

FORAGE SUITABILITY GROUP

Sandy Soils on Stream Terraces, Flood Plains, or in Depressions

FSG No.: G133AA145FL

Major Land Resource Area (MLRA 133A):

Southern Coastal Plain

Map Unit List*

- Clara and Plummer soils, occasionally ponded
- Pickney loamy sand (FL113)
- Pickney loamy sand, depressional
- Pickney sand, depressional
- Pickney soils, occasionally flooded
- Pickney, Dorovan, and Bibb soils, frequently
- Plummer fine sand, frequently flooded
- Plummer mucky fine sand, depressional
- Plummer sand (FL063)
- Plummer sand, depressional
- Pottsburg sand, occasionally flooded
- Rutlege and Plummer soils, depressional
- Rutlege fine sand (FL065, FL131)
- Rutlege fine sand, depressional
- Rutlege loamy fine sand, depressional
- Rutlege loamy sand (FL063, FL113)

***NOTE:** Some members do not identify flooding or depressional in the map unit name but are subject to flooding or ponding. In these cases, please refer to the water features data on the Web Soil Survey. Information in parenthesis refers to soil survey code where map unit occurs.

Adapted Species List

The native forage species listed are considered adapted to grow on the soils in this group at their natural pH lev-

els. All introduced grasses will need native pH raised to min. 5.5 (unless noted) for best production. Consult with state extension service for current cultivar or germplasm recommendations (<http://agronomy.ifas.ufl.edu/foragesofflorida/>).

Perennial Species:

Grasses

Warm season (Introduced)

- Limpograss (*Hemarthria altissima*)

Warm season (Native)

- Maidencane (*Panicum hemitomon*)
- Blue Maidencane (*Amphicarpum muhlenbergianum*)

Annual Species:

Grasses

Warm season

- Japanese Millet (*Echinochloa esculenta*)

Legumes

Warm season

- Aeschynomene (*Aeschynomene americana*)

Seasonal and Total Production Estimates

Unless previously drained, soils in this FSG have very few forage species adapted to their seasonal high water table (1 to 2 feet above the soil surface). If previously drained see forage list and discussion with FSG G133AA141FL.

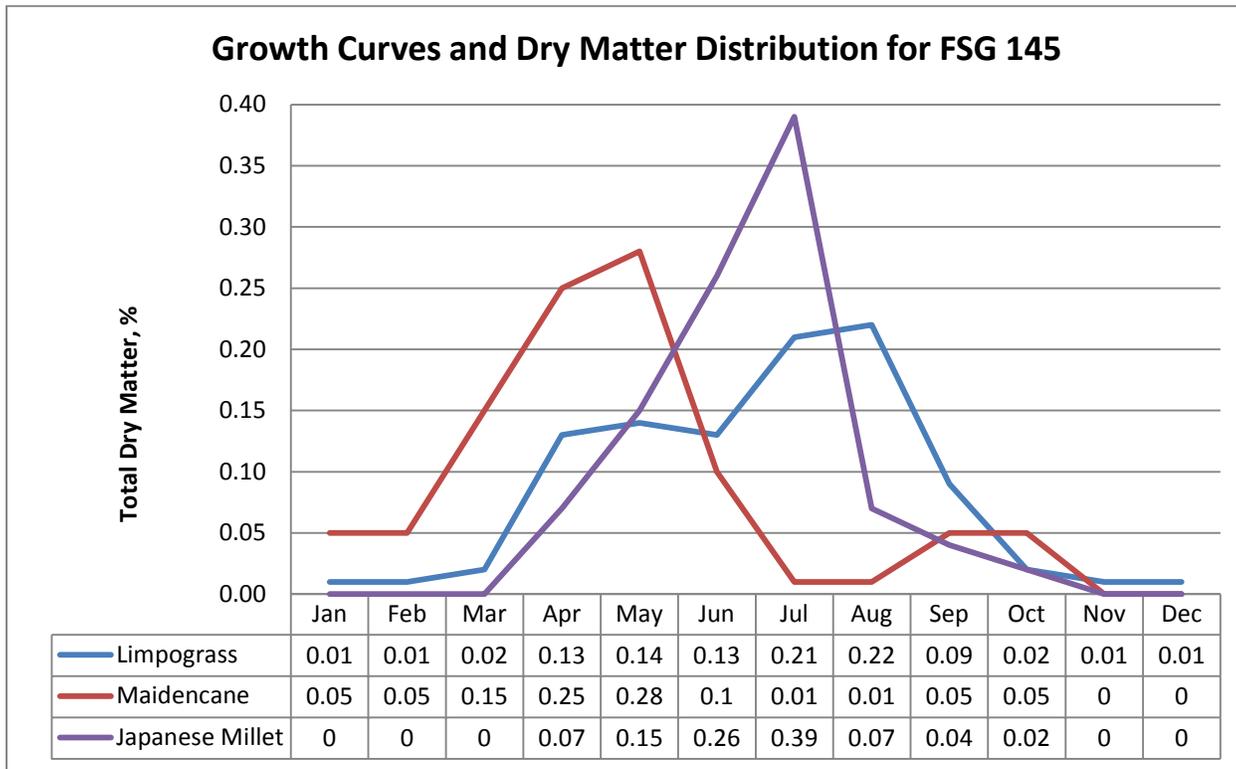
Expected Range in Dry Matter Production and Animal Unit Months (AUM) for Different Forages				
Forage	Range in Dry Matter, lbs/acre		Range in AUM/acre†	
Limpograss (≈400 lb N/acre) ^{3,5}	8,000	13,000	5.1	8.2
Maidencane ^{1#}	5,000	6,700	3.2	4.3
Blue Maidencane ^{1#}	2,100	2,500	1.3	1.6
Japanese Millet ²	4,000	6,000	2.5	3.8
Aeschynomene ⁴	2,000	3,000	1.3	1.9

†Animal Unit Month based on 50% grazing efficiency and 2.6% intake per day.

