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US

Environment Climate crisis **Wildlife** Energy Pollution Green light

US news

This article is more than 3 months old

US honeybee deaths hit record high as scientists scramble to find main cause

US Department of Agriculture calls in university to help study decline as Trump administration staff cuts sting

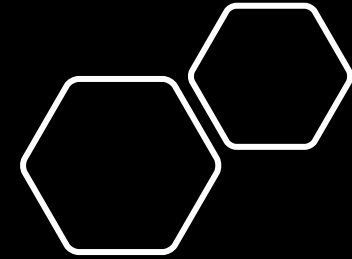
Oliver Milman *in New York*

Tue 25 Mar 2025 06.00 EDT

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Honeybees on a farm in Arcadia, Florida, in 2022. Photograph: Joe Raedle/Getty Images





The age of extinction Bees

'Could become a death spiral': scientists discover what's driving record die-offs of US honeybees

The age of extinction is supported by



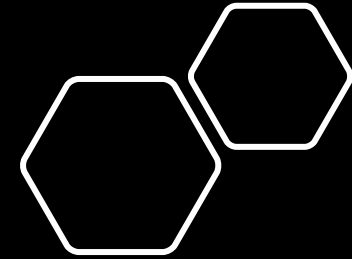
About this content



Phoebe Weston

Tue 8 Jul 2025 06:00 EDT

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Nature.com

Viruses and vectors tied to honey bee colony losses (2020)

Deformed wing virus strains A and B, along with Acute bee paralysis virus, were found at unusually high levels, either in pooled colony samples or in individual bees exhibiting shaking behaviors and morbidity. Differences between these two analyses suggest that direct collections of morbid bees provide a superior diagnostic for causal viruses, a suggestion borne out by confirmation of symptoms and morbidity following isolation and new inoculations. Since these viruses are known to be vectored by parasitic Varroa mites, mites from collapsed colonies were in turn screened for resistance to amitraz, a critical miticide used widely by beekeepers. Miticide resistance was found in all collected Varroa, underscoring the urgent need for new control strategies for this parasite. While viruses are a likely end-stage cause of colony death, other stressors such as nutritional stress and agrochemicals may have also played significant roles.

Key Takeaways

- Trend was identified five years ago
- Varroa Mites Growing Resistant to Amitraz

USDA (2025)

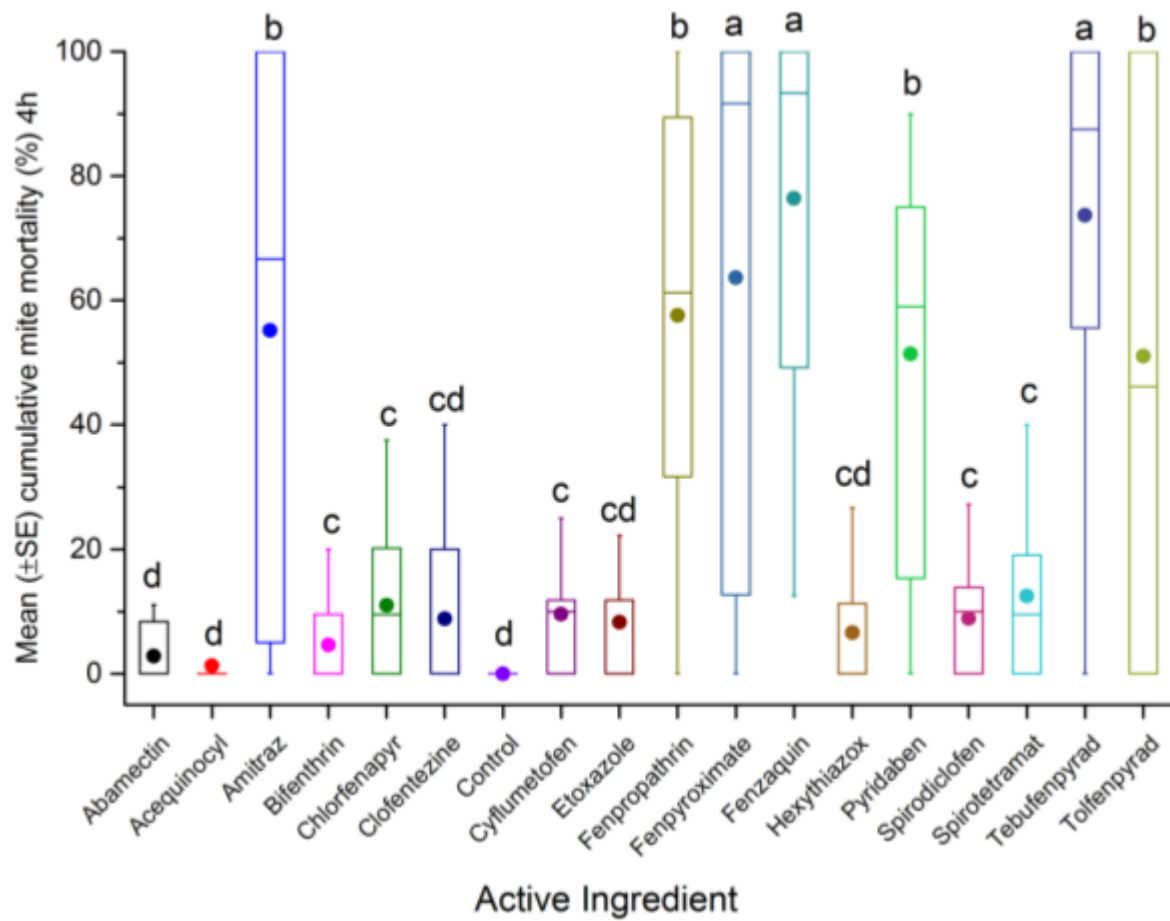
Currently, populations of *Varroa* mites globally have developed resistance to the pyrethroid, Apistan (824 mg of tau-fluvalinate/strip, Vita Europe), and to the organophosphate, Checkmite (1300 mg coumaphos/strip, Bayer)¹. Additionally, resistance is emerging to the only remaining viable formamidine miticide, Apivar (500 mg of amitraz/strip, Veto Pharma)¹²

