Monitoring | Tools of the Trade

Pheromone Traps

- Nantucket pine tip moth
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- Clearwing peachtree borer
- Spruce budworm
- Western bean cutworm
- Beet armyworm
- Fall armyworm
- SW Pine Tip Moth
- Squash vine borer
- Gypsy moth
- Sweetpotato weevil
- European Pepper Moth

USDA Forest Service, bugwood.org

Texas A&M AgriLife Extension

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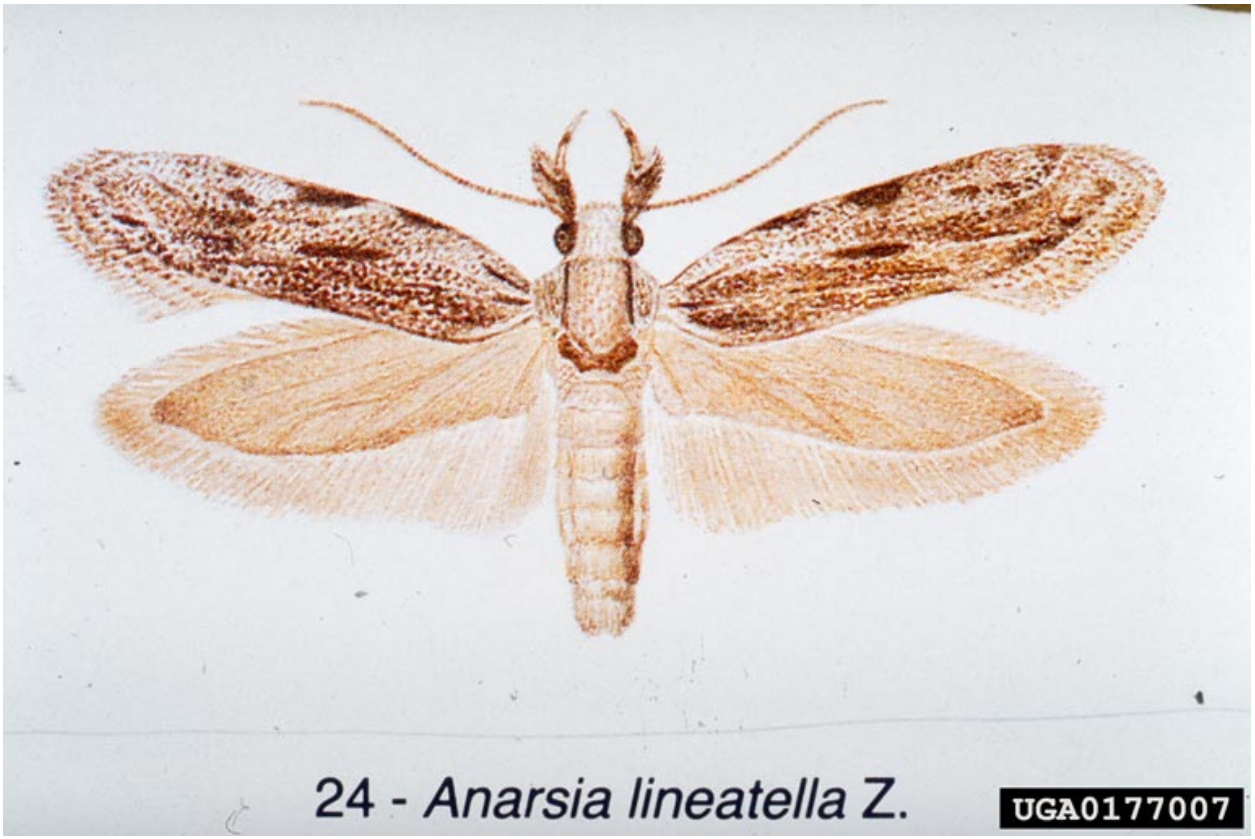

INRA-Versailles, Institut National de la Recherche Agronomique, bugwood.org

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Bernard J. Raimo, USDA Forest Service, bugwood.org

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John Capinera, University of Florida, bugwood.org

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Jim Jasinksi, Ohio State University Extension, bugwood.org

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Jon Yuschock, bugwood.org

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USDA APHIS PPQ, bugwood.org

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USDA AHIS PPQ, bugwood.org

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The Threat
Asian Citrus Psyllid
Asian Gypsy Moth
Asian Longhorned Beetle
Citrus Greening
Coconut Rhinoceros Beetle
Emerald Ash Borer Beetle
European Cherry Fruit Fly
European Grapevine Moth
European Gypsy Moth
False Codling Moth
Giant African Snail
Imported Fire Ant
Khapra Beetle
Light Brown Apple Moth
Mediterranean Fruit Fly
Mexican Fruit Fly
Old World Bollworm
Oriental Fruit Fly
Spotted Lanternfly
Sudden Oak Death

Asian Gypsy Moth

Print

The Asian gypsy moth is a serious threat to our country's landscapes and natural resources.

Photo Credit: John H. Ghent and Manfred Mielke, USDA Forest Service, Bugwood.org

Asian gypsy moths (AGM, including Lymantria dispar asiatica, Lymantria dispar japonica, Lymantria albescens, Lymantria umbrosa, and Lymantria post¬alba) are exotic pests not known to occur in the United States. If they would become established here, they could cause serious, widespread damage to our country's landscape and natural resources. AGMs are similar to the European gypsy moth found in the northeastern United States, but have a much broader host range. Each female moth can lay hundreds of eggs that, in turn, yield hundreds of voracious caterpillars that may feed on more than 500 tree and shrub species. Large AGM infestations can completely defoliate trees. This defoliation can severely weaken trees and shrubs, making them more susceptible to disease. Repeated defoliation can lead to the death of large sections of forests, orchards and landscaping. AGM females are also active fliers. Their ability to fly long distances makes it probable that AGMs could quickly spread throughout the United States.

Where's the Threat?

- Recently detected in Washington State, Oregon, Georgia, Oklahoma and South Carolina.
- Ongoing surveys in those states will help determine whether infestations are present and what follow-up actions may be needed to address them.

Monitoring | Tools of the Trade

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Florida Division of Plant Industry, Florida Department of Agriculture and Consumer Services, bugwood.org

