



## THE FORAGER

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### N.C. Forage & Grassland Council Membership Form

Name \_\_\_\_\_ Name of Operation \_\_\_\_\_  
Address \_\_\_\_\_ City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_  
Phone \_\_\_\_\_ Occupation: Farmer \_\_\_ Industry \_\_\_ Agency \_\_\_ Other \_\_\_\_\_

- \_\_\_\_\_ **Individual** — \$25.00 (open to producers, professional agricultural and industry personel, etc.)
- \_\_\_\_\_ **Individual** — \$75.00 (membership for 3 years)
- \_\_\_\_\_ **Associate** — \$100.00 (open to farm supply delers, formulators, distributors)
- \_\_\_\_\_ **Supporting** — \$300.00 (open to basic suppliers of chemicals, equipment, plant food, seed, etc.)

Make check payable to: N.C. Forage and Grassland Council  
Mail to: 2228 N. Main St., Fuquay-Varina, NC 27526

### DID YOU KNOW?

The power is out, the roads are blocked, and you are out of food. You look out your window and the cows look back with nervous apprehension as you ponder how you are going to survive. What might you find in your pastures that could sustain you through this indefinite period of survival?

#### **Chickweed** (*Stellaria media* L.)

Common chickweed used in salads but the Mouse ear variety needs to be cooked. Taste similar to spinach and is included in soups and stews; chickens graze it. Long history of herbal use for external treatment of itching conditions.

#### **Curly Dock** (*Rumex crispus*)

High in Iron, Vitamins A and C, can be used in small quantities raw or cooked; ground seeds can be a coffee substitute. Large amounts can prevent calcium absorption due to Oxalic acid; effect reduced when leaves are cooked.

#### **Horseweed** (*Conyza Canadensis*) aka Fleabane, Mare's Tail

Young leaves and seedlings cooked or dried (especially with rice); contains an essential oil. American Indians made a tea from the root and lower stalks to treat lower abdominal pain (especially menstruation); also burned the dried leaves in sweat lodges and to ward off insects. Leaves and flowers contain a terpane which causes irritation in the nostrils of horses (lots of sneezing)

Source: *Plants for a Future*: <http://www.pfaf.org/index.html>



# The Forager

THE NORTH CAROLINA FORAGE AND GRASSLAND COUNCIL  
IN COOPERATION WITH  
THE GRAZING LANDS CONSERVATION INITIATIVE

## FORAGE ID: COMMON V. HYBRID BERMUDA

The following characteristics are similar to both species of Bermudagrass but **DO NOT** help to distinguish between the two types:

- A fringe of hairs in the collar region (ligule)
- Soft "hair" on upper leaf surface
- Relatively flat leaf blades
- Presence of rhizomes and stolon

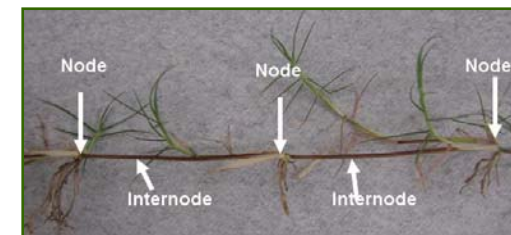


Figure 1: Distance between nodes is often closer for common

In order to distinguish between the two species you should look for:

- Swards of common are usually more dense than hybrid
- Stem diameter of common is usually smaller
- Angle made by leaf blade with the stem is 80° for common and 45° for hybrid (see Figure 2)
- Seedheads more prevalent on common and often have a reddish/purple cast
- Canopy height in common is significantly less than hybrid

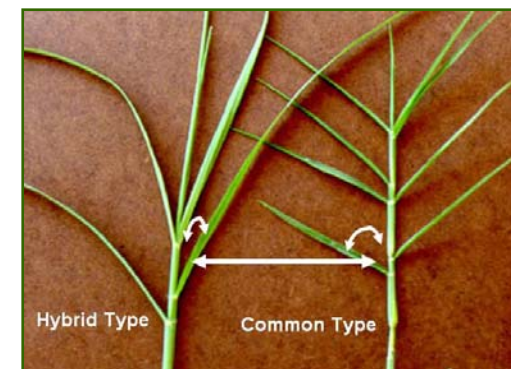


Figure 2: Angle of leaf blades relative to stem is flatter for common

### WATCH OUT!

Tifton 44 (a hybrid) under moisture stress often has many seedheads growing close to the ground like common bermuda.

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## GOATS ARRIVE AT THE CENTER FOR ENVIRONMENTAL FARMING SYSTEMS

This past growing season, twelve inquisitive, friendly, multi-stomached, four-legged forage munchers were integrated into the Organic Unit. These twelve creatures, white-bodied with sharp little horns, drooping ears and brown heads, were female yearling Boer goats, a meat breed whose origin stems from South Africa.

