

Incidence and current situation of the boll weevil

Experience in Brazil

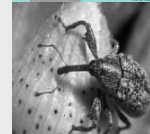
Raimundo Braga Sobrinho, Ph.D
Researcher - Embrapa

Embrapa



Relevant Facts

- ♠ **Cotton production before 1983**
- ♠ **Boll weevil landing (challenges)**
- ♠ **Triumphant dispersal** (HIGH MOBILITY)
- ♠ **Cotton growing production systems**
- ♠ **Opening of new cotton frontiers**
- ♠ **Brazil as a cotton exporter AGAIN**



FRIGHTENING INSECT

- ◆ Technical scientific knowledge
- ◆ Specific PEST for cotton plant
- ◆ Gorgeous environment
- ◆ High power destruction
- ◆ Immature forms protected



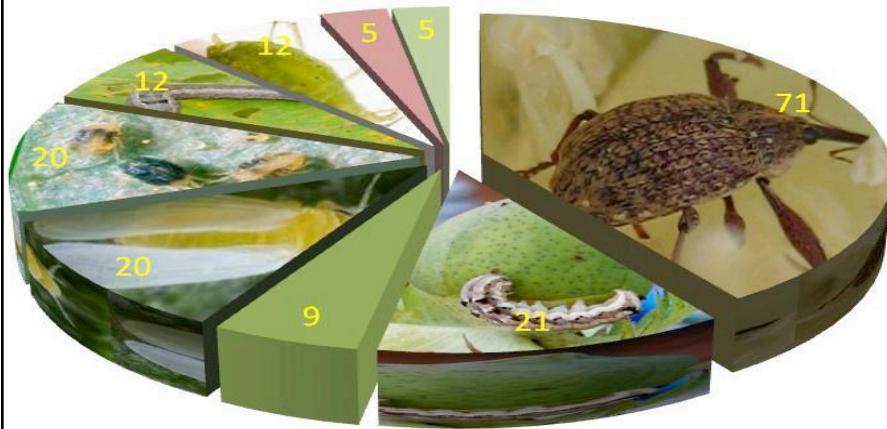
FRIGHTENING INSECT

- ◆ Several generation per year
- ◆ Mechanisms of survival
- ◆ Boll weevil as a political pest
- ◆ Silent pest
- ◆ Pest of unorganized growers



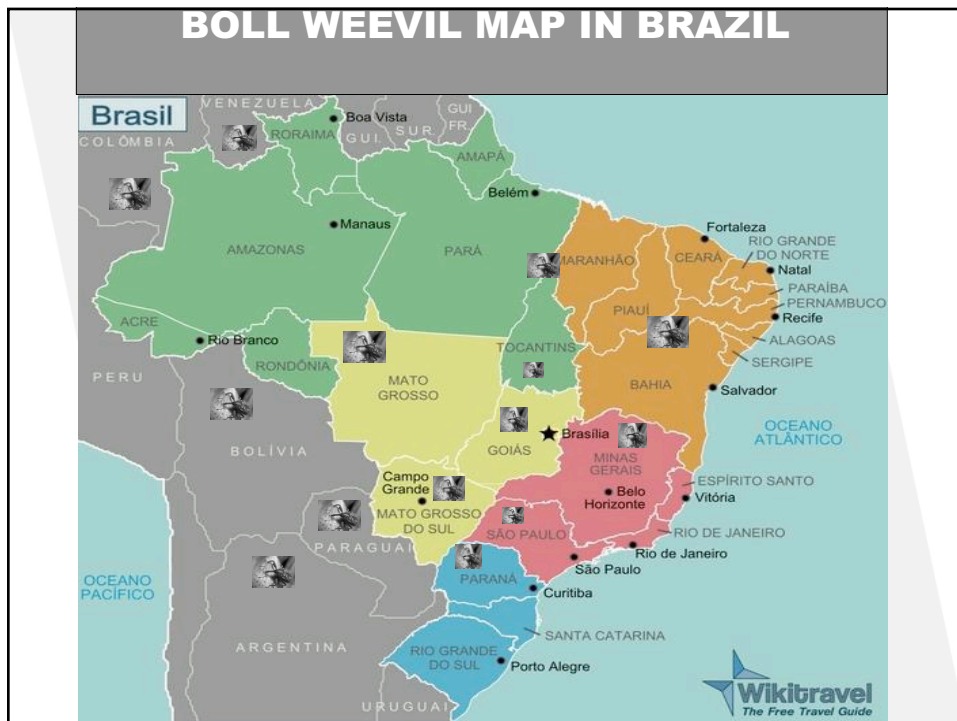
CONTROL EFFORT

Key Pests



Miranda, 2015)

