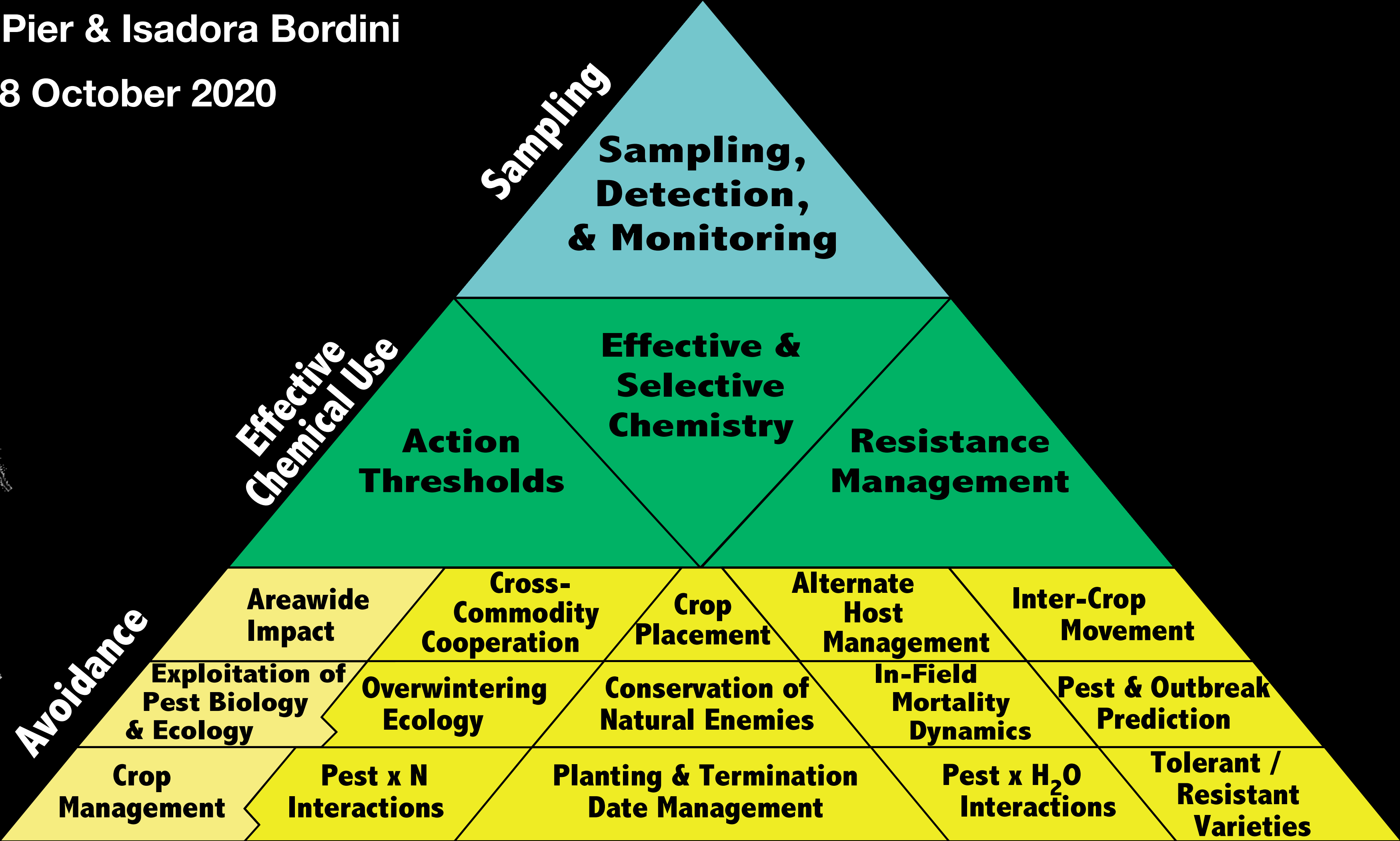
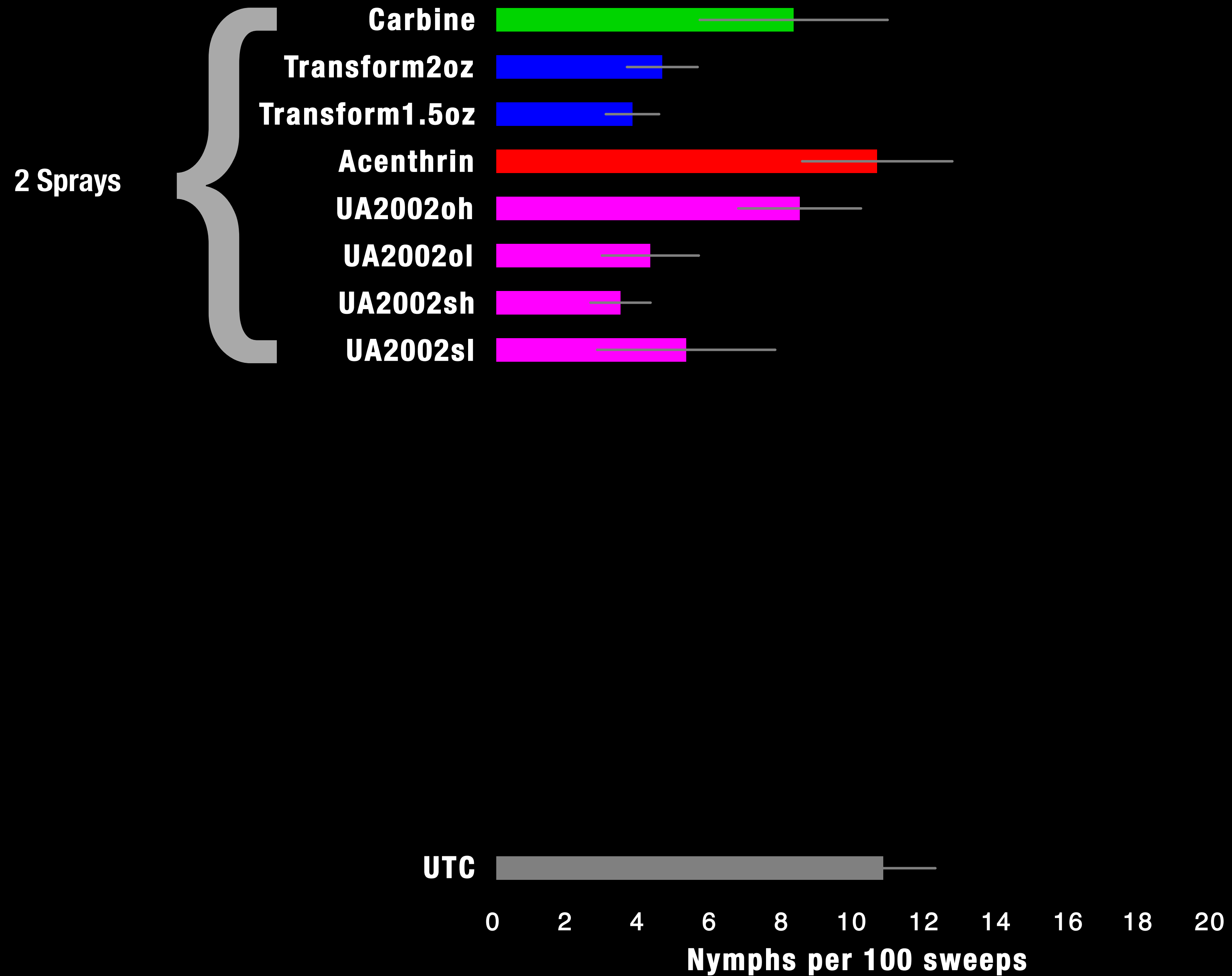


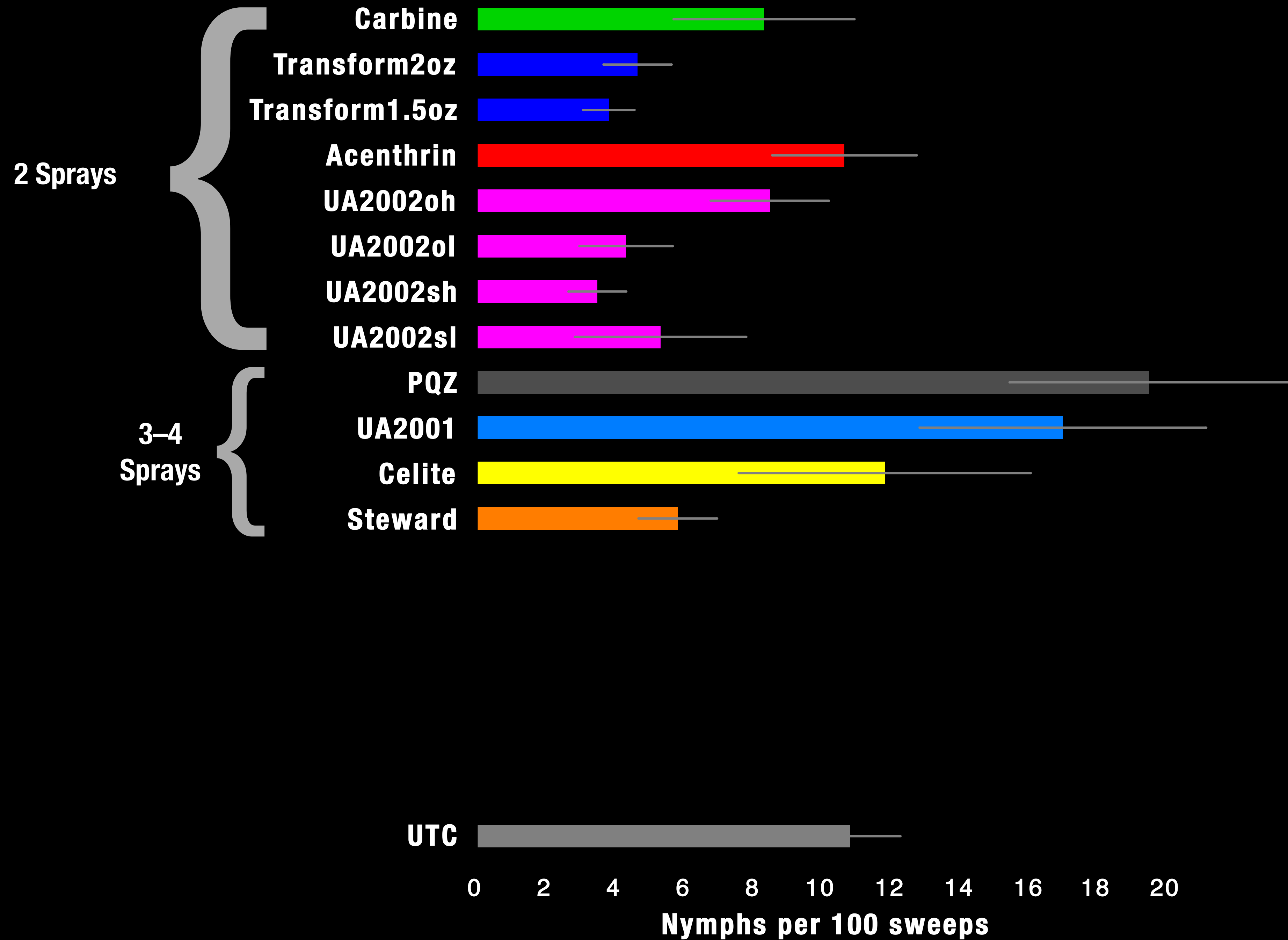
Peter C. Ellsworth, Naomi Pier & Isadora Bordini

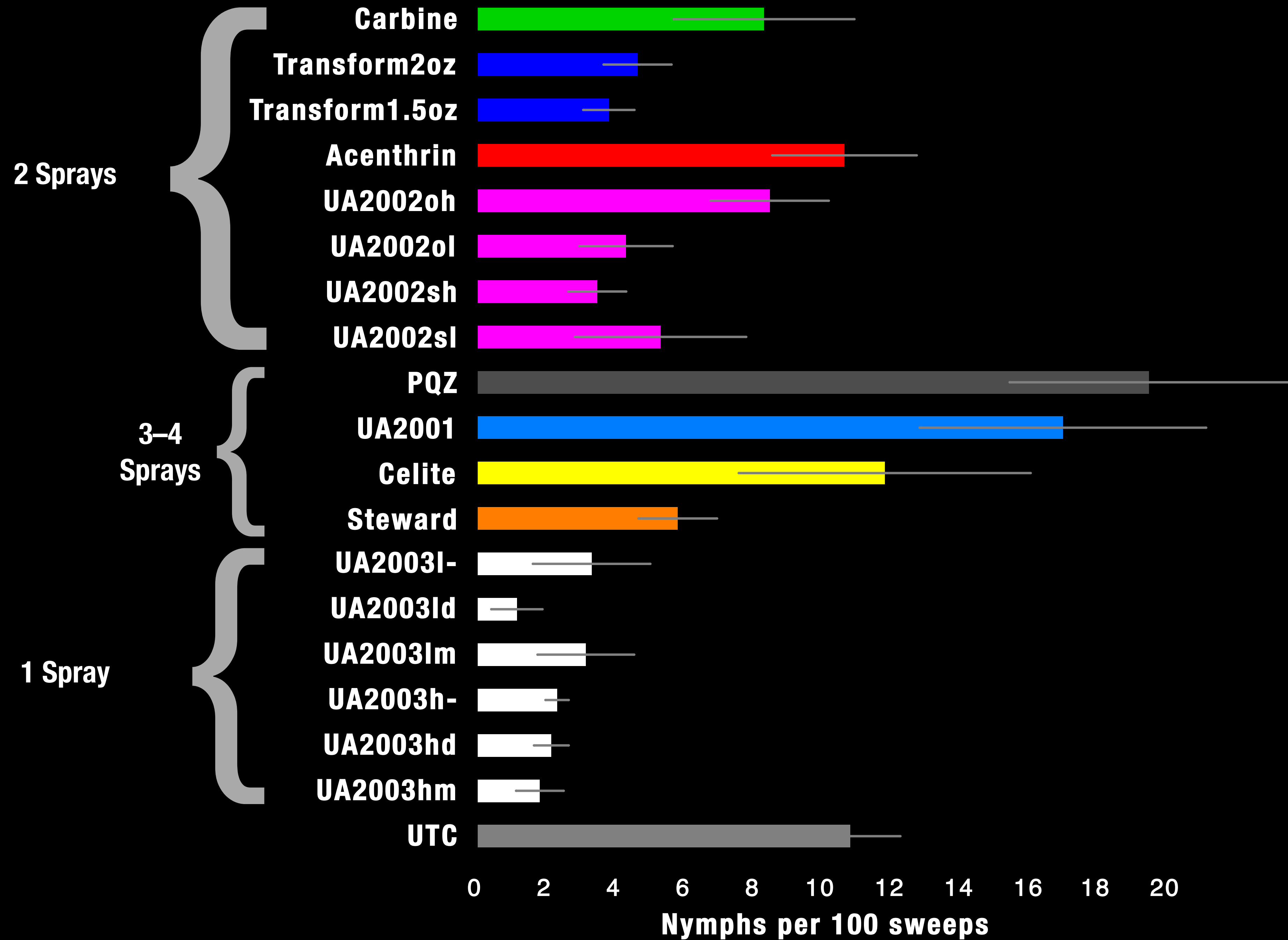
Virtual Farmer Field Day, 28 October 2020