The Guardian (2025)

Due to government staffing cuts, the USDA team were unable to analyse pesticides in the hives and asked [bee experts at Cornell University to carry out the research](#), with the results still to be published.

Key Takeaways

- Top Miticides Becoming Ineffective
- USDA Cuts Affect Ability to Analyze Die-offs



Key Takeaways

- The Race is On to Find the Next Great Miticide

Advantage Shifts to Backyard Beekeeper

We Have the Time

Visit the Hive Often

Count Mites

We Have Effective Methods

Control Mites Before They Get the Upper Hand

Reduce Mite Counts if They Get out of Hand

We Know Our Results Early

We're Not Pollinating Almonds

Now All We Have to do is DO IT

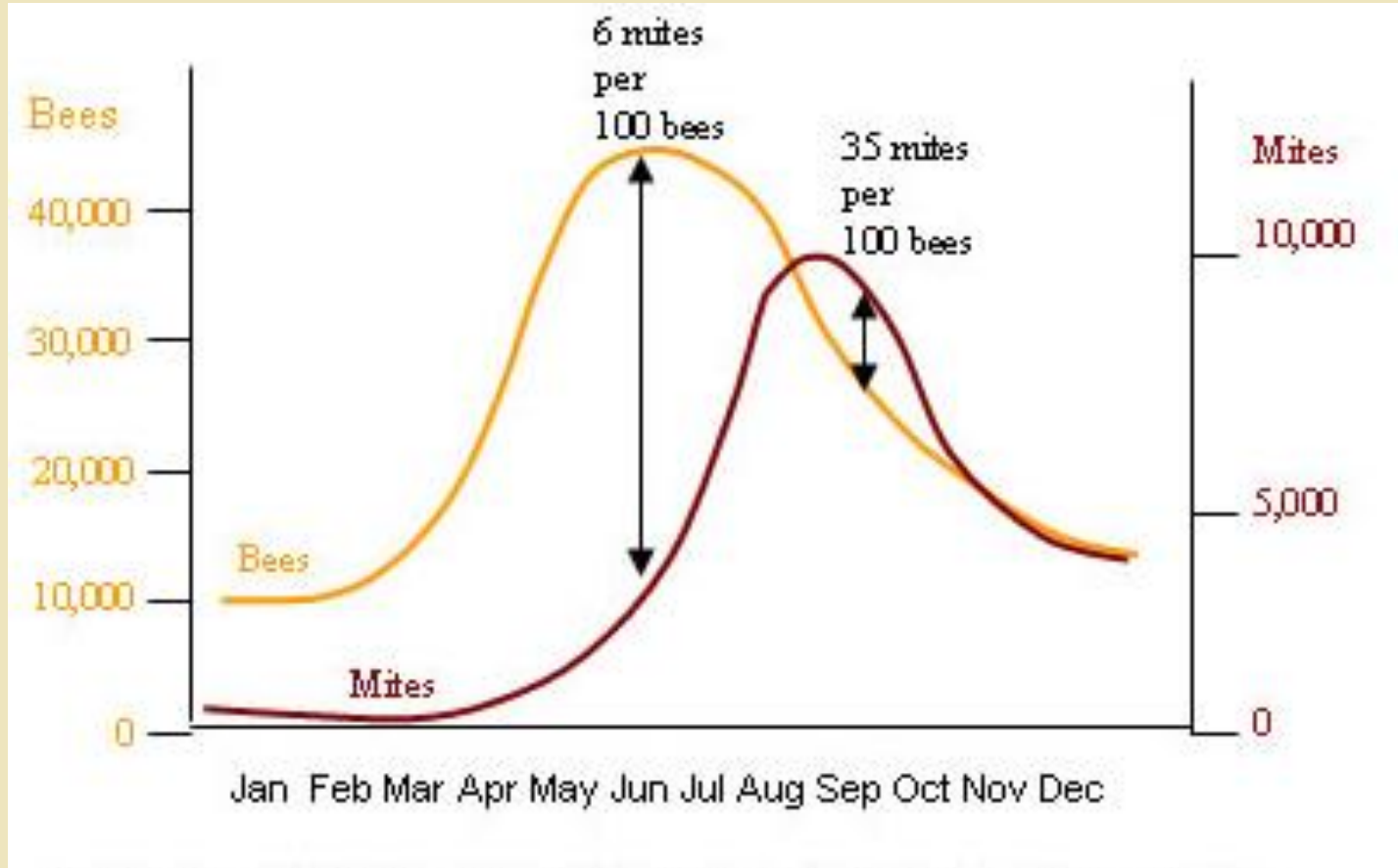
This is on YOU

The Mighty Mite



Mite Basics

June Sept
1% -> 6%
2% -> 12%
3% -> 18%



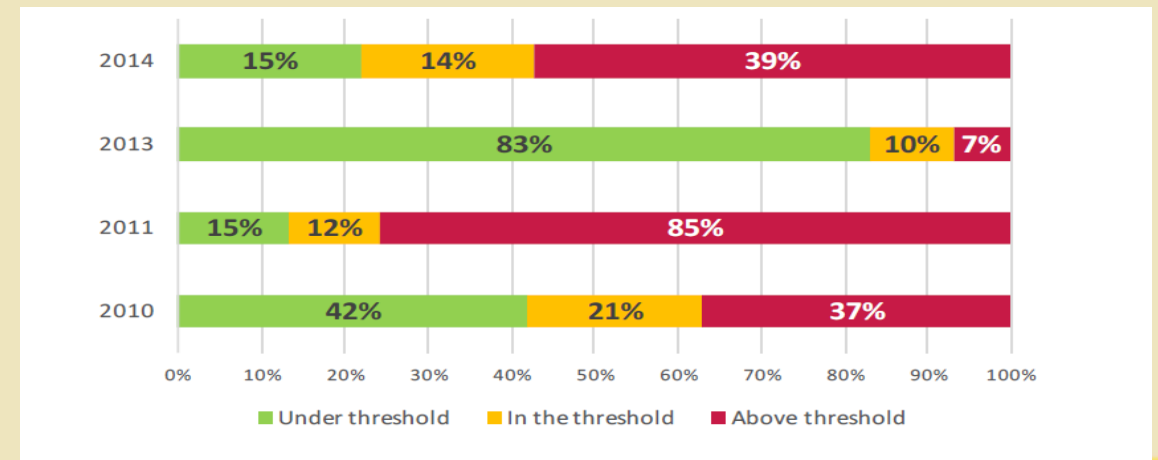
Source:
Randy Oliver for a
Temperate Climate



Facts to Consider

- Mites Don't Kill
- Every Year is Different from a Mite Load Perspective
- A 3% Phoretic Infestation Loses 11lbs of Honey Per Harvest
- If You Don't Count Then You Don't Know

