



ALBERT LEA SEED

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Forage Kale (*Brassica oleracea* L.)

Description

Forage Kale is a good addition to a diverse annual pasture and provides multiple benefits as a green manure crop. The succulent, leafy growth is very competitive against annual weeds and the plants are effective scavengers of excess or residual N, P, and Ca. Forage Kale can be planted early in the spring or late into the fall for quick onset forage and soil coverage. Seeds will germinate rapidly and will typically emerge in a matter of days. Forage kale is the most winter hardy of the brassicas and has good feed value during cold weather but will decompose rapidly by the following spring. The leafy foliage is nutrient rich but given warm weather, the plant will bolt and send up flowering stems.

Overview

- Uses:** Forage—Pasture—Cover Crop
- Strengths:** Rapid establishment
Nutrient dense (high protein and digestibility)
Scavenge nutrients
Competitive with weeds
- Weaknesses:** Can be over-competitive in mixed seedings
Do Not graze in isolation (no more than 75% of the diet)
May survive in regions with milder winters
Unappealing odor when decomposing

Plant Information

- Winterhardiness:** Poor
- Drought-Tolerance:** Moderate (once established)
- Wet soil tolerance:** Moderate
- Average Nitrogen Fixation:** -
- Forage Yield Range:** 1.5 to 6 t DM / A (tops and roots)
- Relative Forage Quality:** 198-207 (index value)
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Seed and Seeding Info

Seeds per lb:	25,000 to 35,000
Seeding Rate Alone:	3 – 4 lbs / acre
Seeding Rate in Mixtures:	1 – 4 lbs / acre
Range of Seeding Dates:	May-June ; August
Methods of seeding:	Drilled or broadcast
Best seeding depth:	¼ to ½ in
Best Soil types:	Most
pH tolerances:	

Cultural and Harvest Information

As a grazing crop?

All forage kale varieties are grazed in the field or cut and fed fresh. Introduce grazing animals to brassica pastures slowly (over 5 to 7 days). Don't turn hungry animals that are not adapted to brassicas into a brassica pasture (two to three pounds of hay or straw should be fed to each animal each day to account for low fiber content of forage). Brassicas should not constitute more than 75% of the animal's diet. A good quality pasture can also be used as a preconditioning diet before grazing brassicas.

As a green manure crop?

Include forage kale in low seeding rates with other cover crops or seeded alone make useful green manure. Mow and work in plants in the fall prior to freezing to add maximum biomass into the soil profile. Kale can also be used as an overwintering cover crop that will winterkill to minimize spring management.

Websites & Resources

Oregon State: Growing Rape & Kale for Forage

forages.oregonstate.edu/resources/publications/fs/rape_kale.pdf

Ohio State: Brassicas for Forage

<http://ohioline.osu.edu/agf-fact/0020.html>

University of Wisconsin: Use of Brassica Crops in Grazing Systems

<http://www.uwex.edu/ces/forage/pubs/brassica.html>

Penn State: Brassicas

<http://extension.psu.edu/cmeg/facts/agronomy-facts-33>

MSU: Forage Brassicas for Winter Grazing Systems

msucares.com/crops/forages/newsletters/09/9.pdf

Kansas State: Brassicas & Chicory for Forage

<http://www.asi.ksu.edu/doc5041.ashx>

Albert Lea Seed House Product Information Guide

The information presented here is based on the best agronomic information we could cull from University Publications and other sources (usually identified). The cultural and agronomic information is relevant only to farming in the upper mid-west. This information is not infallible and is not a substitute for experience and/or education. We **do not guarantee** farming results based on this information.