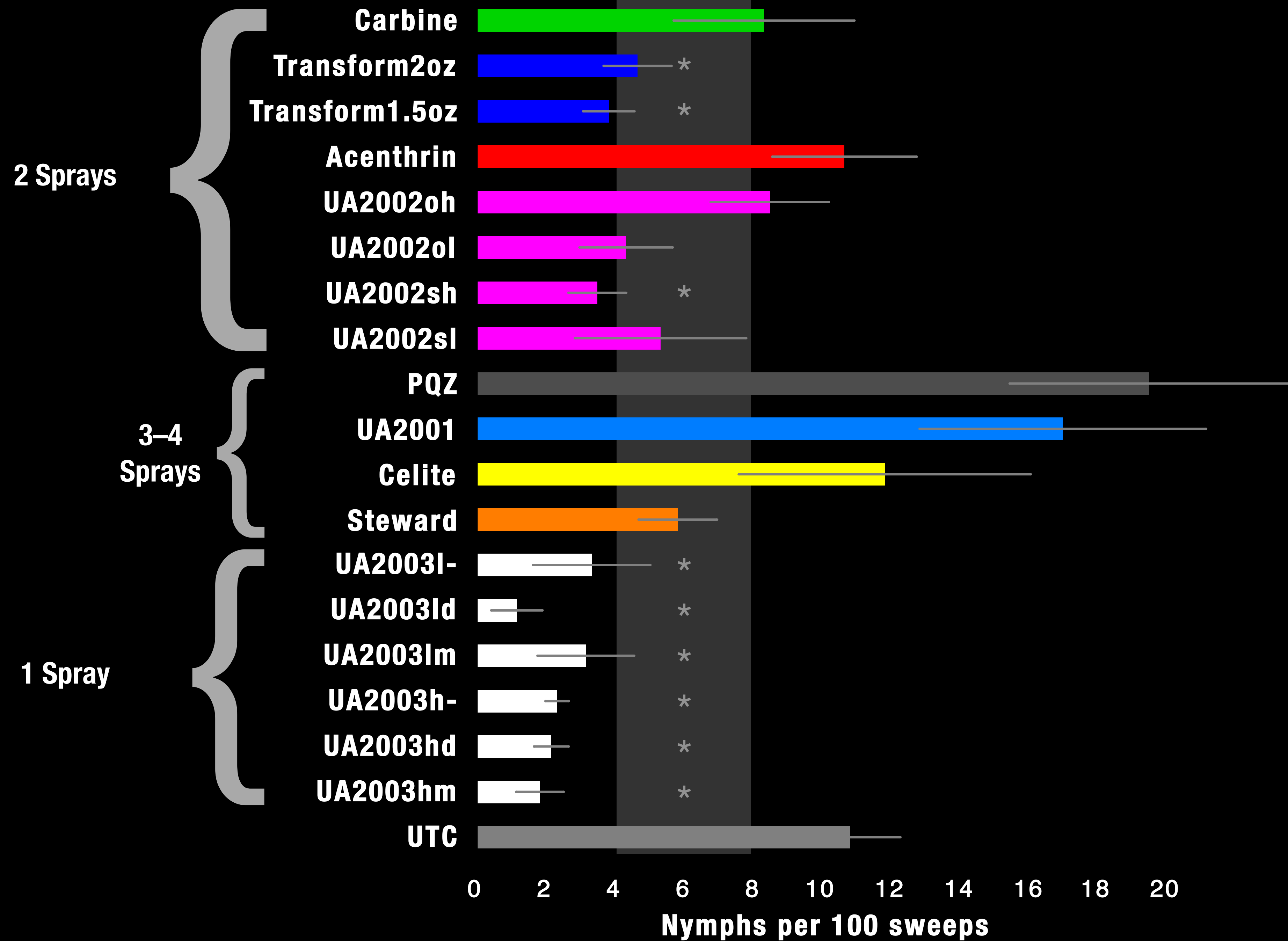


Cotton Insect Management









**Transform
(2 oz/A)**

**≥50% Fruit retention
Compact stature
Carbohydrates to bolls
Lygus feed on squares
Hard cutout**



Identifying Cut-out



Untreated Check (UTC)

0 Lygus sprays

1 PGR spray

Tall plants = Damage

Look for compressed internode

Lost fruiting sites

Late season Lygus

Taller "top" crop

Compensation for losses

Insufficient water & HUs



Top Crop Flower in UTC

Misshapen

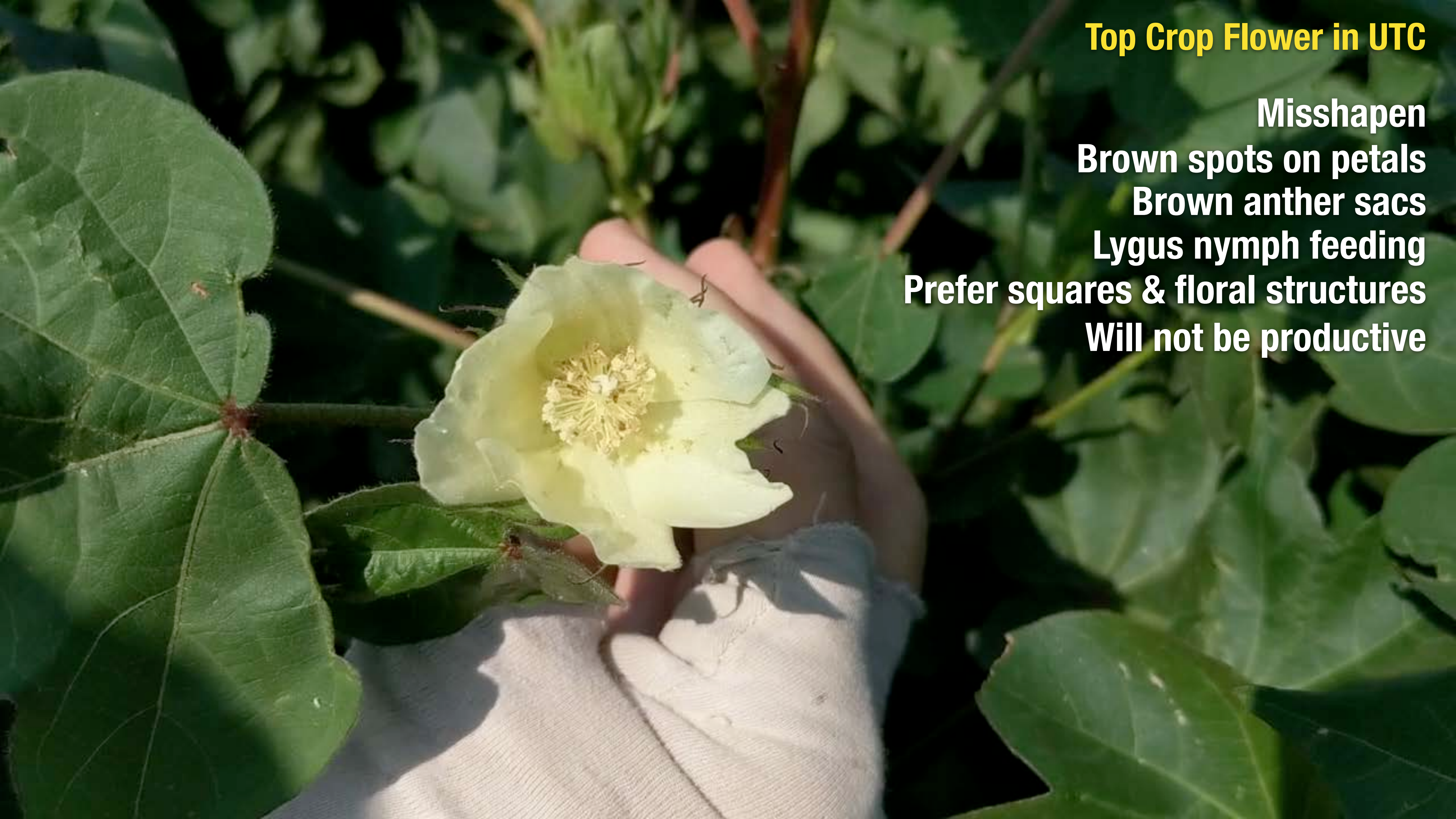
Brown spots on petals

Brown anther sacs

Lygus nymph feeding

Prefer squares & floral structures

Will not be productive





Top Crop Flower in Carbine

Inspect quality of flower

Clean petals

Clean floral structures

Viable, dehiscing pollen

Very good late season control

Examination of Upper Nodes

Short format cotton

No top crop

Excellent fruit retention

~3.5 bales / A

1 Lygus spray only

Planting: 5/29

Final water: 8/21

Defoliation: 9/30, 10/5

Harvest: 10/20

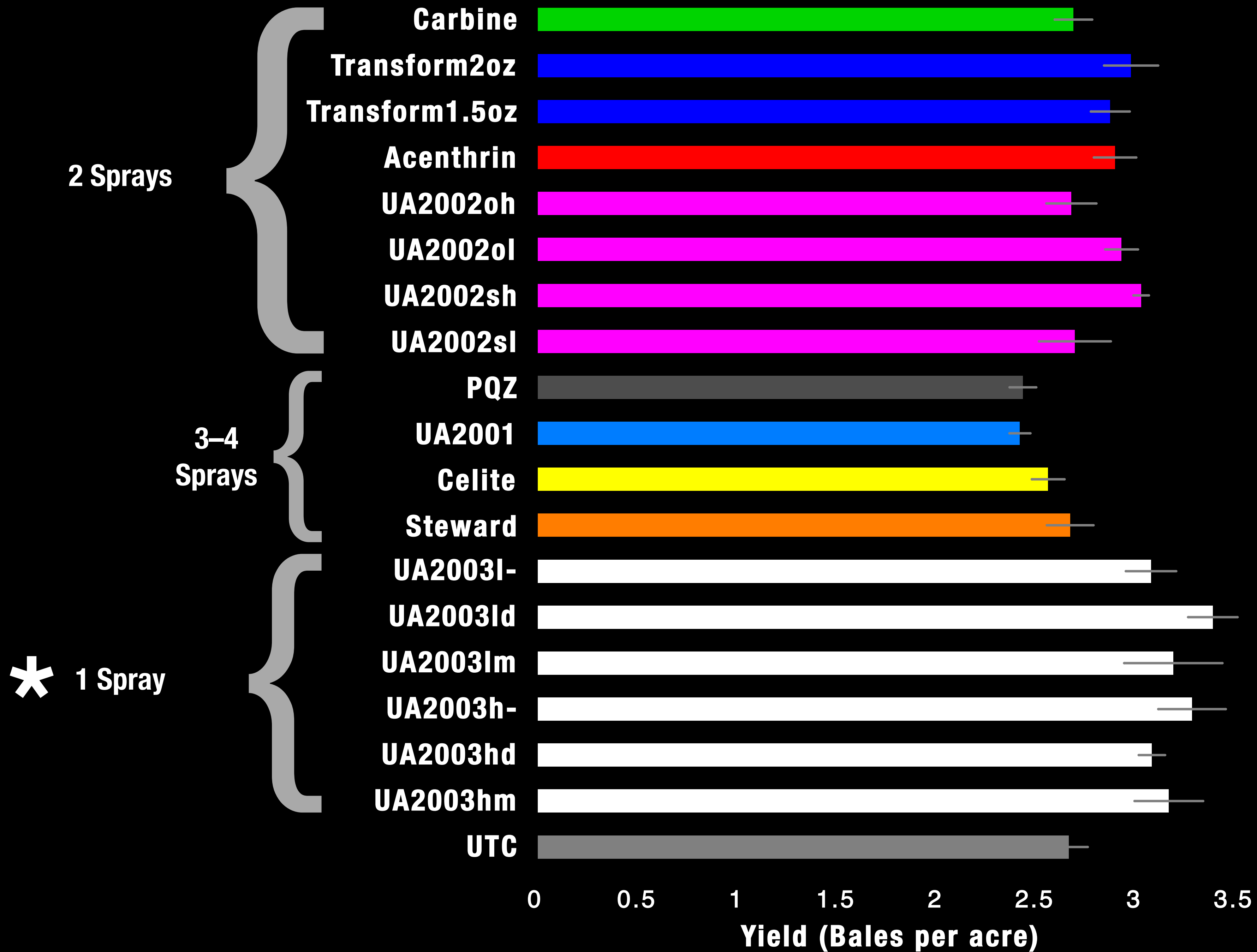
Untreated Check

Upper 13 nodes

8 nodes in top crop

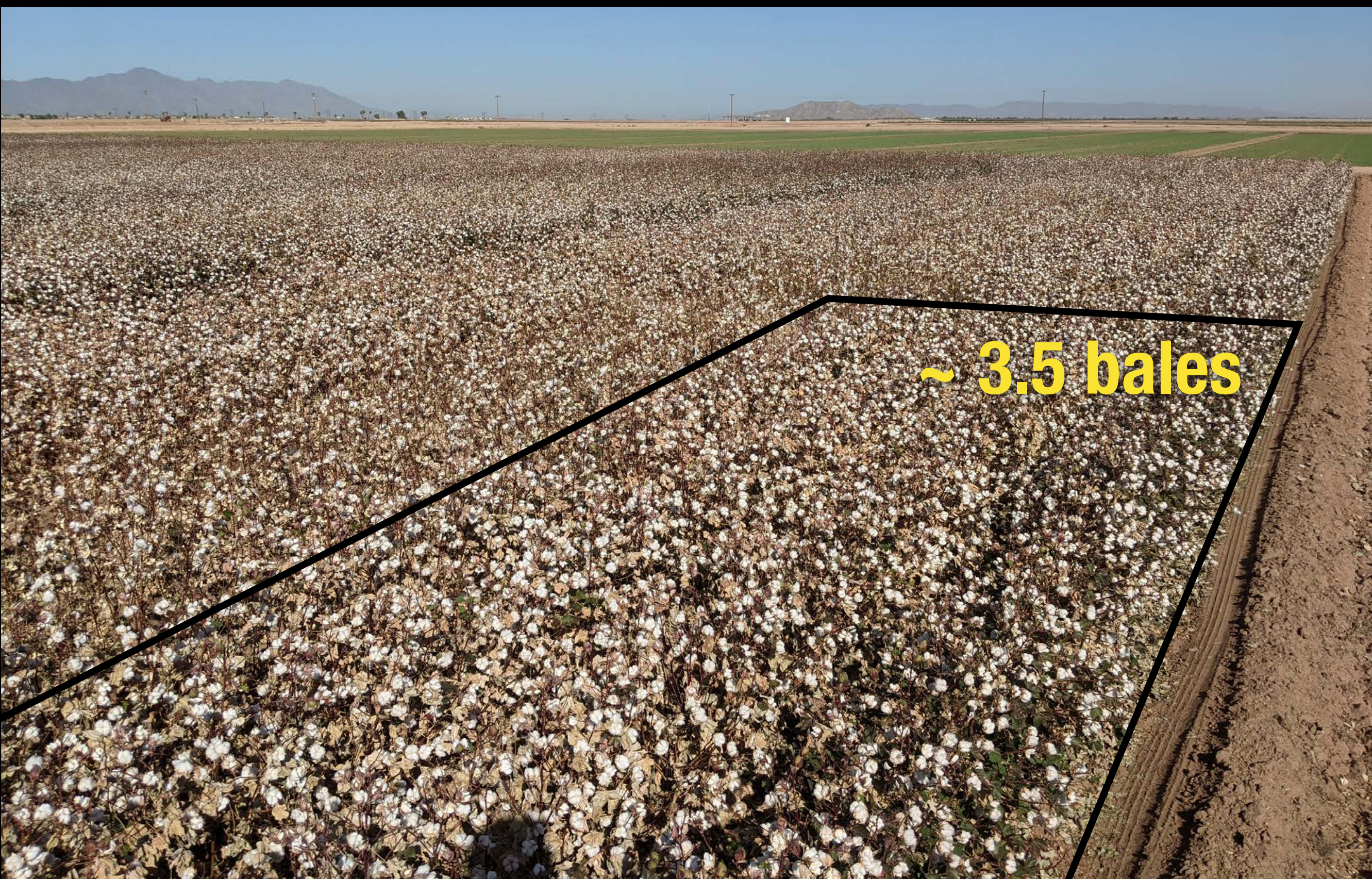
Reduce compensation
masking of Lygus effects