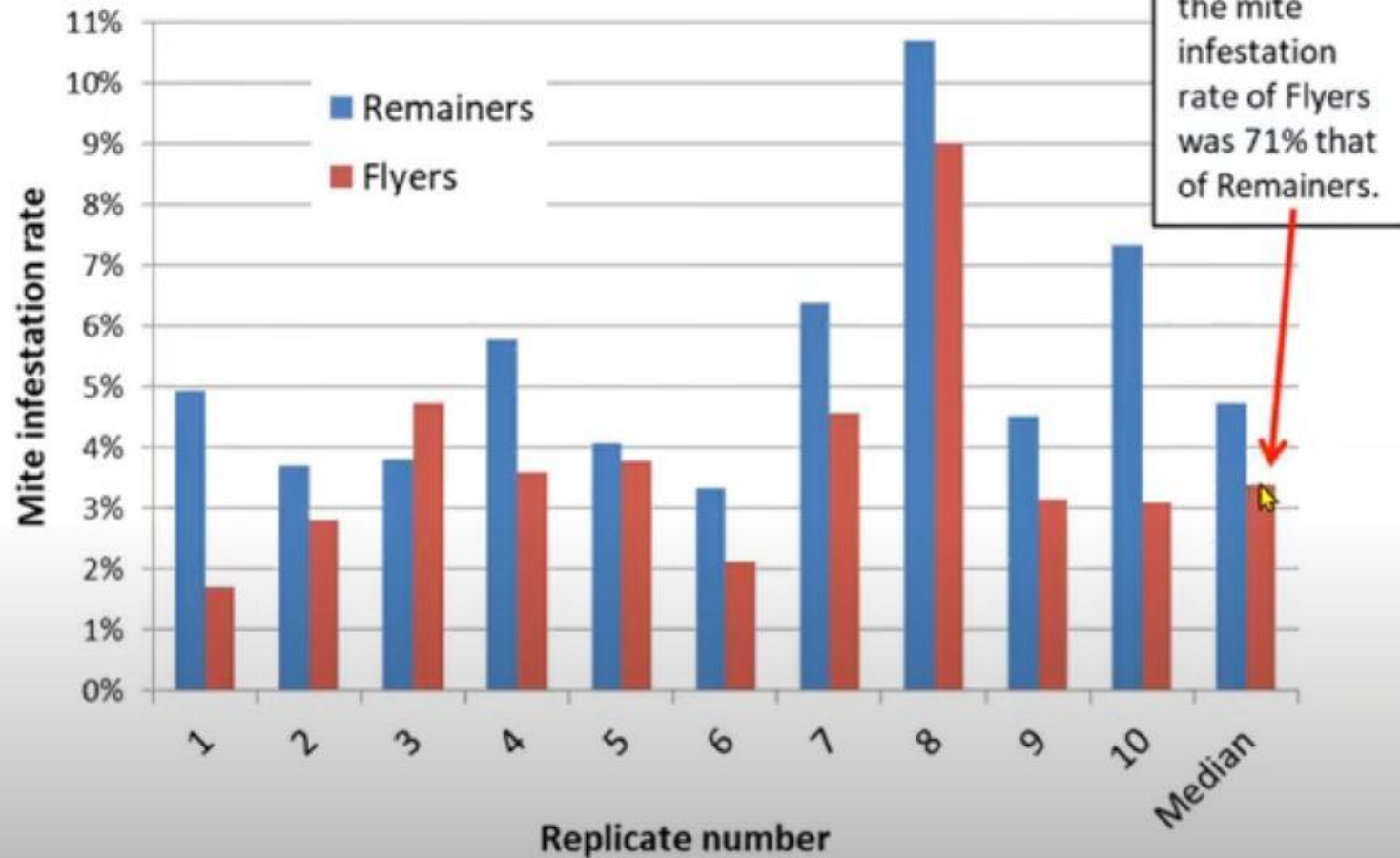
Manage Your Mites!



A pair of worn, black and brown work gloves resting on a wooden surface. The gloves are made of a dark, textured material, possibly cotton or a blend, with brown leather or suede patches on the palms and fingers. The stitching is visible, and the gloves show signs of use, including some fraying and discoloration. The background is a blurred wooden surface, suggesting a workshop or construction site.