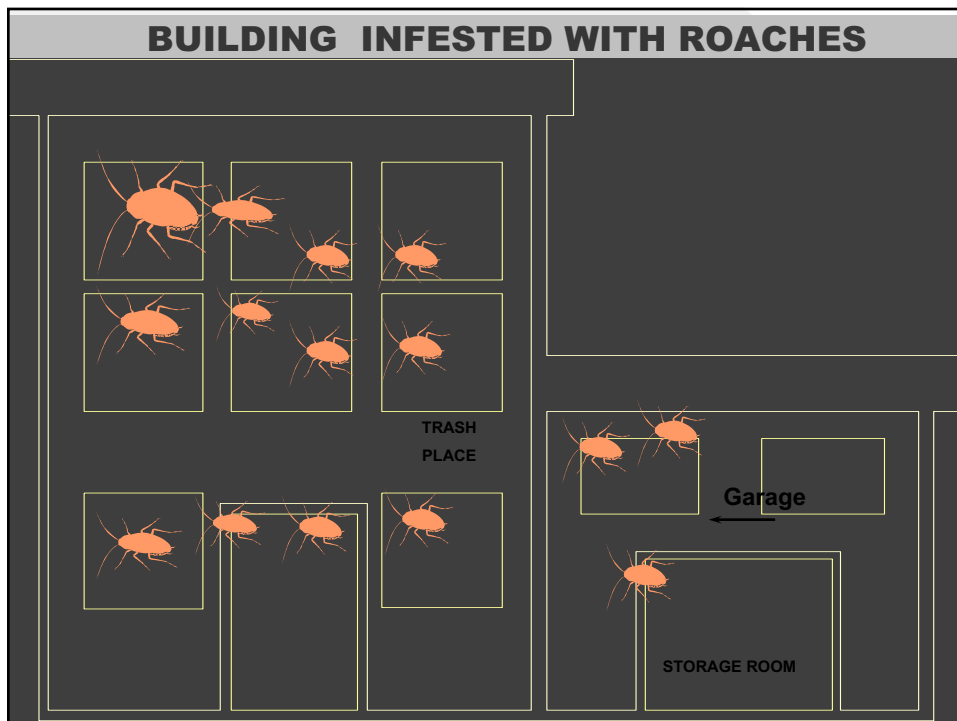
BOLL WEEVIL MAP IN BRAZIL

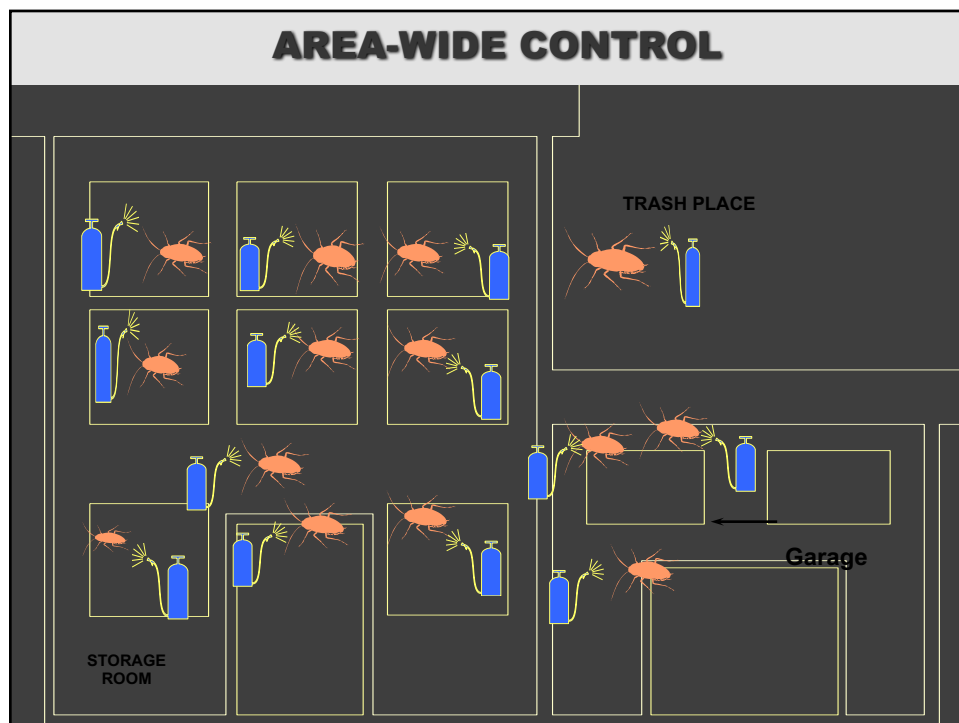