#Superscript numbers refer to references.

#Dry matter estimated based on the assumption air dried yield in reference had ≈16% moisture.

Production Curves:



Physiographic Features

Dominantly very deep, nearly level, poorly drained or very poorly drained soils formed in sandy marine deposits or alluvial deposits. These soils are on flood plains, stream terraces, or depressions of marine terraces. They have 40 inches to greater than 80 inches of fine sand or sand. Diagnostic subsurface horizons are either a spodic horizon within 30 inches, an argillic horizon below 40 inches or both. Some soils lack a diagnostic subsurface horizon. A few members have either a mollic or umbric horizon. The organic matter content of the surface layer is dominantly medium or high. Unless limed, the reaction in the surface layer ranges from extremely acid to slightly acid.

Climatic Features

Freeze-free period (>28° F 9 years in 10 at least):
 averages 255 d (range 243-273 d)

Length of growing season (>32° F 9 years in 10 at least): averages 224 d (range 205-247 d)

Annual minimum temperature (° F in month of January):
 averages 38.2 (range 36.7-39.7)

USDA Plant Hardiness Zone:
 8b (15-20° F, Tallahassee)

Mean annual precipitation (inches):
 averages 62.14 (range 53.18-69.48)

Group Soil Properties (Statewide)

Percent Slope: 0 to 2 percent

Surface Texture: Fine sand, sand, loamy sand, loamy fine sand, and their mucky modifiers

Sand Content of Surface Layer: 78 to 98 percent

Clay Content of Surface Layer: 0.4 to 10 percent

Organic Matter Content of Surface: 0.5 to 20 percent

Cation Exchange Capacity of Surface Layer (meq/100g):
 1.8 to 12.4

Effective Cation Exchange Capacity of Surface Layer (meq/100g): 0.9 to 19.2

Bulk Density of Surface Layer (g/cc): 1.1 to 1.55

Saturated Hydraulic Conductivity of Surface Layer: Rapid or very rapid

Soil Reaction of Surface Layer: 3.5 to 6.5 (unless limed)

Available Water Capacity (0 to 30 inches): 1.0 to 5.4 inch per inch

Depth to Finer Textured Material: 40 to more than 80 inches

Depth to Bedrock: Dominantly more than 80 inches. A few members have bedrock at less than 40 inches.

Drainage Class (Agronomic): Poorly, very poorly

Depth to Seasonal High Water Table (during wet periods): 1 to 2 feet above the surface

Flooding: If flooded, frequent or occasional with brief to very long duration

Ponding: If ponded, long or very long duration

Monthly precipitation (inches) and temperature (F):

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Precip avg	4.80	6.37	3.78	4.45	6.36	7.04	6.32	5.24	3.31	4.16	4.09	4.80
Avg Min	38.2	40.8	46.9	99.8	60.8	67.8	70.7	70.3	66.4	54.6	46.5	41.3
Avg Temp	51.6	54.9	61.2	67.0	74.4	80.2	82.1	81.8	78.7	69.9	61.5	54.4
Avg Max	62.2	66.1	72.5	78.7	85.3	90.1	91.5	91.0	88.0	80.3	71.9	64.5

Climate Station Locations (averages from 1971 to 2000; see Appendix 1)

FSG Documentation

Inventory Data References:

1. ----- . 1987. Range Management for Important Native Grasses of Florida. USDA, NRCS. Gainesville, FL. 168 p.
2. Barnhart, S. 2008. Forage and Cover Crop Considerations for Delayed Planting and Flooded Sites. Iowa State Univ. Ext. <http://www.extension.iastate.edu/CropNews/2008/0611SteveBarnhart.htm> (accessed Oct. 12, 2011).
3. Kalmbacher, R.S., P.H. Everett, F.G. Martin, K.H. Quesenberry, E.M. Hodges, O.C. Ruelke, and S.C. Schank. 1987. Yield and Persistence of Perennial Grasses at Immokalee, Florida: 1981 to 1984. Univ. Florida, IFAS, Agric. Exp. Stn., Bull. 865. (<http://ufdc.ufl.edu/UF00027614/00001?search=kalmbacher>, accessed August 22, 2011).
4. Mislevy, P., R.S. Kalmbacher, and F.G. Martin. 1981. Cutting Management of the Tropical Legume American Jointvetch. Agron. J. 73:771-775 (<https://www.agronomy.org/publications/aj/abstracts/73/5/AJ0730050771>, accessed September 29, 2011).
5. Newman Y.C., A. Agyin-Birikorang, M.B. Adjei, J.M. Silveira, J.M.B. Vendramini, J.E. Rechcigl, and L.E. Soltenberger. 2009. Nitrogen Fertilization Effect on Phosphorus Recommendation Potential of Three Perennial Warm-Season Forages. Agron. J. 101:1243-1248. (<https://www.soils.org/publications/aj/pdfs/101/5/1243>, accessed August 22, 2011).

State Correlation: Pending

Forage Suitability Group Approval:



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Appendix 1: Climate Station Locations		
COOP ID (FL=08)	Location	County
1544	Chipley	Washington
1986	Crestview	Okaloosa
2220	De Funiak Springs	Walton
3230	Fountain	Bay
5275	Madison	Madison
5793	Milton Exp. Stn.	Santa Rosa
5879	Monticello	Jefferson
6240	Niceville	Okaloosa
7429	Quincy	Gadsden
8758	Tallahassee Mun. Air.	Leon