

Kansas Boll Weevil Trapping Program Update

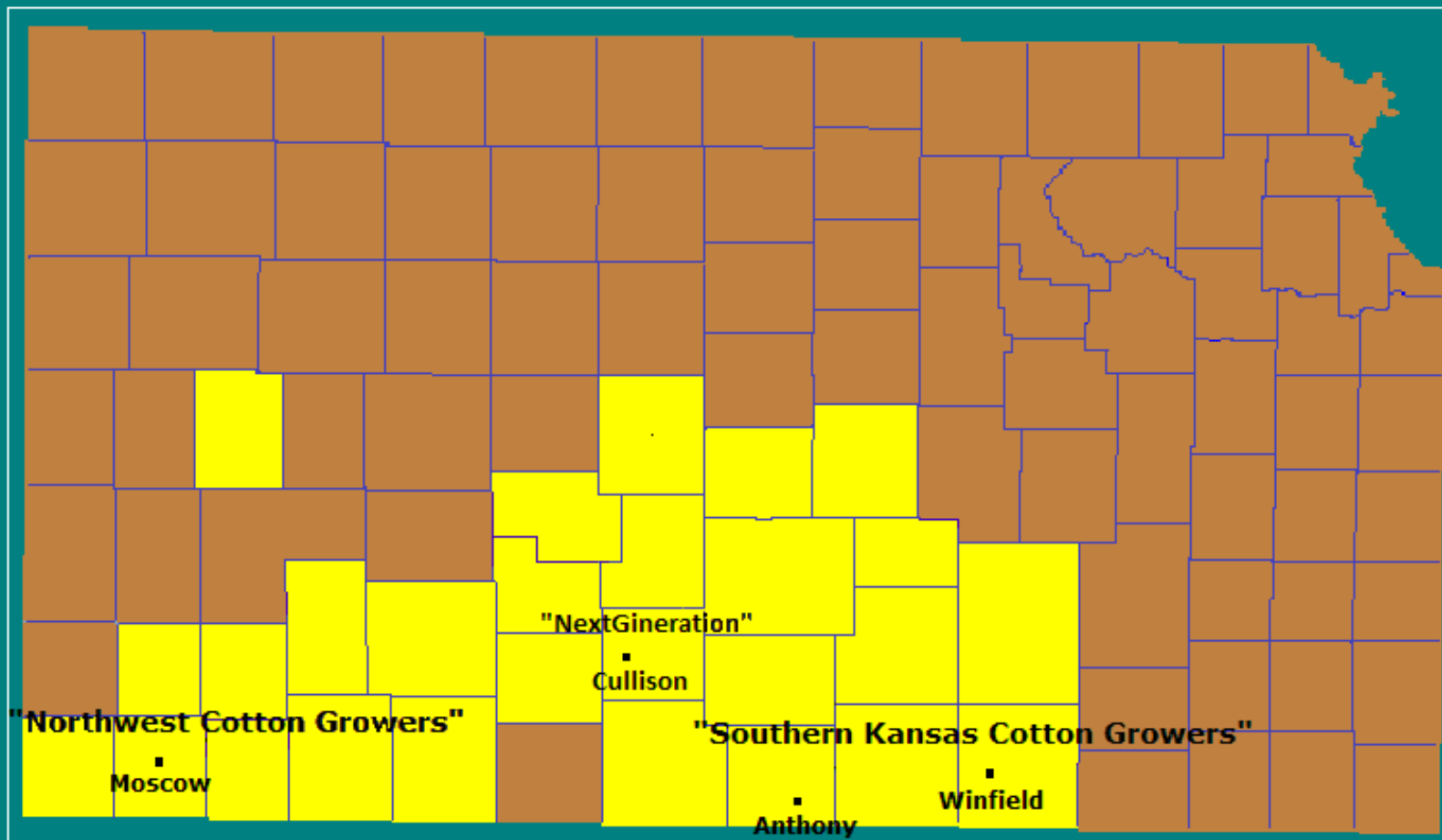
Rex Friesen, Ph.D.