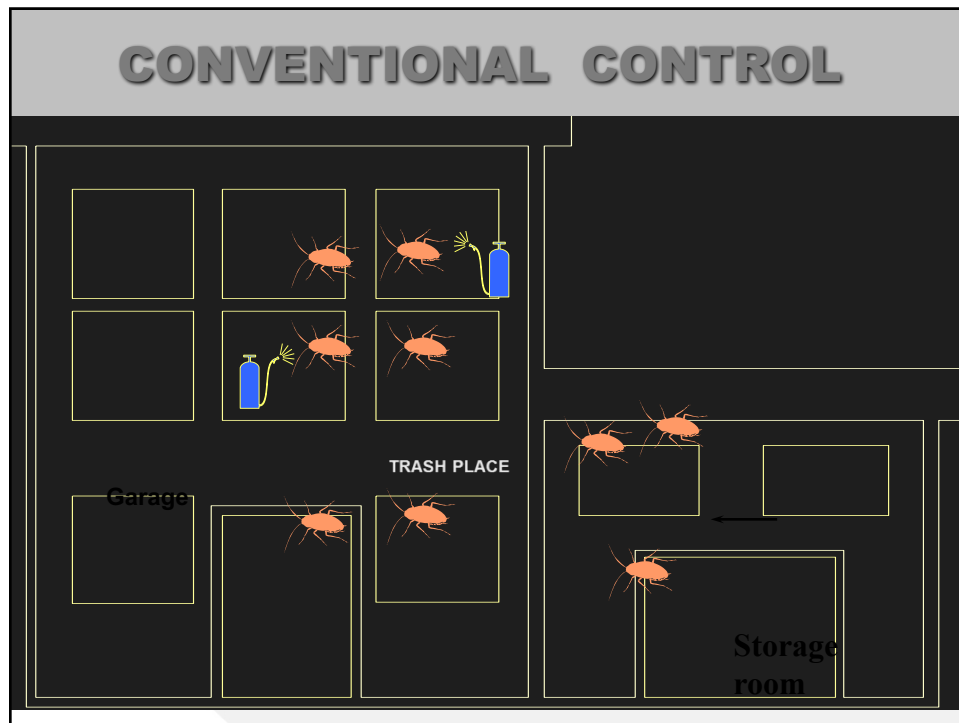


HOW TO CONTROL COTTON PESTS?

