Overview – why natives, why not natives, establishment challenges

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Animal Science and Forages
What are Native Warm Season Grasses (NWSG)?

- A group of tall growing bunch grasses that offer the potential for excellent forage production across the Mid-South
- Native to the Mid-South
  - Grew here before human settlement
  - Naturally adapted to soils, climate, and insect pressure
- Vigorous Summer Growth
  - Peak growth of these grasses occur in the summer
  - Break dormancy in late March/early April
  - Grow rapidly from Mid May to Mid-Summer with dormancy occurring in Oct.
- Five Key Species
  - Big Blue Stem; Little Blue Stem; Indiangrass; Switchgrass; Eastern Gamagrass
Why Grow NWSG for Forage?

• Great forage production during the summer
  • Rest cool season grass pastures
  • Reduce effects of E+ tall fescue
  • Excellent drought tolerance
  • Generally low fertility requirements

• Good to excellent summer stocker/finishing gains

• High hay yields on small acres in fewer cuttings
Blends of Big bluestem (potentially little bluestem) and indiangrass are excellent because they complement each other well. But, others offer no complementary growth with each other and may compete.
# Big Bluestem

*Andropogon geradii*

## Characteristics
- Tall-growing (3-7 ft tall).
- Leaves have fine hairs close to stem. Most tolerant of all NWSG to poor growing conditions and drought.
- Consistent growth curve.
- Does not tolerate wet sites.

## Maturity
- Mid-maturity

## Uses
- Wildlife, pasture, hay

## Challenges
- Slower and more expensive to establish than other NWSG. "Fluffy" seed.

## Varieties
- OZ-70, Rountree, Hampton*

* Improved variety but limited availability.
**Eastern Gamagrass**  
*Tripsacum dactyloides*

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Tall-growing (4-6 ft tall) and coarse leaves. High yields and highly palatable. Tolerates wet sites. Large, slick seed.</th>
</tr>
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<tbody>
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<td>Maturity</td>
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<td>Challenges</td>
<td>Low to medium animal performance. High seed dormancy.</td>
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<td>Varieties</td>
<td>Pete, Highlander, Bumpers*</td>
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<td>Cheyenne, Rumsey, Osage, Americus</td>
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# Switchgrass

*p*Panicum virgatum*

## Characteristics

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## Maturity

Early maturing

## Uses

Hay, biomass, pasture, wildlife

## Challenges

Very clumpy growth habit. Short growing season. Overlaps with cool season forages.

## Varieties

Alamo, Kanlow, EG1101*  

* Improved variety but limited availability.
Advantages of NWSG

• Complement cool season forage production
• Perennial
  • Can last 15-20 years with proper management
  • Savings in yearly seed, fertilizer, herbicides and labor compared to annuals
• Widely adapted
  • Will grow in poorer soils, ridge-tops, and poorly drained bottoms
• Drought Tolerance
  • Metabolic pathway efficient in water use (C-4)
  • Deep root systems (up to 12 feet)
Advantages of NWSG

• Reduced fertilizer inputs
  • Less Fertility needed
  • Can grow with lower pH

• High Yields
  • NWSG can yield 4-5 tons/acre when harvested for hay
  • Stocking rates can be 1,400 – 2,000 pounds/acre

• High Quality Forage
  • Hay harvested in boot stage will garner 10% crude protein (Bypass Proteins)

• Few Pests
  • Only known pest is leaf rust

• Wildlife Friendly
  • Cover for wildlife
Disadvantages of NWSG

• Establishment
  • Will cover in depth

• More management
  • Timing is everything
  • Can get too tall and stemmy
  • Overgrazing

• Understanding the management
  • Not familiar with these grasses
  • Cutting higher
  • Having a grazing plan and rotation ability are critical