**Southern Kansas Cotton Growers Co-Op, Inc.
Anthony, KS, and Winfield, KS**

Why Do We Need to Trap?

- Risk of Boll weevils being found in Kansas is *very* small, **HOWEVER...**
- There is much at stake
 - Increasing Acres—more growers are adding cotton to their rotation; potential of 3.0 million acres in Kansas
 - Increasing economic importance of Cotton to growers and local and state economies
 - National Cotton industry is demanding it
- Undetected establishment and proliferation of boll weevils in Kansas could cripple / eliminate cotton as a commodity option
- Trapping is vital to identify problem area(s) early, so infestations can be dealt with promptly, before they get out of control; eradication is costly and difficult

KANSAS COUNTIES WITH CERTIFIED COTTON ACRES IN 2021



■ = Cotton Gin

Current Status

- **Legislative Update**
- **Boll weevil fees-2021**
- **Employees**
- **2021 Trapping**
- **Changes for 2022**

Legislative Progress

- **Kansas Cotton Association has had input from the National Cotton Council, Oklahoma BWE Organization, and the Texas BWE Foundation to design a trapping program**
- **KCA has been working in close cooperation with the Kansas Department of Agriculture, Kansas Cooperative Council, Kansas Farm Bureau to craft a bill to establish the Kansas Boll Weevil Program**
- **Bill presented to Kansas House Ag committee on Feb. 3.**
- **House Bill 2559 to establish the Kansas Cotton Boll Weevil Program-voted on and passed Feb. 23.**
- **To be presented to the Kansas State Senate Ag committee March 10; voted on by ?**

Boll Weevil Bale fees-2021

- **\$0.50 collected per bale at each gin where Kansas cotton was ginned**
- **Total Bale collections for 2021 = \$90,000***

***approximate; not all funds received yet**

Employees

- **Kevin Murphy, Director, trapper (full time, permanent)**
- **Jerry Stuckey, trapper (seasonal)**
- **Technical support: Univ. of Oklahoma, Candace Johnston**

2021 Trapping

- **362 traps placed (based on last year's field locations)**
- **300 "Active" traps: SC = 165; SW = 135 (62 traps removed—no cotton in vicinity)**
- **Traps placed and serviced every three weeks, beginning mid-May, and continuing through end of December, early January (checked for weevils; pheromone and kill strips replaced)**
- **Tablets and trapping software are being used to manage trapping information**

Changes for 2022

- **Create Board of Directors for Kansas Boll Weevil program (assuming passage of bill).**
- **New trapping data collection App (for trappers)**
- **Work with OU support to create and maintain Kansas Boll Weevil Program website**

Minimum Trapping Protocol*

- 1 trap per section with cotton field(s) in it.
- Traps placed in areas where cotton was located the year before (will use FSA data to locate last years' fields)
- Trap locations adjusted as crop develops

*As defined by the National Cotton Council Boll Weevil Action Committee

Weevil Capture Scenario

- **If a weevil of questionable identify is captured, specimen will be shipped overnight to qualified entomologist for verification**
- **Upon positive ID, trap density in capture area will be significantly increased**
- **All positive and adjoining fields within 1 mile of capture will be treated immediately with approved pesticide, then weekly for three weeks after first capture**
- **Traps in capture area will be service daily for at least three days, then weekly until crop termination.**

Questions can be referred to:

- **Kevin Murphy, Director
Boll Weevil Program
8402** **Kansas
tel: (605) 295-**
- **Rex Friesen, Ph.D. Crop Consultant, Southern
Kansas Cotton Growers
4818** **tel: (620)-222-**
- **Gary Feist, President, Kansas Cotton
Association, General Manager, Southern
Kansas Cotton Growers;
(620)-845-0500** **tel:**

Insect Pest Management for Kansas Cotton

Rex Friesen, Ph.D.