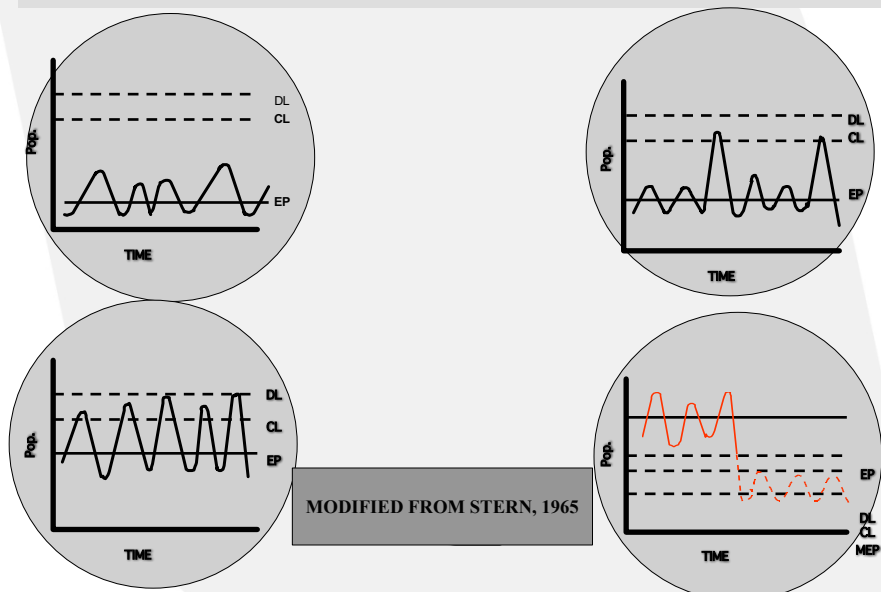


BUILDING INFESTED WITH ROACHES

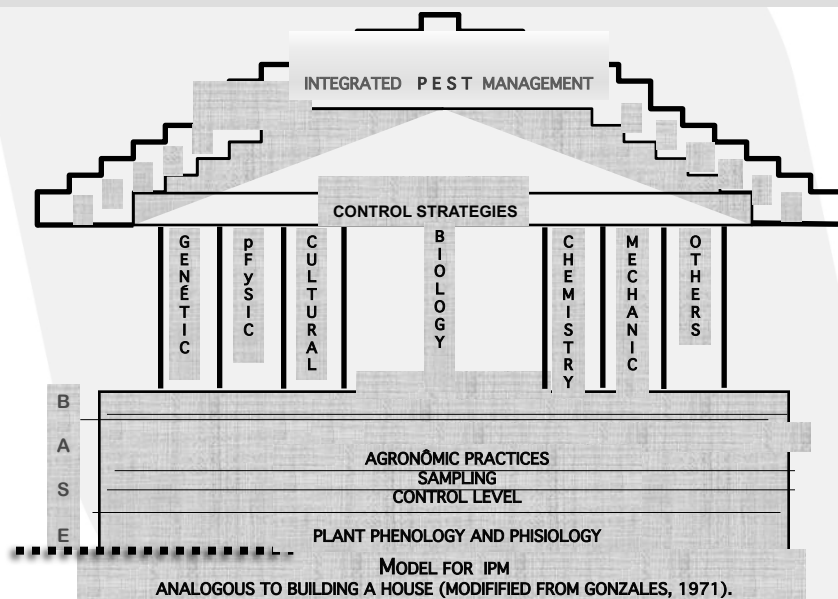