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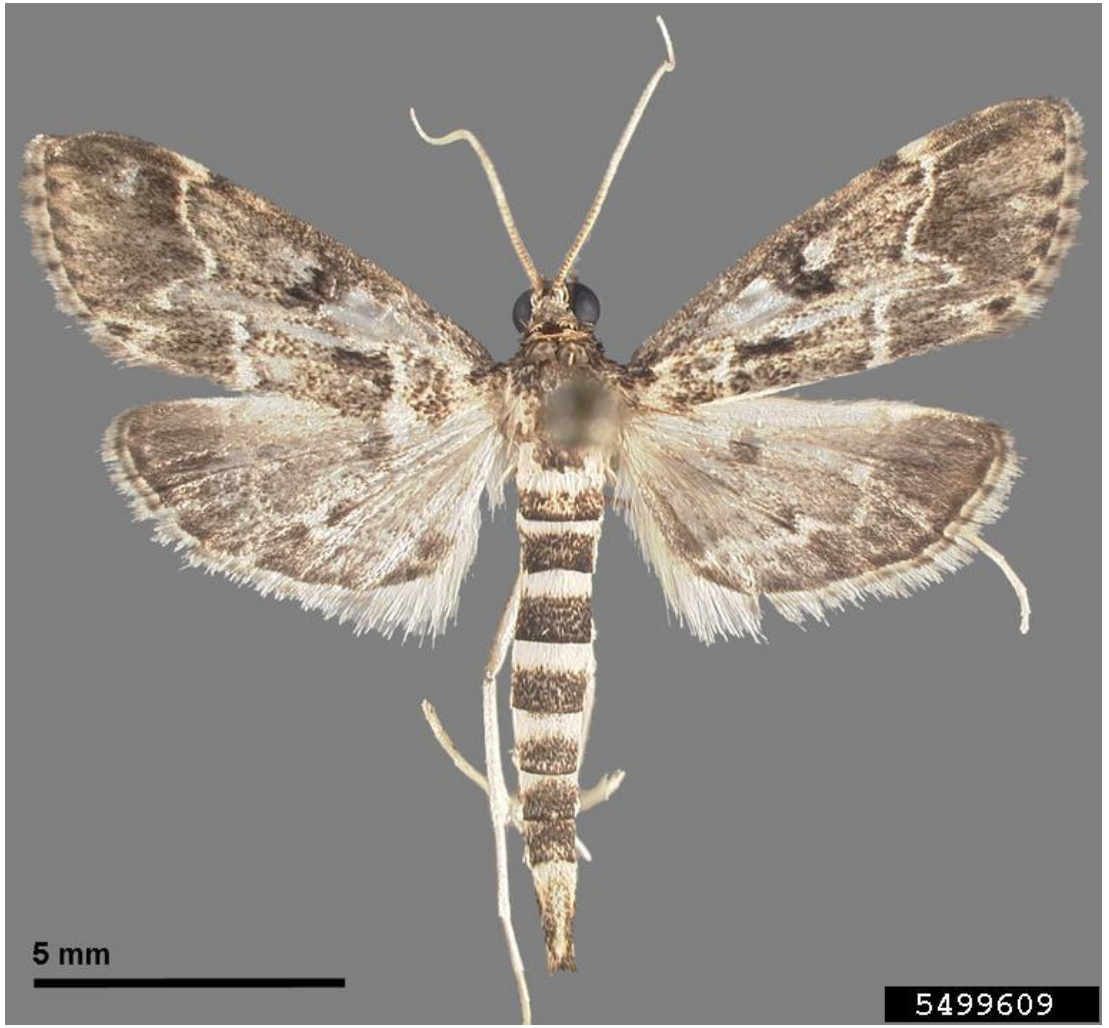
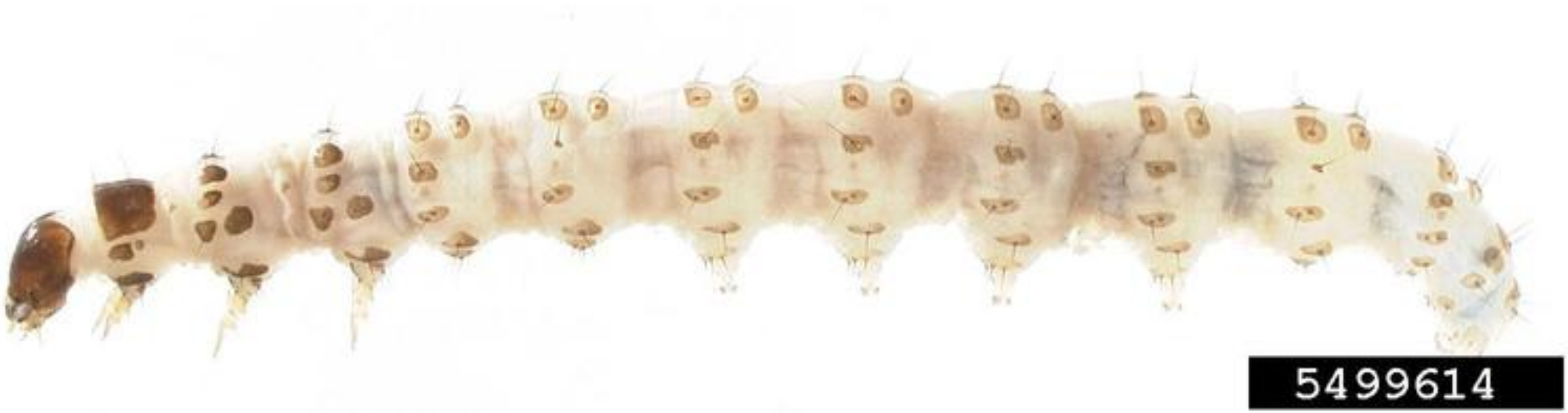


Kurt Ahlmark, Microlepidoptera on Solanaceae, USDA APHID PPQ, bugwood.org

Texas A&M AgriLife Extension

Monitoring | Tools of the Trade

Pheromone Traps



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Kurt Ahlmark, Microlepidoptera on Solanaceae, USDA APHID PPQ, bugwood.org

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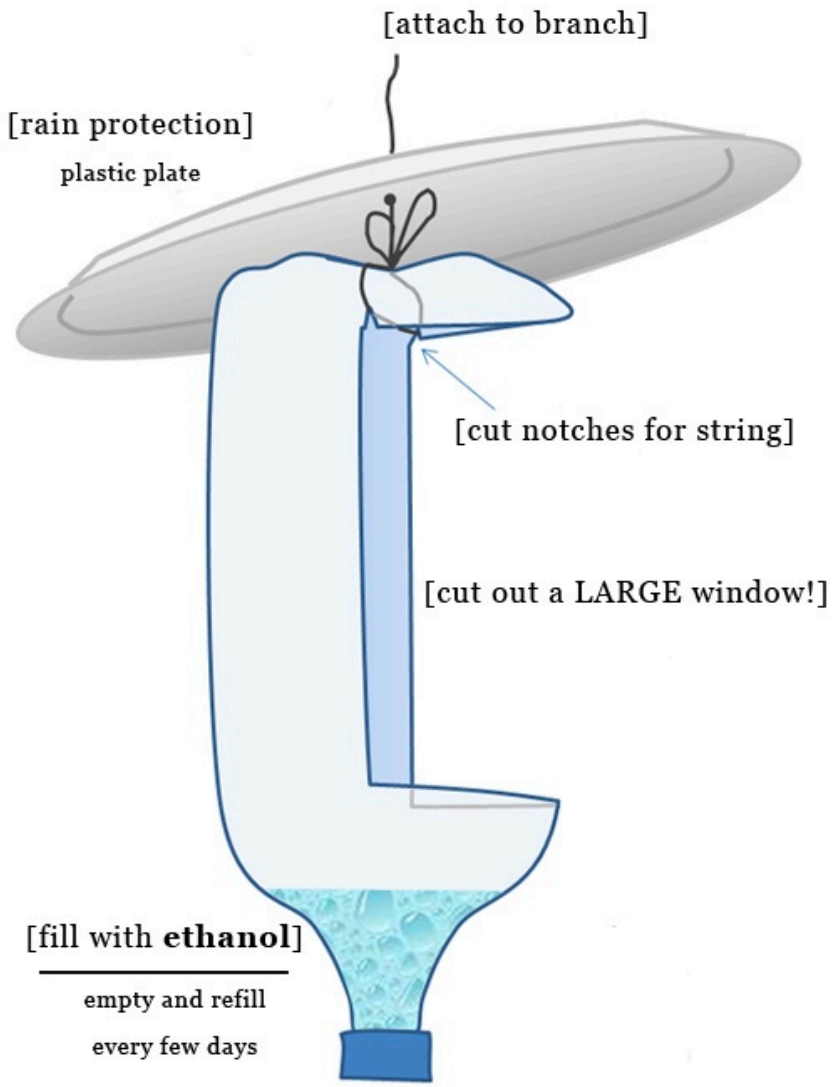
Monitoring | Tools of the Trade