Mite Count Basics

Comparison in mite infestation rate between bees remaining vs. flying off

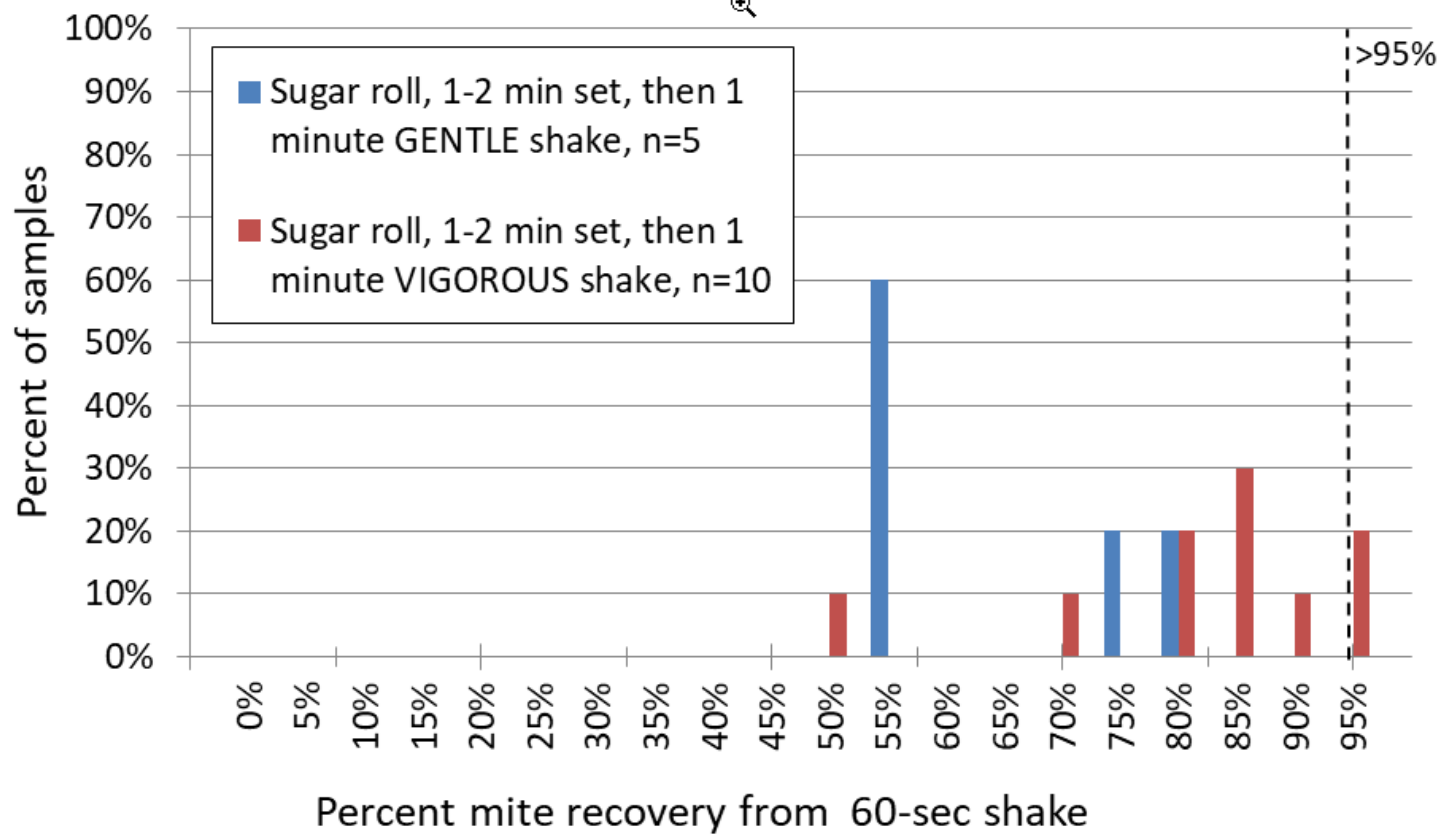


Foragers vs. Nurses

26:07 / 59:03 • The "staying" bees had ~1.2x higher infestation rate than the original sample. CC