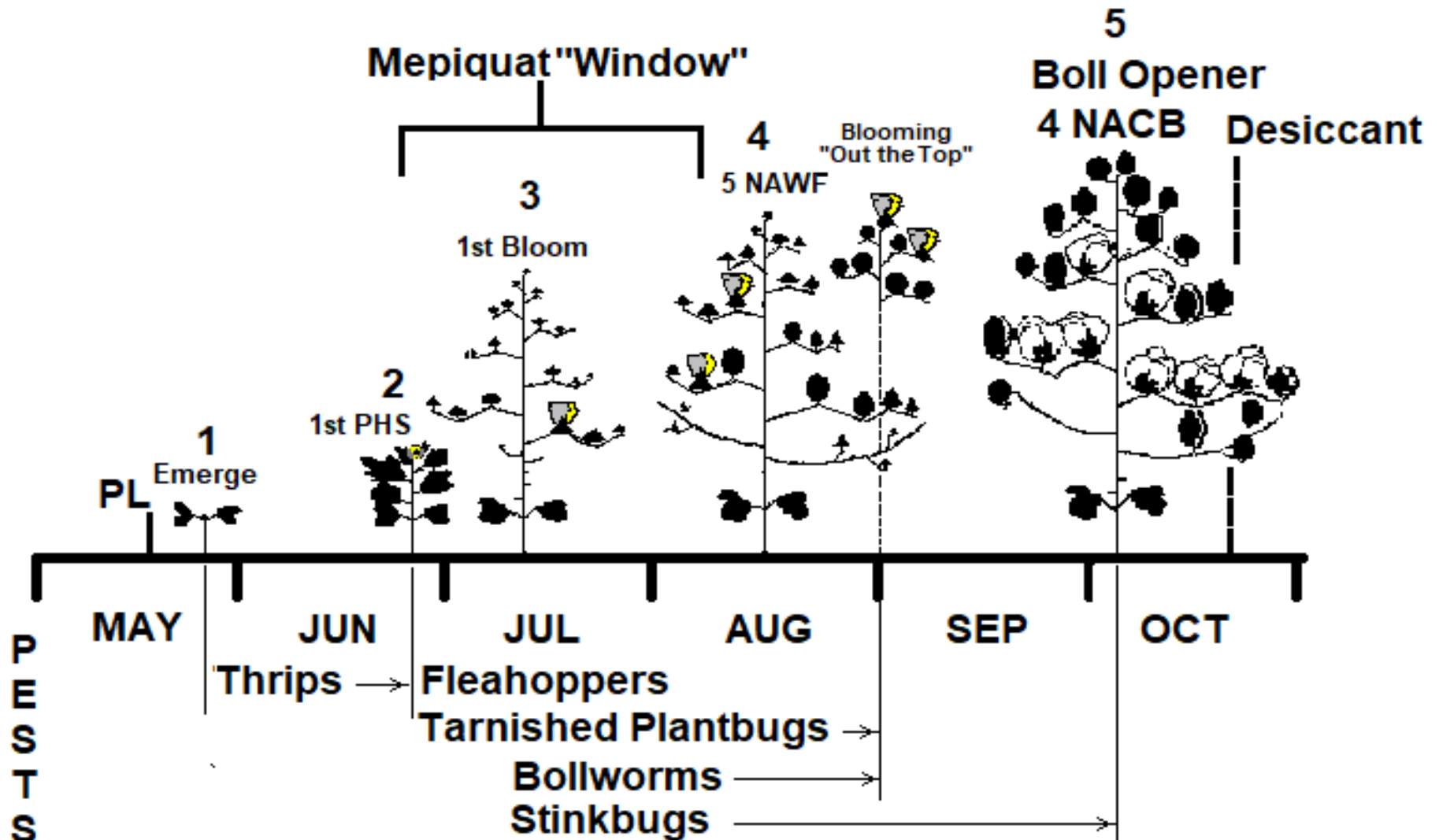
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Key Cotton pests in Kansas