General Trap(s)



Texas A&M AgriLife Extension

Monitoring | Tools of the Trade

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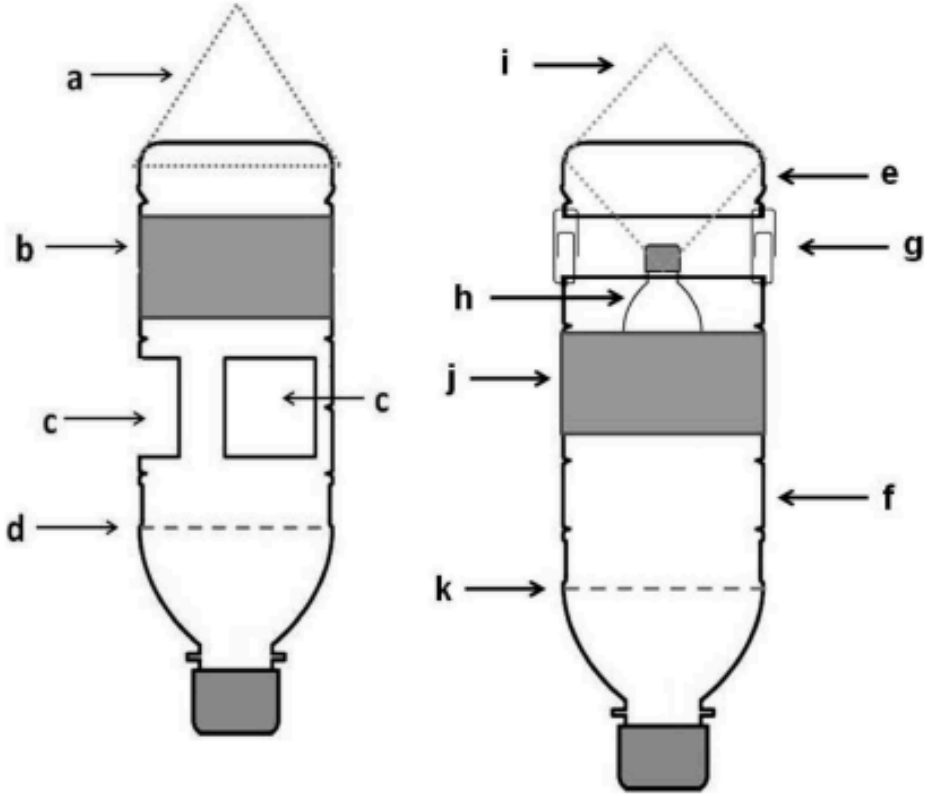


Fig. 1. The traps used in our study: (Left) standard bottle trap; (a) harness, (b) yellow band, (c) three square openings (the third opening is placed on the opposite side of the bottle), (d) maximum level of the lure; (Right) improved bottle trap; the bottom of the bottle (e) is cut off from the upper portion (f) and these two parts are reattached with paper clips (g). The isopropanol dispenser (h) is hung by a rope or wire harness (i), (j) color band, (k) maximum level of the killing agent (aqueous 0.02% Triton X).

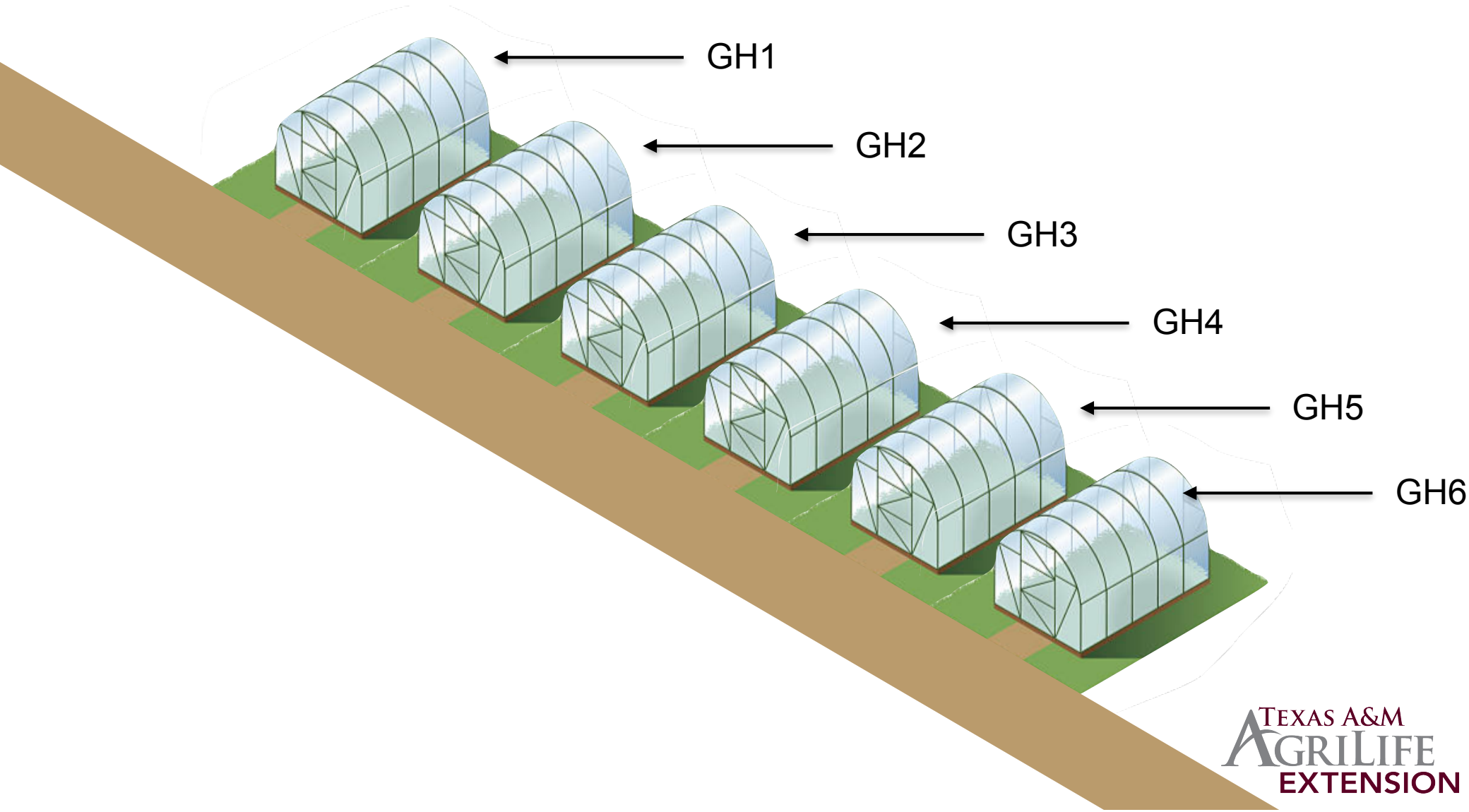
Purchase lure OR use 50% isopropanol (rubbing alcohol)

Cowell et al. (2012)