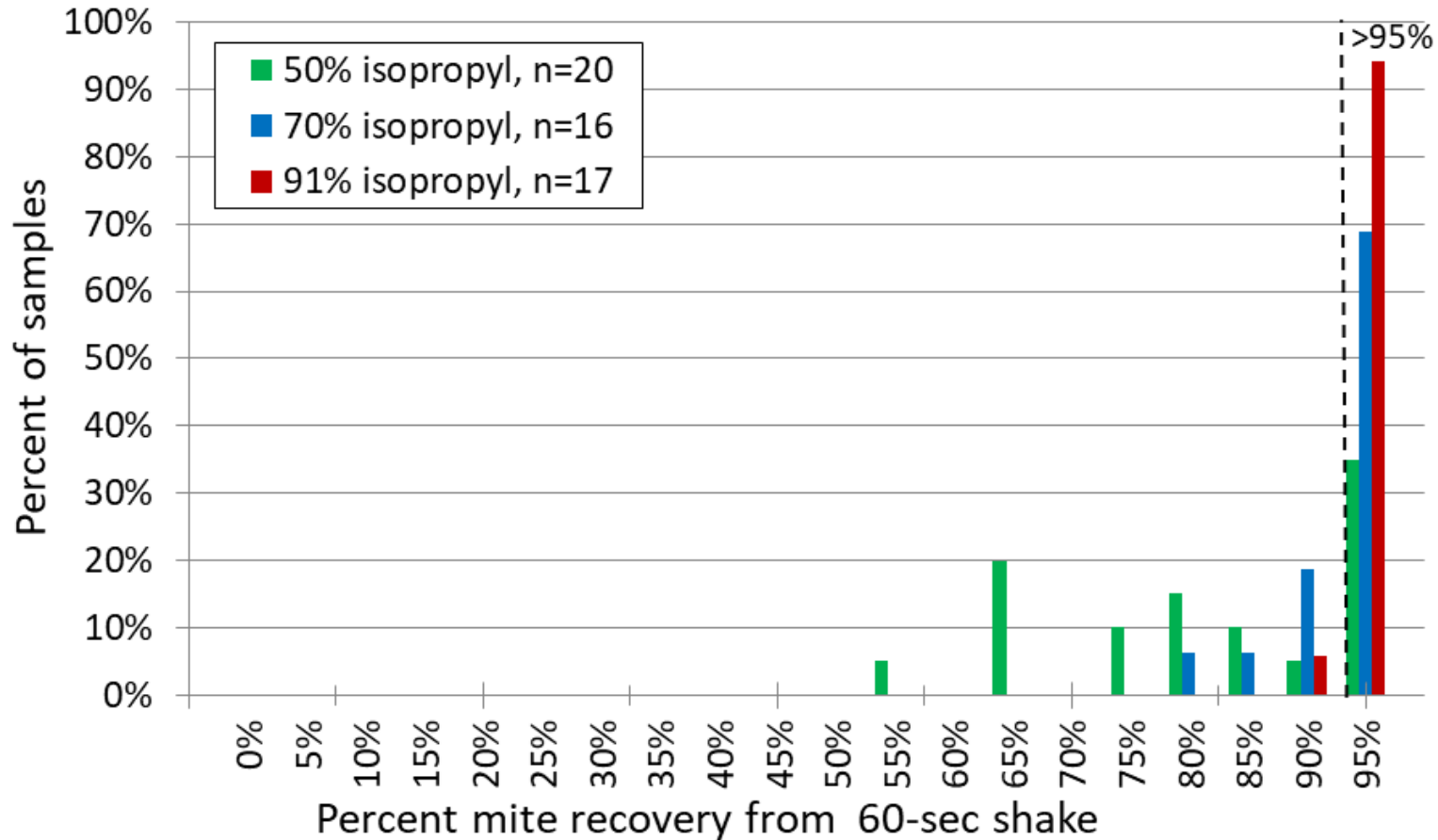
Distribution of mite recovery results, using the sugar "roll & shake"



The Sugar Shake



Distribution of mite recovery results, using isopropyl alcohol



Alcohol Isn't
all the Same





Little immobilization, nearly all mites survived.

Mites immobile, then near complete recovery.

Near complete kill of the mites.

