



Jackson County Beekeepers Monthly Newsletter

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Varroa Destructor



The *Varroa destructor* mite, seen in a scanning electron micrograph, is a devastating parasite of honey bees. WELLCOME IMAGES/SCIENCE SOURCE.

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November & December 2022
TOP NEWS

2022 Club Meetings

Club meeting on Thursday, December 1, 2022, at the ALFA building on Hwy 72 in Scottsboro.

A demonstration by Marguerite and Robert McClintock from Under Clover Apiary (they're on FB). In this workshop, they'll touch upon the properties of natural beeswax, and do a few demos of projects you can make on your own. Finally, we'll discuss some shortcuts and have a Q/A. Marguerite says: "We are not experts by any means, so we love ideas from others 😊"

The meeting will start at:

- **6:00 PM**

Current Management (year 2)

February is traditionally our changing of the Guards so to speak, and as of February 4th, 2022 our leaders are:

- Ray Latham - President
- Keith Fletcher - Vice President (Acting president while Ray has surgery)
- Dustin Davis - Secretary
- Meindert Dijkhuis - Treasurer/editor

Current directors are:

- Lane Walden and Jeremy Mulkey will be up for re-election since their 1-year term is up this year. (They fulfilled the remaining term of 1 year left vacant by Ray Latham and Keith Fletcher when they were elected President and VP last year).
- Rob Woody and Charlie Smith were elected for the full 3-year term. (This is year 2)
- Terry McClendon will continue to serve the remainder of his term. (year 3)

Deb Davis has requested to be dismissed from her duties. (This was her last year too) We're looking to fill her spot. Let us know if you like to volunteer. (Calling all ladies!!!! This is your chance.)

Club Resources you can use!

- If you want to use any equipment, like the extractors, or EZ-Vape, for instance, CALL or TEXT Keith Fletcher at (703)887-6071 and reserve whatever you need.

2022/2023 Membership Drive Begins

Although February is traditionally the month to renew your membership, we like to encourage you to become a member now. If you sign up in November or December, we'll carry your membership over to 2023. The Board would like to encourage you to renew your membership by mail if you're still apprehensive to attend live meetings due to the COVID thread. We understand.

Please forward your \$10.00 membership payment (remember, it covers your whole household) to:

- **JCBA, attn Treasurer Meindert Dijkhuis, 794 Hendrix Rd, Sylvania, AL 35988.**

Please include your Name, Address, Phone-number, and eMail. You will receive your proof of payment in return mail.

Be a Contributing Editor.

If you have questions, ideas, articles, YouTube video links, or subjects you would like to share with our Club Members, please let me know by sending me an email to meindertdijkhuis@gmail.com

Feel free to write something, and I'll be glad to add it. We want to share information.

Business Opportunity.

I received a message from Mr. Chris Gully. He runs a Hardware Store in Bridgeport, AL. He's looking for someone to sell honey products at his store. If you are interested in this opportunity, please call him on (256) 495-1033 (store number)

Let's Talk Bees!

On November 3rd, we had an interesting talk from Master Beekeeper Bill Elliott from the Madison Beekeepers Association. The focus of his talk was about Varroa Treatment of his beehives, and the plan he implemented to battle this threat.

We all know about Varroa, but do we know how it came about? Like so many other ruinous pests, Varroa started to cause trouble after it moved to a new host. One species, *V.jacobsoni*, is a long-standing parasite of Asian honey bees throughout their home range of southern Asia. It reproduces in the bees' brood cells, where it feeds on the larvae, but it typically doesn't destroy colonies. One reason is that the mite lays its eggs only on larvae that will become drones—the males that mate with queens—and hives produce only a few drones. If the mite does target the more numerous larvae of worker bees, they commit suicide (a process called social apoptosis), preventing the mite from reproducing. The natural process of starting a new colony, called swarming, also gives colonies a fresh start; when a queen and a swarm of workers abandon their old hive, they leave behind the reproducing mites as well.

In the mid-20th century, after apiarists brought European colonies to Asia, the mite found its new host. The European bee, which beekeepers prefer for its large colonies and docile workers, generally lacked the Asian variety's defenses. Breeders had selected against swarming behavior, for example, because keepers don't like queens to abandon their hives. The mite quickly adapted to its new host, and it routinely infests the larvae of European worker bees. The result was a new strain of Varroa—defined as the new destructor species in 2000—which ran amok. It now afflicts European bees everywhere except Australia and a few islands. (Copied from <https://www.science.org/content/article/breeders-toughen-bees-resist-deadly-mites> - Erik Stokstad 2019)

