Bermudagrass Management
- Cattle and Compaction

Why does it matter?

Animal trampling can be a detriment to the environment if excessive, leading to
(1) reduced water infiltration and poor forage growth and
(2) denuded areas that contribute to poor water quality of nearby surface waters.

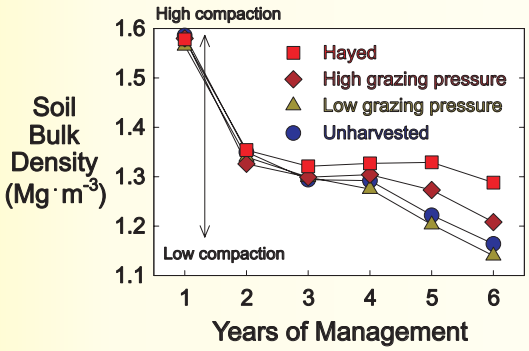
What was done?

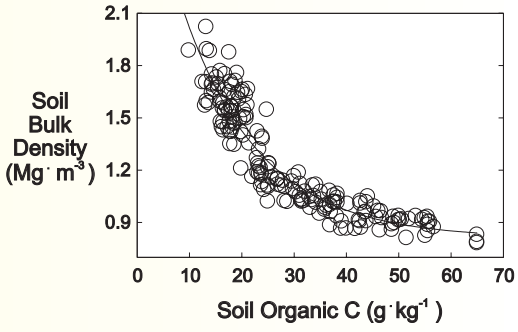
Soil was sampled yearly from 'Coastal' bermudagrass pastures managed in 4 different ways following cropland, representing a gradient in:

	high	hayed monthly
forage utilization		high grazing pressure
		low grazing pressure
	low	unharvested

What was found?

By avoiding overgrazing, the majority of the area under grazed pastures remained uncompacted. Accumulation of surface soil organic matter buffered the compactive forces of animal traffic.





A full description of this research can be found in the article:

Franzluebbers AJ, Stuedemann JA, Wilkinson SR. 2001. Bermudagrass management in the Southern Piedmont USA. I. Soil and surface residue carbon and sulfur. Soil Science Society of America Journal 65: 834-841.

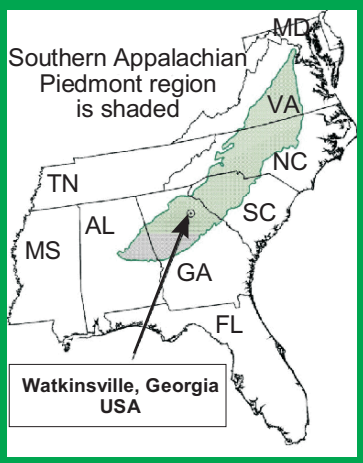
What's the impact?

Soil compaction can be avoided with cattle management that optimizes grazing pressure with available forage.

Allowing surface soil organic matter to accumulate avoids compaction.

USDA

Agricultural Research Service



J. Phil Campbell Sr. Natural Resource Conservation Center

1420 Expt. Station Rd.
Watkinsville GA 30677

Tel: 706-769-5631
Fax: 706-769-8962
www.spcru.ars.usda.gov

Research Team

Lead investigator
Alan Franzluebbers
afranz@uga.edu

Collaborators
John Stuedemann
Steve Knapp
Eric Elsner
Dwight Seman

Research from the Soil Resource Management National Program

JPC Research Note - 02