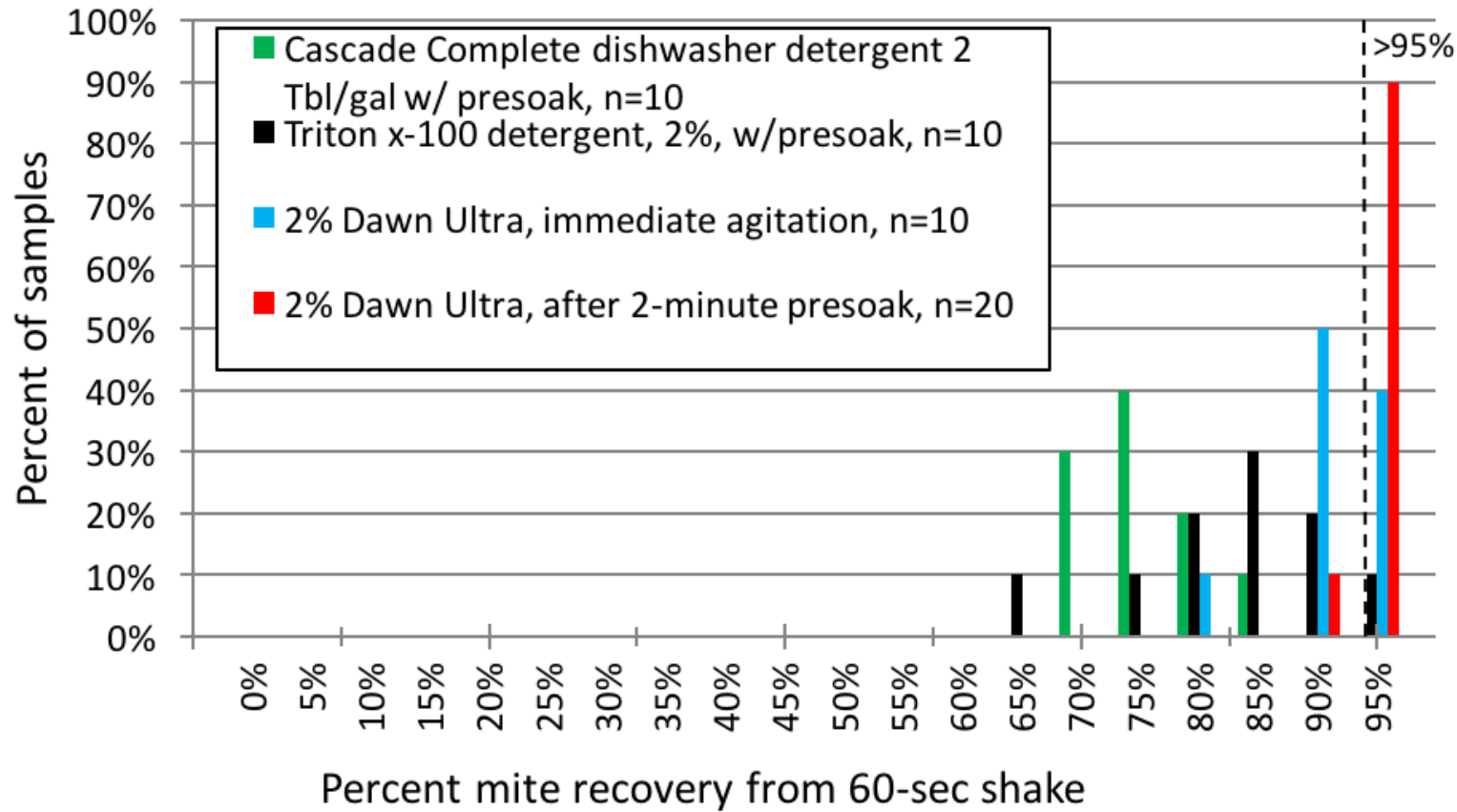
Slow recovery of about a third of the mites.

Quick recovery of around two thirds of the mites.

Alternatives to Alcohol



Distribution of mite recovery results, using detergents



And the Winner





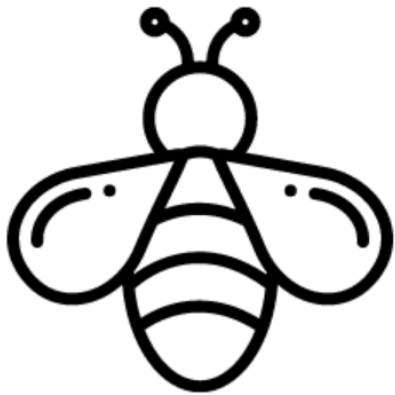
What it
Looks Like



The ABC's of the TVBC - What to know for July, 2025...

Apiary

What your bees are doing

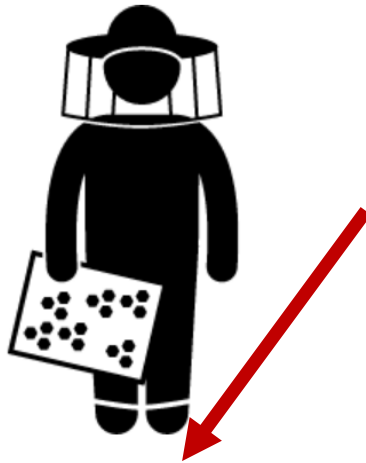


WHAT ARE THE BEES DOING?

