

Planting Annuals for Supplemental Grazing

Species: Sorghum Sudan grass

Sorghum Sudan Grass hybrids may offer one solution to producing forage dry matter when emergency conditions occur. Sudan grass is a warm season grass unlike most of our forage species which are cool season grasses. Sudan grass is known to be drought resistant and is one of the highest yielding summer annuals available to farmers. Sudan grass can produce over 6800 pounds per acre compared to most cool season pastures producing around 4000 pounds per acre. One NC agronomist said “instead of looking at how many cows per acre we can produce we should focus on how many pounds of forage we can produce per acre, that is what we are ultimately selling (grass)”.



PURPOSE:

- Provide grazing opportunities during hot summer months
- Extend the summer grazing season
- Reduce impacts of overgrazing on traditional fescue pastures
- Provide a palatable forage opportunity
- Establish a supplemental feed during dry years where traditional pasture has shortfalls.

Site Selection

Planting should not exceed 5% of the total current established pasture. For example: a farm with 20 acres of pasture should only plant 1 acre of Sudan grass ($20 \times .05 = 1$). Choose a site with well drained soil that has good access to water for the animals. Choose an area that currently has a poor stand of grass. The area chosen should be situated within the operation where it can be observed daily and easily accessible. It may be necessary to cross fence to subdivide into smaller paddocks.

Establishment Methods

Drilling seed into pasture area using no-till grain drill or disking pasture and top seeding.

Site Preparation

Graze or clip the grass to within 2-3 inches of ground. Sow using a no-till grain drill on 8" spacing plant at a rate of 25 pounds of seed per acre. Crosshatching can provide a stand that is thicker but is not necessary. Herbicide may be used to control competition prior to planting however in pasture situations where grass is less than 3 inches it may not be necessary (**herbicide should not be necessary in the current drought conditions**). A no-till grain drill is available to rent from the Hiwassee River Watershed Coalition: (828) 837-5414.

If disking pasture of poor quality, the area can be grazed to within 2-3 inches of the ground or treated with herbicide one week prior to disking. Once the area has been disked it can be planted using a broadcast seeder at a rate of 25 pounds of seed per acre.

Amendments

Apply lime and fertilizer according to soil test recommendations. Use caution when using a high nitrogen fertilizer because Sudan grass can store nitrates in the leaves which can be detrimental to livestock. Spread fertilizer application over the entire growing season rather than using a one shot approach.

Seeding Dates

Plant Sudan grass seed between May 15 and June 30 for best performance. Seed should be planted between ½ and 1 inch deep.

Grazing

Keep animals off the area until the Sudan grass has reached 18-22 inches. Once it has reached this height it can be grazed to within 3 inches of the ground. Livestock should be removed and the stand should be allowed to regrow to 18 inches before grazing again. Recovery usually is within 21 to 28 days. It may be necessary to establish several small paddocks to provide a continual source while each paddock is recovering. Note: If Sudan grass is allowed to grow more than 26-30 inches it is less palatable.

Establishing a Sacrifice Area

Fescue pastures do not grow much during the hot summer months and recovery this year is unlikely. It may take at a minimum 1 year for pastures to recover. Start small do not plant over 5% of total pasture in Sudan grass. Locate this planting near an area that can be sacrificed or used exclusively during the summer months and within 800 feet of available water. Keeping the animals off the remaining pasture will remove the grazing pressure and stress to the existing grass. Instead of allowing the animals access to the entire farm and denuding all the pasture the farmer will only sacrifice a smaller area. The size of the sacrifice area can be determined by the number of animals present and amount of pasture available.

PROBLEMS:

Sudan grass is not suitable graze for horses. It has been reported to cause "circling disease" in horses. Second, it should not be cut for hay unless it can be wrapped as

haylage, or put into a silo as silage. Third is the risk of Prussic poisoning. Similar to cherry leaves in the wilt stage it will kill animals. Following a frost Sudan grass will wilt and have high levels of toxic compounds produced within hours. Fourth is the risk of nitrate poisoning. Sudan grass can store high levels of nitrates in its leaves. High levels of nitrogen storage can occur from over fertilizing or prolonged drought conditions followed by rain. This can cause a sudden uptake of large amounts of nitrogen. Fifth, Sudan grass looks like Johnson grass.

Managing Problems

1. Do not graze horses on Sudan grass (enough said)
2. Do not cut for hay unless you have capability to wrap (always take a sample of any hay and have it tested before feeding)
3. To prevent Prussic Poisoning close animals off if frost is predicted and for a minimum of 7 days following a frost. Once the plant dies (killing frost) wait 7 days before allowing animals back into Sudan grass.
4. To avoid nitrate poisoning do not over apply nitrogen. If soil tests recommend 100 pounds of nitrogen per acre instead of applying all 100 pounds at once apply at lower rates over longer interval. In this example apply 20 pounds per acre every 3-4 weeks until the 100 pounds per acre has been applied.
5. Sudan grass looks like Johnson grass but it is an annual and doesn't come back year after year. Sudan grass is easily killed by herbicide as well as a heavy frost.

Dealing with Annuals

Dealing with annuals requires the producer to have a change in mind set. Traditional management may not work when dealing with annuals. Annuals require some work on behalf of the producer. It may require purchasing some temporary fence materials. Livestock will need to be given the amount of forage per day they can eat. This sometimes is hard to gauge. To begin give the animals a section (start small) when they have eaten all they want they will lie down. If they lie down before the paddock is completely grazed they have been given too large a section. The next day make an adjustment and give the animals a smaller section. It may take a day or so for the producer to gauge to appropriate amount needed. Once this has been established give the animals approximately the same amount daily.

Plan ahead. Section off 2 or 3 paddocks when you have time; don't wait until you decide to move the cows or goats. Doing this will allow you to simply open a gap or gate and turn the animals into the Sudan grass. Look at your operation; see where this might work for you and how you could make Sudan grass work in your system. There is one element that is critical---water. Make sure animals have good quality water close to the area you chose to plant Sudan grass.

Think about planting a winter annual in this same area this fall. Dairy farmers have been very successful for years using winter annuals in combination with Sudan grass. Why feed hay when animals can graze. It's sometimes cheaper to buy that extra temporary fence than to purchase fuel for tractors and maintenance hay equipment. Each producer is going to have to make these decisions for his/her operation.