Excellent Lygus Control

No Lygus Control



~ 3.5 bales



~ 2.5 bales

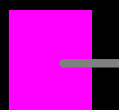
Experimental

PQZ

2 Sprays



Assail 3.5oz



Assail 2.3oz



PQZ



SivantoHL5oz



SivantoHL7oz



Sefina



UTC-disrupted



0

1

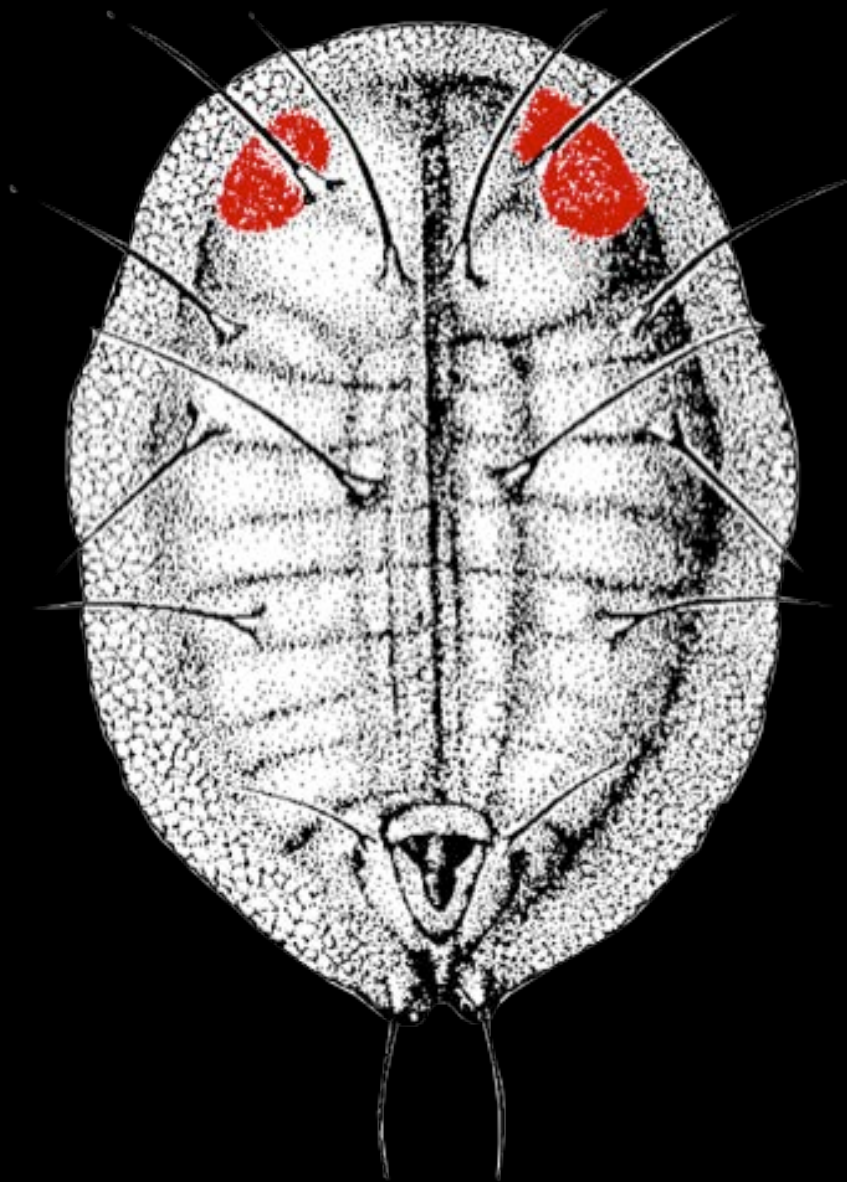
2

3

4

5

Large Nymphs per disc



+1 Rescue
Spray

4–5
Sprays

2 Sprays

UTC-disrupted

UA2004

Miteus

Celite 610

Sefina

SivantoHL7oz

SivantoHL5oz

PQZ

Assail 2.3oz

Assail 3.5oz

0

1

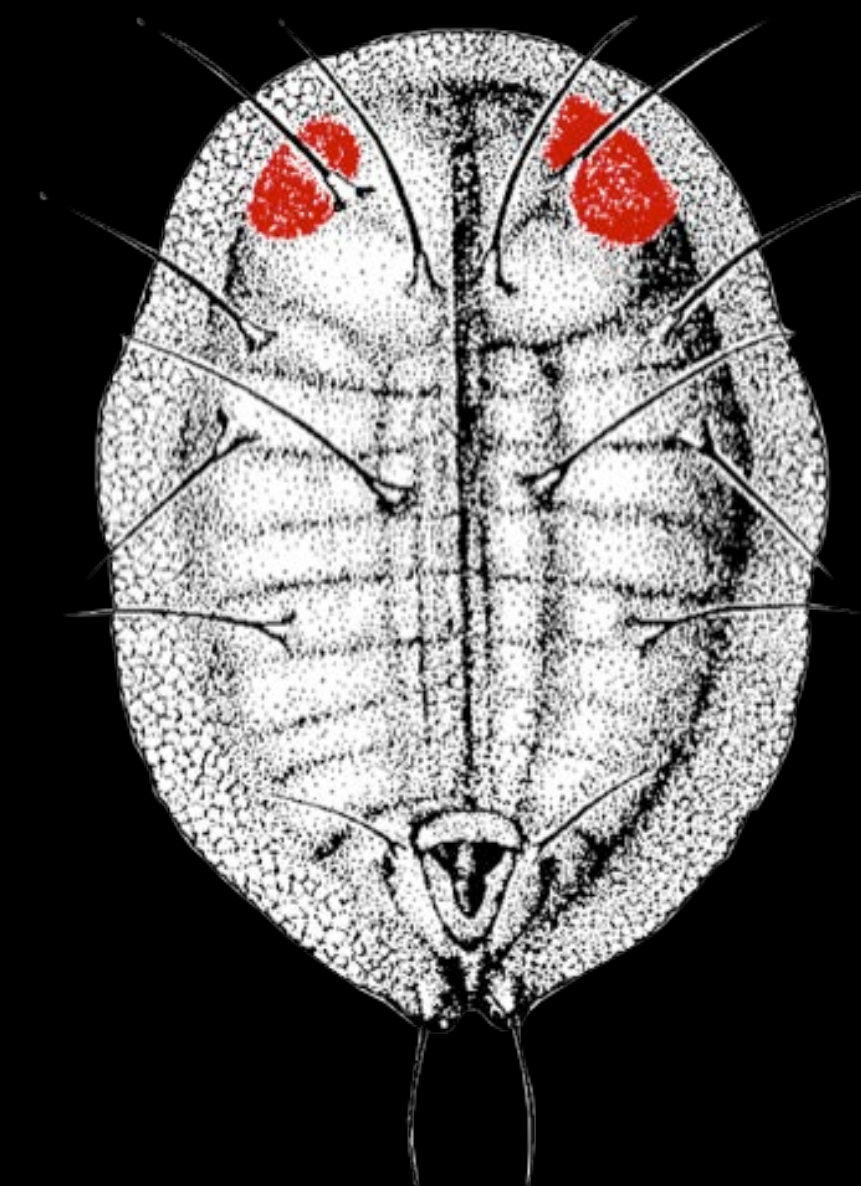
2

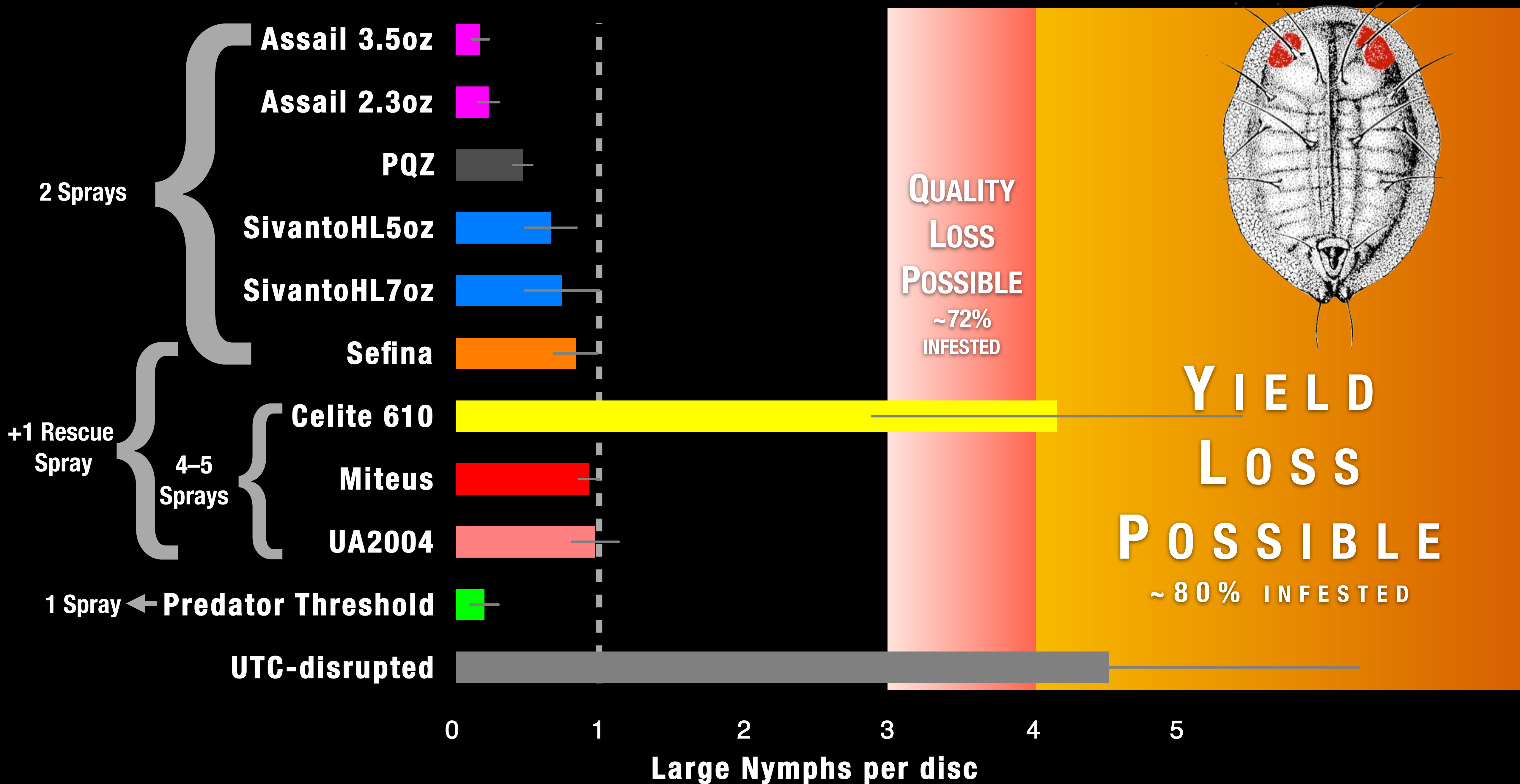
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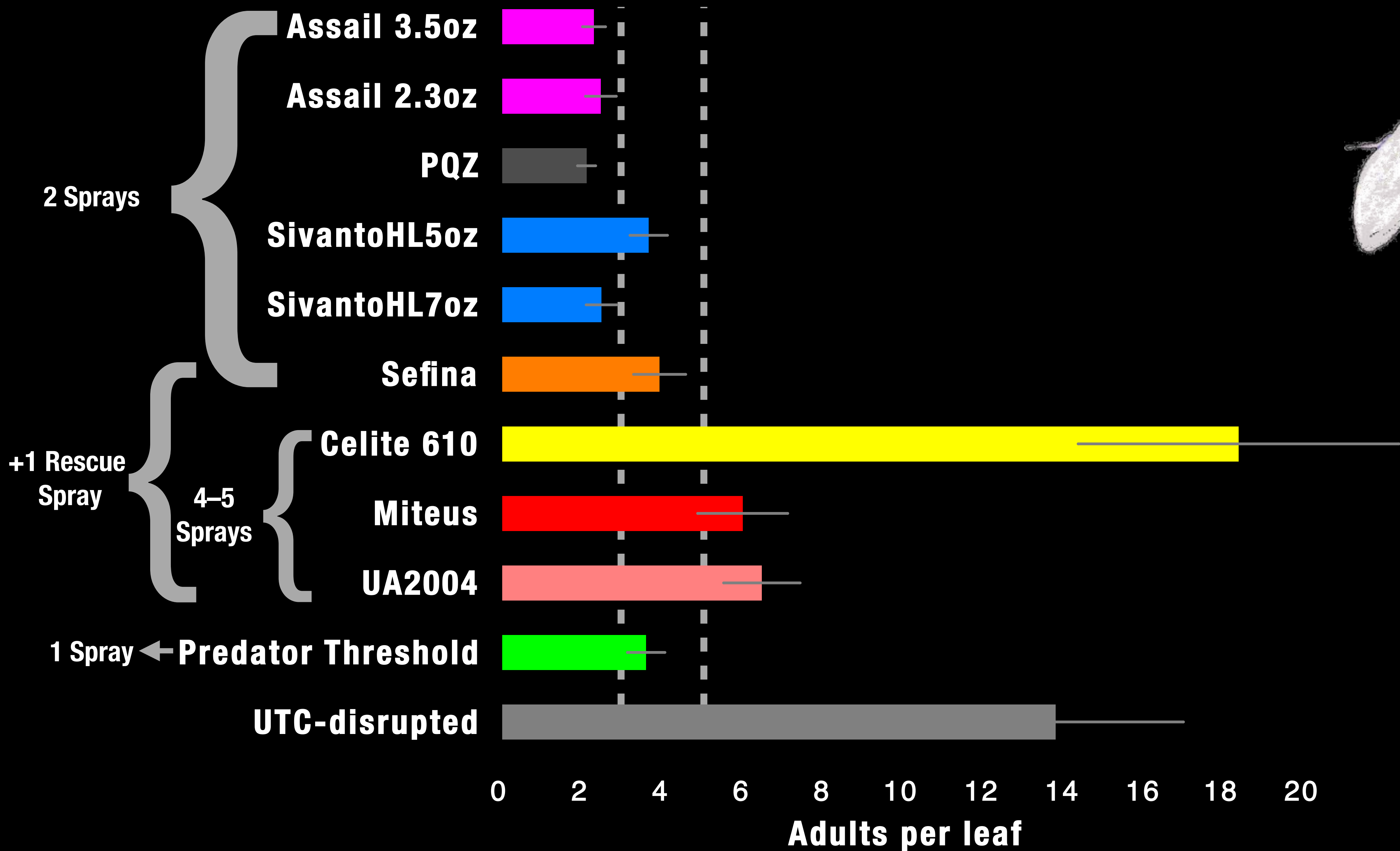
4

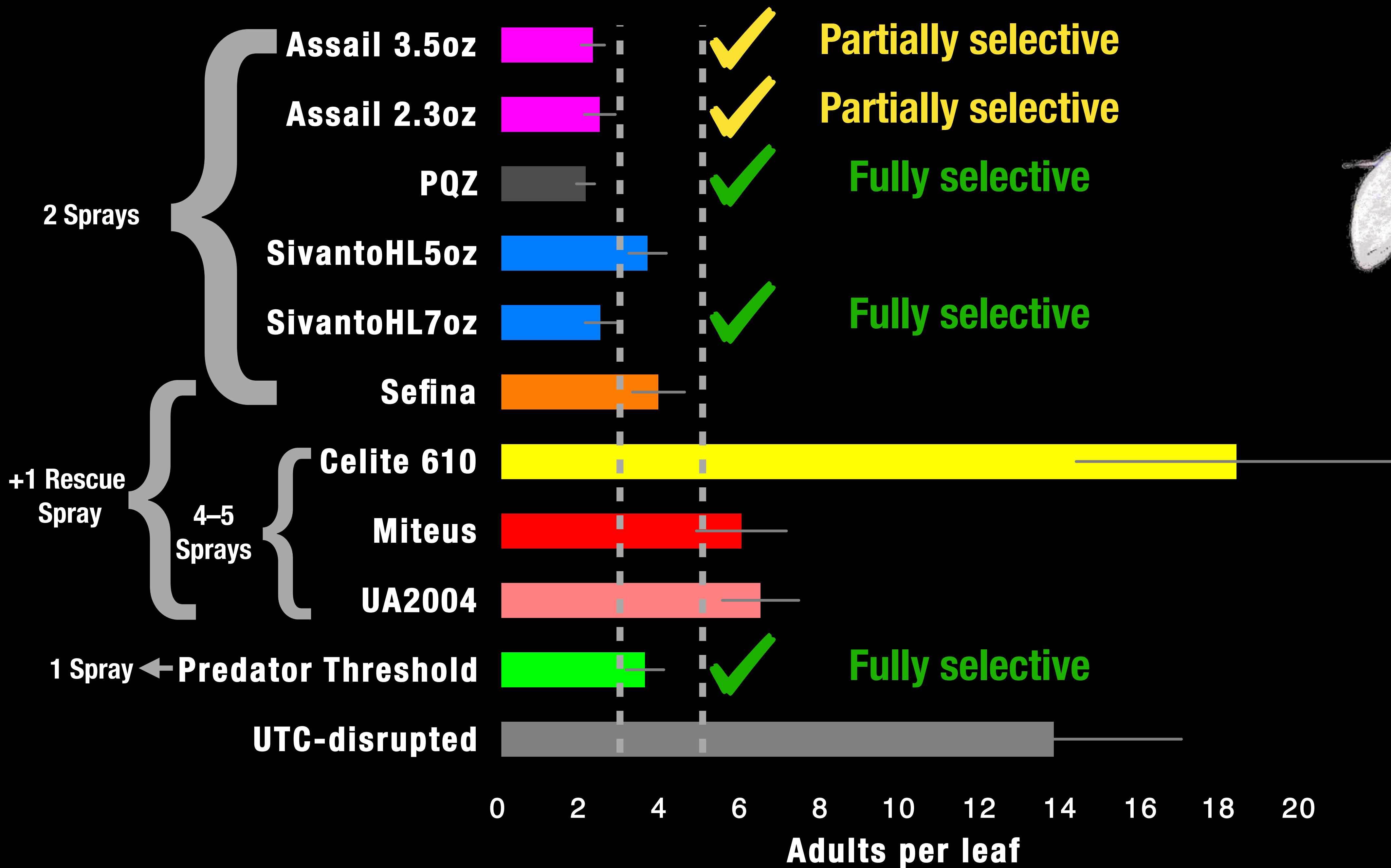
5

Large Nymphs per disc









Just for Fun!