These animals were controll-grazed with temporary fences made of electronetting because goats are known to be escape artists, and they lived up to their reputation. They fed on small plots planted with forage mixes such as fescue, orchardgrass, white

clover and chicory. As part of the rotation devised by Brian "Busha" Green, heavy nitrogen uptake vegetables will be planted following two years of grazing by the goats. For winter grazing, other plots were planted last fall with cereal rye. Newly-acquired goats will graze these plots as soon as forage growth is sufficient.

Goats play an important role in organic farming systems from the standpoint of nutrient cycling, soil improvement, income generation and conversion of fibrous resources into value-added products, to name a few. In addition, goats add another dimen-



### REMEMBER

Hybrid Bermuda does not produce viable seeds!

### UPCOMING EVENTS

- ⇒ **MARCH 14:** NC MEAT GOAT PRODUCERS CERTIFICATION TRAINING CLASS, GOLDSBORO (MAXINE MOSLEY, 919-496-2280)
- ⇒ **MARCH 16:** PASTURE AND TURF EXPO, ROBESON CO. (910-671-3276)
- ⇒ **APRIL 12:** WASTE MANAGEMENT AND PASTURE USE ON HORSE FARMS, BREVARD, NC
- ⇒ **MAY 9:** CEFS ALTERNATIVE SWINE UNIT DEDICATION SEASONS OF SUSTAINABLE AGRICULTURE KICKOFF! [CEFS\\_INFO@NCSSU.EDU](mailto:CEFS_INFO@NCSSU.EDU)

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## NRCS PROGRAMS: CALLING ALL STEWARDS



The **Environmental Quality Incentive Program (EQIP)** is a state-wide program that provides between 50% and 75% cost share on the implementation of best management practices to solve resource concerns such as erosion and sedimentation, animal access to streams, and poor quality or inadequate forage. Practices that are available for cost share include fencing to exclude cattle from surface water as well as cross fencing to facilitate rotational grazing, spring development, animal trails and walkways, stream crossings, and providing an alternative water system. Applications are competitive depending on environmental benefit and most funding decisions are made in late winter or very early spring each year.

The **Conservation Security Program (CSP)** provides financial incentives for a commitment to good stewardship. The program is only available in selected watersheds in eastern NC for 2005 and 2006. To be eligible, operators must maintain records that document management of their herd size as compared to available forage

and evidence that nutrients and pesticides are applied in accordance to minimum standards. Additional enhancement payments are available for such practices as rotation of high animal use areas, intensive rotational grazing, and managing forages for diversity and continuous ground cover.

The **Grasslands Reserve Program (GRP)** assists landowners to restore and conserve grasslands by enrolling them in permanent or 30-year easements, or rental agreements 10 to 30 years in duration. Lands enrolled in the program must follow an NRCS plan to protect the grasslands, provide for biodiversity of plant and animal populations, and improve environmental quality. Easement payments are based on the fair market value of the land, less the grazing value. Payments for rental agreements are based on a payment equal to but not more than 75% of the grazing value. NC currently has 12 GRP participants across the state, ten of which are being established in easements. ([www.nc.nrcs.usda.gov](http://www.nc.nrcs.usda.gov))

### QUESTIONS FROM THE FIELD

“CAN FALL ARMY WORM CAUSE ENOUGH DAMAGE TO BERMUDA GRASS TO HINDER REGROWTH IN THE SPRING?”

**Q: Can fall army worm cause enough damage to Bermuda grass to hinder regrowth in the spring?**

**A:** Although fall army worms tend to eat only the leaves and do not harm the stolons or rhizomes directly, a severe infestation on new growth just prior to frost may affect storage of carbohydrates and lead to some winter damage or slower recovery in the spring.

**Q: Is peanut hay safe to feed to cattle? What is the nutritive quality?**

**A:** Peanut hay is one of the more variable crops with

quality decreasing dramatically with time in the field after digging and before baling. If it is baled within a week without any rain on it, it can be very good for cows with 12–14% crude protein and TDN near 60%. However, after a bit of weathering, it can be as low as 8% CP and less than 50% TDN. The difference is mostly due to loss of leaves.

**Q: Is matua drought tolerant?**

**A:** Yes, especially when compared to orchardgrass and fescue. Also, it responds better to moisture after an extended period of drought stress.

## GOATS AT CEFS CONT'D

sion to any operation because they live at their own pace, have their own specific needs, and have to be cared for on a daily basis. Furthermore, they are interesting to observe and they offer great companionship. Thus, we can all learn from them if we take the time to slow down a little bit. As humans, we tend to not give the animals we live and work with the credit and respect they fully deserve while in our care.

