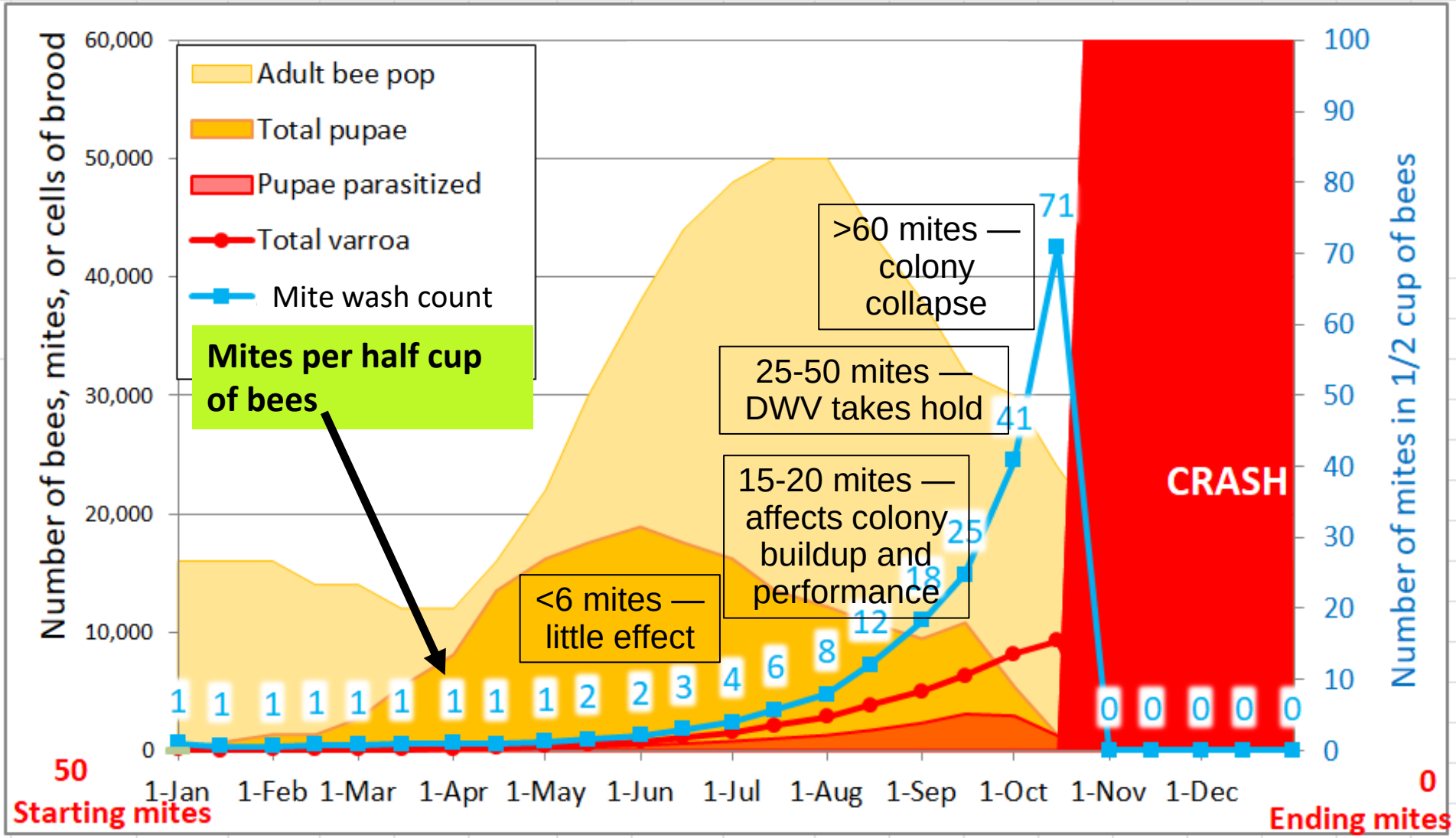
MONITORING THE VARROA INFESTATION RATE

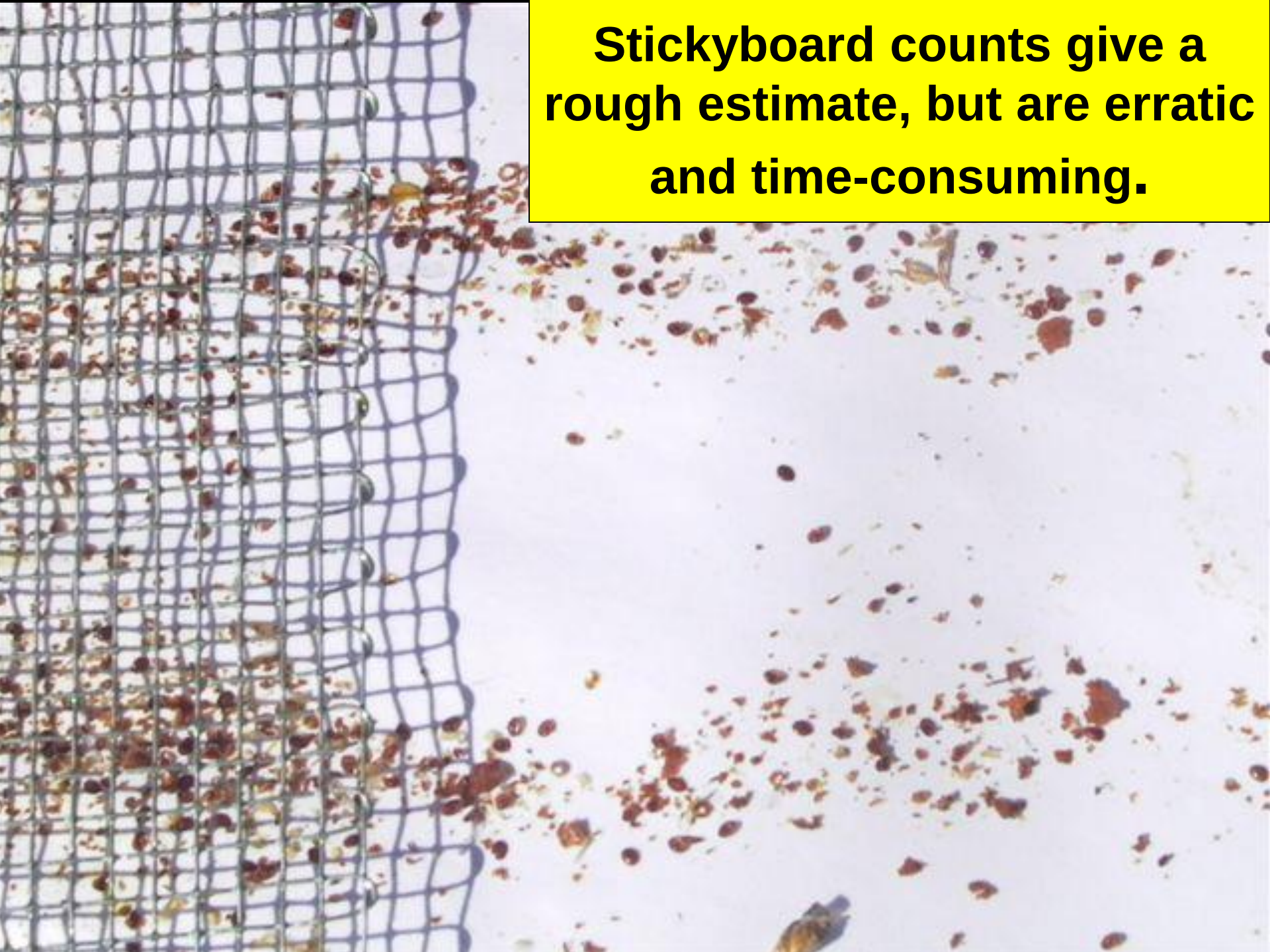


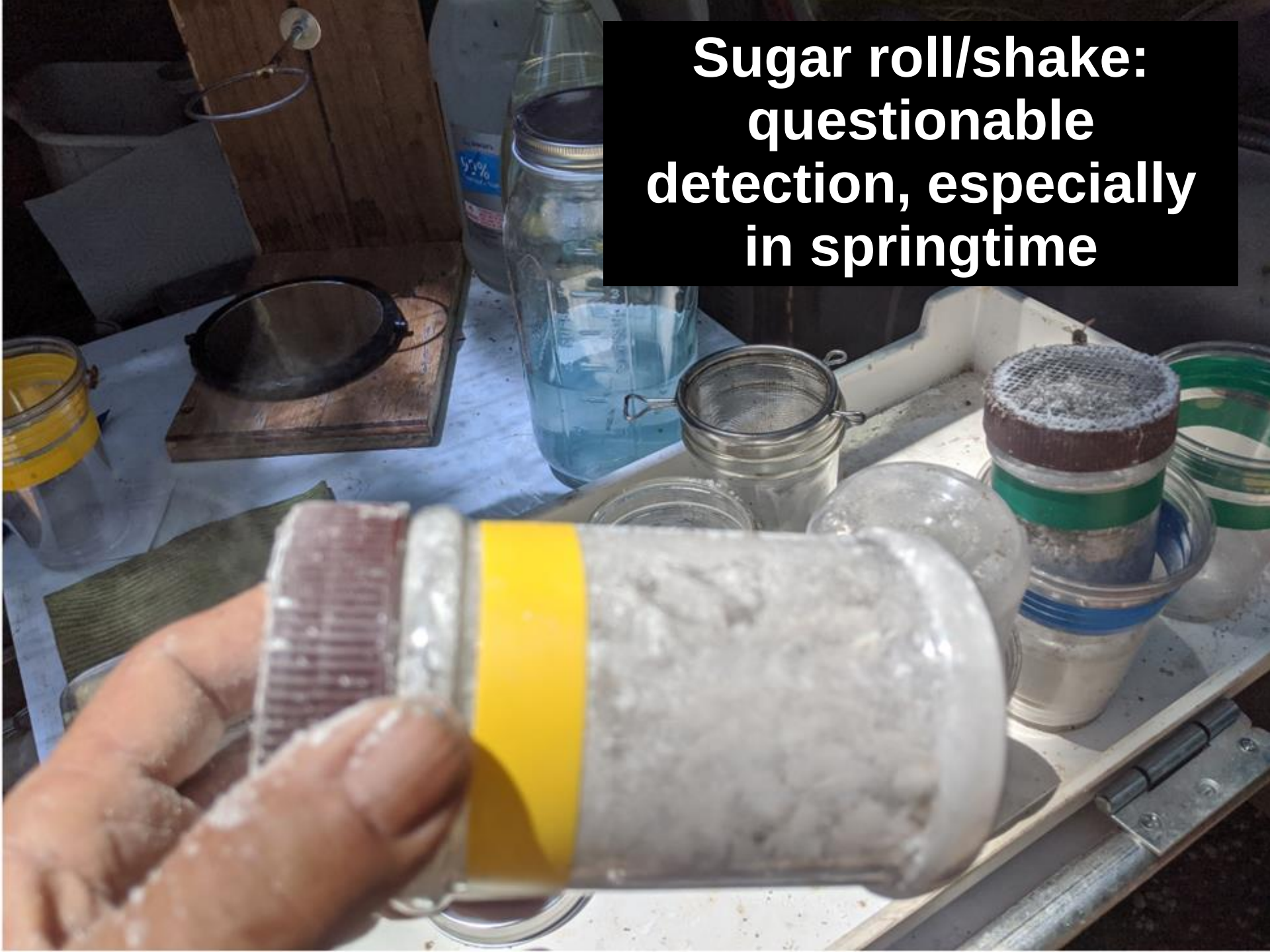
D: Default colony in temperate climate, managed to prevent swarming (slight fall brood buildup)

The effect of the mite infestation rate

Effects of varroa/DWV relative to mite wash counts of ½ level cup of bees


Don’t rely upon visual inspection – most mites are on the underside


Stickyboard counts give a rough estimate, but are erratic and time-consuming.


Sugar roll/shake: questionable detection, especially in springtime

It’s quickest and most accurate to monitor the infestation rate of a half-cup of adult bees

Don’t mess with a central brood comb – misleadingly high mite wash counts, and greater chance of harming the queen


Suggestion:
Take the bee sample from a comb *adjacent to, but not containing open brood*
Here!
Brood area
Here!


Shake a bee sample.
Tip: use an 18-qt tub.