Just for Demonstration Fun!







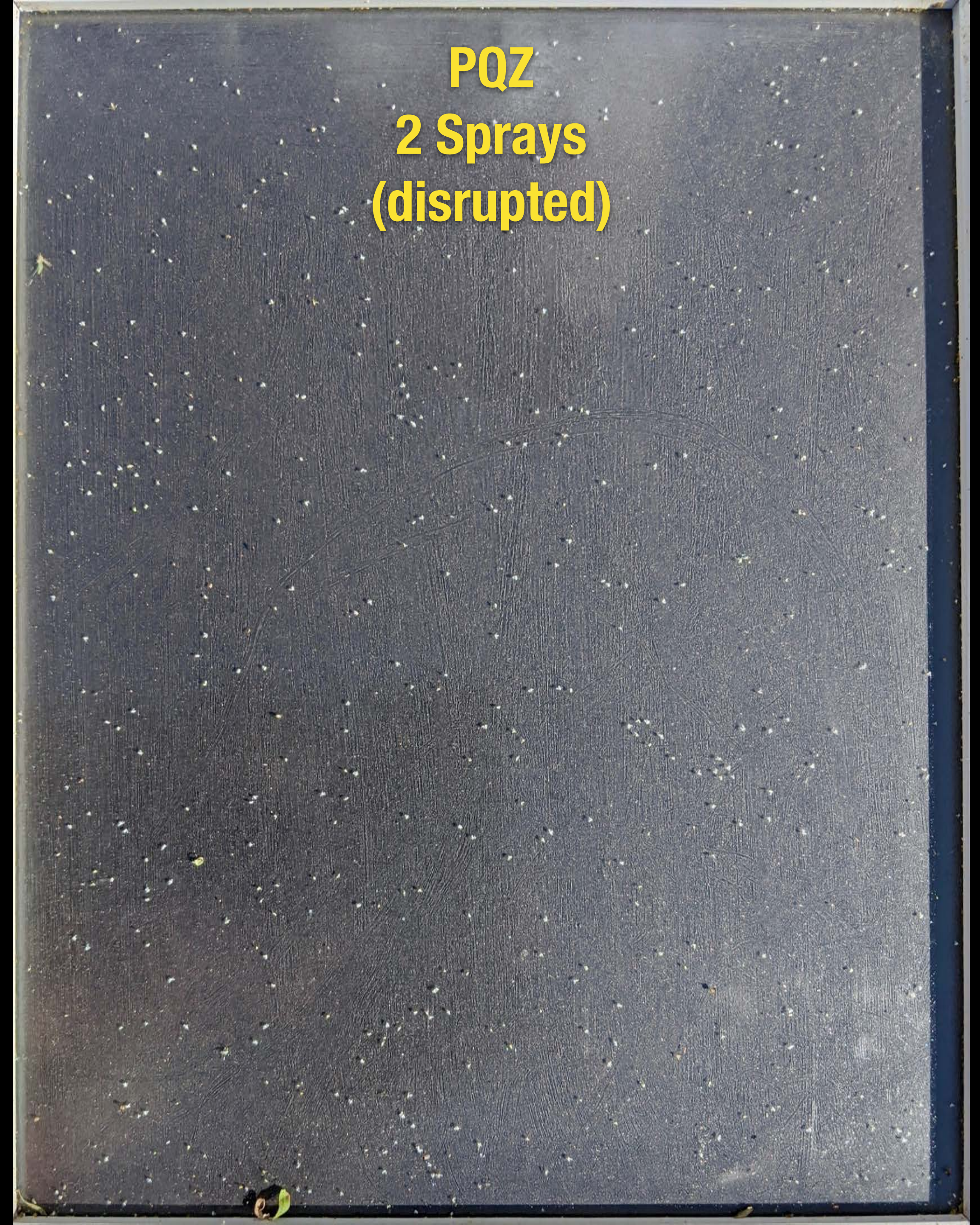
**Untreated
Check (UTC)**



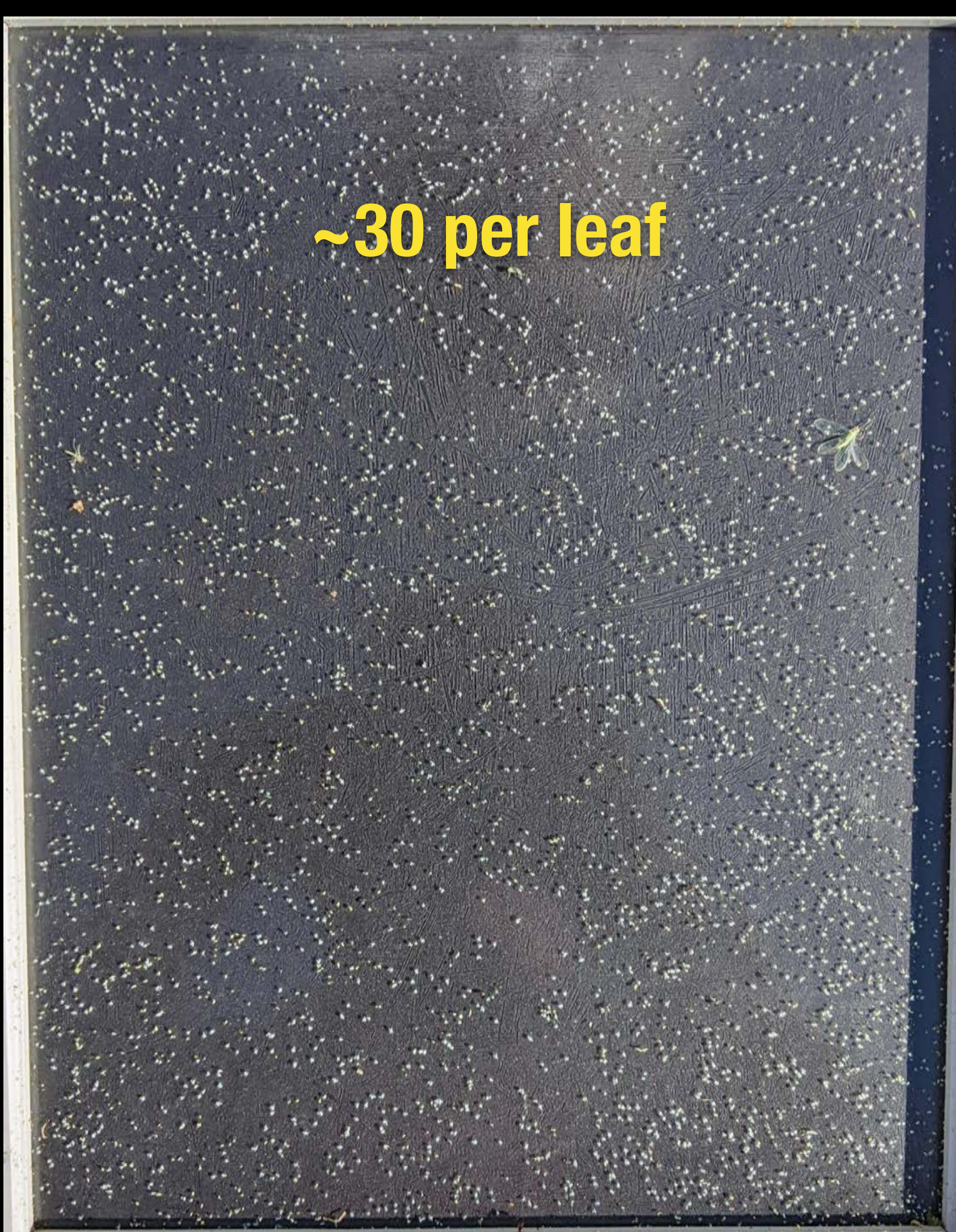
Untreated Check
0 Sprays
(disrupted)



PQZ
2 Sprays
(disrupted)

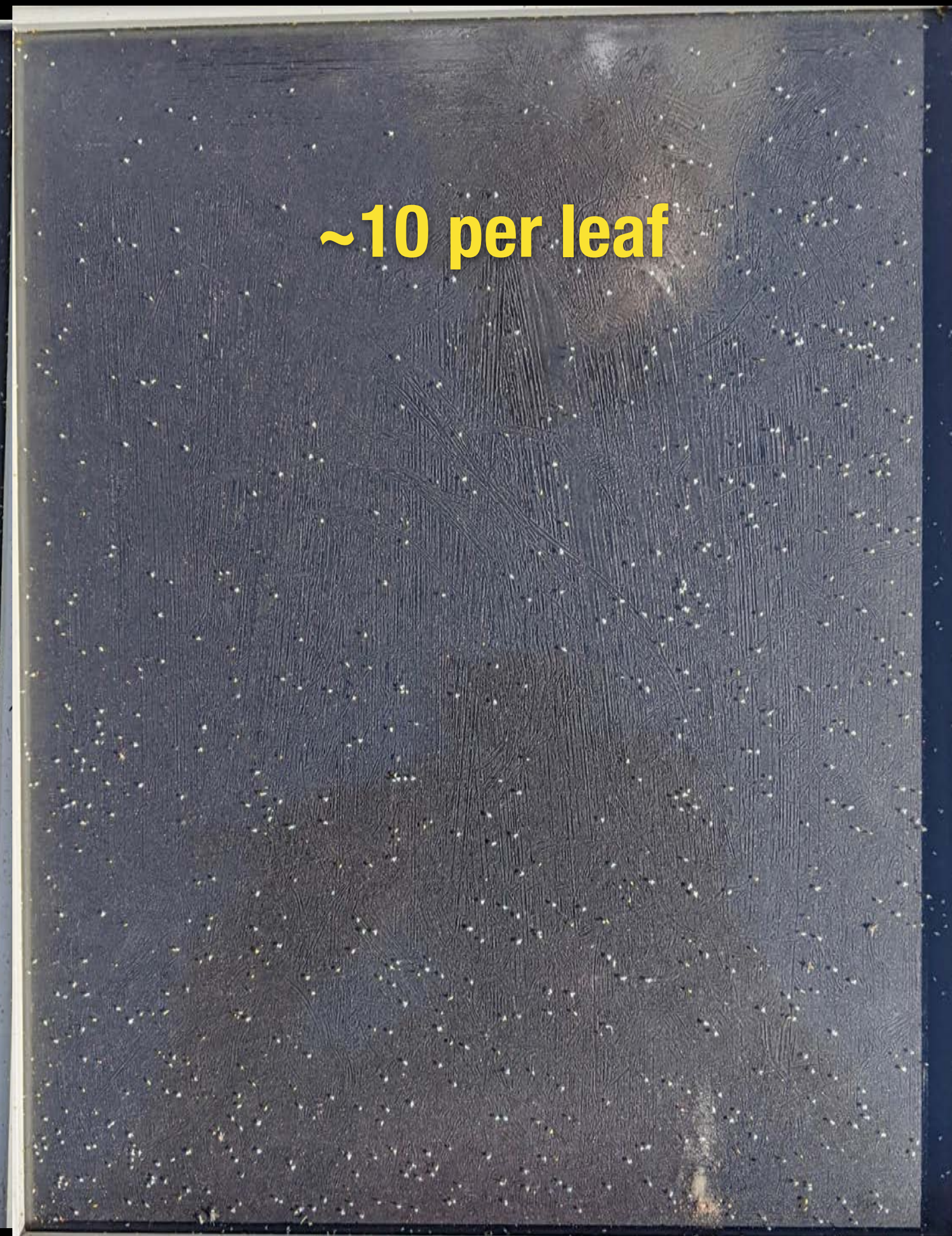


Untreated Check
0 Sprays
(disrupted)



