

## “New Zealand’s favourite kale”

- Medium-tall kale with excellent yield potential
- Late flowering variety that maintains leafy crops into early September
- Good leaf-to-stem ratio for its yield potential
- Thinner stemmed variety

SUGGESTED SOWING TIME	SUGGESTED SOWING RATE (kg/ha)	TIME TO FIRST GRAZING	NUMBER OF POTENTIAL GRAZINGS	POTENTIAL YIELD (t DM/ha)
Late October	4	14-16 weeks	2	Accumulated = 14-15
Late November to late December	4	18-24 weeks	1	Average = 10-14 Top = 18+
Late January to mid February	4	14-18 weeks	1	8-10

### Background

**Sovereign** is a very popular New Zealand bred kale that combines excellent quality with a good yield potential. **Sovereign** has a very high top end yield potential, although average yields are around 10-14 t DM/ha, depending on management and environment. **Sovereign** has been utilised over an extremely wide range of environments, seasonal extremes and within differing farm systems. **Sovereign** continues to be one of the most farmer friendly kales in the industry.

Some of the key points that set **Sovereign** apart for farmer friendliness and ease of management are;

1. **Sovereign** has a uniformly thin stem. Even at low plant numbers the diameter of **Sovereign’s** stem is not as great as the majority of kales in the industry. Thick stems left in the paddock after winter grazing become a management issue for seed bed preparation.
2. Like all kales, **Sovereign’s** stem quality reduces from top to bottom; **Sovereign’s** bottom fraction of stem makes up less of total yield than many other kale cultivars.
3. **Sovereign** is one of the latest flowering kales available in New Zealand. This means that in late grazing environments such as the Canterbury high country, or where there is a chance of excessive winter crop, **Sovereign** will last through to the start of October before the onset of flowering.



## Additional Data

Being aware of the components of the kale plant helps a grazer understand what they are feeding their animals and helps to create the correct expectations in animal performance. Tables 1 and 2 provide an extensive field based survey on the composition of large stemmed giant type kales and **Sovereign**.

Leaves are uniform in quality but stem quality reduces dramatically from the top of the stem to the bottom. The bottom fraction of the **Sovereign** stem makes up a much smaller part of total yield.

**Table 1. Composition (% of total DM) and Crude Protein Content (CP%) and its Impact on Diet Protein Content for Different Kale Types**

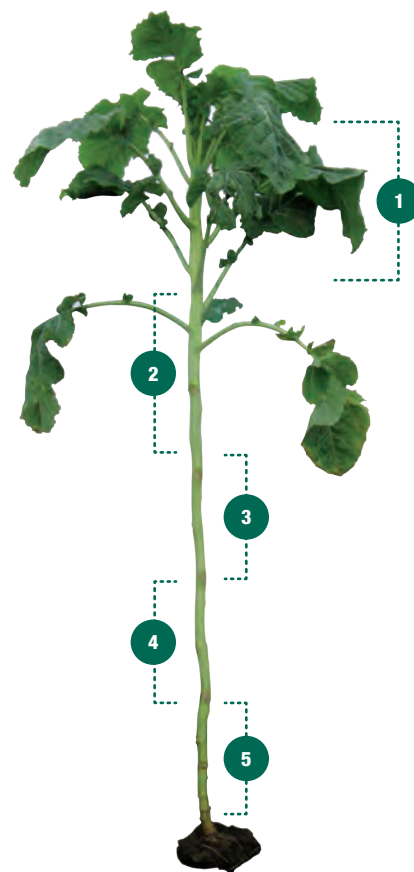
PLANT PART	SOVEREIGN			GIANT TYPES		
	% OF TOTAL DM	CP % DM	DIET* CRUDE PROTEIN %	% OF TOTAL DM	CP % DM	DIET* CRUDE PROTEIN %
1 Leaf	44	16.7	16.7	24	17.7	17.7
2 Upper Stem	11	10.0	15.4	17	9.5	14.3
3 Upper Mid	14	7.3	13.7	19	6.2	11.7
4 Lower Mid	15	5.9	12.3	20	5.7	10.2
5 Lower	16	5.6	11.2	20	4.5	9.0

\*Diet CP% refers to the average CP% of the diet as more kale components are eaten.

**Table 2. Composition (% of total DM) and Metabolisable Energy Content (MJ ME/kg DM) and its Impact on Diet ME Content for Different Kale Types**

PLANT PART	SOVEREIGN			GIANT TYPES		
	% OF TOTAL DM	ENERGY (MJ ME/kg DM)	DIET ME* (MJ ME/kg DM)	% OF TOTAL DM	ENERGY (MJ ME/kg DM)	DIET ME* (MJ ME/kg DM)
1 Leaf	44	12.9	12.9	24	12.7	12.7
2 Upper Stem	11	12.4	12.8	17	11.6	12.2
3 Upper Mid	14	11.6	12.6	19	9.7	11.4
4 Lower Mid	15	9.4	12.0	20	9.8	11.0
5 Lower	16	8.6	11.5	20	6.6	10.1

\*Diet ME refers to the average quality of the diet as more kale components are eaten.



## Key Tips

- Kale is traditionally sown between late November and early December. The only reason to sow earlier is if it is being sown in very dry conditions or lambs are to be used to graze the crop in February/ March. Early sowing of kale may have higher drymatters and therefore possibly higher yields by late autumn, however this is associated with older plants with more lignin and lower quality stems. This can make utilisation harder and often leads to more stem left in the paddock.
- January or early February sown **Sovereign** is a genuine alternative to sowing rape at this time. The benefits are that **Sovereign** will hold leaf for longer and the stem will maintain its quality for longer. It is a great option for young cattle and sheep grazing.

