



FORAGE KING

GREENFEED MAIZE SEED BLEND



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Forage King is a blend of several different maize hybrids which produce excellent summer greenfeed yields. Suitable for use in dairy, beef and deer farm systems, it produces reliable yields of quality drymatter which can be grazed or cut and carried. The maize hybrids in Forage King take varying times to reach harvest maturity therefore this product is not suitable for maize silage.

Benefits of greenfeed maize

There are a number of reasons why there is increasing interest in using maize as a summer greenfeed crop:

- **Large seed.** While many small seeds must be planted near the surface, maize is a large hybrid seed which can be planted deeply into the soil moisture zone. This allows for good crop establishment even when planting conditions are dry.
- **Drought tolerant.** Maize is a deep-rooted water efficient crop which produces reliable yields even under dry growing conditions.
- **Weeds.** There is an excellent range of herbicides available to control weeds in maize crops.
- **High yields.** While yields will vary depending on crop location and stage of maturity at grazing, typically farmers will harvest between 10 – 18 t DM/ha from a Forage King crop.
- **Low cost.** Generally farmers can grow a Forage King crop yielding 10 – 18 t DM/ha for 7.7 – 13.9 c/kg DM standing (Tables 1 and 2).

Table 1: Estimated Forage King cost per hectare

	Estimated cost (\$/ha)	My costs (\$/ha)
Soil test	7	
Spraying out pasture	50	
Lime (1.25 t/ha)	60	
Base fertiliser	200	
Cultivation	150	
Forage King (2 bags/ha)	194	
Seed insecticide treatment (e.g Gaucho [®])	149	
Starter fertiliser (e.g 300 kg/ha 12:10:10)	175	
Planting	150	
Weed control (herbicide and application)	110	
Sidedress nitrogen (broadcast 200 kg/ha urea)	140	
Total cost	1385	

Table 2: Estimated Forage King cost per kg DM standing

Crop Yield (tDM/ha)	10	12	14	16	18
Drymatter cost (c/kgDM)	13.9	11.5	9.9	8.7	7.7

Growing a high yielding crop

- Select your paddock and take a 150 mm soil test to determine crop fertiliser requirements.
- Spray out the paddock, apply the base fertiliser and then cultivate to prepare a fine, even, clod-free seedbed.
- Forage King can be planted as soon as the 9 am soil temperature is 10°C and rising at 5 cm depth. Use either a precision planter (76 cm rows) or a conventional seed drill. The recommended sowing rates (25 kg bags) are:
 - Precision planted 1.5 bags/ha
 - Conventional drill 2.0 bags/ha
- To reduce the risk of insect damage to seedling maize crops, plant insecticide treated Forage King seed.
- If the planter has fertiliser bins, apply an N-P-K fertiliser (e.g. 12:10:10 or DAP) at planting time. If it does not have fertiliser bins, ensure all P and K requirements are met with the base dressing and apply N as required.
- For high yields, good weed control is essential. There are a number of herbicide options available to control grasses and/or broadleaves in maize. Talk to your local seed or farm supply merchant for more details.
- For maize that has been precision planted, it is possible to apply additional sidedress nitrogen to the crop when it is just less than knee high. Use specialised sidedressing equipment or alternatively, spin urea on either just before or during rain.

Feeding methods

Maize can be greenfed from 6 – 8 weeks after planting although higher yields will be achieved if the crop is left until cob fill has commenced. Greenfeed maize can be either breakfed, harvested with a flail type silage harvester or precision chopped.

If you are breakfeeding maize always feed it behind an electric wire. Some farmers run over the outside plants using the wheel of the tractor to make them more easily accessible. For maximum utilisation, feed the entire crop while most of the plants are still green. Flail type silage harvesters can be successfully used on greenfeed maize. If possible, harvest early in the morning while the dew is still on the ground as this will reduce the amount of dust that is “sucked up” with the maize.

If you are breakfeeding or harvesting with a flail type harvester ensure that a significant number of animals are given access to the crop at the same time. This will reduce the risk of an individual animal eating just cobs and suffering from grain overload.

Precision harvesters are the best way to harvest greenfeed maize. They do not suck up dirt and the maize is cut into small (15 – 20 mm) pieces eliminating the animals ability to sort and leave behind the less palatable pieces. In some districts maize harvesting contractors will chop greenfeed maize every 1 – 3 days. Alternatively, tractor-drawn single row choppers with maize heads can be purchased either new or second-hand.

Forage King will have higher energy levels than stalky pasture, pasture silage or hay but it has relatively low protein levels (Table 3). It should ideally be fed in conjunction with a protein source such as leafy pasture or a high protein crop.





Table 3: Nutrient content of commonly used summer feeds*

Feedstuff	Energy (MJME/kgDM)	Crude protein (%)
Greenfeed maize ** - green plants, no cobs - early grain fill	10.0-10.5 10.3-10.8	12-16% 8-10%
Pasture silage - good quality - poor quality	10.0 9.0	17 15
Pasture hay - good quality - poor quality	9.7 7.3	17 7
Summer leafy pasture	10.0	18
Summer stalky pasture	9.0	14

*Holmes et al. 2003. Milk Production from Pasture, Massey University.

** Estimated from local feed test results and overseas data.

Feeding rates

The ideal feeding rate for milking dairy cows is up to 25 – 50% of the dietary drymatter intake as Forage King. Dry cows, heifers, beef cattle or deer require less protein and can be fed more than half of their diet as Forage King greenfeed maize. To maximise utilisation when feeding deer, it is recommended that feeding starts when the crop is around 1m height.

Forage King is not suitable for maize silage

Forage King contains a blend of hybrid maturities including very short and very long maturity hybrids. The significant difference in drymatter content of the various hybrids makes it impossible to make good quality maize silage from Forage King.

Farmers who attempt to ensile Forage King run the risk of:

- lower yields.
- a poorer quality fermentation.
- lower feed value silage and reduced silage palatability.

**FORAGE KING IS NOT SUITABLE FOR ON-FARM OR
TRADED MAIZE SILAGE**

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