

Forage Management

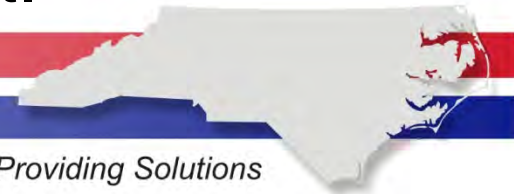
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NC State University
A&T State University
**COOPERATIVE
EXTENSION**

Empowering People · Providing Solutions

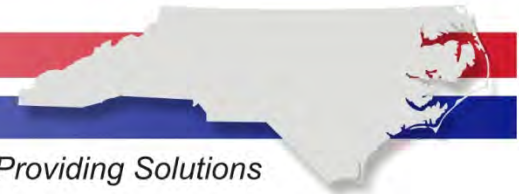
Reasons to use Forage based Diets

- Highest quality feed you can offer.
- Cheapest quality feed you can offer.
- Extremely high Grain costs.
- Can be organic.
- Can grow this 10-11 months per year.
- Animal products (meat, milk, eggs) chemically change to increase good omega 3 FFA's and also have anti-carcinogenic properties- ie healthier for us to eat.

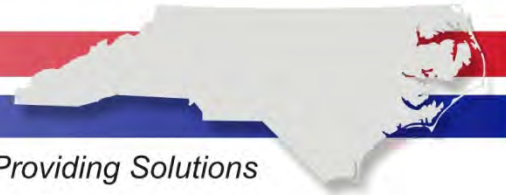


Considerations for SE US

- Soil type, drainage, and fertility level
- Warm and Cool Season Forage Varieties
- Annual vs. Perennial
- Is nutritive part of plant within easy reach of animal?
- Changing your mind set from poultry producer to grass manager.
- What breeds and/or species will work best for heat tolerance, forage usage, parasite resistance, etc.

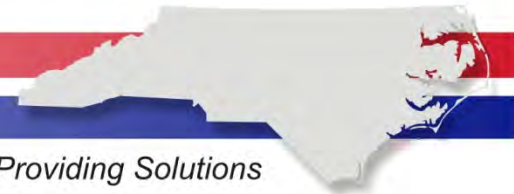


Complementary Species

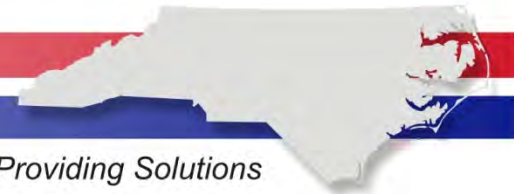


Other considerations

- For profit? How much time do you have to develop your flock to develop a marketable product ? Usually takes 5-10 years.
- Heritage vs Commercial vs a Heritage breed/Commercial Crossbred
- Strengths of Heritage breeds vs. Commercial strains?
- What do Clients want?
- Making a long term plan for success



Gleaning the Garden with Turkeys



Warm Season Forages

Examples of Warm Season Forages-
(April 15- Oct. 15)

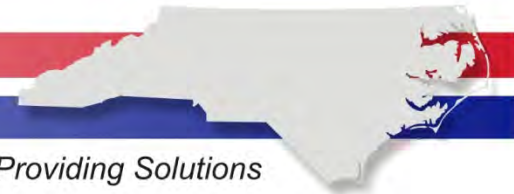
Bermuda Grass

Crab Grass

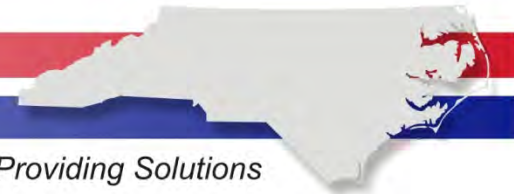
Dwarf Pearl Millet- Annual

Goose grass

Dallas grass



Bermuda grass mix



Warm Season Forages

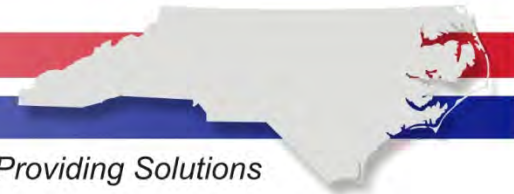
Growing cycle from April to October

Planting time- Early April- May 15

Fertilize between April and August

After Grazing stubble-

On grass- 1-3 inch, Millet 5-7



Cool Season Forages

Growing Season- Late Feb-May, Aug 15-Nov.

