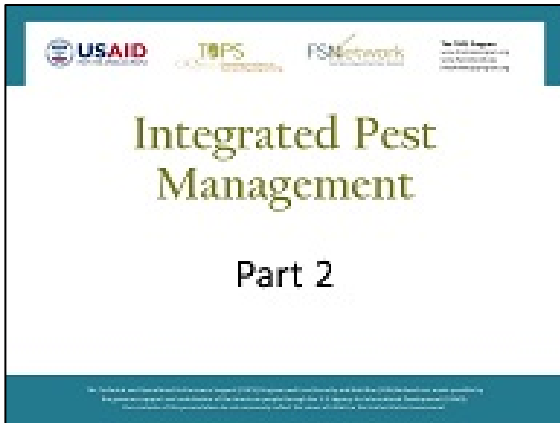
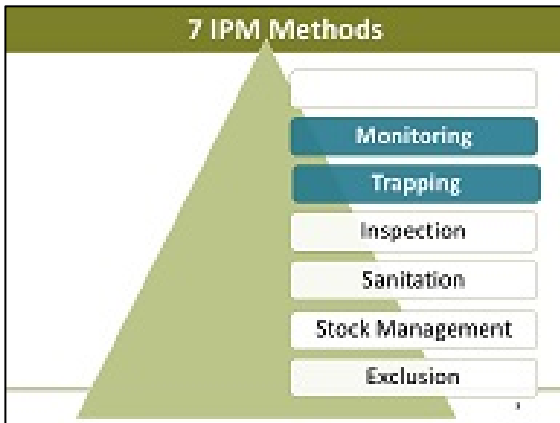
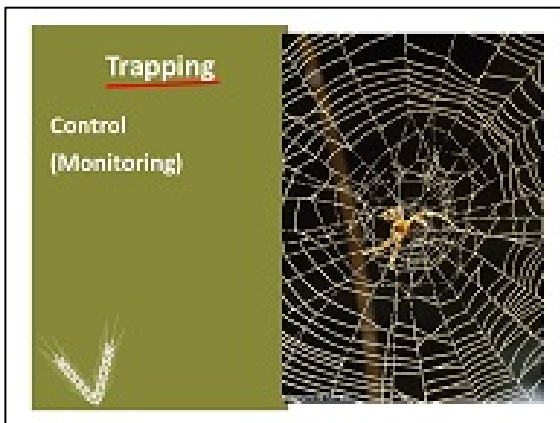


IPM Part 2 HANDOUT

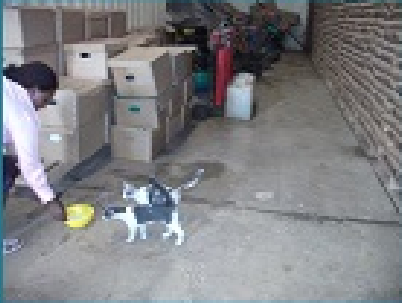






IPM Part 2 HANDOUT

Trapping for Control: Applies to rodents

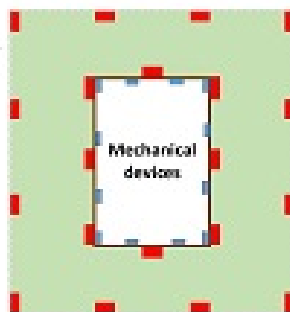


Trapping for Control: Mechanical Devices



Interior Trap Placement


- Place along "travel paths"
- After success, shift trap position 0.5m



IPM Part 2 HANDOUT

Monitoring

Sampling
Trapping Programs
Data Interpretation




Why monitor?

Avoid unnecessary treatments
Treat promptly, when necessary


Sampling : Definition

The process of taking a representative portion of stored grain to make inferences about the population or an attribute of the population (density or number of insects, % of commodity that is infested, etc.).