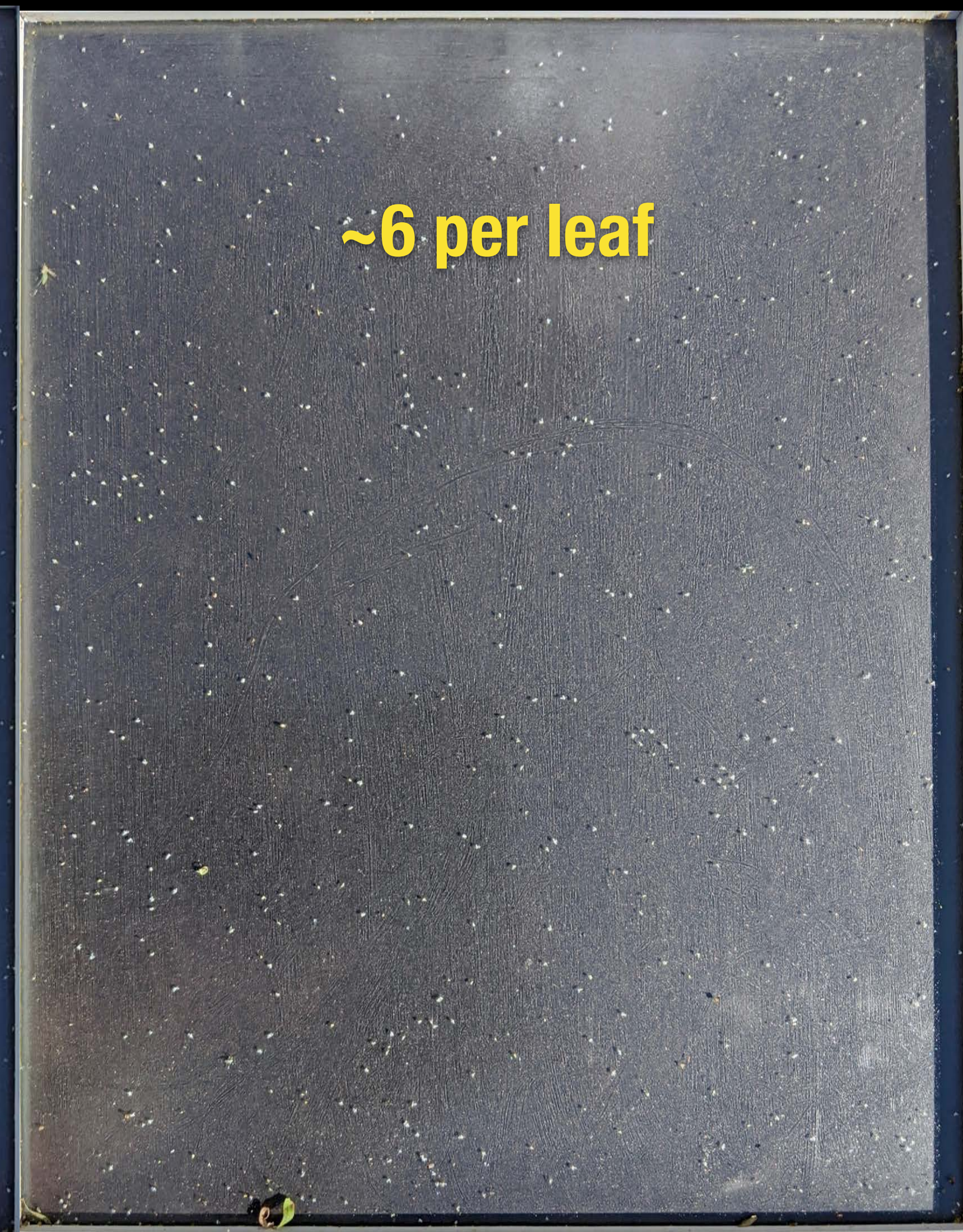
~30 per leaf

Predator Threshold
1 Spray

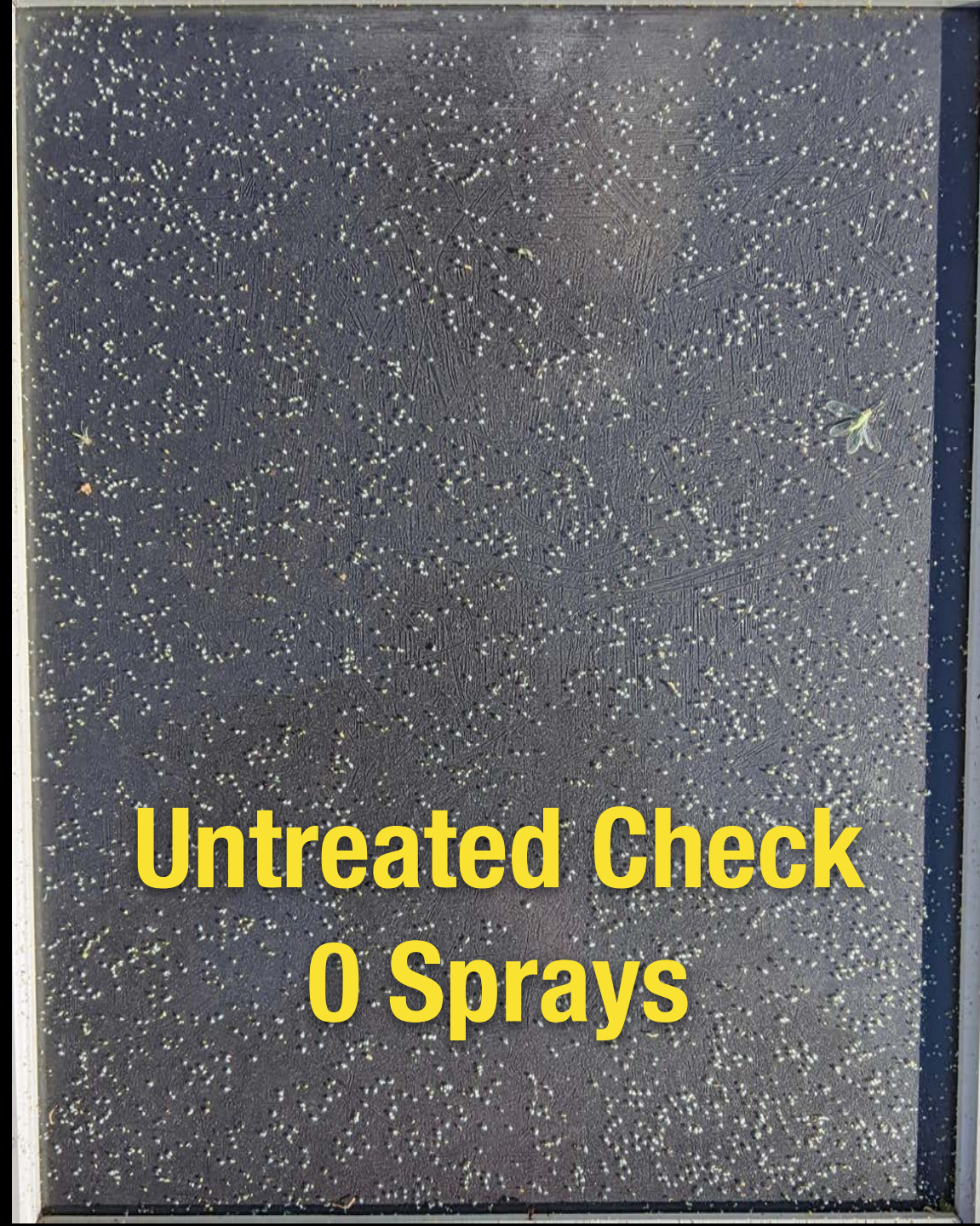


~10 per leaf

PQZ
2 Sprays
(disrupted)