In this edition of the newsletter I wanted to address some of the resources Bill discussed, and reiterate the importance for checking your colonies for Varroa. His main information was provided by the Honey Bee Healthy Coalition, and by Randy Oliver's Varroa Model that can be found on scientificbeekeeping.com. (see links below)

[Varroa Management - Honey Bee Health Coalition](#)

[TOOLS FOR VARROA MANAGEMENT](#)

[Varroa Management Decision Tool](#)

[Randy's Varroa Model - Scientific Beekeeping](#)

For starters;

- A. Your colonies have varroa**
- B. You will not “see” them on your bees**
 - a. They tend to feed on the bee’s underside**
- C. Varroa reproduce under capped brood cells**
 - a. We see capped brood for 8 to 10 months (or 11?) in AL**
 - b. Worker cell: 1.3 – 1.45 mites (12 days)**
 - c. Drone cell: 2.2 – 2.6 mites (15 days)**
 - d. Drone cells are preferred**
- D. Varroa populations grow exponentially**
 - a. Population roughly doubles monthly**
 - b. Once mite load exceeds 4%, growth rate seems to increase**
- E. Mites reproduce only under capped brood cells**
- F. You must treat for varroa (with proven products)**
 - a. or your bees will likely die ... or abscond in the Fall or Winter**

What are the effects of Varroa on your hives:

- A. Varroa feed on bees both while pupating and also as adults.**
- B. Weaken their immune system**
- C. Increase susceptibility to viruses**
- D. Varroa are vectors for many viruses; especially**
 - a. Deformed Wing Virus**
 - b. Acute Bee Paralysis Virus**
 - c. plus many more viruses and more are being discovered**

Treat or not to Treat! How do you know?

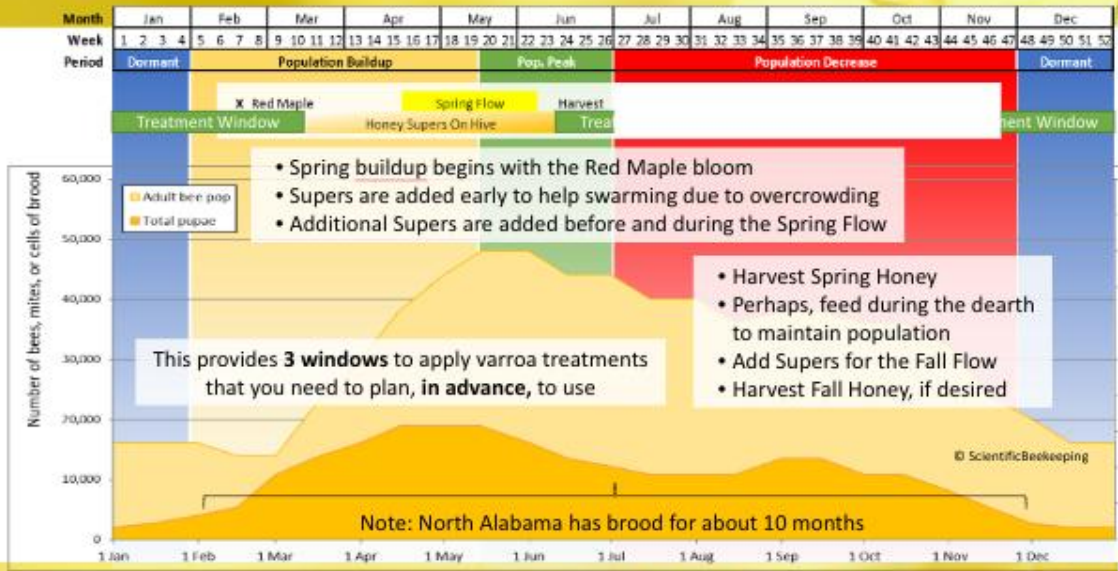
Frequent Testing My Friend. (see page 7 of the Tools.... Link on how to test)

Based on Bill Elliott’s own findings, this is the only way to find out. Do an early test (January) to set a baseline for your colony, and with help of the tools listed in the links above, establish a timeline for optimum treatment effect, and base your annual plan on that.

Bill shared a great Alabama Beekeepers Calendar, which he overlays with a Varroa breeding/growth timeline.

