

# POLK COUNTY GRAZIER

December 14, 2021



*An eNewsletter by the Rich Mountain  
Conservation District*

## WHITE CLOVER

**Here are some reasons why you SHOULD plant white clover:**

- **Livestock Forage** – White clover is a very nutrient dense and highly preferred livestock forage that is very high in crude protein and TDN. Since it is a cool season plant, it fits well when included into a perennial warm season grass forage base (such as bermudagrass and bahiagrass) by providing added growth from fall to spring when the warm season grasses are slow to grow or dormant.

White clover can also provide some minor production in the summer months if the weather is not too hot and dry. When mixed into a stand of fescue, white clover helps to dilute the toxicity caused by the fescue endophyte. Although grass production may be reduced by having white clover in the pasture (due to competition) the overall productivity of the pasture is usually increased when considering both grass production + clover production. A good forage mixture to strive for is approximately 60-80% grass and 20-40% clover, but of course these numbers are subjective and mainly to show that too little clover is bad and too much clover can also be bad.

**Table 1. Approximate nutrient content (% dry matter) of some common grass and clover pasture plants. (Hoveland, 2000)**

Species	Crude Protein	TDN	Calcium	Phosphorus	Magnesium
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White clover	25	80	1.5	0.4	0.4
Red clover	20	70	1.5	0.4	0.4
Annual ryegrass	20	68	0.5	0.3	0.2
Orchardgrass	15	65	0.3	0.3	0.2
Tall fescue	13	62	0.3	0.3	0.2
Bermudagrass	10	54	0.3	0.2	0.2

*Nutrient content table from the "White Clover Establishment and Management Guide" by the University of Georgia Cooperative Extension, March 2009.*

- Nitrogen Fixation** – White clover, like other plants in the legume family, has a special symbiotic relationship with rhizobium bacteria that produces plant available Nitrogen. The bacteria grow on the roots of legumes and are able to process and convert atmospheric Nitrogen to a form that is available to the plants. In fact, Nitrogen is the most abundant component of the atmosphere but one of the most deficient nutrients in the soil limiting plant growth. But, legumes have their own "Nitrogen factory" growing on their roots that can provide them with all the Nitrogen they need to grow. Of course, legumes do not like to share their free Nitrogen with nearby grasses so the most effective way to get it redistributed around the pasture is with good rotational grazing. Allowing livestock to graze the legumes and then deposit their manure piles around the pasture effectively recycles the plant available Nitrogen and provides it to the other forages. White clover has been shown to provide an estimated 100-150 lbs Nitrogen/acre annually on research plots. Currently, Ammonium Nitrate (34-0-0) is locally \$760/ton which equates to about \$0.13 per pound of actual

Nitrogen. At those rates, white clover is providing around \$13-\$19.50 per acre per year in Nitrogen value.

- **Soil Health** – Maintaining living green plants in a pasture year round has been shown to promote soil health by providing habitat for many soil organisms. The addition of organic matter and increased soil biological action provides valuable tilth to the soil and helps maintain forage production. Since white clover grows in the cool season it helps to bridge a gap in plant growth from the fall until spring. Having white clover in a pasture also helps to maintain soil temperatures by insulating the soil from hot and cold extremes in air temperatures.



- **Wildlife Forage** – For many of the same reasons that white clover benefits livestock it also benefits wildlife by providing valuable forage during the fall through spring when there might not be much else available. It is commonly planted in wildlife food plots along with other forages such as wheat and turnips for the deer and turkey.

- **Pollinator Habitat** – Bees and many other pollinators love white clover flowers. The flowers provide an excellent source of pollen and nectar to honey bees and increases honey production. There are also many varieties of native bees such as bumble bees that benefit from clover. Planting clover near gardens and orchards helps attract pollinators and that increases production of crops that rely on pollination such as fruits and many vegetables.



- **Erosion control and reduced weed pressure** – Because white clover grows mainly during the cool season it provides ground cover during a time when the soil may otherwise be bare. Having ground cover year round reduces the chances of the soil being exposed to heavy rainfall and washing away. This is especially important on steeper ground. Also, having bare ground tends to lead to more weed growth by allowing sunlight to the soil surface and allowing weed seeds to germinate. Growing white clover in a pasture reduces the chance of exposed soil and resulting weed pressure.
- **Relatively cheap and easy** – White clover seed typically cost \$4-5/lb which might seem high but consider that only 2-4 lb/acre is all that is usually needed when interplanted in an existing pasture. That results in a seed cost of \$8-20/acre and the clover will normally last many years if maintained properly. White clover is also easy to establish and can simply be “frost seeded” in the late winter months by broadcasting the seed in late February or early March. Of course soil testing and correcting any nutrient deficiencies are highly recommended as well.

## Here are some reasons why you **SHOULD NOT** plant white clover:

- **Heavy herbicide usage** – If you regularly spray your pastures with certain herbicides containing Picloram and/or Triclopyr (such as Grazon P+D or Remedy) you should not waste your time or money on planting white clover. These herbicides kill clover just as effectively as they kill weeds. Also, these herbicides also have some soil activity which may stay in the soil for many months following spraying and will kill germinating clover seedlings. We typically recommend not to plant clover within a year of applying these herbicides and waiting longer would be better. There has been some research done showing that some types and rates of 2,4-D can be applied to stands of white clover without completely eliminating it.
- **Brushy or weedy fields** – If your fields have a lot of brush or weeds then you should not plant white clover until the fields get cleaned up. The main reason is that weeds and brush typically need an herbicide application or two (see above).
- **Poor soils** – If your farm is very wet or extremely rocky you should not plant white clover. Although white clover is tolerant of many of the soil problems we have in the Ouachita Mountains of western Arkansas it will not tolerate very poor soils. Some soil problems can be reduced with drainage or the addition of soil amendments such as lime but a shallow droughty soil will probably not support white clover through the first summer.
- **Bloat** – If your livestock are prone to bloat you should not plant white clover. Livestock grazing lush stands of white clover can have health problems such as bloat which can be reduced by keeping the composition of white clover below 50%. Also consider culling those animals that commonly have bloat issues.
- **Hay** – If your main crop on a particular field is only hay with no grazing then you should probably not plant white clover in it. White clover is a lower growing plant and will not take a lot of competition from taller grasses that are typically allowed to mature before being cut for hay. The reason that white clover is effective in a grazed field is that it can tolerate grazing pressure very well and the competition (grasses) is kept in check and not allowed to smother the white clover. Consider red clover in a hay field instead of white clover.

**More information on white clover is attached.**

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**LOOK ----->** The Rich Mountain Conservation District Rich is 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](mailto:Deanna.wright2@usda.gov) before 4:30 p.m. on December 28th, 2021. Please call (479)437-6054 for more information.

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## 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.

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**Rich Mountain  
Conservation  
District**

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

**[Publications - Rich Mountain Conservation District \(rmcd.org\)](http://Publications - Rich Mountain Conservation District (rmcd.org))**

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Sent on behalf of the Rich Mtn Conservation District.

Thanks for your interest in grazing management and conservation,

**Steve Swall**

District Conservationist

USDA-Natural Resources Conservation Service

Mena Service Center (Polk & Montgomery Counties)

(479)437-6054

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