- **Thrips**
- **Cotton Fleahoppers**
- **Tarnished Plantbugs**
- **Stinkbugs**
- **Bollworms (= Corn earworm, Sorghum headworm, Soybean podworm)**

Pests by Cotton Developmental Stage

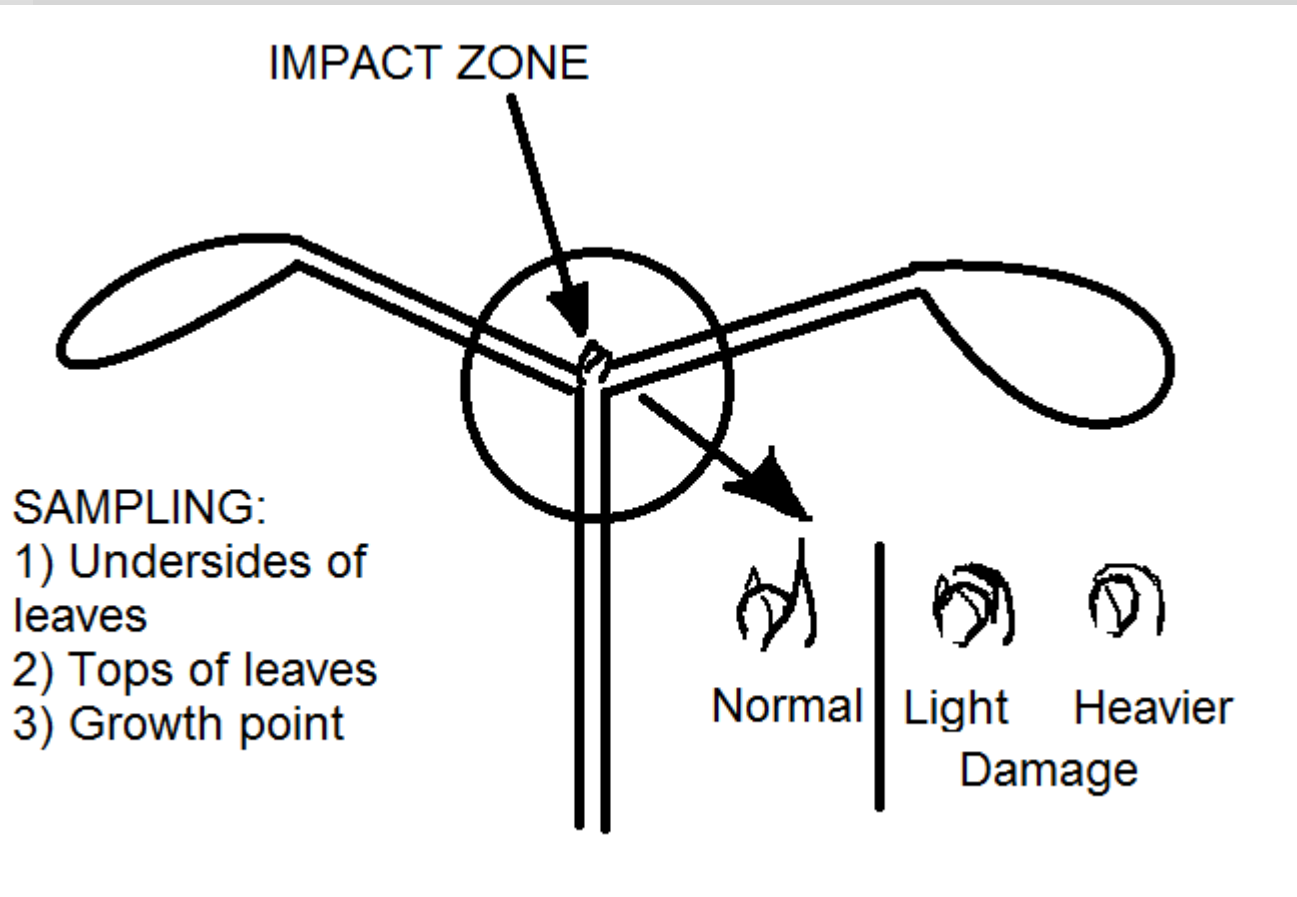


Adult Thrips on Young plant



UC Statewide IPM Project
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Scouting for Thrips