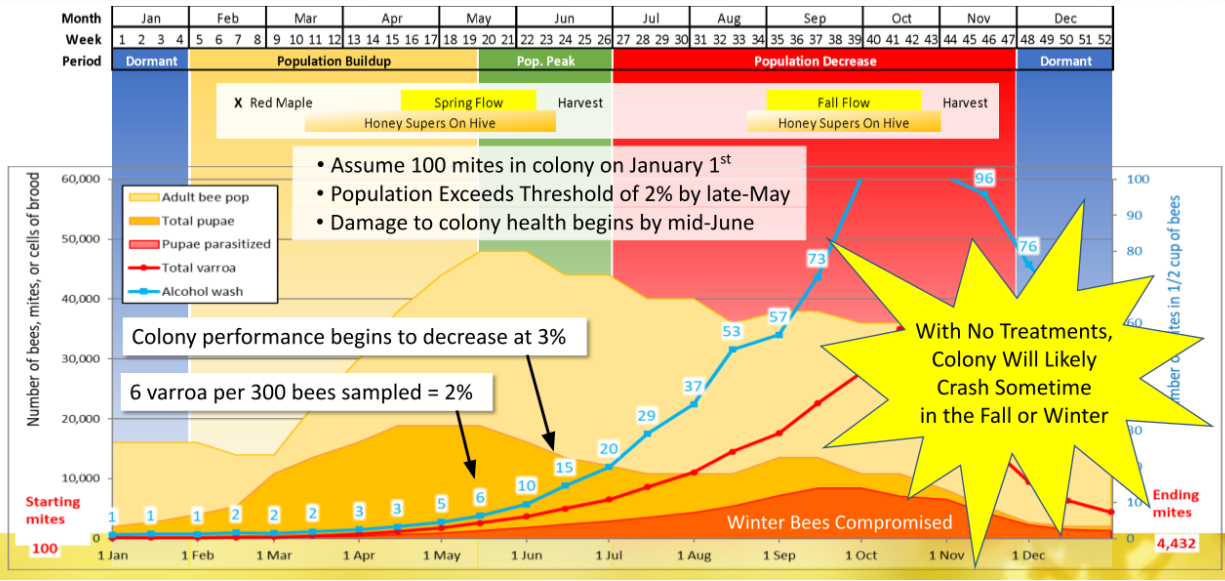
See next page

North Alabama Beekeeping Calendar



Note: Colony and Varroa model developed by Randy Oliver. Model is available at <http://scientificbeekeeping.com/randyx-varroa-model/>

Now, Overlay the Varroa Population Growth



Varroa Treatment Options¹

Only Highly Effective Options Provided

TOOLS FOR VARROA MANAGEMENT

A GUIDE TO EFFECTIVE VARROA SAMPLING & CONTROL

HEALTHY BEES · HEALTHY PEOPLE · HEALTHY PLANET™



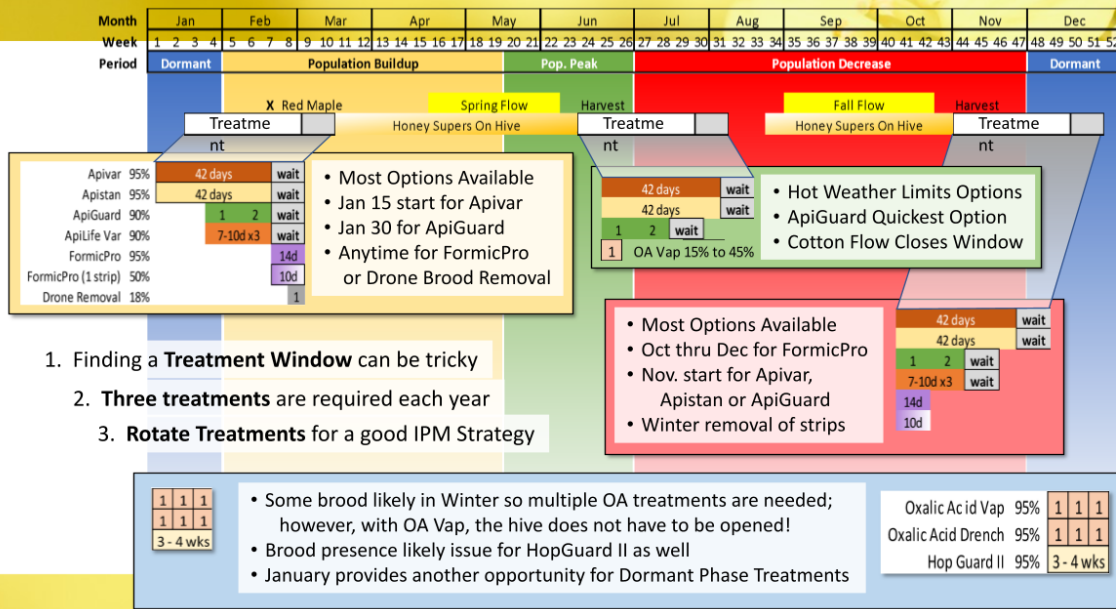
Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec								
Week	1 2 3 4	5 6 7 8	9 10 11 12	13 14 15 16 17	18 19 20 21	22 23 24 25 26	27 28 29 30	31 32 33 34	35 36 37 38 39	40 41 42 43	44 45 46 47	48 49 50 51 52								
Period	Dormant				Population Buildup				Pop. Peak				Population Decrease				Dormant			