~6 per leaf



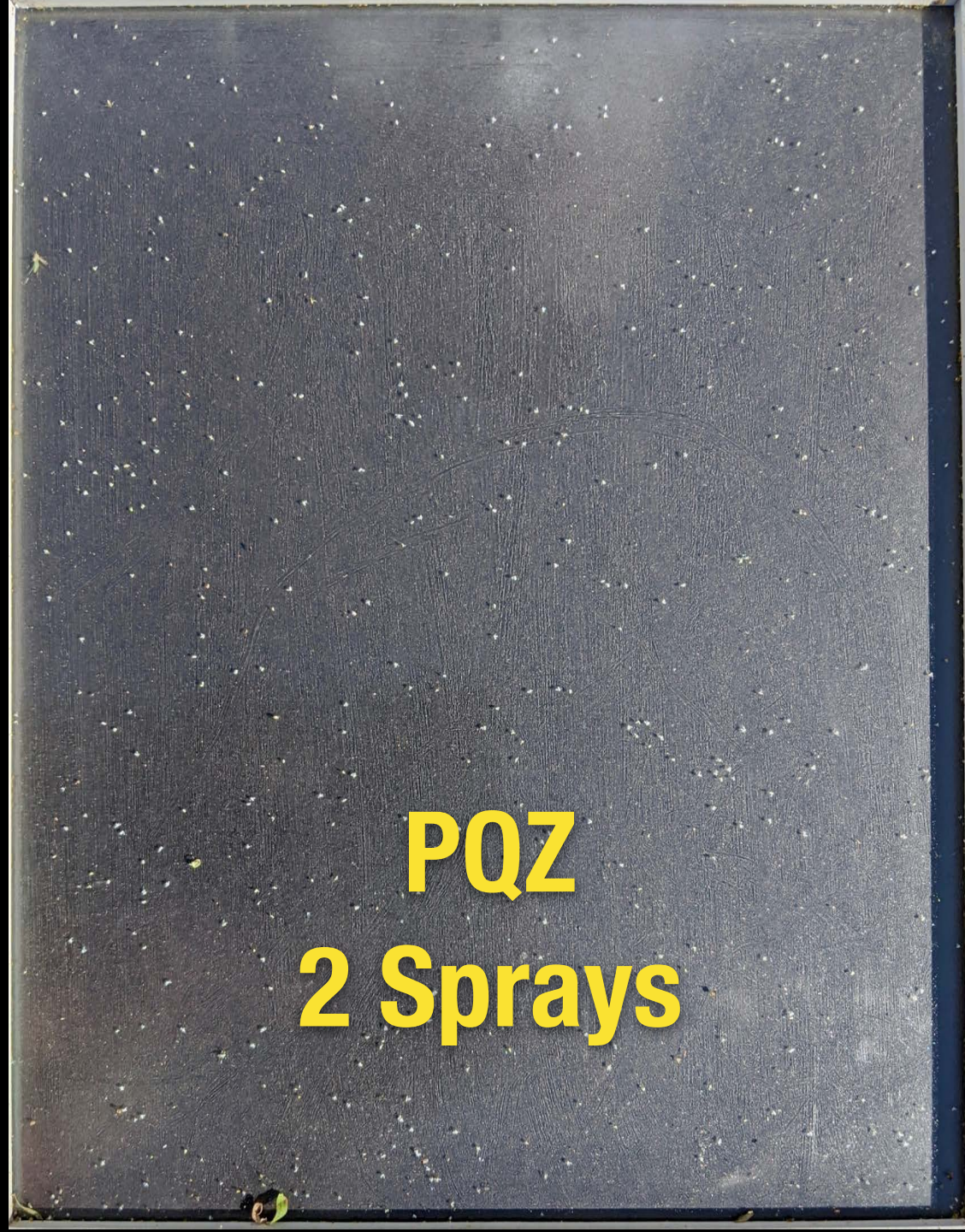
Untreated Check
0 Sprays



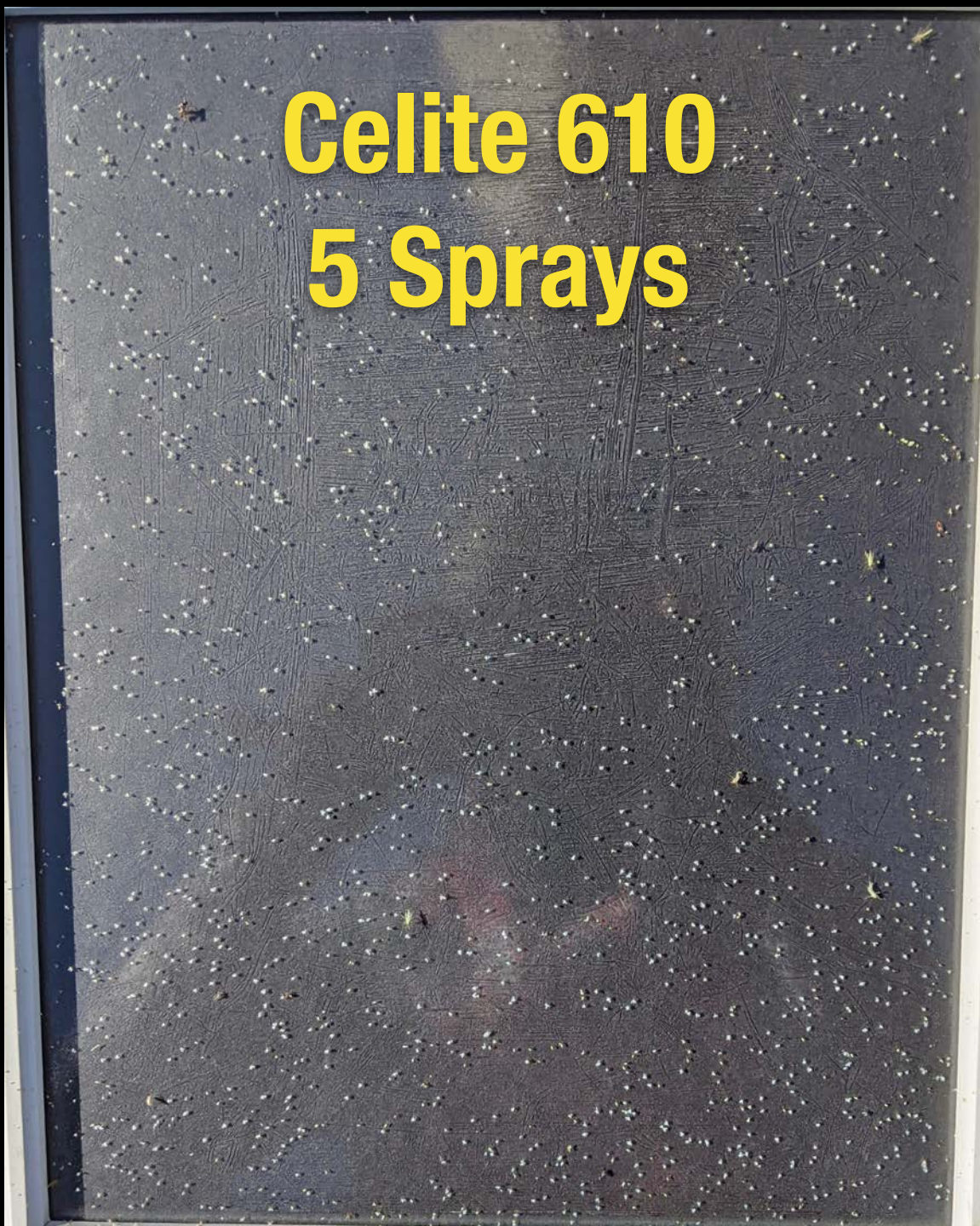
Sefina
2 Sprays



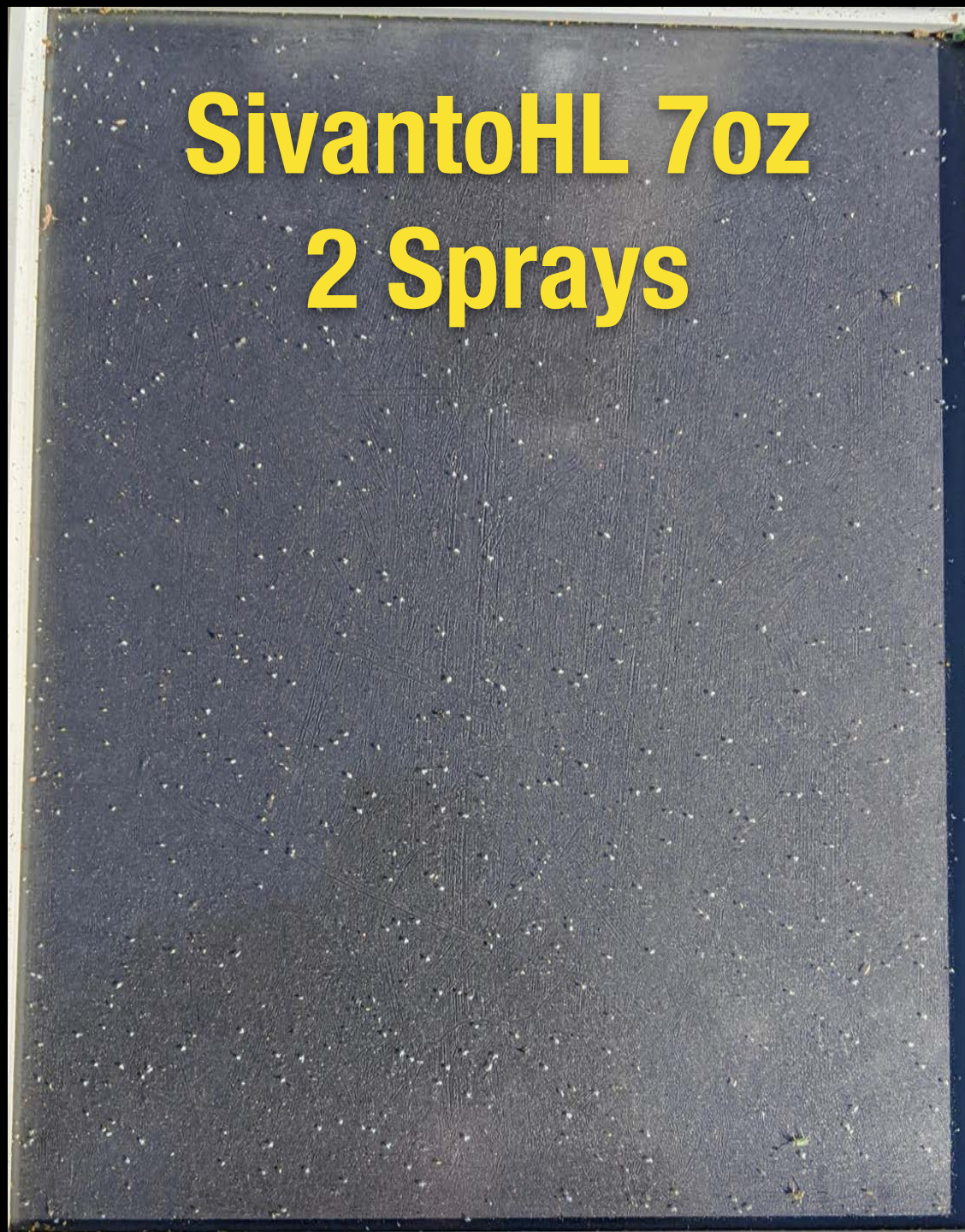
Assail 3.5oz
2 Sprays



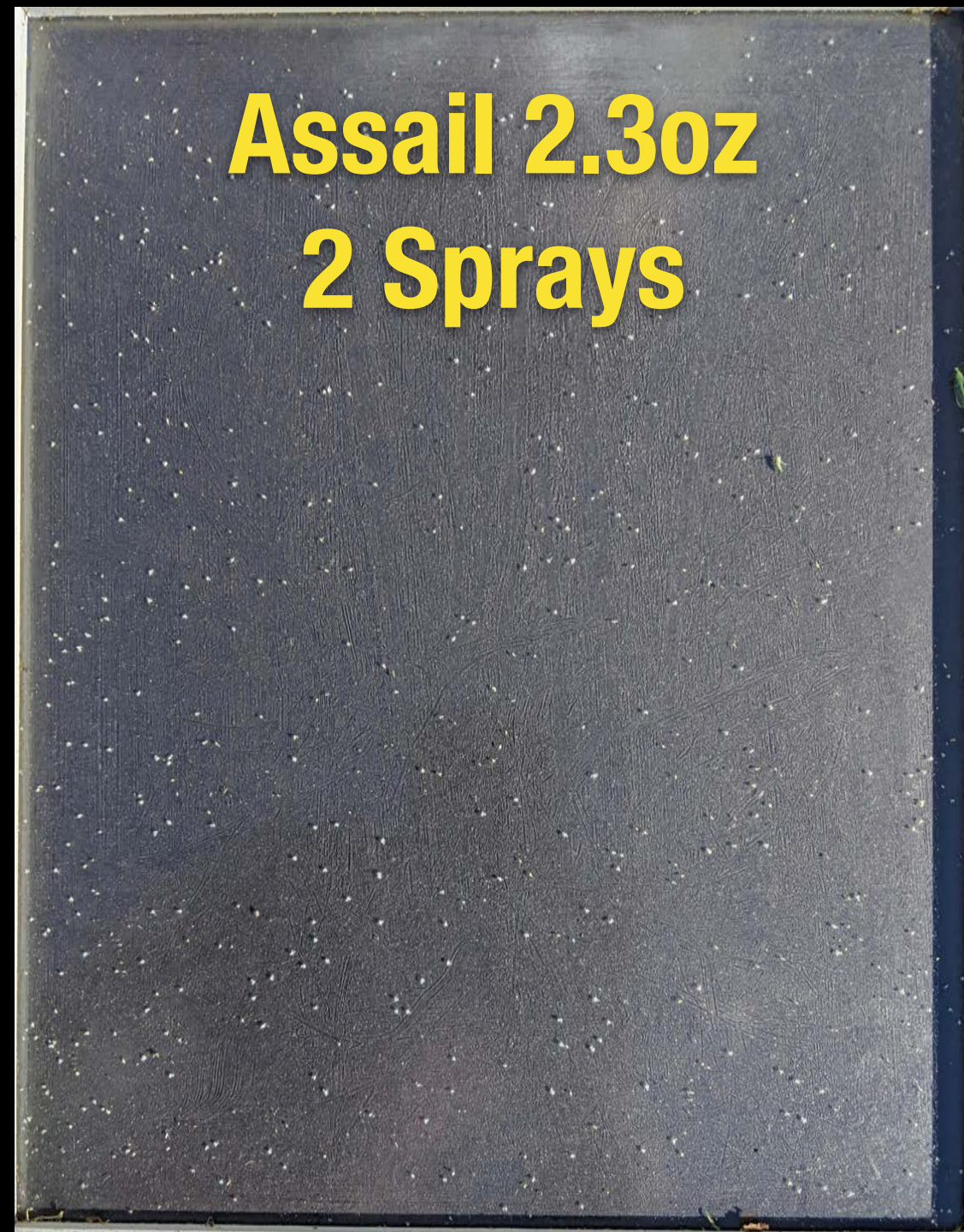
PQZ
2 Sprays



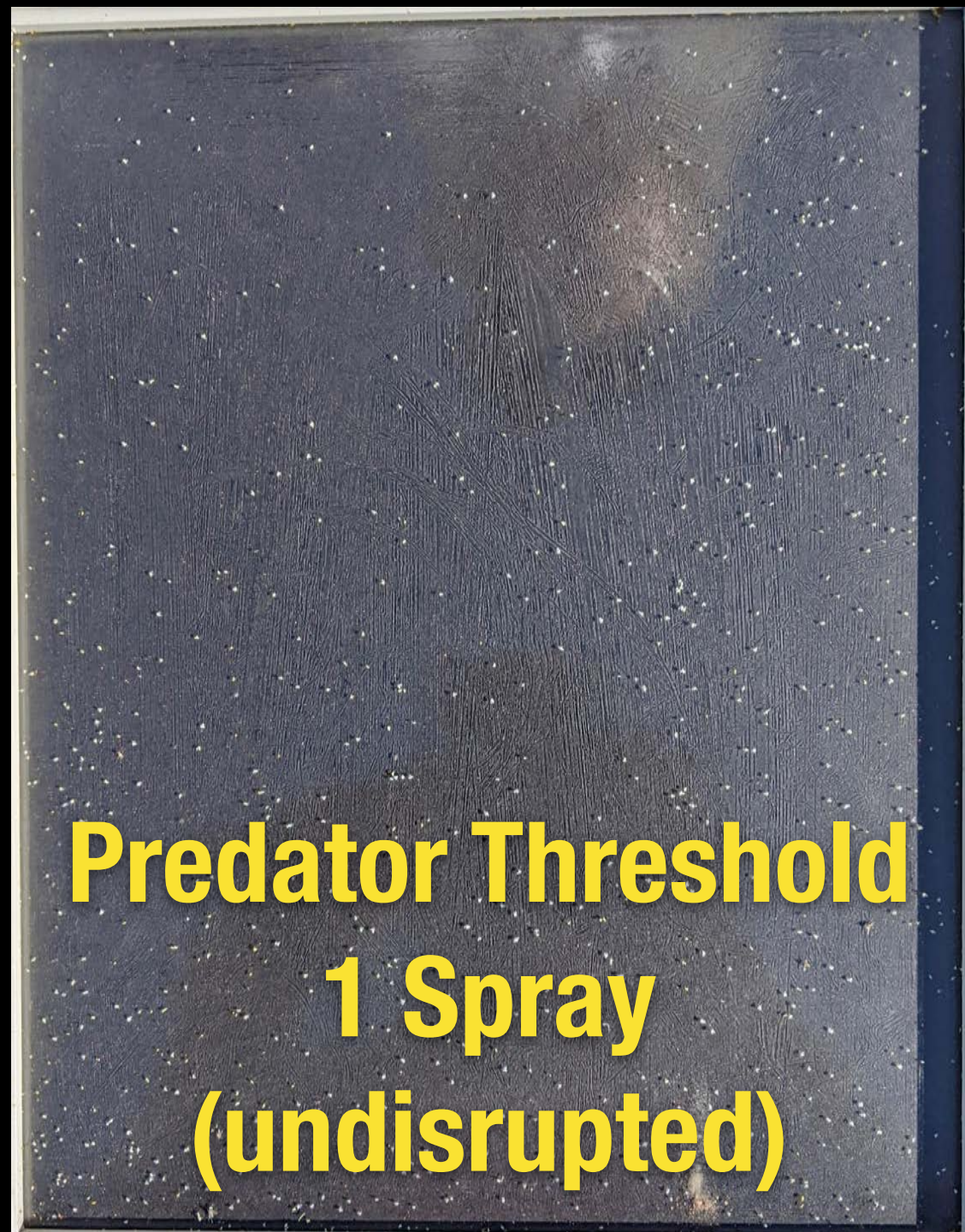
Celite 610
5 Sprays



SivantoHL 7oz
2 Sprays



Assail 2.3oz
2 Sprays



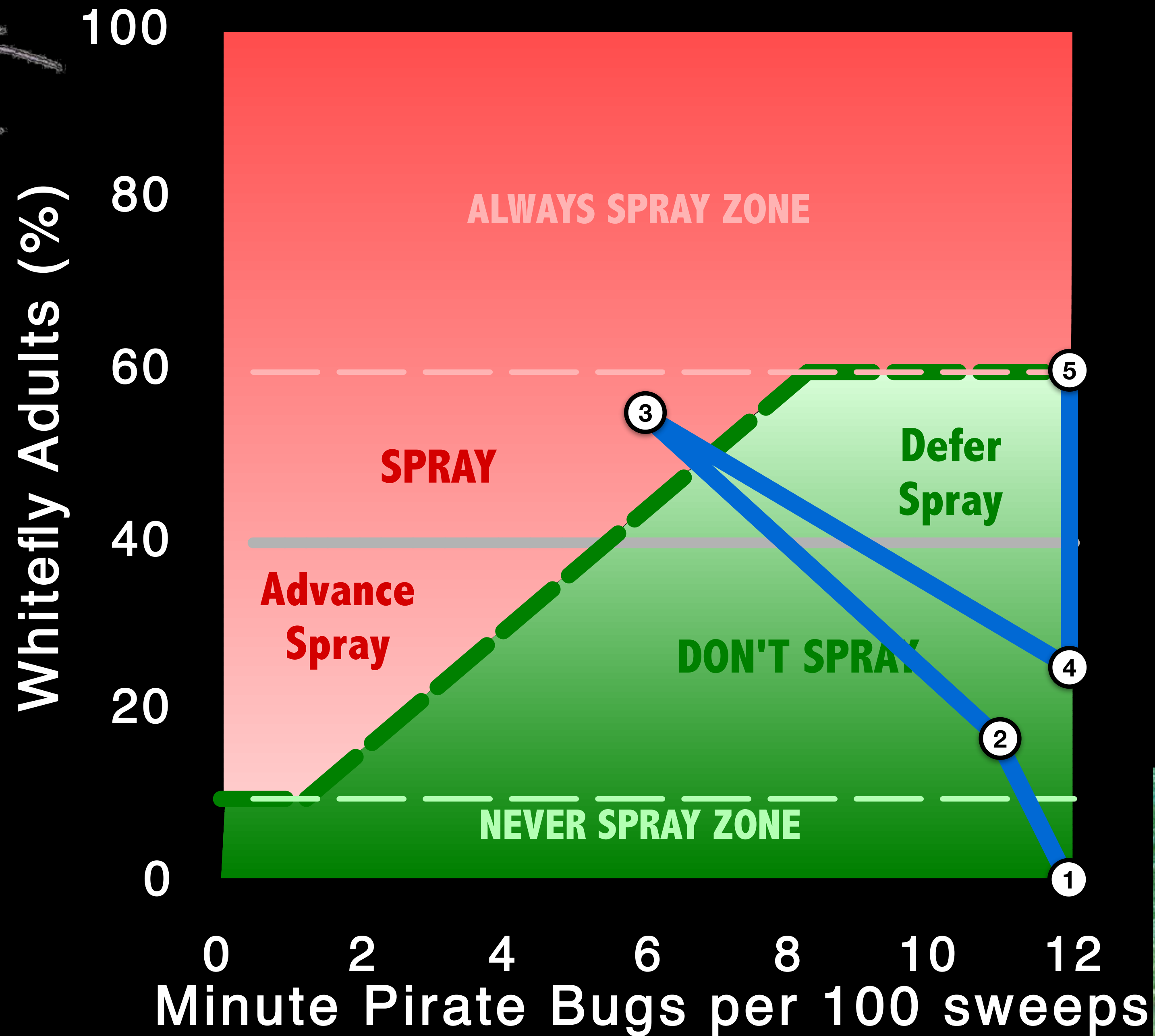
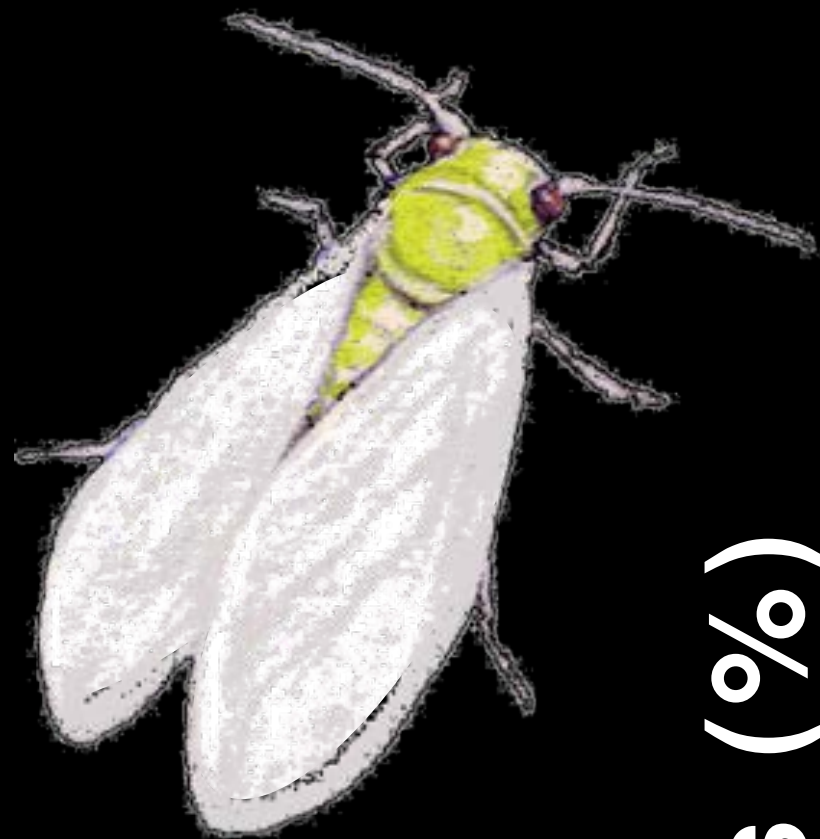
Predator Threshold
1 Spray
(undisrupted)



“Stickiness” Ruins Fiber & Markets!