Signs of Thrips feeding



Thrips Damage



Growth Stage-1st Pinhead Square



Sweep-Net sampling

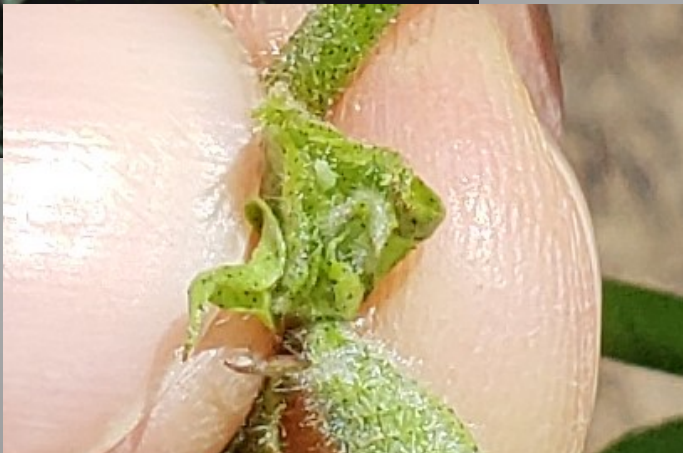


Plantbug Sampling and Action Thresholds

PROTECT THE EARLY SQUARES! THERE MAY NOT BE TIME TO REPLACE THEM (although the plants will try to)

- **Combine sweep net samples and plant square retention to evaluate fields for treatment of plant bugs**
- **Square retention should be 95+% at beginning, then slowly drop over next 3 weeks, or so**
- **If early square retention is around 80% or less, *FIND OUT WHY!* (early square loss nearly always due to insects)**
- ***Fight the urge to “just throw in some acephate” because you are going over the field anyway....excessive exposure to a compound is how resistance happens***

Fleahopper Adult and Nymph and Damage



Tarnished Plant Bugs



Tarnished plant bug adult and nymph



Sweepnet signs of Fleahopper/TPB feeding



Fruiting Position with Scar of Missing Square



"Flared Square"="Investigate"
could be signs of plant bugs, bollworms, or something else



Stinkbugs (var. spp.)



**Southern Green SB
Nymph**



©MARLIN
**Southern Green SB
Adult**



©MARLIN E. RICE

**Brown SB
Adult**

Sampling for Stinkbugs

- **Early-season**

- Sweep net: to find any is a “yellow flag”
 - *How is fruit retention?*

- **Mid-season:**

- Sweep net samples (become less dependable as plants grow and canopy over)
- “Pop” a number of large, but still soft green bolls to look for “feeding warts”. Action Threshold = 15+% sampled bolls with warts and/or lint staining

Adult Stinkbug and damaged small boll



Stinkbug Feeding "Warts"



Stinkbug damage (old)



Bollworm (=Corn earworm) Moth, Egg, and New Hatch Larva



Bollworm Larvae



Bollworm damage



Bollworm Sampling and Action Thresholds

- **B2/W2 varieties:**
 - 20% plants with eggs observed
- **B3/W3 varieties:**
 - Overspray is rare, but not “zero”
 - Treat at 6% squares with damage *or live larvae observed*

Bollworm Treatment recommendations

- Vancor @ 1.7 oz/ac
- Prevathon @ 14-20 oz/ac
- Besiege @ 6.5-12.5 oz/ac
- Note...A.I. in Prevathon, etc., is a gut poison—worms have to eat it. Coverage is very important. Works best on small worms.

Questions?

- You can contact me at:

Tel: (620) 222-4818, or

e-mail: southern.kansas.2@pcca.com

(I like to text ;-)