Fescue (Max Q- or improved stands of Endophyte-free)

Orchard Grass

Prairie Grass (Brome Grasses) *Only if you have a high P index in your soils.

Rye Grass

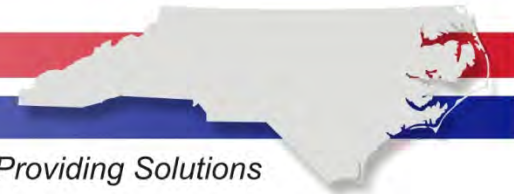
Cereal Grains

Alfalfa- Drought tolerant- Draws bugs

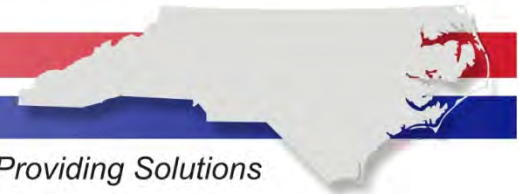
Brassica's- Cabbage, Kale, turnips etc.

Small Grains

Clovers (legumes) *PH needs to be around 6



Small Grain Gleaning



Cool Season Forages

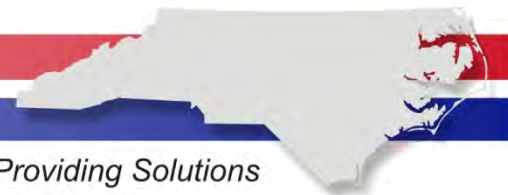
After Grazing Stubble-

Grasses- 2-4 inches

Alfalfa- 5-7 inch stubble

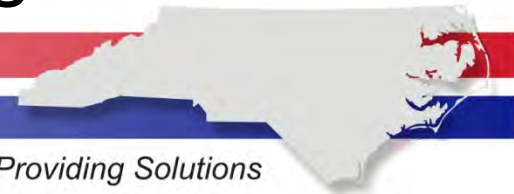
Fertilize – Feb- April 15 or Aug. 15 to Oct.15

Planting time- Usually Aug. 15- Oct.1

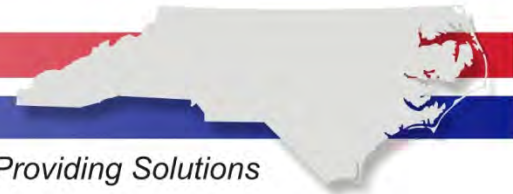


Improving your forage quality

- Add Legumes (cool season) will reduce amount of Nitrogen by 2/3.
- Graze hard within 2-7 days and then give adequate rest. Warm season -14 days, Cool season- 18-49 days
- Work with soils and conditions on your farm- Do NOT fertilize in Droughts

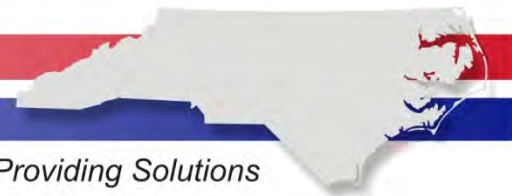


Mob grazing ducks-Pekins



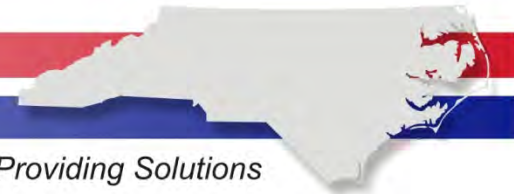
Improving your forage quality

- Salad bar system- Multispecies within a sward.
- Use Multiseasonal model on your farm to effect a 10-11 month forage use.
- Use plants to attract insects if you are setting up system for chickens



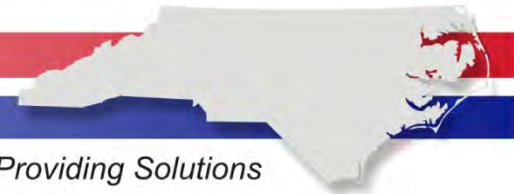
Forage Considerations

- Try to graze area down to stubble in 3-5 days. If you do not have enough animals, need to consider mowing.
- Use a sickle on weeds and thistle bushes after animals are out of paddock.