1. Hives/colonies are in full bloom as the flowers are too.
2. Gathering nectar, pollen and propolis.

Beekeeper

What you should be doing

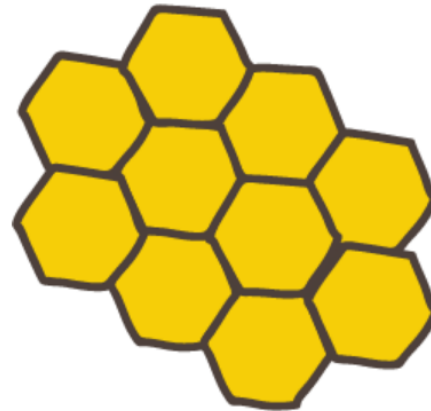


BE A MITE BUSTER

1. Do your first mite test if you haven't already.
2. Prepare for and harvest honey.

Community

What your community is doing



CALENDAR OF EVENTS

- 6/28 FLC Hive Inspection Demonstration 9:30am
- 7/3 Night Market, 9th&Main, Boise 5-9pm

Requirements for shirt and drawing

- For all TVBC club members current with dues as of **August 1, 2024**
- Have three online entries, or
- At the **October meeting** submit the PDF or excel form below showing a mite check for three consecutive months (ideally August, September, October):
- We also welcome photos of your journey (mites, mite tests and mite treatments).
- Entries will be tabulated in November.

Rewards

- Every entry will receive a Mite Busters t-shirt
- Major gifts including restaurant gift certificates, bee magazine subscriptions and bee supplies.

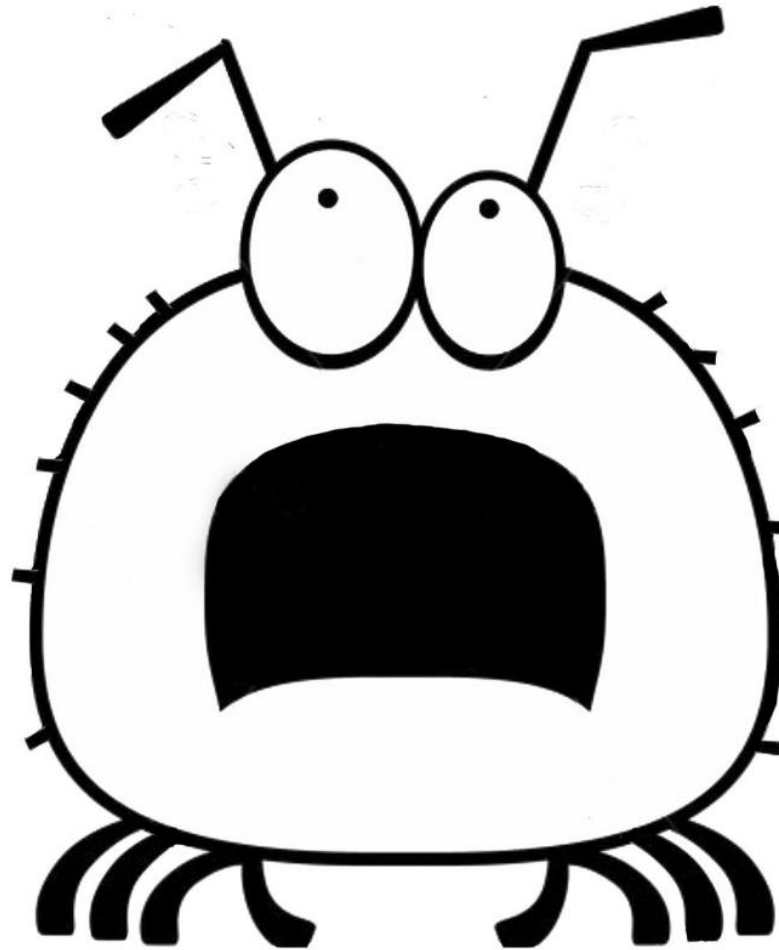


Mite Busters Worksheet
[Download File](#)



mite_check_excel_sheet.xlsx
[Download File](#)

ENTER TEST RESULTS



TVBC Mite Test Results

Please record your mite test results below. Members in good standing with mite test results posted for three months will receive a free shirt and be entered in an October drawing for prizes.

marcvonhuene@gmail.com [Switch account](#)



* Indicates required question

Email *

Your email



Are there any notes you want to add to this entry?

Your answer

Number of mites detected *

Your answer

Your name *

Your answer

Date of test *

Date