Timeframe Treatment Option Length Efficacy Supers Comments

- Oxalic acid (vaporization) 1 day 95% □ Fumes extremely dangerous
- Oxalic acid (dribble) 1 day 95% □ May chill cluster
- HopGuard II 2 weeks 90% ✓ Little to no brood is best
- ■ ■ ■ Apivar (amitraz) 42 days 95% □ Wait 2 weeks to add Supers
- ■ ■ ■ Apistan (tau-fluvalinate) 42 days 95% □ Temp > 50°F (historical issues)
- ■ ■ ■ Apiguard (thymol) 14d, twice 74-95% □ Temp > 59°F, wait 2 wks to super
- ■ ■ ■ ApiLife Var (thymol plus) 7-10d, 2-3x 70-90% □ Temp 65°F to 85°F, wait 2 wks
- ■ ■ ■ FormicPro (formic acid) 2 weeks 95% ✓ Temp < 92°F
- ■ ■ ■ FormicPro (1 strip only) 10 days 50% ✓ Temp < 92°F, knock down dose
- ■ ■ Drone Brood Removal 1 day 15-20% ✓ May be used 2-3 times

¹https://honeybeehealthcoalition.org/wp-content/uploads/2018/06/HBHC-Guide_Varroa_Interactive_7thEdition_June2018.pdf

Treatment Options Available by Time of Year



Varroa Mite Treatment Threshold



In order to determine your mite level, you need to sample your colonies on a regular basis using the alcohol wash or sugar shake method. See the *Tools for Varroa Management Guide* in the Resources section for the sampling process.

Use the chart below to determine if you should treat or whether you are at an acceptable mite level.

Table: Treatment Thresholds by Phase (% = Number of mites/100 adult bees)

Colony Phase	Acceptable Further control not needed	Danger Control promptly
Dormant with brood	<1%	>2%
Dormant without brood	<1%	>3%
Population Increase	<1%	>2-3%
Peak Population	<2%	>3%
Population Decrease	<2%	>2-3%

Bill Elliott's lecture provided a compelling story to treat your colonies for Varroa; if you don't do it today. Although I am fully aware of the threat Varroa poses, I have never treated my hives in all of the seven years I have been keeping bees. Yes, I have lost colonies, but blamed it primarily on myself when that happened. My philosophy has always been: Bees know best, let them be. However, Bill's compelling message suggests otherwise. At minimum, we should test for mites. By sacrificing a few hundred bees for these periodic tests, we can prevent a colony's demise, and prevent disappointment on our part, when it actually happens.

Below is a link to a YouTube link on how to check for Varroa with an alcohol wash. This test takes about a cup of bees (ca 300)

[How to check for varroa mites in a beehive](#)

The Challenge:

So, Let's all do a Varroa test in January to set the baseline for 2023. It would be cool if you shared your data/findings with me, and maybe we can chart it out, and report on "the State of the Varroa" in the February or March Newsletter or during our club meetings.

My email is meindertdijkhuis@gmail.com. Let me know how many colonies you tested, and what the results for each are (Varroa count per 300 bees), and the location of your hive (Zip Code)

Favorite Book List

Keeping Bees in Horizontal Hives: A Complete Guide to Apiculture

Georges de Layens & Gaston Bonnier

Dr. Leo Sharashkin (editor)

374 pages, 250 ill.

\$39.95. ISBN 978-0-9842873-6-9

Deep Snow Press, 2017

***Keeping Bees With A Smile: A Vision and Practice of Natural Apiculture* (I Like!)**

Fedor Lazutin

Dr. Leonid Sharashkin (editor)

402 pages, 140 ill., 32 full-color photos

\$24.95 (on sale). ISBN 978-0-9842873-5-2

Deep Snow Press, 2013.

Honeybee Democracy Hardcover – Illustrated, October 10, 2010

by [Thomas D. Seeley](#) (Author)

Can be purchased Used for \$14.00. \$22.00 on Amazon

Honeybees make decisions collectively-and democratically. Every year, faced with the life-or-death problem of choosing and traveling to a new home, honeybees stake everything on a process that includes collective fact-finding, vigorous debate, and consensus building. In fact, as world-renowned animal behaviorist Thomas Seeley reveals, these incredible insects have much to teach us when it comes to collective wisdom and effective decision making.

Raising Honeybee Queens

by Gilles Fert (Author) Dr. Leonid Sharashkin (editor)

144 pages, 150 full-color illustrations

\$29. ISBN 978-0-9842873-8-3

Deep Snow Press, 2020

Note: The above books are available in the JCBA Library.