TEXAS A&M AGRILIFE EXTENSION

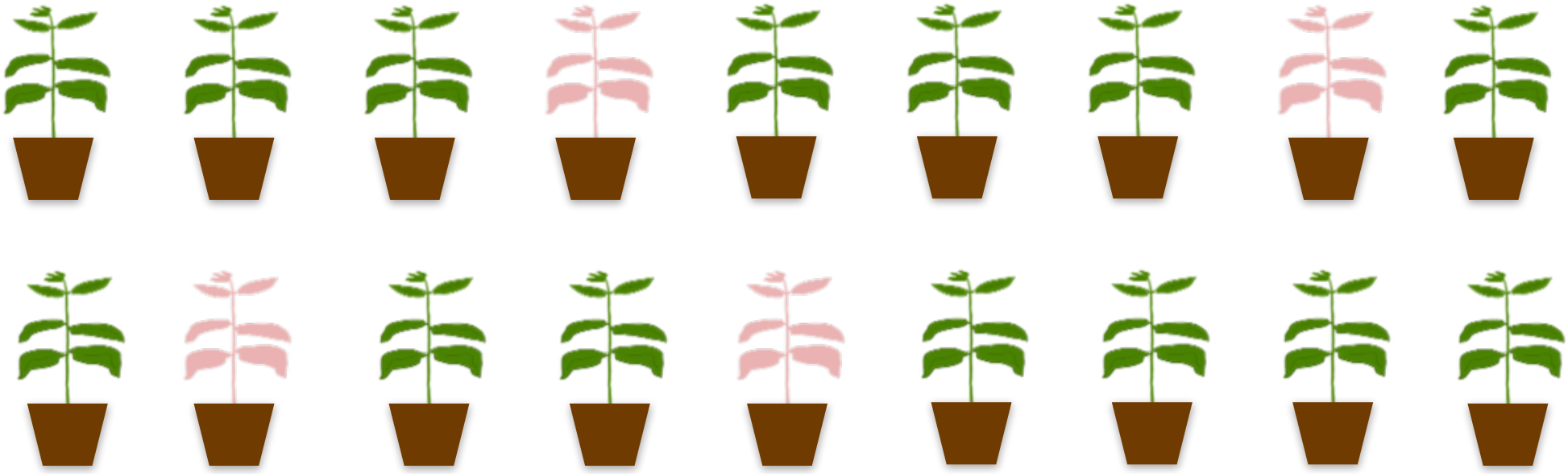
Monitoring | Sampling

Pest Management Units



Monitoring | Sampling

Presence/Absence Monitoring



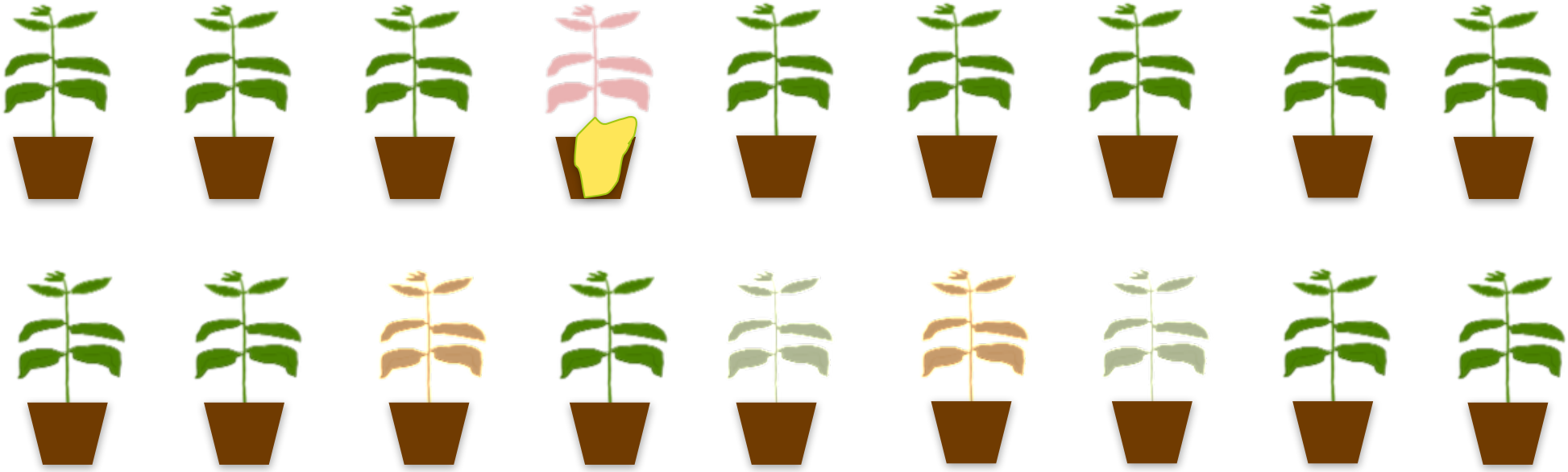
1/6 = 17%

4/20 = 20%

Texas A&M AgriLife Extension

Monitoring | Sampling

Rating & Indicator Plants

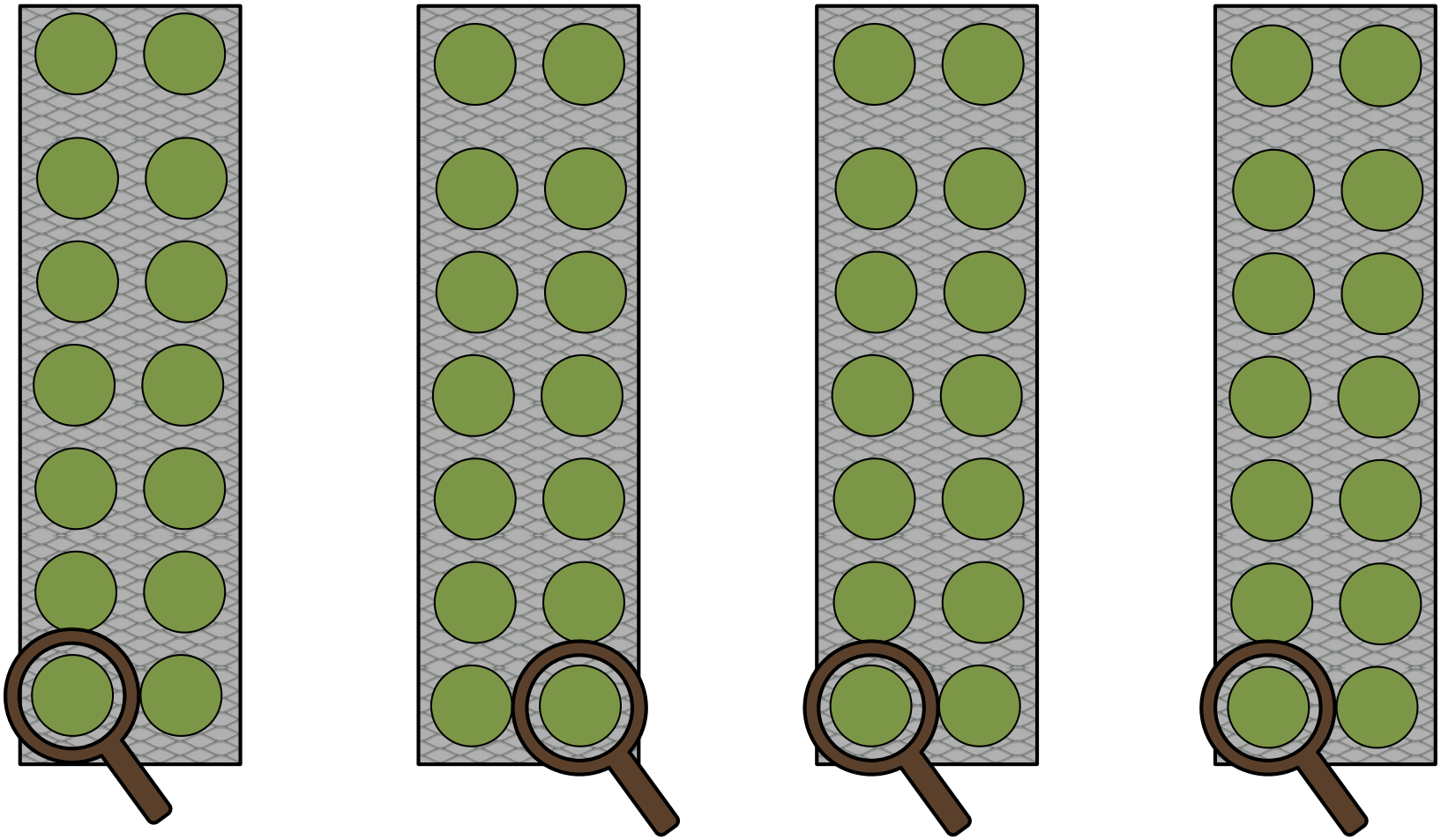


Higher infestation

Texas A&M AgriLife Extension

Monitoring | Sampling

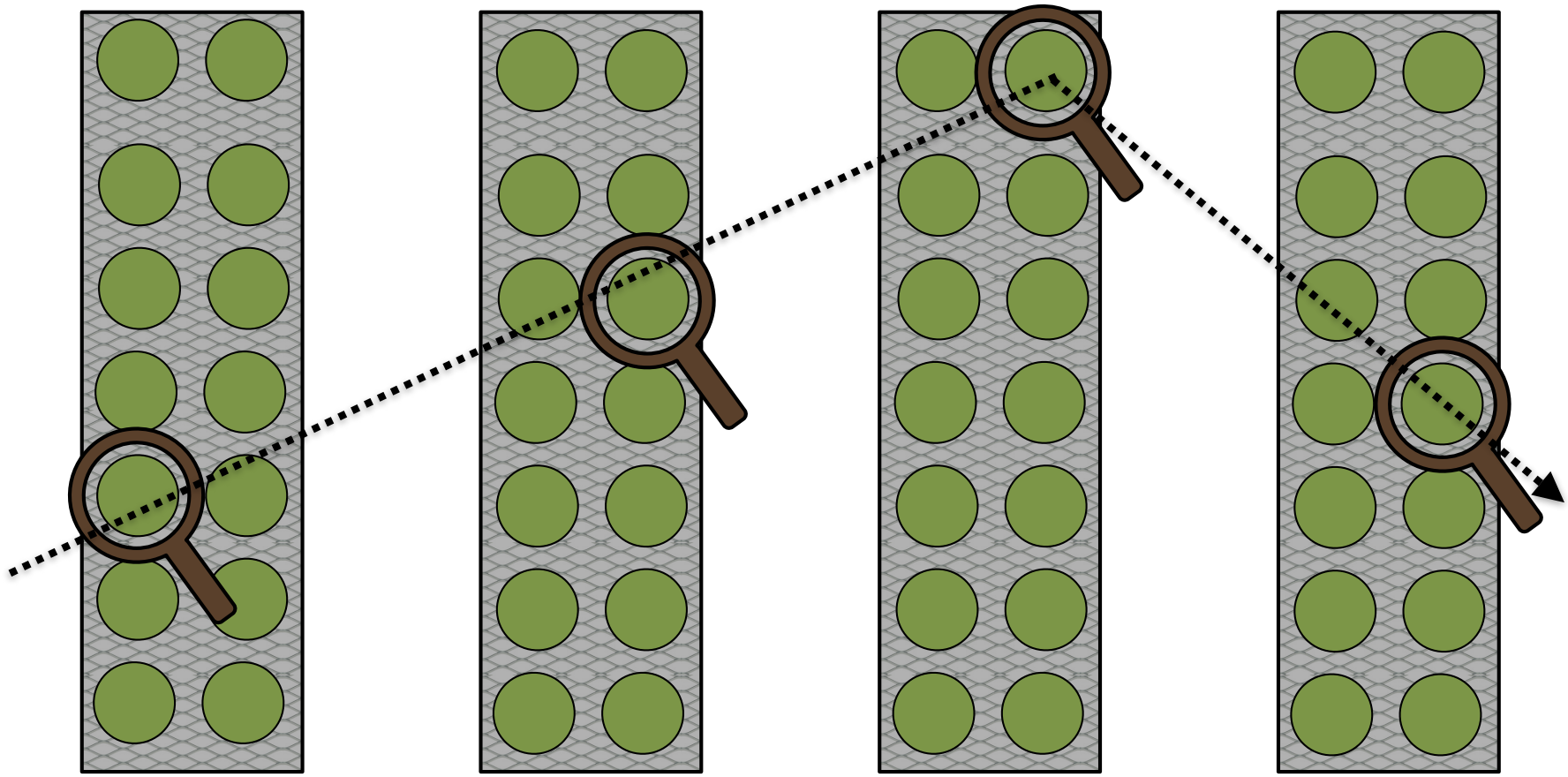
Representative sampling | Poor sample



Texas A&M AgriLife Extension

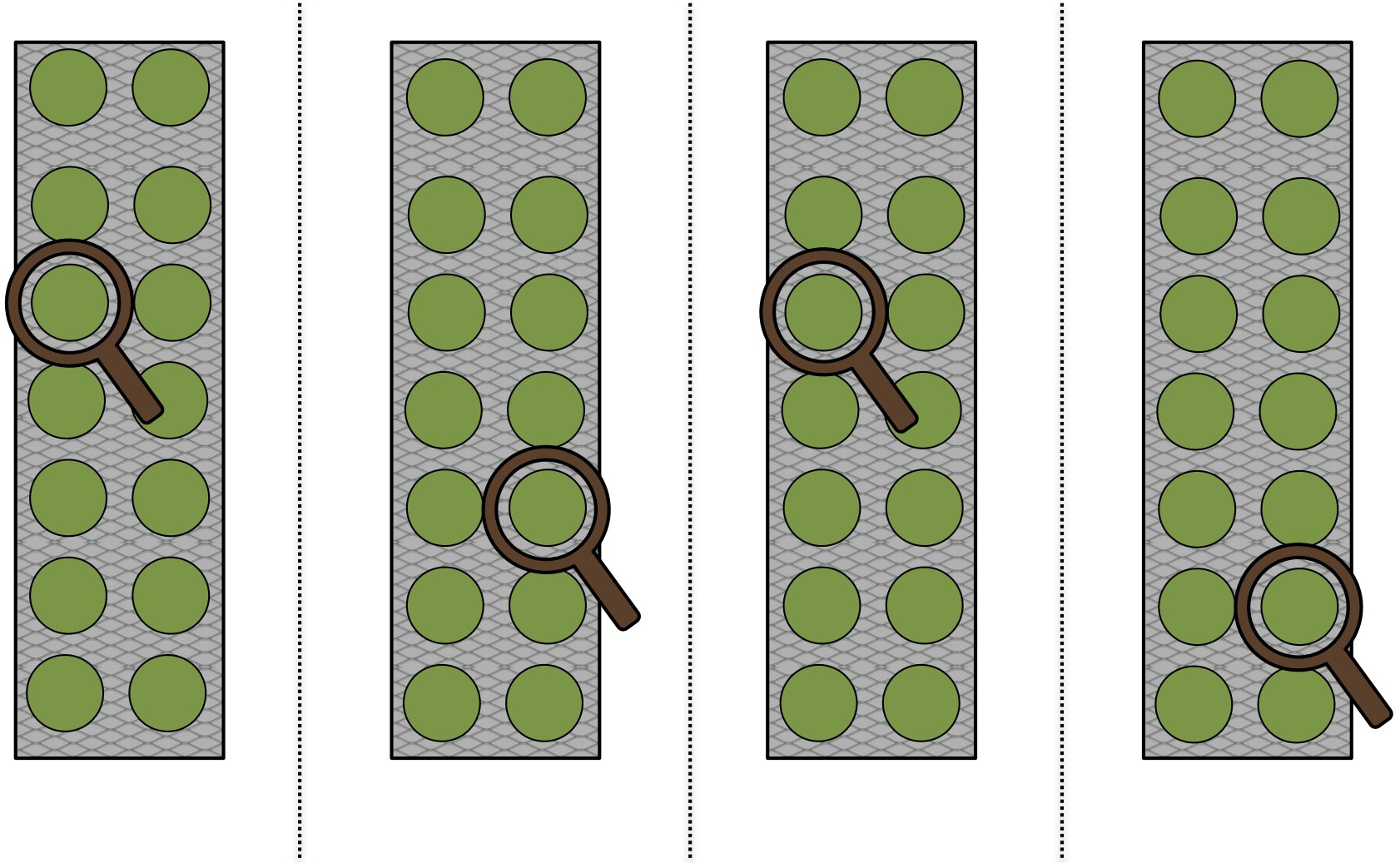
Monitoring | Sampling

Representative sampling | Transect



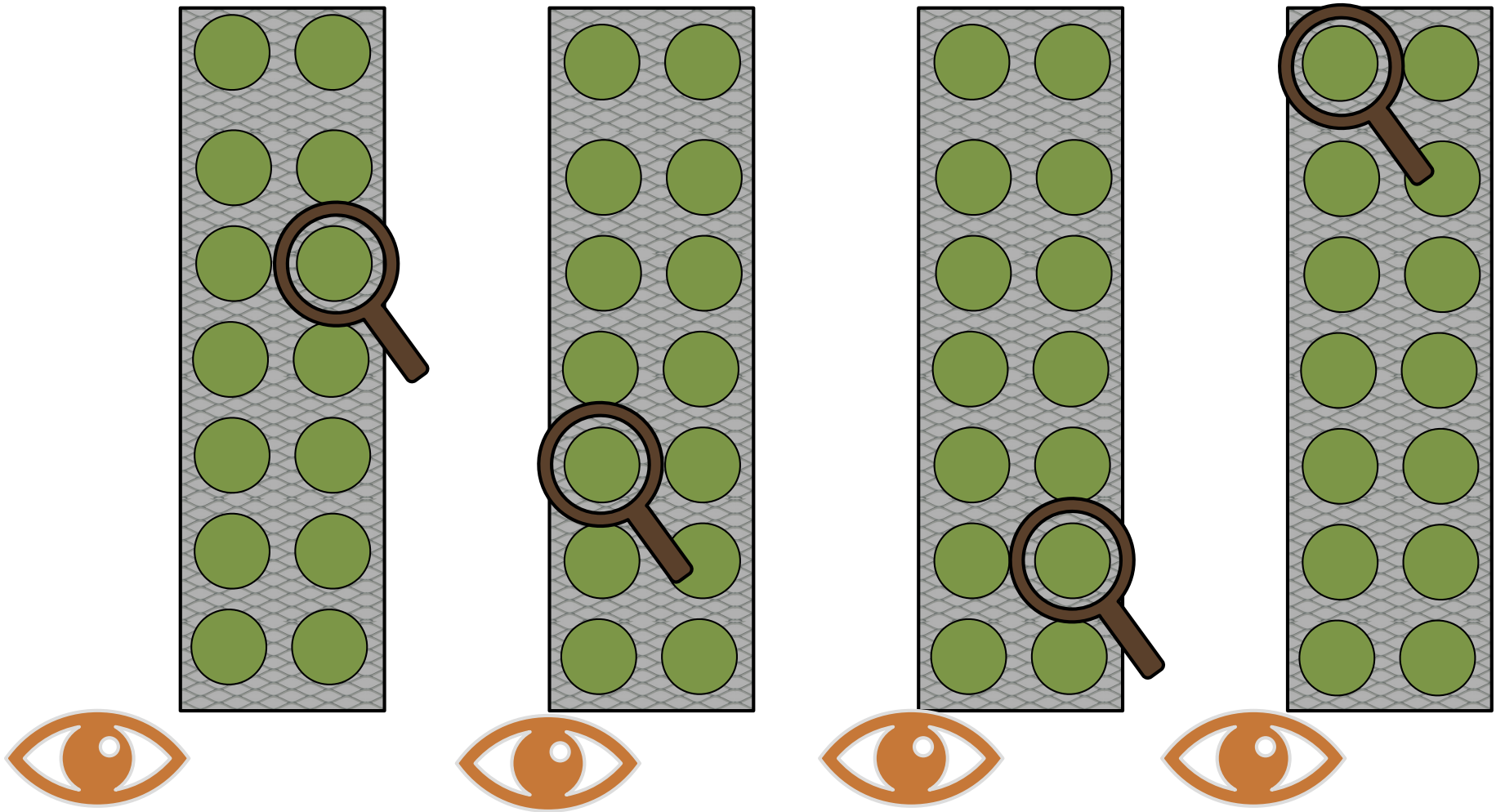
Monitoring | Sampling

Representative sampling | Quadrant



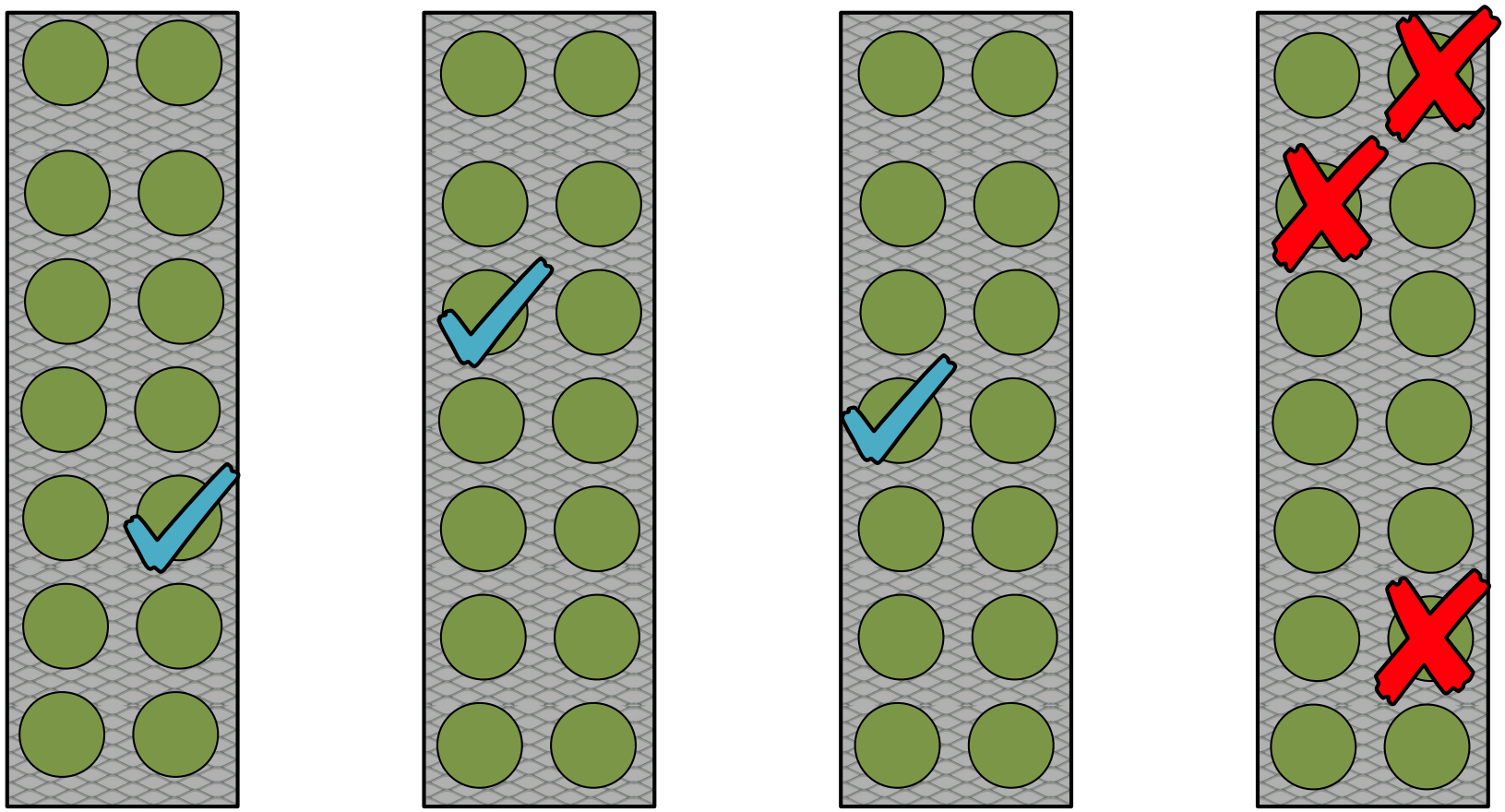
Monitoring | Sampling

Representative sampling | Targeted Pseudorandom



