

POLK COUNTY GRAZIER

January 5, 2022



*An eNewsletter by the Rich Mountain
Conservation District*

**Article by Jeremy Huff, Arkansas NRCS
Grazing Specialist, for the January issue of
the Arkansas Cattlemen's Association
publication ([Arkansas Cattlemen's
Association | Little Rock, AR | arbeef.org](#))**

Do you know grazing affects plant's root growth and productivity? A study from Franklin J. Crider, USDA-Soil Conservation Service, in 1955 demonstrated this relationship. Plant root productivity and growth is proportionally related to the top growth leaf area. Hence, the more top growth – the

more roots. The less top growth – the less roots. Also, root growth is stopped more severely based upon the grazing height and frequency of grazing instances. Before we dive into details – let's remember some of the functions of plant roots. First plant roots anchor the plant to the soil. This is essential for soil conservation. Secondly, plants use roots to absorb and conduct water and essential mineral from the soil. Third, roots are a storage organ for plant necessities such as carbohydrates.

The study had a few different experiments. One experiment found that a single clipping of over half the top growth resulted in the root growth stopping for periods ranging from 6 to 18 days. Crider noted that root growth stopped within 24-hours of defoliation and continued until recovery of the top growth was well advanced. The study noted when most of the top growth was removed repeatedly, in a *periodic* fashion, the root growth stopped for periods that range from 25 to 45 days during the growing season.

The study provided insight on what occurs when plants are repeatedly grazed short very *frequently*. When 90% of the top growth was removed and periodic clippings were done 3-times per week – all root growth stopped for the duration of the experiment. Root growth stoppage was less but still substantial when 70% of the top growth was removed. When only 40% of the top growth was removed – there was no root growth stoppage. The study demonstrated a balance point in the relation of top growth reduction and root growth stoppage to be between 40 and 50 percent.



Photo showing relationship between top growth removal and root growth stoppage.

This study supports the “**graze half, leave half**” approach which has been a staple for grazing management schools to teach producers for years. Some folks will state, “Jeremy, we can’t control exactly how much cattle graze off.” The entire premise around grazing management is to have more livestock *control* which will allow *you* to make better forage *management decisions*. Residual leaf area can be better managed when paddocks are sized for the management control desired.

Again, the study was completed in 1955 – approximately 67 years ago. Here is a quote from Crider’s summary of the project. *“These data have particular application to soil conservation and pasture-management practices. They*

emphasize that the growing top cannot be reduced more than half without adversely affecting the functioning of the root system and the plant as a whole. They are striking evidence that close grazing or mowing during the growing season is at the expense of stand establishment and maintenance. The complete stoppage of root growth is of particular significance in conservation farming. Because of the continuous suppression of above ground growth and the inability of the plant to replenish food reserves, the effects of root inactivity are lasting. Thus weakened, the plant is less able to resist grazing, erosion, drought, cold, and disease.

The conclusion is, therefore, that the successful use of grass for soil conservation and pasturage, is contingent in large measure on the employment of practices that preserve the closest possible balance between top and root development.

Do you think the summary is still relevant in 2022?

"It Takes Grass To Grow Grass"

LOOK -----> The Rich Mountain Conservation District is **still** taking resumes for a **PART-TIME STUDENT INTERN POSITION**. Conservation Technician position provides technical support to help carry out coordinated programs of soil and water conservation. Serves as a vital part of the planning process to aid NRCS employees in their planning efforts to implement resource management system planning. Work duties include but are not limited to assisting farmers and landowners with installation of conservation practices and programs and work with GPS equipment and computers.

This position is also ideal for conservation, agriculture, forestry, environmental science, and natural resource students who are looking to get some experience in the field. Self-motivated and dependable with a strong work ethic and attention to detail; excellent organizational, interpersonal, and problem-solving skills; and ability to communicate successfully and professionally (both written and verbal). This job will be part-time during the school year (will work around school schedule) and may be full-time in the summer. Work involves outside jobs on farms and in the woods with some office duties.

- Must be able to be flexible and work independently while meeting deadlines and supporting the efforts of an overall team.
- Experience with computer skills including word processing, email, spreadsheets, and use of the Internet.
- Preference given to a current college student interested in conservation, natural resources, or agriculture.
- A valid driver's license is required.
- Must be at least 18 years old.
- Prefer these skill and abilities:
 - Proficient in use of smartphone technology, digital cameras, and GPS devices.
 - Comfortable working in brush, undergrowth, and thickly forested areas.
 - Able to take direction and communicate (via phone and email) with team members.
 - Organized and attentive to detail.
 - Able to manage their time effectively.
 - Can work alone efficiently.

Bring resume to Deanna at 508 7th Street Mena AR 71953 or email it to Deanna.wright2@usda.gov as soon as possible. Please call (479)437-6054 for more information.

Upcoming Grazing Meetings and Seminars:

⇒ **February 8, 10, 15, 17, 2022 – Forage Management from the Ground Up Training (times and location to be announced)** Please call Polk County Extension (479)394-6018 to register or for more information. This training is four sessions (Session 1-Soils and Nutrients, Session 2-Pastures, Session 3-Extending Grazing, and Session 4-Weeds). Cost is \$15/session or \$40 for all four.

**Rich Mountain
Conservation
District**

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DID YOU KNOW?

Archived copies of the "POLK COUNTY GRAZIER" are now available on the Rich Mtn. Conservation District website at:

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