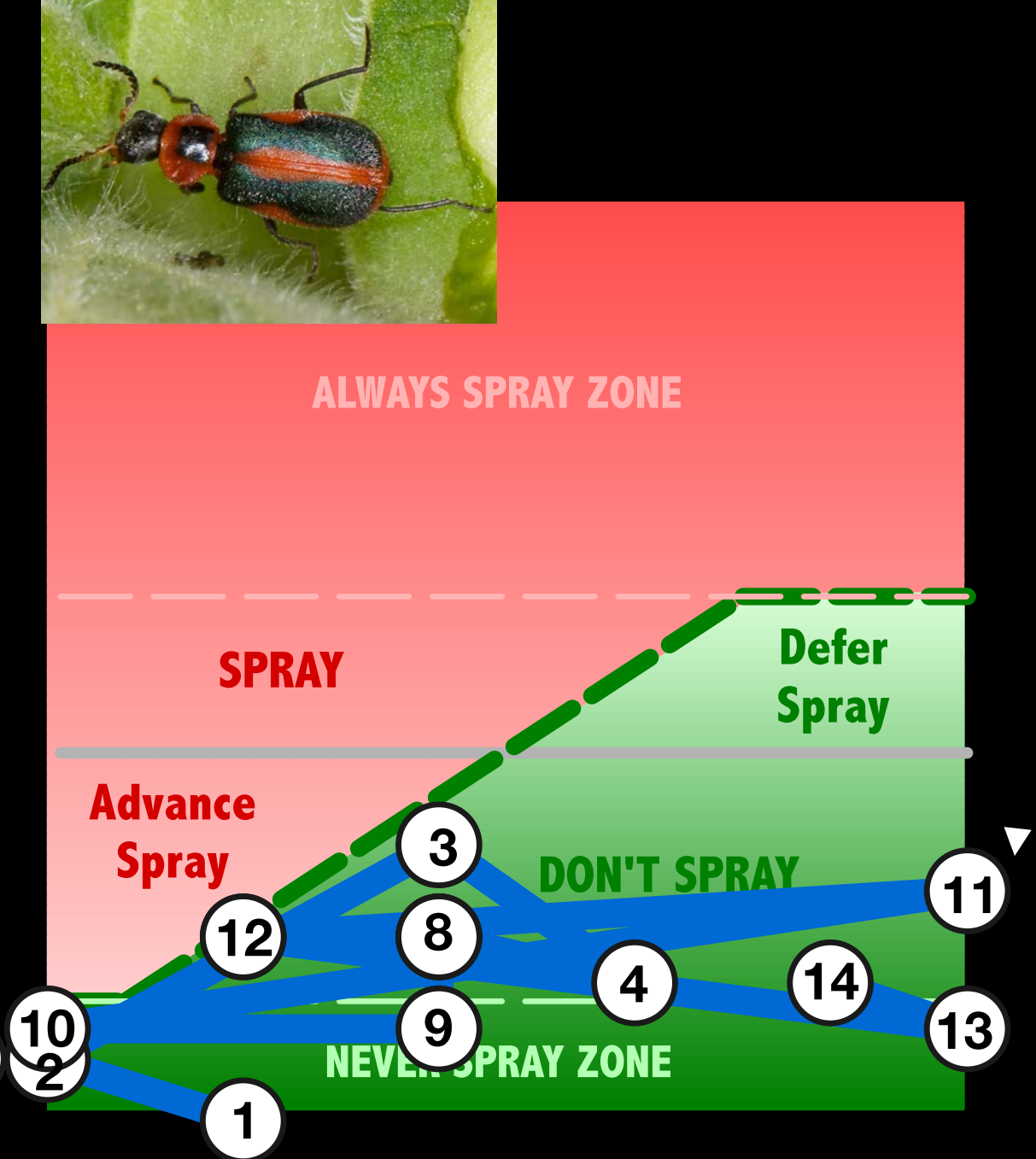
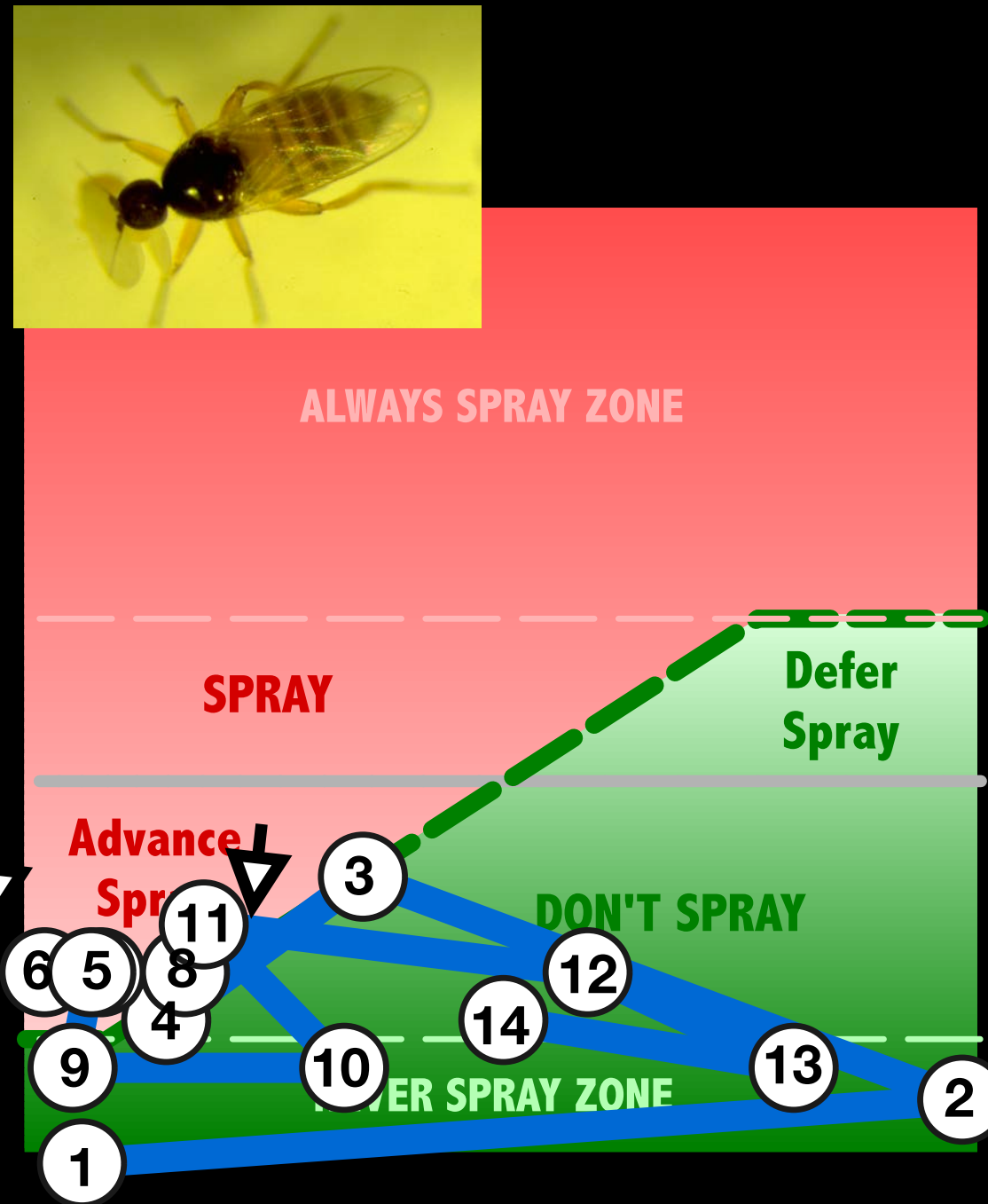
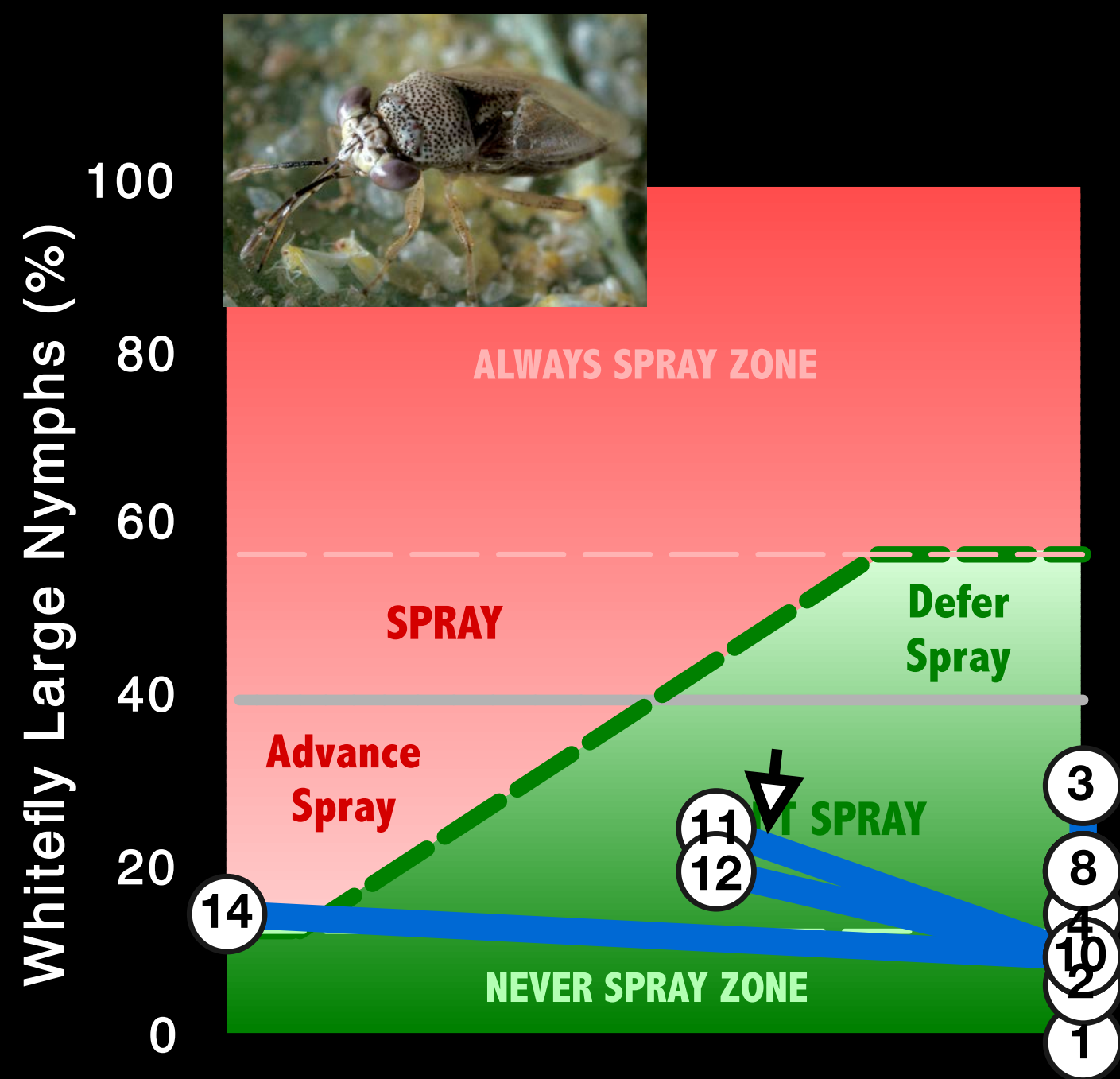
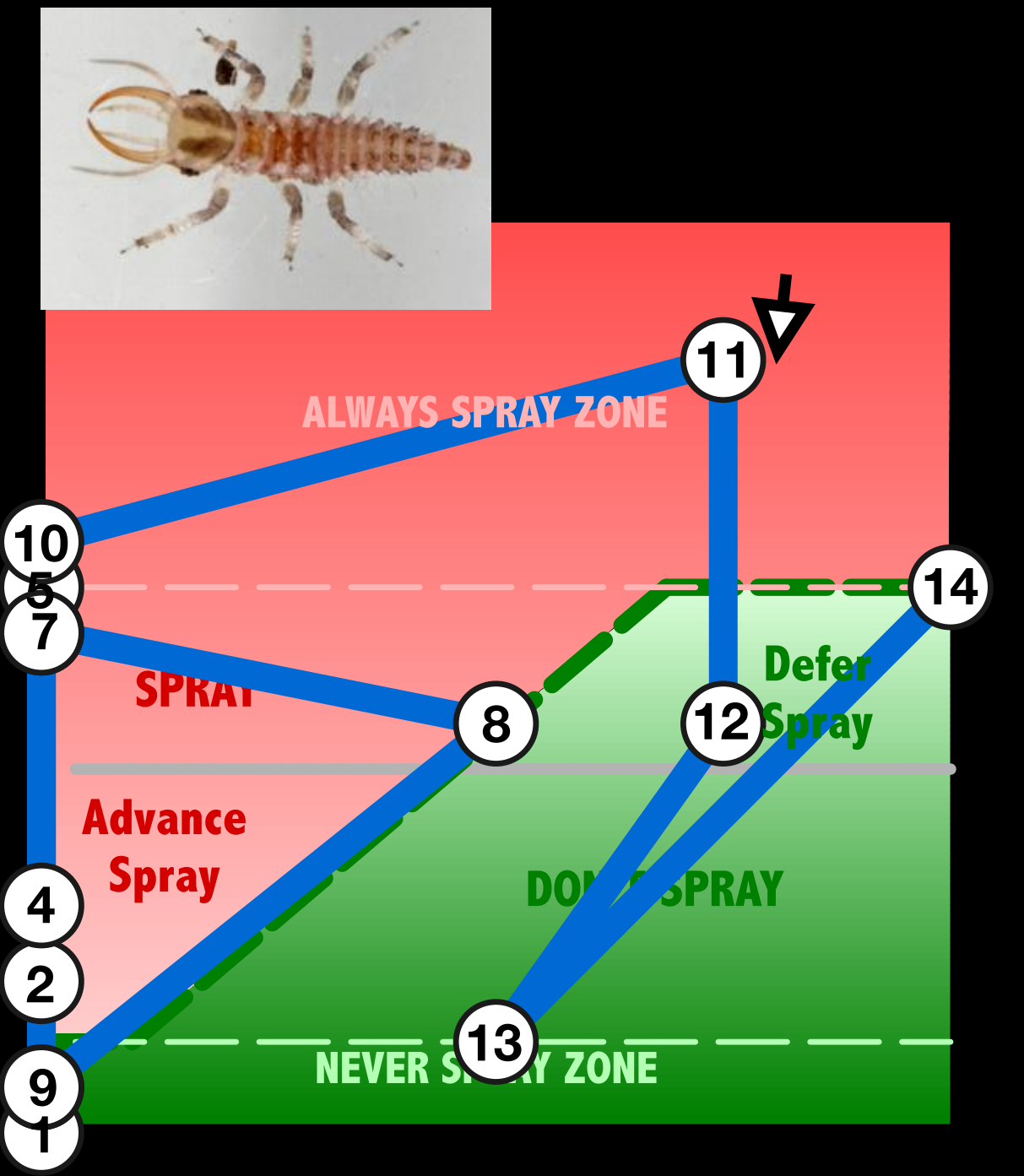
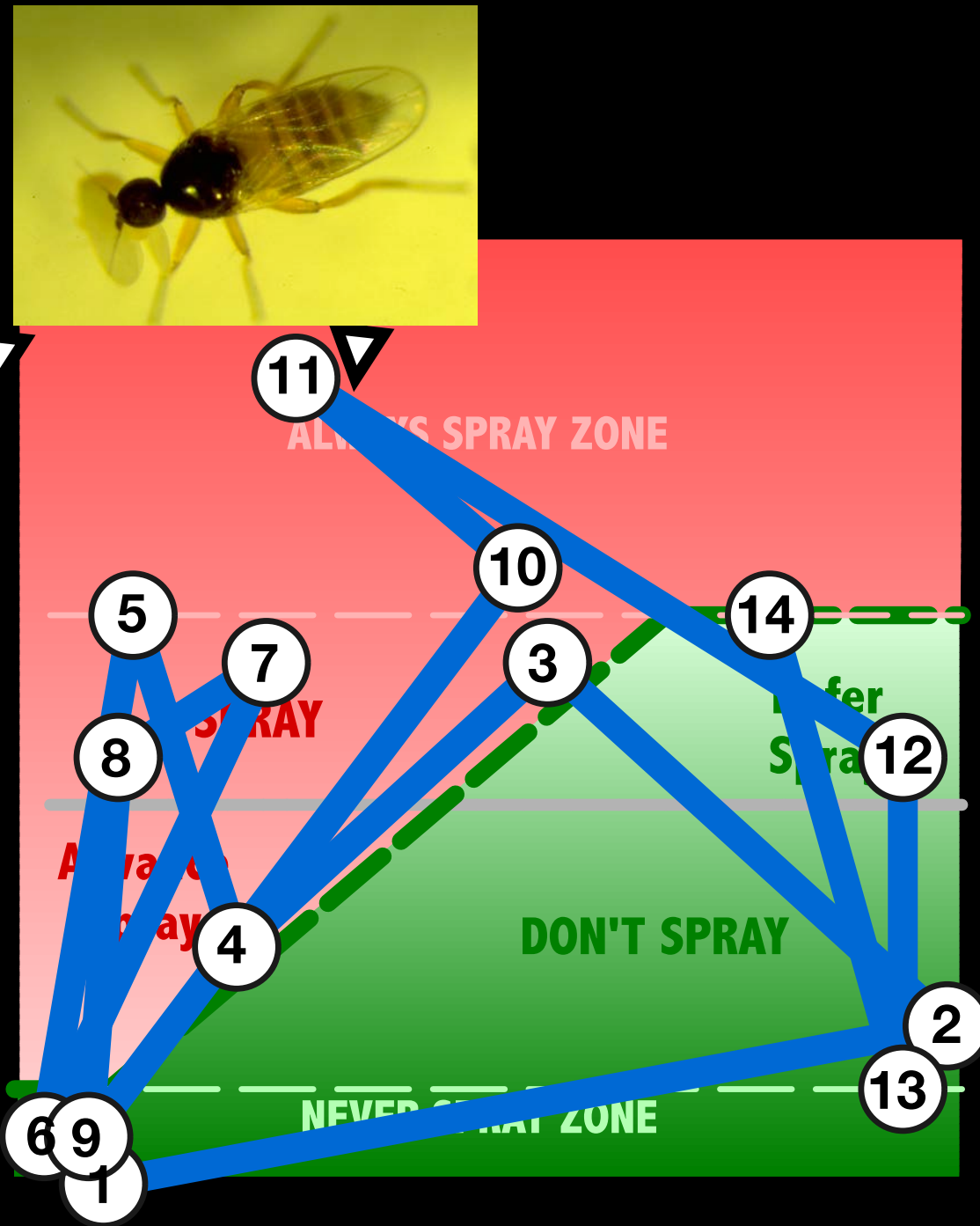
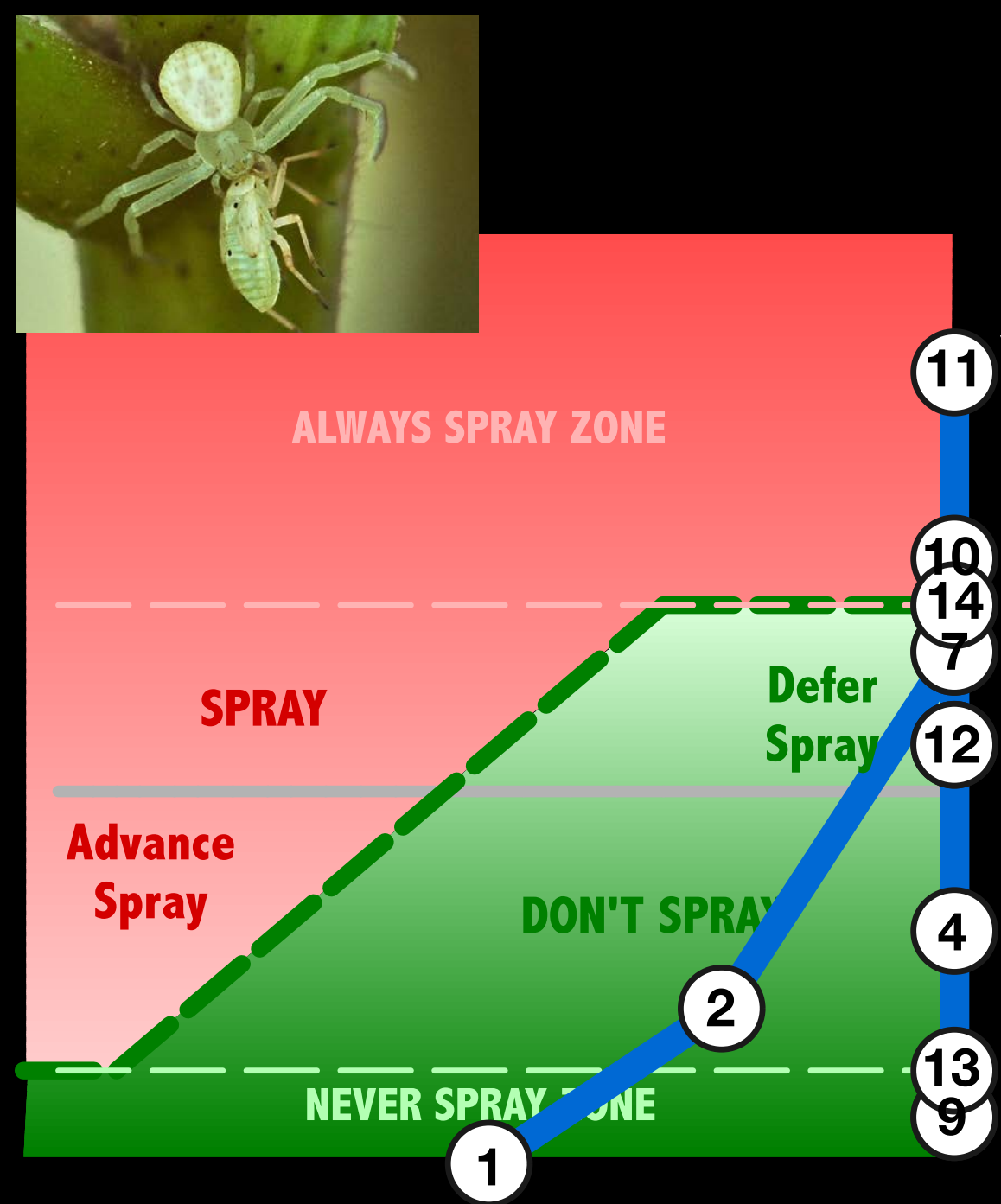
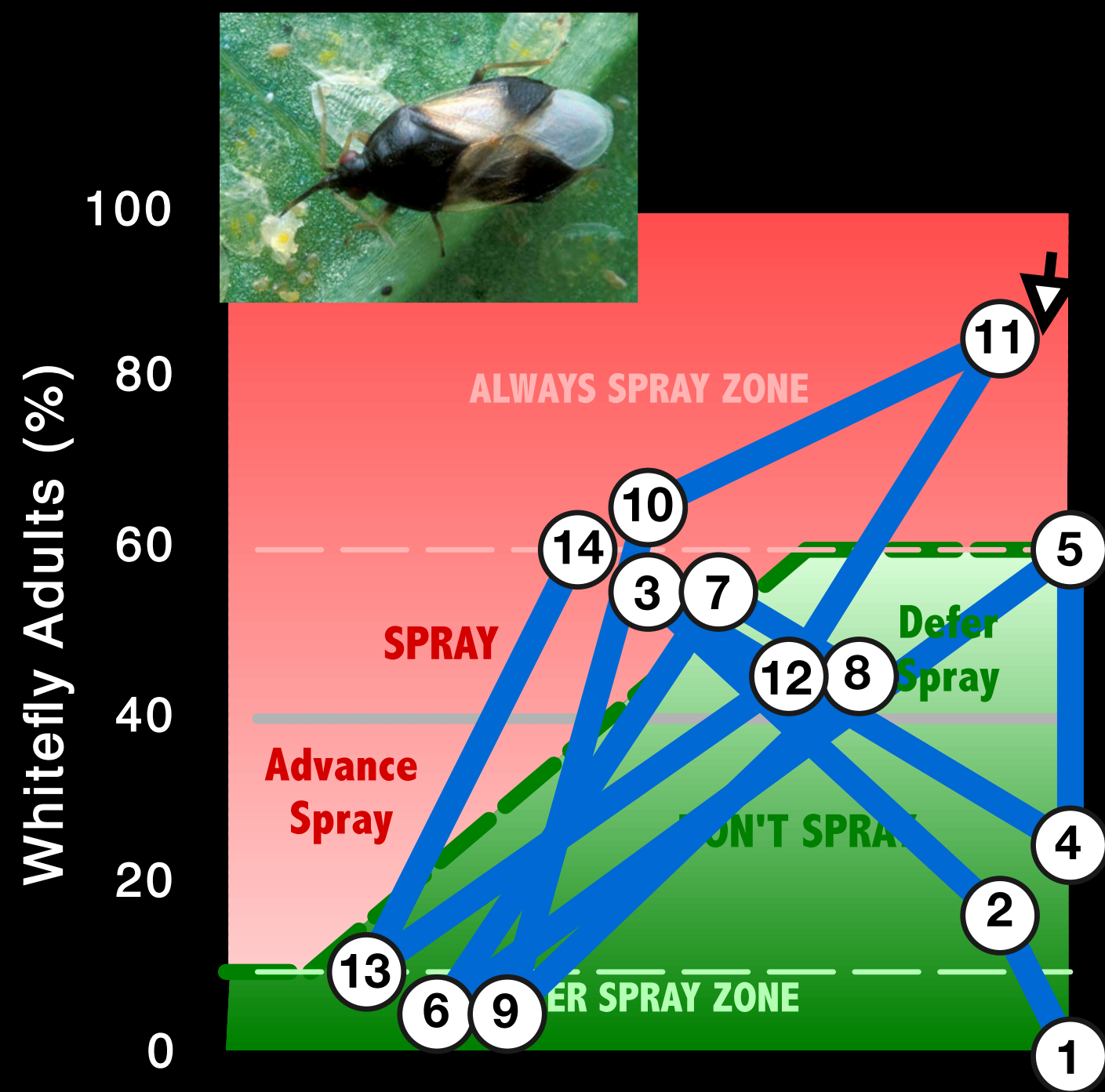
**Sugars excreted by whiteflies
Sooty mold fungi grow on sugars**