Monitoring | Sampling

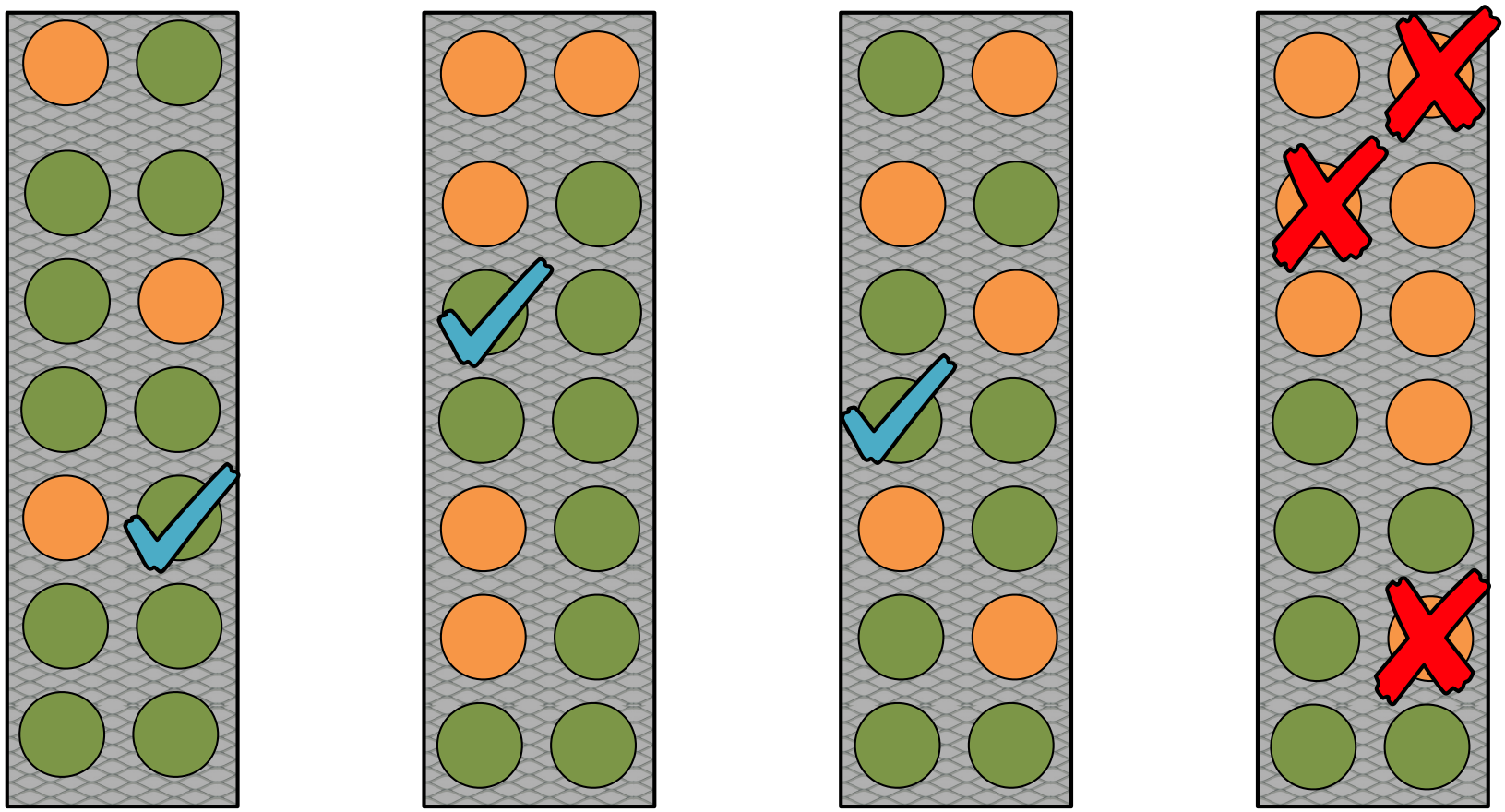
Standardized Sampling



Texas A&M AgriLife Extension

Monitoring | Sampling

Standardized Sampling



Texas A&M AgriLife Extension

Monitoring | Documenting

date	wk#	gh	plant	cultivar	transplant d	whitefly nymphs	whitefly adults	mealybug immatures	mealybug adults	thrips	thrips damage (0 - 10)	fungus gnats	Notes
8/2/19	0	8	poinsettia	christmas be	25-Jul-19	0	0	0	0	0	0	4	
8/2/19	0	8	poinsettia	christmas be	25-Jul-19	3	0	0	0	3	1	0	
8/2/19	0	8	poinsettia	christmas be	25-Jul-19	0	0	0	0	0	0	0	
8/2/19	0	8	poinsettia	christmas be	25-Jul-19	5	0	0	0	0	0	1	
8/2/19	0	8	poinsettia	christmas be	25-Jul-19	6	1	5	1	0	0	0	
8/2/19	0	8	poinset									0	
8/2/19	0	8	poinset									3	
8/2/19	0	8	poinset									0	
8/2/19	0	8	poinset									0	
8/2/19	0	8	poinset									2	
8/2/19	0	8	poinset									0	
