

Technical Bulletin

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Canada's Seed Partner

AC[®] Goliath Crested Wheatgrass

Crested wheatgrass is a very long-lived perennial bunch grass. It has an extensive fibrous root system that gives it excellent winter hardiness and drought resistance. Crested wheatgrass is characterized by rapid early spring growth that is very palatable, but forage quality drops quickly after heading. Crested wheatgrass can be utilized for hay or pasture and maintains a healthy ratio in mixed stands.

Bred in western Canada for the harsh Canadian environment AC[®] Goliath is the perfect fit for hay or pasture where crested wheatgrass is needed.

Highlights:

- Selected for vigour, yield, larger seed size and plant stature
- 25% larger seed than Kirk
- Improved seed yield potential compared to Kirk
- 3% higher forage yield potential than Kirk in Western Forage Testing System Trials from 1998-2000

Breeder:

Dr. Bruce Coulman
University of Saskatchewan
Saskatoon Research Centre
Agriculture and Agri-Food Canada

Summary of AC[®] Goliath crested wheatgrass in the Western Forage Testing System 1998-2000

Zone	Site Years	Kirk kg/ha	AC [®] Goliath kg/ha	% Kirk
Irrigated	5	12786	13716	107
Black/Grey	7	7774	7890	101
Dark Brown	6	6547	6702	102
Brown	3	3649	3383	93
Overall	21	8027	8294	103

Note: Dry matter yields in kg/ha



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For more information, call 1-800-665-7333 or visit www.secan.com

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Forage Factsheet – Crested Wheatgrass

Species Name: Crested Wheatgrass – *Agropyron cristatum*, *Agropyron desertorum*

There are 2 types of crested wheatgrass. Most new cultivars are intermediate between these two types.

Crested wheatgrass characteristics

Diploid (<i>A. cristatum</i>, fairway-Parkway type)	Tetraploid (<i>A. desertorum</i>, Nordan/ Summit type)
- smaller seeds	- large seeds and seed heads
- finer leaves and stem	- coarser stems and leaves
- less drought tolerant	- more drought tolerant

Origin: Russia and Siberia

Longevity: Long-lived.

Uses: Pasture, hay.

Optimal time of use: Crested wheatgrass is best for early spring grazing and early season hay. Graze at the four leaf stage to promote regrowth and reduce seed head formation. Mature crested wheatgrass plants are coarse and have very low palatability.

Recovery after use: At least 60 days rest is required between defoliations. Regrowth is limited after late June. If moisture conditions are favorable, some regrowth can occur in late summer and fall.

Yield: Diploid type (Fairway type) crested wheatgrass yields approximately 3320 lbs/acre (3772 kg/ha) in the Brown soil zone, 4480 lbs/acre (5090 kg/ha) in the Dark Brown soil zone, 4280 lbs/acre (4863 kg/ha) in the Black and Grey soil zones. Tetraploid type (Nordan/Summit type) crested wheatgrass yields approximately 3160 lbs/acre (3590 kg/ha) in the Brown soil zone, 4720 lbs/ acre (5363 kg/ha) in the Dark Brown soil zone, 4600 lbs/acre (5227 kg/ha) in the Black and Grey soil zones. Initial stocking rates are 0.7 AUM/acre (1.7 AUM/ha) in the Brown soil zone, 1.1 AUM/acre (2.7 AUM/ha) in the Dark Brown soil zone, and 1.4 AUM/acre (3.5 AUM/ha) in the Black and Grey soil zones.

Palatability / Nutritional Value: Crested wheatgrass has an average digestibility of 61% and crude protein level of 11-12% in the vegetative state. Crested wheatgrass' palatability and nutritional value decrease markedly with advancing maturity.

Competitiveness: Crested wheatgrass is very competitive. Crested wheatgrass is a bunchgrass, but spreads effectively through seed dispersal. Crested wheatgrass is invasive and can spread into other areas, such as native rangeland.

Winter Hardiness: Crested wheatgrass is extremely winter hardy.

Drought Tolerance: Crested wheatgrass has excellent drought tolerance.

Erosion Control: Crested wheatgrass has limited use for erosion control.

Ease of Establishment: Crested wheatgrass is an excellent establisher and spreads rapidly if it is allowed to set seed.

Suggested Mixtures: Alfalfa for haying or grazing.

Salinity Tolerance: Crested wheatgrass has moderate salinity tolerance.

Flooding Tolerance: Crested wheatgrass withstands up to two weeks of spring flooding or saturated soils.

Soil Texture: Crested wheatgrass is suited to well drained sandy through clay soils.

Acidity Tolerance: Crested wheatgrass tolerates soil pH as low as 6.0.

Management Considerations: Stocking rates, stock density, and animal distribution can be adjusted to ensure adequate utilization of crested wheatgrass and reduce ungrazed plants. Crested wheatgrass responds well to nitrogen fertilization.

Source: Saskatchewan Forage Council, 2007.
Dryland Forage Species Adaptation CD.