**Can we measure this for
in-field decision-making?**



**Samples through
time (5 bouts)**

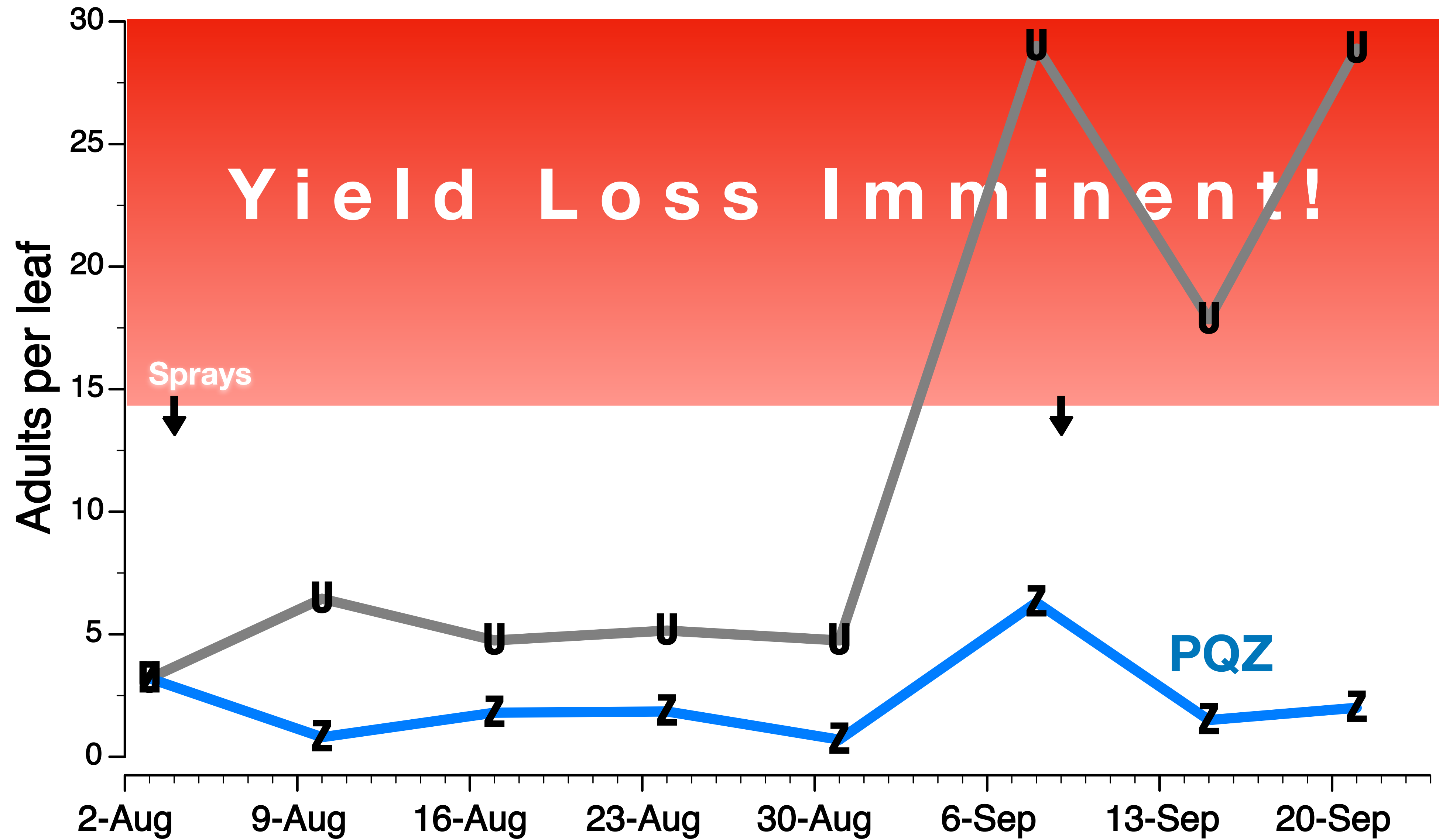


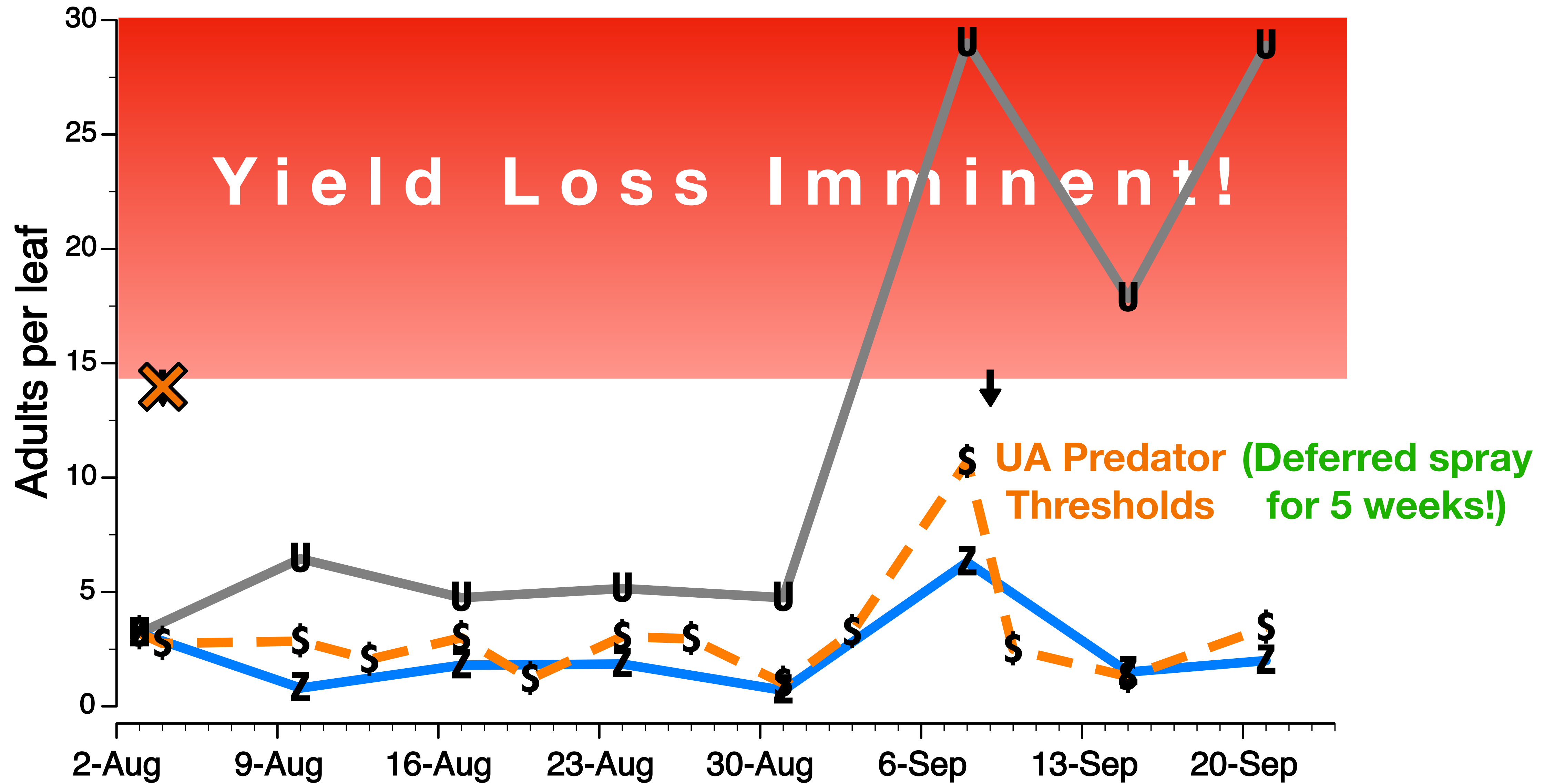


Right Size the Tool for Your Situation









Funding and Support

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USDA-NIFA, Extension Implementation Program



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Alexa Brown
Maxine Cruz
Goya Lizarraga
Jose Partida
Emily Thacker
Tonya Thacker



**COLLEGE OF AGRICULTURE
AND LIFE SCIENCES**

COOPERATIVE EXTENSION
Arizona Pest Management Center

For more information...

Cotton Insecticide Use Guide – Knowing and Balancing Risks

<https://acis.cals.arizona.edu/docs/default-source/ipm-shorts/cottoninsecticiderisk.pdf>

Making Use of Predators in Cotton

<https://acis.cals.arizona.edu/docs/default-source/agricultural-ipm-documents/publications/ptoplamine.pdf>

Making Whitefly & Predator Counts

<https://acis.cals.arizona.edu/docs/default-source/ipm-shorts/predatortopreyratios.pdf>

Predator “Thresholds”

<https://acis.cals.arizona.edu/docs/default-source/ipm-shorts/wfbit.pdf>



Robert Loring Nichols

March 3, 1946 - October 7, 2020