These 12 friendly goats were used to teach principles of controlled-grazing, animal husbandry and health practices to the summer interns. This 2006 season the goats, along with the chickens and turkeys, will be a welcome addition to the small farm unit for the 1000 or so schoolchildren that will visit as part of the Discover Ag. Program.

Our goal is to permanently integrate goats into the Organic Unit by breeding them in the fall, raising the kids on the farm, and selling

the excess animals. We are planning to have a three-sided shelter built on the premises.

For more information on the projects at CEFS visit their website at [www.cefs.ncsu.edu](http://www.cefs.ncsu.edu) or contact Dr. Nancy Creamer, Director of CEFS at 919-515-9447



### Goat Facts

- It takes 20 minutes for the human stomach to break down the fat globules in goat milk versus 1 hour to digest the same amount of cow's milk.
- Average price for goat meat is \$5.00 / lb
- Stocking rate for meat goats is 6-8 goats /ac given a year round forage program

## SPRING PASTURE CONSIDERATIONS: PLANTING NEW GRASSES

Planting cool season grasses like fescue, orchardgrass, bluegrass and prairiegrass in the spring is very risky, even though some years one may be successful. If one is going to risk planting these grasses in spring, it is best to get the seeds into the soil in late February-early March. Be prepared to encounter significant competition from crabgrass, panicums, signalgrass, goosegrass and many summer broadleaf weeds. The least risky thing to do is to plant a summer annual in spring and then plant the cool season grasses in September. Grazing management for the spring planted cool season grasses will need to be very controlled to minimize grazing below 3-4 inches anytime before fall.

### Other things to consider:

If pastures have significant winter weeds like buttercup be prepared to spray as early as day time temperatures stay in the 60°F range. When the yellow flowers appear they will be pretty, but you are a few weeks late on getting effective control. If you plan to plant hy-

brid bermudagrass this year, it is a good time to make arrangements for the sprigs. The odds of getting good stands are best when the dormant sprigs are put into the ground before any green-up occurs. If you plan to plant native warm season grasses for forage, wildlife habitat, field borders or buffers, it is time to get those seeds ordered. Can you purchase hay cheaper than you can produce and harvest it? Protecting the pasture plants by not over grazing and trampling can result in better yields in the future. Even if the pasture is not a primary source of feed, it is necessary to manage the

### The Forager Revived!

It is our hope to circulate The Forager on a monthly basis, targeting questions and information pertinent to North Carolina. If you have questions, comments, or submission ideas please contact Sarah Morgan at 919-515-3492 or [sarah\\_morgan@cropsci.ncsu.edu](mailto:sarah_morgan@cropsci.ncsu.edu)

## RESEARCH HIGHLIGHTS

What if you could access a map of your farm from the internet at any given moment and know how much forage dry matter was available to feed your animals? Could it help you develop a feed budget? Could it give you accurate feedback on the effects of the effluent spray gun that malfunctioned? Would regulatory agencies be able to more effectively monitor corporate farms?

These ponderings were the inspiration behind a research project initiated by **Sarah Morgan** and **Jim Green** at NC State University in 2000. They used infrared photographs obtained from an airplane at an altitude of 854 meters to see if there were correlations between biomass, nitrogen uptake and nitrogen concentration on various canopies (pure and mixed) of warm season forages and pixel counts from the infrared image.

Results showed promise with four of the seven photographic parameters analyzed ( $R^2$  ranging between 0.54 to 0.82) with the Green NDVI index being the strongest estimator of nitrogen uptake across all the forage species regardless of N source ( $R^2 > 0.76$ ).

It is still not clear if results obtained from an airplane will maintain their accuracy when the image capturing device is a satellite but research with row crops such as wheat and corn indicate a great potential.

### WHAT'S A PIXEL?

Short for Picture Element. The basic unit from which a video or computer picture is made. Essentially a dot with a given color and brightness value. The more pixels the higher the resolution of the picture.

GOATS GRAZING CHICORY (TOP) AND OATS (BOTTOM) AT CEFS



### BERMUDAGRASS SEEDS

Variety	Composition	Company
Campo Verde	Common / Giant	DLS
Cheyenne	Single Variety	Seeds West
CD90160	Single Variety	DLS
KF 194	Single Variety	KF Seed Co.
Mirage	Single Variety	DLA
Pasto Rico	Common / Giant	KF Seed Co.
Pasture Supreme	Common / Giant	Kaufman Seeds
Ranchero Frio	Cheyenne / Giant	Seeds West
Riata	Wrangler / Riviera	Johnston Seed
Sungrazer Plus	CD90160/KF194/Giant	KF Seeds
Wrangler	Single Variety	Johnston Seed