

FORAGE SUITABILITY GROUP

Loamy and Clayey Soils on Stream Terraces, Flood Plains or in Depressions

FSG No.: G133AA345FL

Major Land Resource Area (MLRA 133A):

Southern Coastal Plain

Soil Series List

Due to the large list of map units in this group, please refer to Appendix 1.

Apalachee	Grady
Bethera	Kingston
Bibb	Meggett
Brickyard	Pansey
Byars	Pantego
Cantey	Rains
Emory	Yonges

Adapted Species List

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

[\(http://agronomy.ifas.ufl.edu/foragesofflorida/\)](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 G133AA341FL.

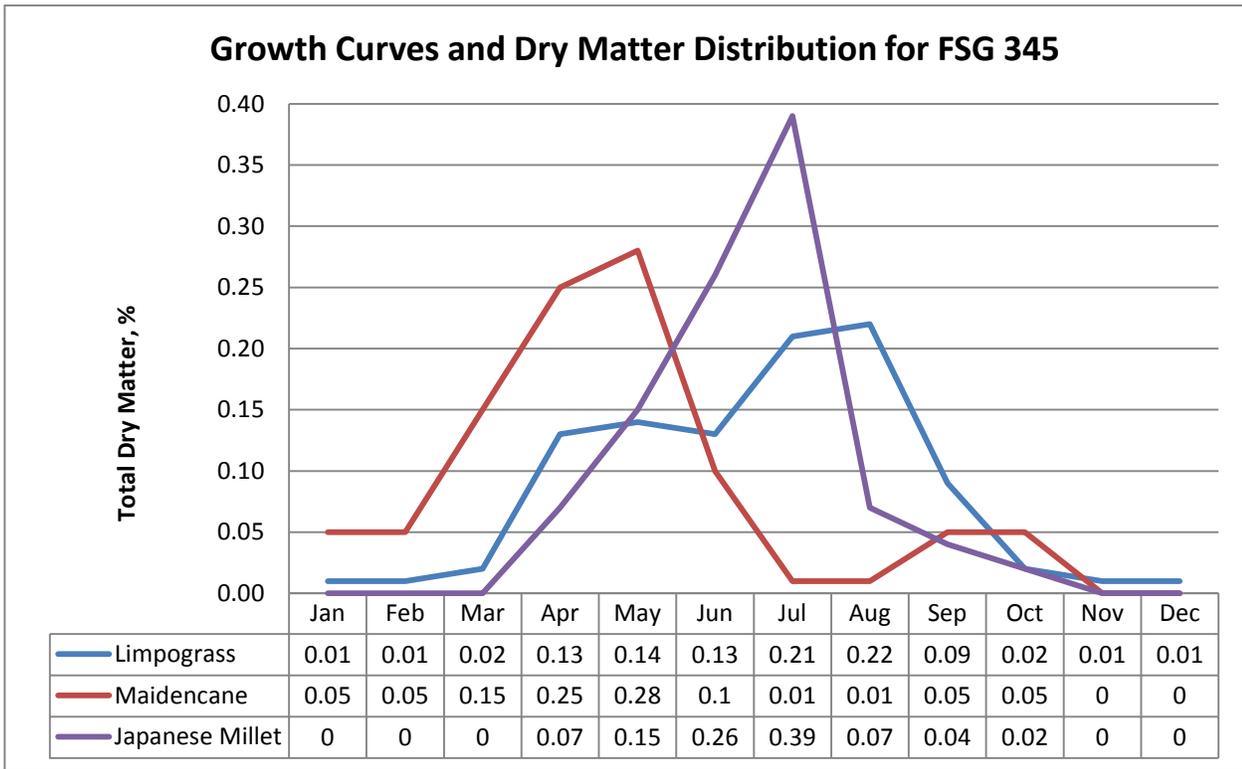
Expected Range in Dry Matter Production and Animal Unit Months (AUM) for Different Forages				
Forage	Range in Dry Matter, lbs/acre		Range in AUM/acre†	
Limpograss (≈400 lb N/acre) ^{3,5}	8,000	13,000	5.1	8.2
Maidencane ^{1#}	5,000	6,700	3.2	4.3
Blue Maidencane ^{1#}	2,100	2,500	1.3	1.6
Japanese Millet 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 loamy and clayey marine deposits or alluvial deposits. These soils are on flood plains, or in depressions of marine terraces. Diagnostic subsurface horizon is an argillic horizon above 20 inches. 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 neutral.

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: Dominantly sandy loam, fine sandy loam, loam, clay, fine sand, loamy sand, loamy fine sand, and their mucky analogs. A few members are sand, very fine sandy loam, silt loam, sandy clay loam, clay loam, silty clay loam, and sandy clay.

Sand Content of Surface Layer: 26 to 95 percent

Clay Content of Surface Layer: 5 to 74 percent

Organic Matter Content of Surface Layer: 1 to 20 percent

Cation Exchange Capacity of Surface Layer (meq/100g):
 1.3 to 54.4

Effective Cation Exchange Capacity of Surface Layer (meq/100g): 2.4 to 72.1

Bulk Density of Surface Layer (g/cc): 1.3 to 1.68

Saturated Hydraulic Conductivity of Surface Layer:
 Moderate to very rapid

Soil Reaction of Surface Layer: 3.5 to 7.3

Available Water Capacity (0 to 30 inches): 0.2 to 6.0 inch per inch

Depth to Finer Textured Material: Less than 20 inches

Depth to Bedrock: Greater than 80 inches. Some members have bedrock at less than 80 inches.

Drainage Class (Agronomic): Very poorly, poorly

Depth to Seasonal High Water Table (during wet periods): 1.0 to 2.0 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 2)

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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Tom Weber, State Soil Scientist

Appendix 1: Map Unit List*	
Apalachee clay (FL063)	Kinston, Johnston, and Bibb soils, frequently flooded
Bethera silt loam (FL063)	Kinston-Bibb association, frequently flooded
Bibb loamy sand, frequently flooded	Kinston-Johnston-Bibb complex, frequently flooded
Bibb soils (FL063)	Meggett soils, frequently flooded
Bibb-Kinston association (FL113)	Pansey fine sandy loam (FL063)
Brickyard clay loam, frequently flooded	Pansey loamy sand (FL059)
Byars fine sandy loam, frequently flooded	Pansey sandy loam, depressional
Cantey fine sandy loam (FL079)	Pantego complex (FL059)
Emory fine sandy loam, ponded	Pantego loam, depressional
Grady fine sand loam (FL063)	Rains and Bayboro soils, depressional
Grady fine sandy loam, depressional	Rains fine sandy loam (FL113)
Grady loam (FL033)	Yonges fine sandy loam (FL073)
Grady loam, ponded	Yonges-Herod association (FL063)

***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 or Soil Data Mart. Information in parenthesis refers to county code where map unit occurs.**

Appendix 2: 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