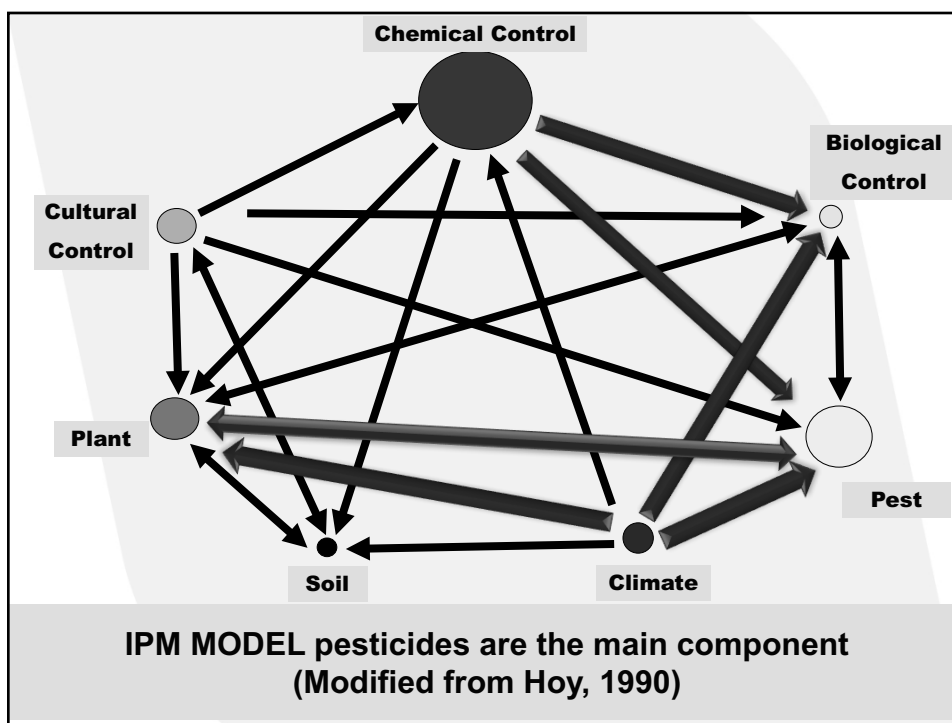
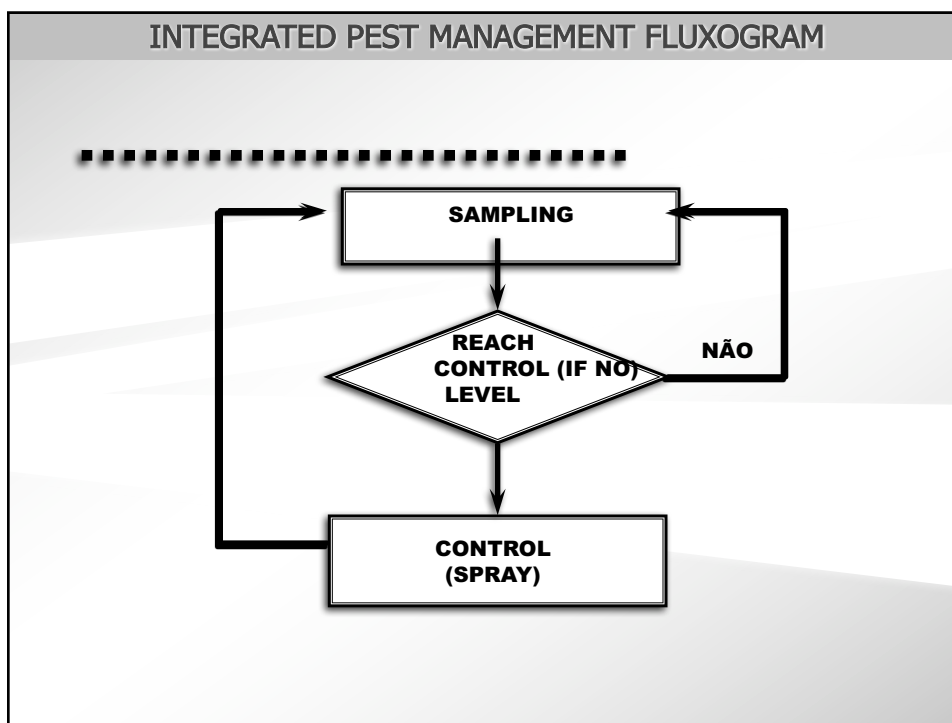


