Beginning of the Day
Cotman For Consultants

Bob Griffin
Goals

- Making End of Season Decisions
  - When to terminate insecticides
  - When to terminate irrigation
  - When to safely defoliate
COTMAN uses cotton crop monitoring techniques to summarize crop development status, detect stress, and assist with in-season and end-of-season management decisions.
SQUAREMAN – is used to monitor crop development up to time of first flower. Reports provide feedback on square retention and plant stress.
BOLLMAN is used when the crop is flowering to monitor boll-loading stress and to assist with end-of-season crop termination decisions. BOLLMAN utilizes NAWF data. A non-computer version of BOLLMAN is available.
Description

The diagram illustrates the flowering stages of plants. It shows two main stages:

1. **SQUAREMAN**: Before first flowers, the diagram indicates the growth phase of the plant.
   - Check squares down the plant.

2. **BOLLMAN**: After flowers, the diagram shows the flowering phase.
   - Count nodes above 1st position white flowers = NAWF

The x-axis represents days after planting, ranging from 30 to 80 days. The y-axis shows the growth and flowering stages of the plants.
BOLLMAN

BOLLMAN is the component of COTMAN that I use to make end of season decisions.
BOLLMAN DEFINITIONS

- NAWF – Nodes above uppermost 1st position white flower.
TOP NODE TO BE COUNTED

1st Terminal Node
SAMPLING FOR BOLLMAN

- 20 – 40 Plants / Field
- Count nodes above uppermost 1st position white flower that the leaf is completely unfurled on.
Sample Site Selection

- Select sites where plants represent those that the grower will use to make management decisions.

- Samples should represent the predominate growing conditions in each field.

- Stand density
- Soil Type
Avoid these areas unless they represent a large portion of the field.

- Spot applications
- Random physical injury e.g. hail damage
- Chronic field conditions (sand blows, low spots)
Samples should be taken in the same general areas, in the same order from the field each time it is sampled, but avoid sampling the same plants each week.
Sample sites should be located no less than 100 feet from the edge of the field and separated by at least 150 feet.

If areas of the field are bordered by known insect habitats, take at least one sample from each of these areas.

In fields larger than 40 acres add one additional sampling site for each additional 10 acres over 40.
Goals

- Making End of Season Decisions
  - When to terminate insecticides
  - When to terminate irrigation
  - When to safely defoliate
When to terminate insecticides

NAWF5 + 350 DD 60’s
When to terminate irrigation

NAWF5 + 450 DD60’s
When to safely defoliate

NAWF5 + 850 DD60’s
FIELD: M01 YEAR: 2006 ANALYSIS DATE: 10/17
SOIL: Silt Loam ACREAGE: 165 PLANTING DATE: 04/18 CULTIVAR: D&PL 444
IRRIGATION: YES ROW SPACING: 38 LOCAL WEATHER: Marianna REPLANT(%): 0

X AXIS: DAYS AFTER PLANTING DATE
Y AXIS: NUMBER OF NODES
Physiological cutout before Last Possible Cutout.

Physiological Cutout (NAWF = 5) : 07/24

Days, Planting to NAWF = 5 : 97

Latest Possible Cutout Date : 08/07

Cutout Type : Crop Maturity
HEAT UNIT TOTAL and THRESHOLD DATES

Heat unit total (to date 10/17) : 1325.80
calculated from NAWF = 5 : 07/24.

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<th>Heat Unit Threshold</th>
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Summary Report of Farm BillGerrardIII in Year 2006, 08/05

FARM : BillGerrardIII  YEAR : 2006  ANALYSIS DATE : 08/05
GROWER : BillGerradIII  LOCATION : ARKANSAS, AR
DAILY PICKER CAPACITY : 40  HARVEST DAYS PER WEEK : 6  TOTAL ACREAGE : 1133
DAYS BETWEEN DEFOILIATION AND HARVEST INITIATION : 20  TARGET HARVEST COMPLETION DATE : 11/01
LONG TERM WEATHER : Marianna, AR, 1948-2005  ACCEPTABLE WEATHER RISK : 15

Table Name : NAWF  Table Title : (none)  * : projected

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