silage

Generally the rule for whole-grain silage is to take the crop at the late milky-dough stage (maximum DM and energy). The crop should be chopped as finely as possible, because with the tough straw and hollow-stems of cereals this is necessary to get optimum compaction in the stack. The literature suggests chopping should be no longer than $\frac{3}{4}$ in. (1½ cm.).

Bullion also has potential as a high yielding spring-sown grain crop.

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