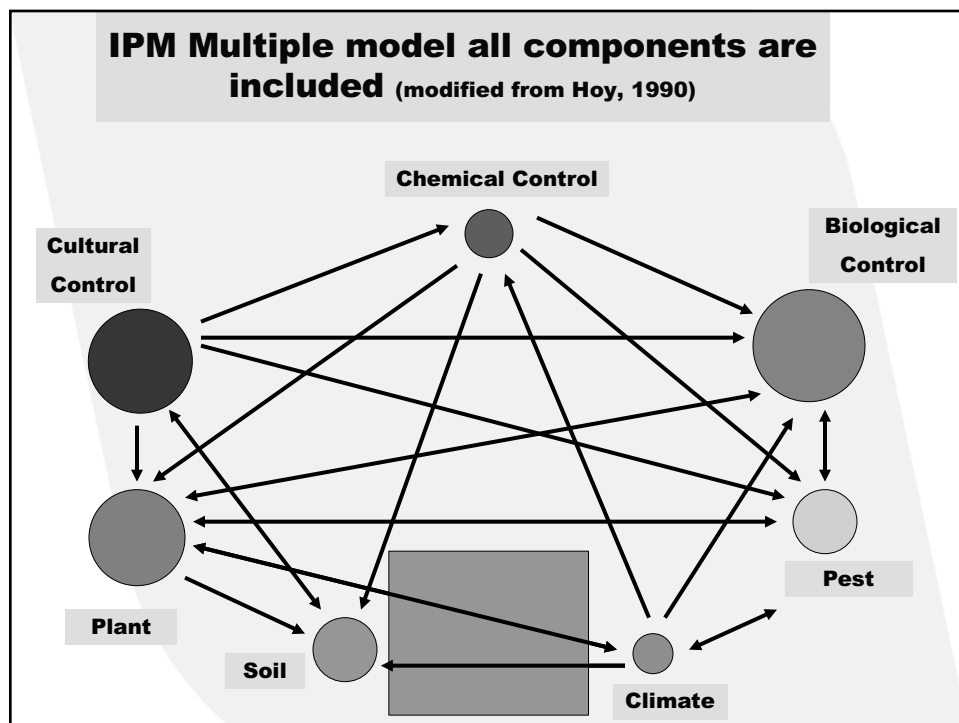
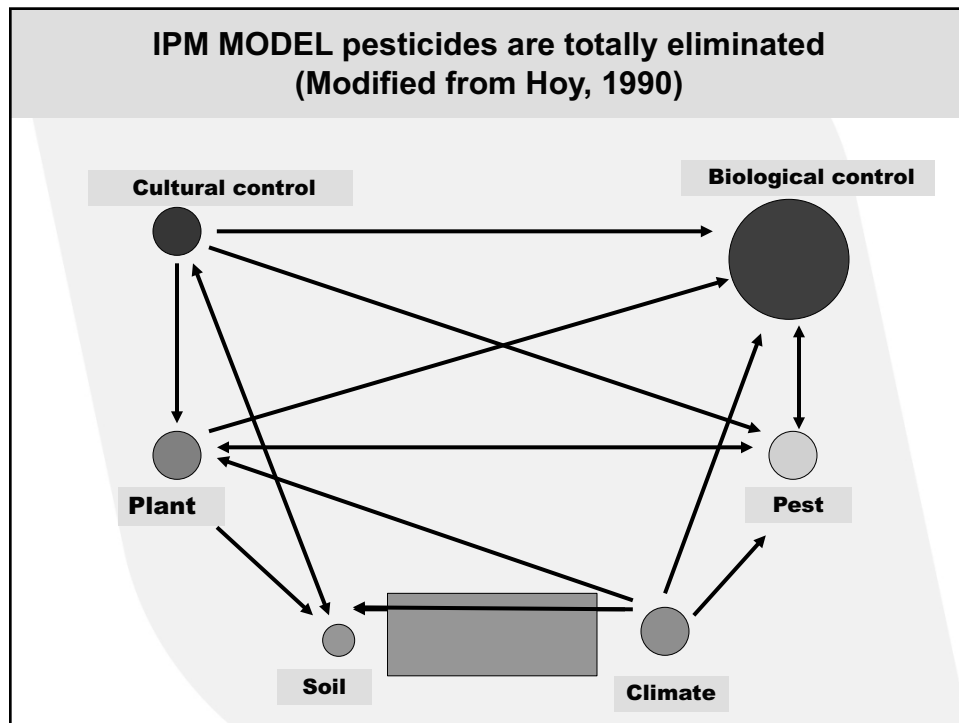
IPM General Concept



IPM Principles



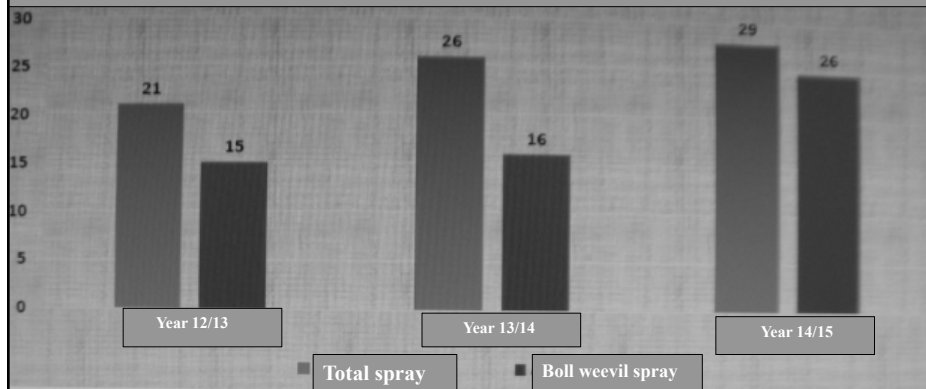




WHY SO MUCH EMPHASIS TO BOLL WEEVIL?