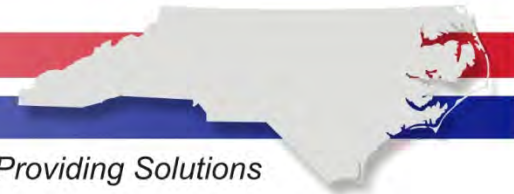
Forage Considerations

- REST your paddocks between grazing.
- Continuous grazing kills grass stands.
- If the grass seeds out, it is too old for grazing animals to use properly. Not the best quality.



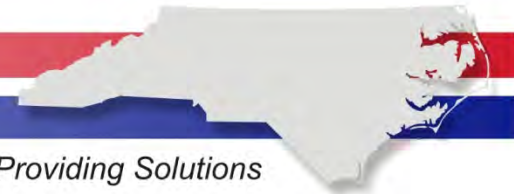
Forage Mgt. Considerations

- Fertilizer timing is crucial. Need to do at least two times per year on warm and cool season grasses.
- Recommend that you have a balance of warm (1/3) and cool season grasses (2/3) on farm for 10 month a year grazing utilization.



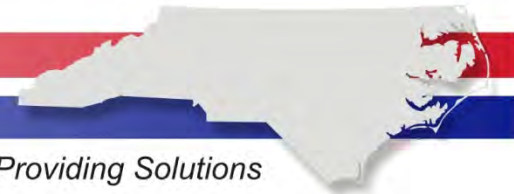
Forage Considerations

- Forages are Cheapest, Highest quality food to feed farm animals.
- Stored feed costs 5-10 times as much as forages to use.
- Chickens can use up to 15-25 percent forages in diet
- Turkeys/Geese can use up to 40% of forages in diet



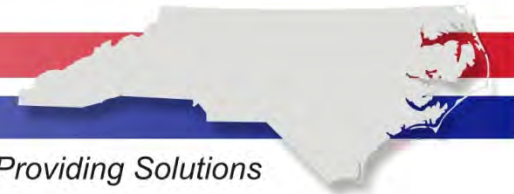
What breeds and species will work best on your farm?

- Heritage breeds- Tend to be aggressive graziers, have strong immune systems, slow growing, superior taste. In general have poor muscling/carcass qualities because they have not been selected for since 1950's.
- Commercial breeds- More delicate, poor immune systems, grow quickly, good feed efficiency, superior carcass qualities but taste may be off as compared to heritage breeds.
- Whatever breed you pick it needs to be heat tolerant and parasite resistant.



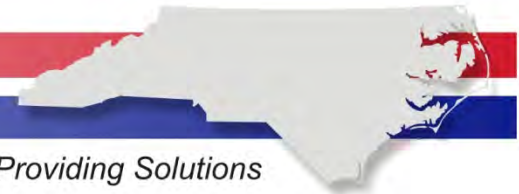
Multi-species rotation

- One way to reduce parasite loads organically is to use different species in pasture rotation.
- Each species has its own specific parasites and if they are ingested by “other” species this will interrupt life cycles and kill parasites as they are digested.



Health considerations in SE

- If you use pasture systems your birds will be exposed to more parasites than caged bird systems. If you are going to raise poultry in SE you must think about having a proactive parasite control program. With our mild winters it is very hard to have successful organic livestock or poultry production in SE US.
- Predator prevention – Can use Dogs, Donkeys and llamas.
- Parasitism- Gut worms and Coccidia,- gut worms can cause anemia, feed intake reduction, lower weight gains, sickness, death. Will start seeing losses from internal parasites about 3-5 years into production. *Organic alternatives have not been found to work for gut worm management.



Health Considerations in SE

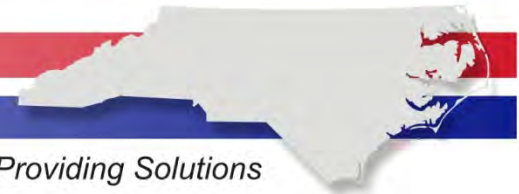
- Gut worm mgt.- Deworm birds twice per year and/or use multi species grazing program (organic) to reduce effects of internal parasites. Goats, sheep, poultry etc.
- Coccidia – Affects young animals most- either vaccinate in hatchery (organic) or use medicated feed with coccidiostat for first 6 weeks. * Can cause high mortality losses in first 6 weeks if left untreated. Usually associated with bloody stools with mucous. Die quickly.
- External Parasites- Mites, Lice, ticks- Can use Oregano powder (organic) or commercial products.



