

LUSHNESS IS NOT A FACTOR IN THE WATER SOLUBLE CARBOHYDRATE OR STARCH CONCENTRATION OF GRASS.

Kathryn Watts

Rocky Mountain Research & Consulting, Inc., Center, CO

Lush pasture is considered a principle associated cause of laminitis.(1) The purpose of this investigation was to see if grass that was not “lush” was lower in WSC and starch.

Three replications each of smooth brome (*Bromus inermis*) and quackgrass (*Elytrigia repens*) were collected along an irrigation ditch in an area with less than 2 inches of rainfall that growing season. The samples immediately adjacent to the ditch were “lush”; being one meter tall, very green and thick. The grass 1 meter away from the ditch was “non-lush” or stressed; .3 meters tall, sparse and had brown, dead tissue. Samples were frozen immediately and shipped to Dairy One, Ithaca, NY for analysis for starch and WSC, which include sugars and fructan. (2)

Another set of 3 replications was pulled from a paddock of Garrison meadow foxtail (*Alopecurus pratenses*) and Paddock meadow brome (*Bromus riparius*) under sprinkler irrigation that had been purposely drought stressed. Areas receiving water from two overlapping sprinkler heads were still lush when immediately adjacent areas being covered by only one sprinkler head were nearly dead from drought. All samples were pulled from 3-5 PM. ANOVA by Agricultural Research Manager 6.0.

		(% of dry matter)	
		WSC	Starch
Smooth brome	lush	15.8 a	1.6 a
	stressed	11.3 a	1.1 a
Quackgrass	lush	10.6 a	1.7 a
	stressed	13.2 a	1.4 a
Meadow foxtail/ brome	lush	13.5 a	1.0 a
	stressed	12.9 a	1.0 a
LSD (P=.05)		6.02	1.32
SE		1.35	.30

Means followed by same letter do not significantly differ.

Green, vigorous, well-hydrated, “lush” grass is not significantly different in WSC or starch content compared to grass that is short, sparse, brown, drought stressed and dying. The term “lush” is not descriptive of grass that is higher in WSC or starch.

(1) Slater, M R, Hood, DM, Carter GK. Descriptive epidemiological study of equine laminitis. Eq Vet J. 1995; 27:364-7.

(2) Available at: <http://www.dairyone.com/Forage/Procedures/default.htm>