8/2/19	0	8	poinset									5	
8/2/19	0	8	poinset									3	
8/2/19	0	8	poinset									0	
8/2/19	0	8	poinset									0	
8/2/19	0	8	poinset									2	
8/2/19	0	8	poinset									0	
8/2/19	0	8	poinset									0	
8/2/19	0	8	poinset									5	
8/2/19	0	8	poinsettia	Polar	25-Jul-19	1	0	0	0	0	0	3	
8/2/19	0	8	poinsettia	Polar	25-Jul-19	0	0	0	0	0	0	2	
8/2/19	0	8	poinsettia	Polar	25-Jul-19	18	1	0	0	0	0	0	
8/2/19	0	8	poinsettia	Polar	25-Jul-19	0	0	0	0	1	0	0	
8/2/19	0	8	poinsettia	Polar								1	
8/2/19	0	8	poinsettia	Premium M								0	
8/2/19	0	8	poinsettia	Premium M								0	
8/2/19	0	8	poinsettia	Premium Ma								0	
8/2/19	0	8	poinsettia	Premium Ma	22-Jul-19	0	0	0	0	0	0	2	
8/2/19	0	8	poinsettia	Premium Ma	22-Jul-19	1	0	0	0	0	0	2	
8/2/19	0	8	poinsettia	Premium Ma	22-Jul-19	0	0	0	0	0	0	1	
8/2/19	0	8	poinsettia	Premium Ma	22-Jul-19	0	0	0	0	0	0	0	