Historical of insecticide application against cotton pests





"The supreme art of war is to subdue

enemy without fighting."

Sun Tzu

The Art of war

"What the ancients called a clever fighter is one who not only wins, but excels in winning with ease."

Sun Tzu

Difficulties/Bottlenecks

- High temperature and rain
- Favorable conditions post cotton harvest
- Crop System (soybean/corn/cotton)
- Food sources all year long
- Introduction of transgenic cotton
- Cotton stubble (Tigueras)
- Bad cotton stock destruction (penalty)



Difficulties/Bottlenecks

- **Boll weevil bioecology**
- **No transgenic cotton against boll weevil**
- **No adoption of area-wide control concept**
- **Permanent monitory system (regional warning system)**
- **Lack of grower organization (penalty)**
- **Low adoption of IPM, prevention and management practices**



PECULIARITIES BOLL WEEVIL

GROWTH REGULATOR

CUT OUT (CONTROL)

LEGAL RESTRICTION FOR 2 - 4 D USE

CONTROL LEVEL

SHORT SEASON COTTON

TRAP CROP

CRYPTIC PERIOD OF DAMAGE

DO NOT PUT SO MUCH EMPHASIS ON GOVERNMENT

WORKING GROUP (CHARGE FOR CONSTANT REPORT)



PECULIARITIES BOLL WEEVIL

FREE COTTON PERIOD (OVER 60 DAYS)

MONITORING PROGRAM WITH PHEROMONE (BTW)

ELIMINATION COTTON PLANTS ON ROAD SHOULDERS

CROP ROTATION (COTTON/SOYBEAN/CORN)

SEQUENTIAL PIN HEAD SQUARE SPRAYING

UNIFORM PLANTING DATE

STALK DESTRUCTION ON TIME (REGIONAL AND COLLECTIVE)



PECULIARITIES BOLL WEEVIL

ESTABLISHMENT OF NEW RULES (FINING)

REFUGE AREA

EXPOSURE OF BOLL WEEVIL ADULT

BOLL WEEVIL BEHAVIOR ON COTTON PLANT

BOLL WEEVIL FOOD (SOURCE FOR SURVIVAL)

TRANSGENIC COTTON + BOLL WEEVIL ????

S P E E D



T I M I N G



Soybean on field without any preparation



COTTON REGROWTH ON SOYBEAN FIELD



FINAL REMARKS - SUGGESTIONS



- ♠ **Boll weevil is a manageable insect**
- ♠ **Needs collective and harmonic actions**
- ♠ **Adjustment of technical knowledge**
- ♠ **Area-wide management concept**
- ♠ **To strengthen the rules for pest prevention**
- ♠ **Discuss with producers terms of agreement**
- ♠ **Participation of ICAC/ALIDA**
- ♠ **Time flows, but the boll weevil flies EVER**



THANK YOU FOR YOUR ATTENTION



A contact information block with a white background and a gray header. The header contains the word "CONTACT" in a bold, black, sans-serif font. Below the header, the name "RAIMUNDO BRAGA SOBRINHO" is written in a bold, black, sans-serif font. Further down, the address "EMBRAPA AGROINDUSTRIA TROPICAL" is written in a bold, black, sans-serif font, followed by "RUA DRA. SARA MESQUITA, 2270" and "60511-110 FORTALEZA - CEARÁ" in a bold, black, sans-serif font. The phone number "FONE: 55 85 3391 7270 999249907" and the email address "E-MAIL: raimundo.braga@embrapa.br" are also written in a bold, black, sans-serif font. In the top right corner of the block, the "Embrapa" logo is visible.