Managing Grass-Based Dairies in Hot Climates

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Weather for Waynesboro Ga

- Inconsistent weather patterns

- Irregular rainfall

- Summer heat stress

- Winter stress factors

Presentation Overview

- Overview of Pineland Dairy's Operating System

- Managing the Pastures
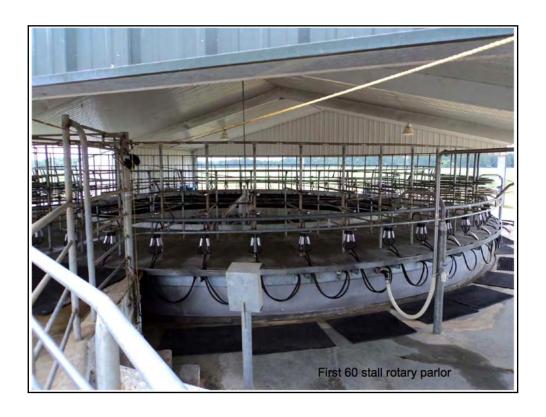
- Managing the Livestock

- Managing the People

Goal: To Supply Practical Ideas To Manage Grass Based Dairies During Hot Weather

Our Mission
To produce high quality milk and meat for the lowest possible cost using environmentally friendly and sustainable methods

Pineland Dairy's Operating System

- The Dairy Consists of Two Farms
  - 400 Cows on 350 acres (300 irrigated)
  - 700 Cows on 400 acres (250 irrigated)
  - Additional Land for Grazing Heifers and crops

- Hybrid system with feed bunks allows for supplementing with TMR.

- Cows are supplemented on concrete

- Sheltered feeders, but no cattle housing

- Heifers and dry cows

  ➡ Total grazing 9-10 months

  ➡ Winter months supplemented with stored forage

- Target calving dates are October-November

- High throughput parlors are important
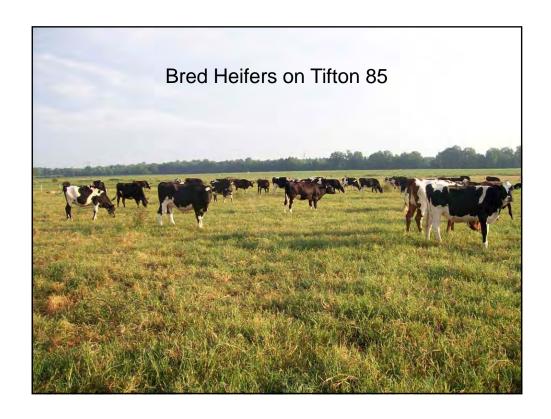
Facilities

First 60 stall rotary parlor

Forages

- Tifton 85 Bermuda grass for summer perennial

- Pearl Millet and Crabgrass for summer annuals

- Winter annuals include Ryegrass, Arrowleaf Clover, and Cereal Rye.

- Stored forages are corn and sorghum silages

Tifton 85 Bermudagrass
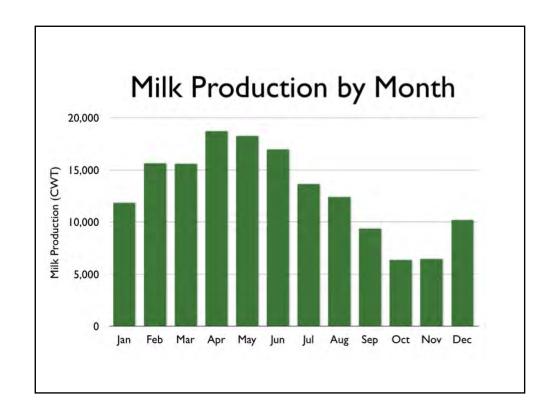
Grazing Management

- Winter Rotation 30 days (Ryegrass and Clover)

- Summer Rotation 10-14 days (Bermuda grass and millet)