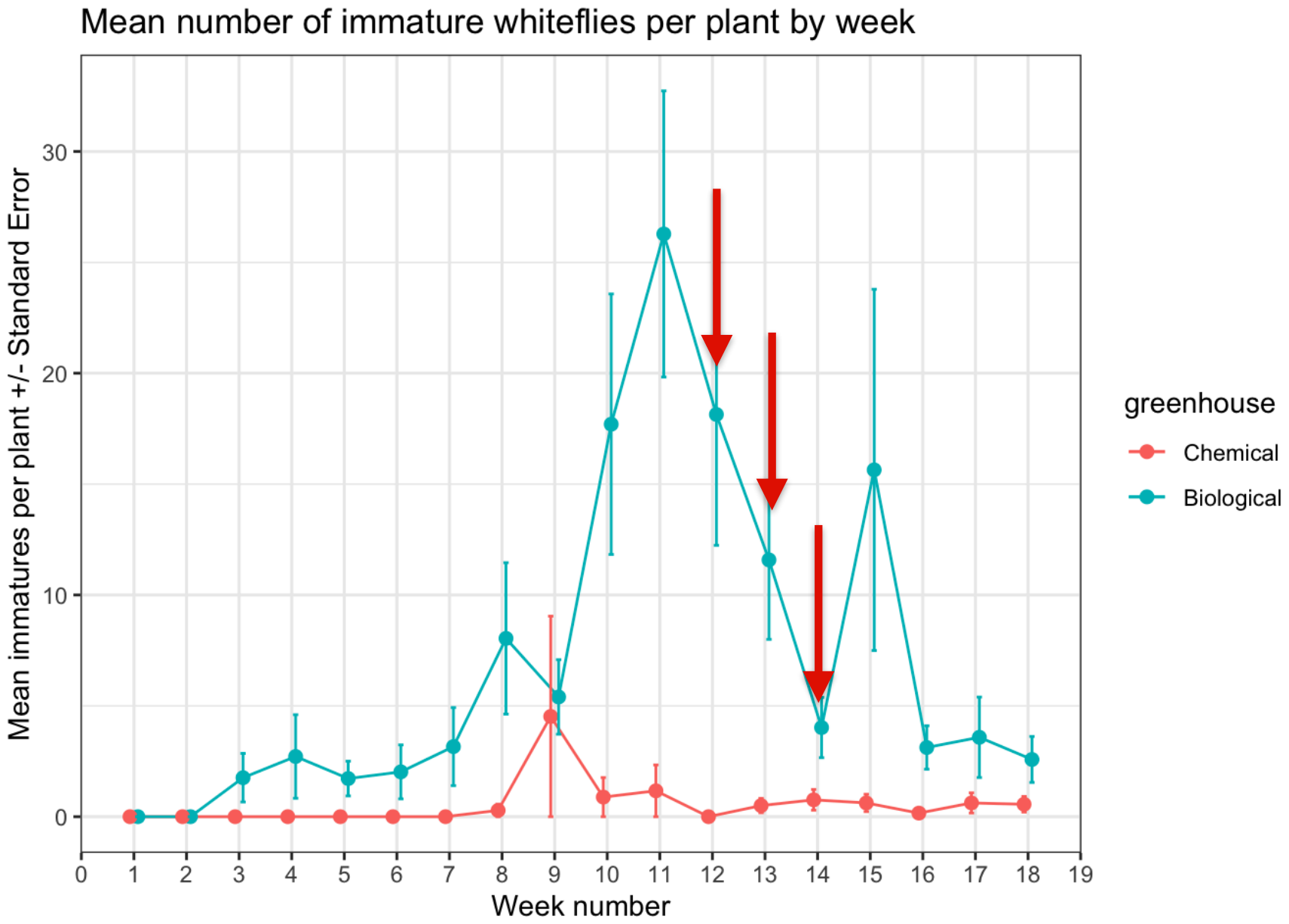
View trends in populations

Patterns in pests of specific crops

Patterns in pest outbreak related to crop stage

How many whiteflies is too many?

Monitoring | Documenting



Defoliating	Skeletonization	Sucking	Boring	Mining	Gall

Types of Damage

Defoliating | Skeletonization | Sucking | Boring | Mining | Gall

Photo Cred: Purdue University

Defoliating | Skeletonization | Sucking | Boring | Mining | Gall

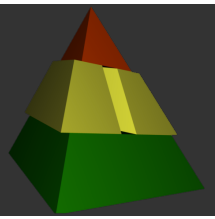
Photo Cred: Utah State University

Photo Cred: New Hampshire Garden Solutions


Photo Cred: Wikimedia

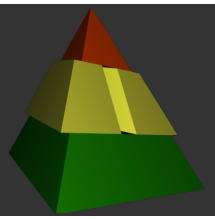

UGA1121014

Cultural/Sanitation



- Keep a clean environment
- Remove weeds/alternative hosts
- Reduce unnecessary moisture
- Companion planting
- Banker Plants
- Trap Plants
- Crop Rotation
- Nutrient management
- Plant defense

Physical/Mechanical



- Hand weed
- Hand remove insect pests
- High pressure water spray
- Exclusion nets and barriers
- Pitfall traps
- Yellow sticky cards

Cultural & Mechanical Control

Sanitation

Cultural & Mechanical Control

Companion planting

Efficacy of three natural substances against apple aphid (*Aphis pomi* De Geer, Ap

Effect o

patula n

coloniza

Beata Janko

[1] Department o

Kraków, Pola

[2] Department o

29 Listopada

39%±12% (ci

the substances tested was found at highest concentration.

Marigold (*Tagetes erecta* L.) as an attractive crop to natural enemies in onion fields

Cravo-de-defunto (*Tagetes erecta* L.) como cultura atrativa para inimigos naturais em cultivo de cebola

Luís Cláudio Paterno Silveira[I]; Evoneo Berti Filho[II, *]; Leonardo Santa Rosa Pierre[II]; Fernanda Salles Cunha Peres[III]; Julio Neil Cassa Louzada[IV]