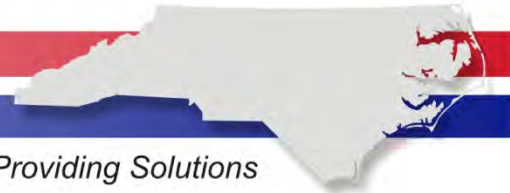
Flock Guardians / Cheap Labor



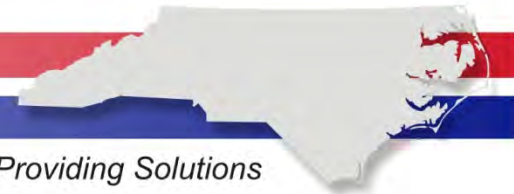
Flock Guardians



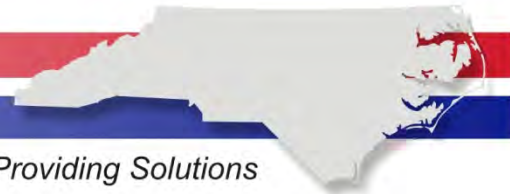
Complimentary Species



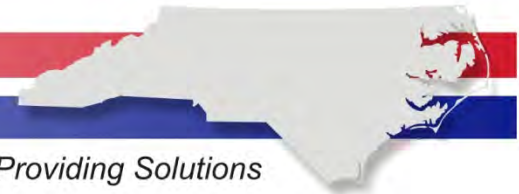
Complimentary Species



Complimentary Species



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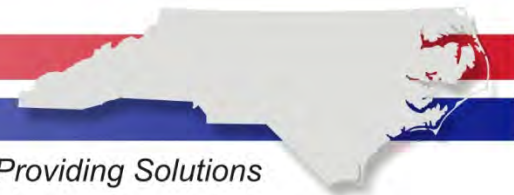


Complimentary Species



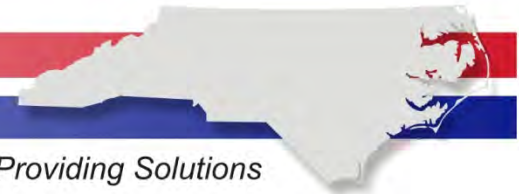
Liming

- Recommend soil sampling and liming to test every 3 years.
- If timed correctly can significantly reduce parasite loads on soil.



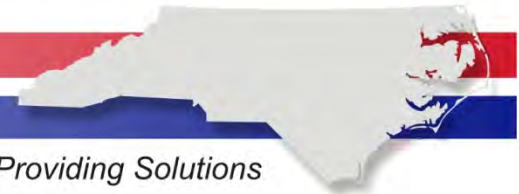
Agronomic rates

- Fertilizer application may not exceed the Nitrogen requirement of the crop as determined by the soil test recommendations.



Resources

- Land grant universities- Squeaky wheel gets most attention.
- ALBC library
- Private libraries.
- Allen Nations Grass Farmer Magazine



Pastured Geese



Pastured Turkeys

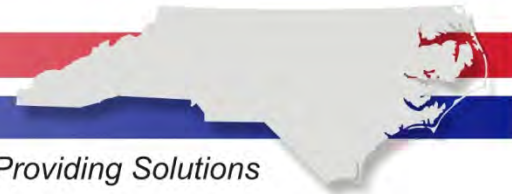


Pastured Ducks



Special thanks

- Photos- Jeannette Barenger, ALBC
 - Debbie Roos, NCCES
 - Marti Day, NCCES



Discussion topics

- Some choices for a profit making farm if you want to incorporate heritage breeds:
- A. Long Term Profitability Goals- Keep only heritage breed flock knowing that you will have 5-10 years to improve the carcass qualities and feed efficiency of your flock if you start with an unimproved flock.
- B. Short Term Profitability Goals (Poultry)-Keep pure bred heritage breed flock to produce the male parents while gradually improving upon marketable traits. At same time use a Commercial strain as the female parent to get a cross bred market animal that will combine the strengths of both Heritage breeds and Commercial strains. ie Shorter growing time than Heritage breed, better carcass quality, utilize hybrid vigor, better feed efficiency, better tasting, better immune systems.
**Use these offspring as a terminal cross market animal.

Questions?

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