- Only the best portion of the sward is consumed by milking herd

- Pastures need to be reset twice per summer

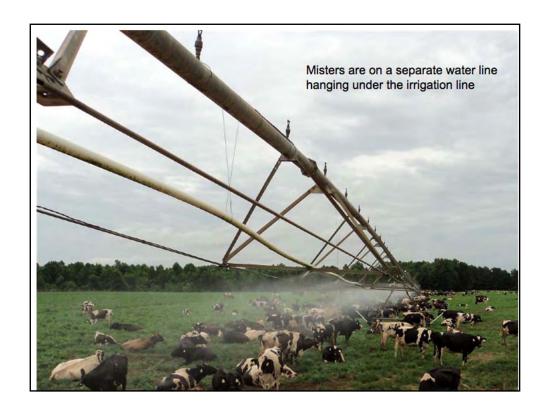- Each farm has a group of bred heifers to clean up pastures

Bred Heifers on Tifton 85

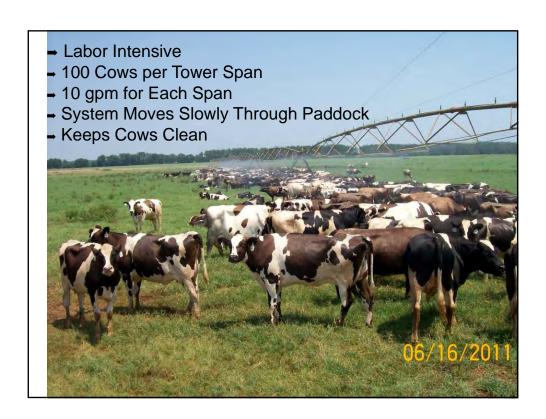Nitrogen Fertilizer is
Applied Through
Pivots

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Managing the Livestock

- Crossbreds, coming from US Holstein base

- Committed toward smaller cows
  - Fertility
  - Heat Tolerance
  - Efficiency
  - Handling

- Cows receive cooling from May-September

- Cull Rate = 12% to 20%

- SCC = 200,000 winter to 300,000 summer

Milk Production by Month

Mister System Over Holding Area

Misters are on a separate water line hanging under the irrigation line

- Labor Intensive
- 100 Cows per Tower Span
- 10 gpm for Each Span
- System Moves Slowly Through Paddock
- Keeps Cows Clean

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Day – cool cows with pivot

Night – Irrigate with pivot

Caution:
All fences need to be designed for pivot to pass over without catching

Hot wire dangles in front of pivot to arouse sleeping cows and prevent them From being crushed by advancing pivot

- Practical for Small Groups
- Does Not Cool Very Well
- Wind Danger

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K-Line Irrigation Cooling Calves

→ Heifers Using Trees for Shade
→ Low Labor
→ Poor Distribution of Nutrients

•Drinking Cups on Pivot
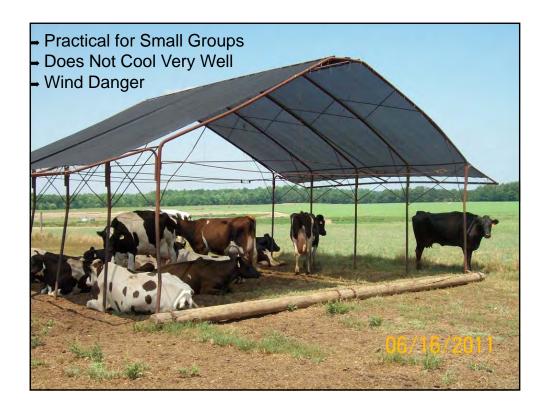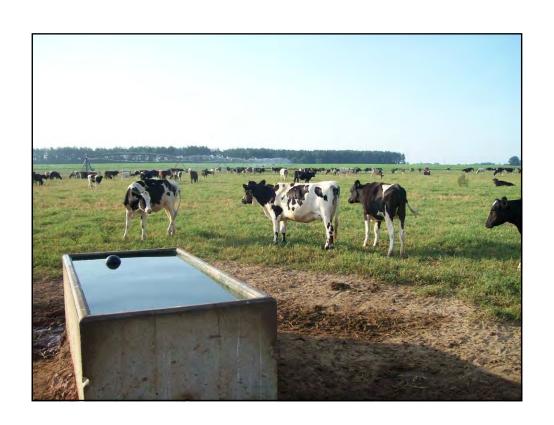- Versatile for Hybrid Systems

Managing the People

- Good people are a treasure

- Heat stress affects people as well as livestock

- Design systems to minimize work in the hot months and the heat of the day

- Supply good housing with air conditioning

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Questions ?

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