Sampling : 3 Types



Visual Inspection

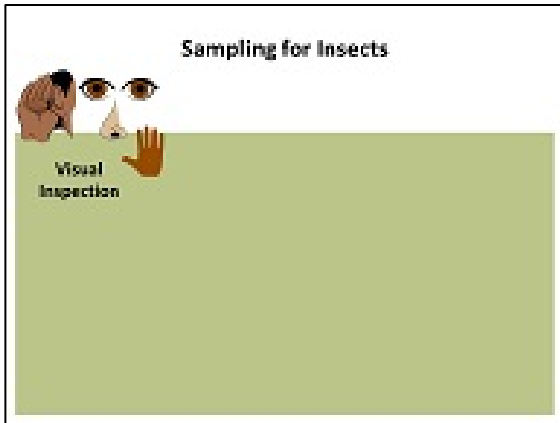


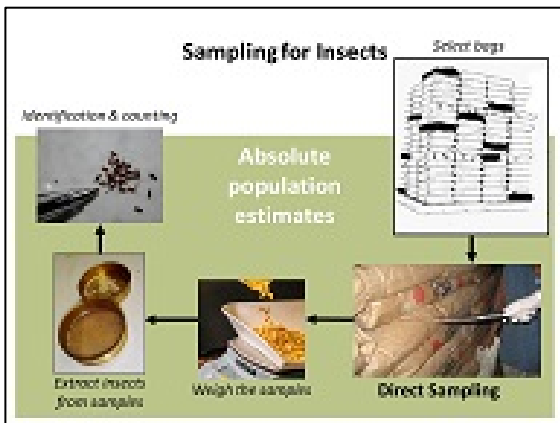
Indirect Sampling

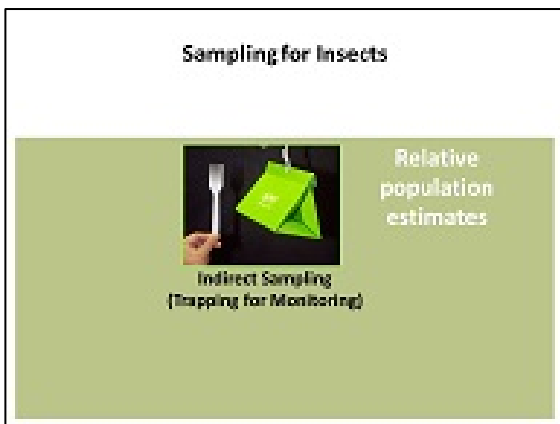


Direct Sampling

IPM Part 2 HANDOUT







IPM Part 2 HANDOUT

Aerial Traps



Trap flying insects in a sticky substance

Hang or suspend traps at eye level

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Surface Traps



Trap crawling insects


baited traps

pitfall traps

sticky traps

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Attractants



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IPM Part 2 HANDOUT




Developing & Managing a Trapping Program

1. Type of trap?
2. Pheromone lures and oil attractants?
3. How many traps? 10 - 20 (to start)
4. Placement? 4 TO 15 meter spacing
5. Frequency of checking? Weekly over 28° C

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Is every insect trapped important?




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IPM Part 2 HANDOUT


Data Interpretation



Visual Inspection




Sample directly



Spray every 15-30 days

Data Interpretation

Insects in > 50% of bags → FUMIGATE



Direct Sampling

Small Group Activity

As a group:

Read each question and determine if it is **TRUE** or **FALSE**.

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IPM Part 2 HANDOUT

Data Interpretation



TRUE or FALSE

For monitoring purposes, the number of insects found in each trap should be recorded.

Data Interpretation



TRUE or FALSE

Traps with no insects means that insects are not present in the warehouse.

Data Interpretation



TRUE or FALSE

The number of insects captured changes in direct response to changes in insect population density. In other words, one should be twice as concerned with a trap containing 10 moths as compared to a trap containing 5 moths.

IPM Part 2 HANDOUT

Data Interpretation



TRUE or FALSE

In addition to insects captured, monitors should record information on temperature, any recent sanitation activities, or movement of commodities.

The essence of monitoring is the analysis of data over time.

	DATE	DATE	DATE	DATE
TRAP#1	Y			
TRAP#2	N			
TRAP#3				
TRAP#4				

Y = insects in trap

N = trap empty

- Number traps
- Check all traps on same day
- Establish "threshold" to trigger action

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Summary

- Map trap locations
- Keep food fresh
- Check traps every:
 - Weekly if above 26° C
 - Bi-weekly if 20° - 26° C
- Set "Threshold" (% of empty traps)
- Act when threshold exceeded
- Develop protocols

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