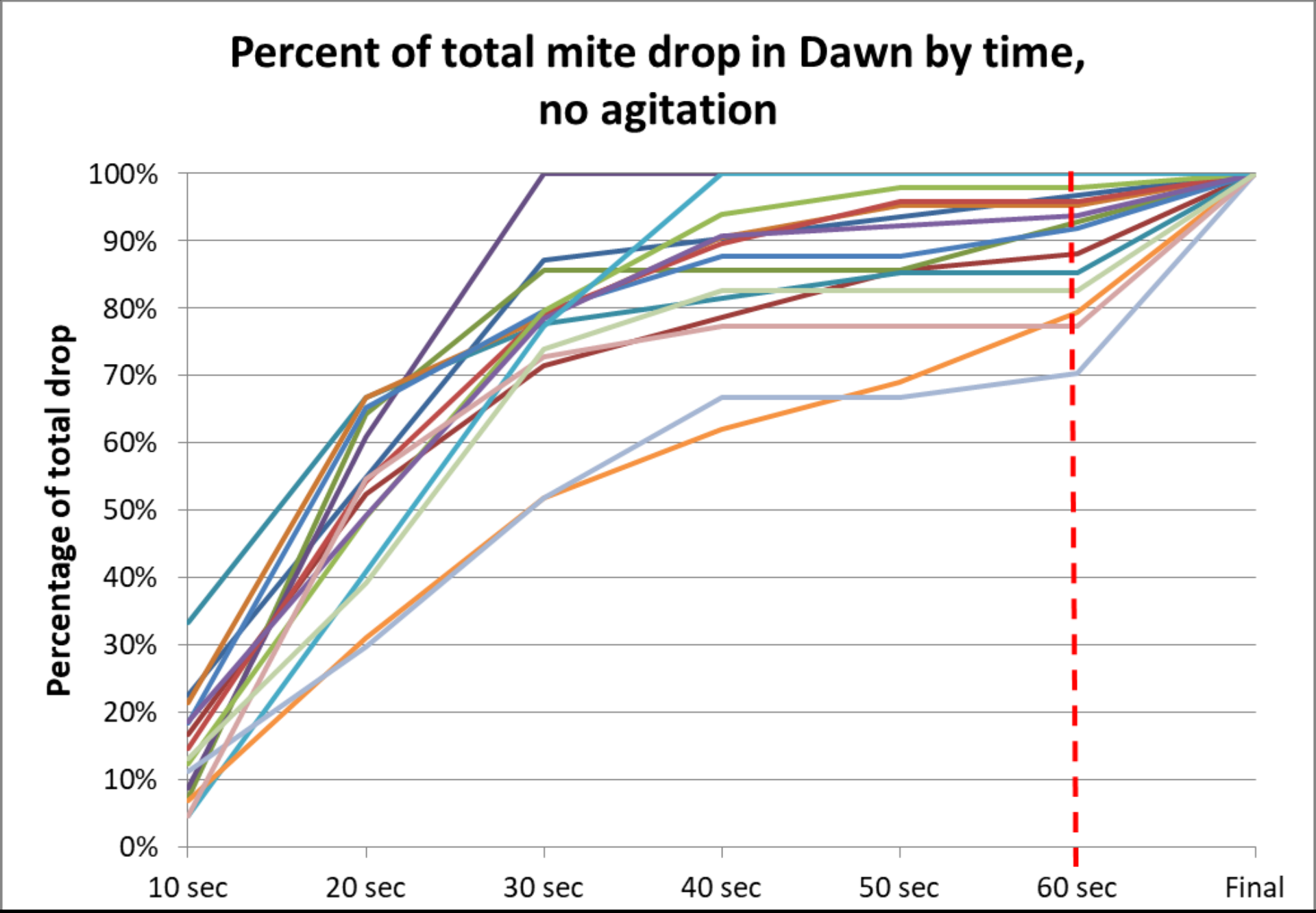
Allow the older bees to fly off


Look for a queen as the older bees fly off

Scoop a level ½ cup of the young bees

A level the half cup (125 mL) holds ~315 bees.
I never get stung when brushing off the extras!

Dump the bees into detergent solution



Wait at least one minute for the mites to release…

I've developed an inexpensive mite wash cup design.

Jacob McBride is now producing them

forbeessake@gmail.com


Bulky, difficult to hold and use.
For Bees Sake
Monitor Varroa!
The Oliver Mite Wash Cup
Ergonomic, quick, easy, and cheap!
forbeessake@gmail.com
Order enough for your club!

Be sure to wait a minute for the mites to release, then gently swirl.
Most mites will drop within 15 seconds

Lift out the cup of bees so that light can shine down through the foam.

View from below.

TIP: use a 10x magnifying mirror (6-inch diameter) placed about 4 inches below the bottom of the cup.

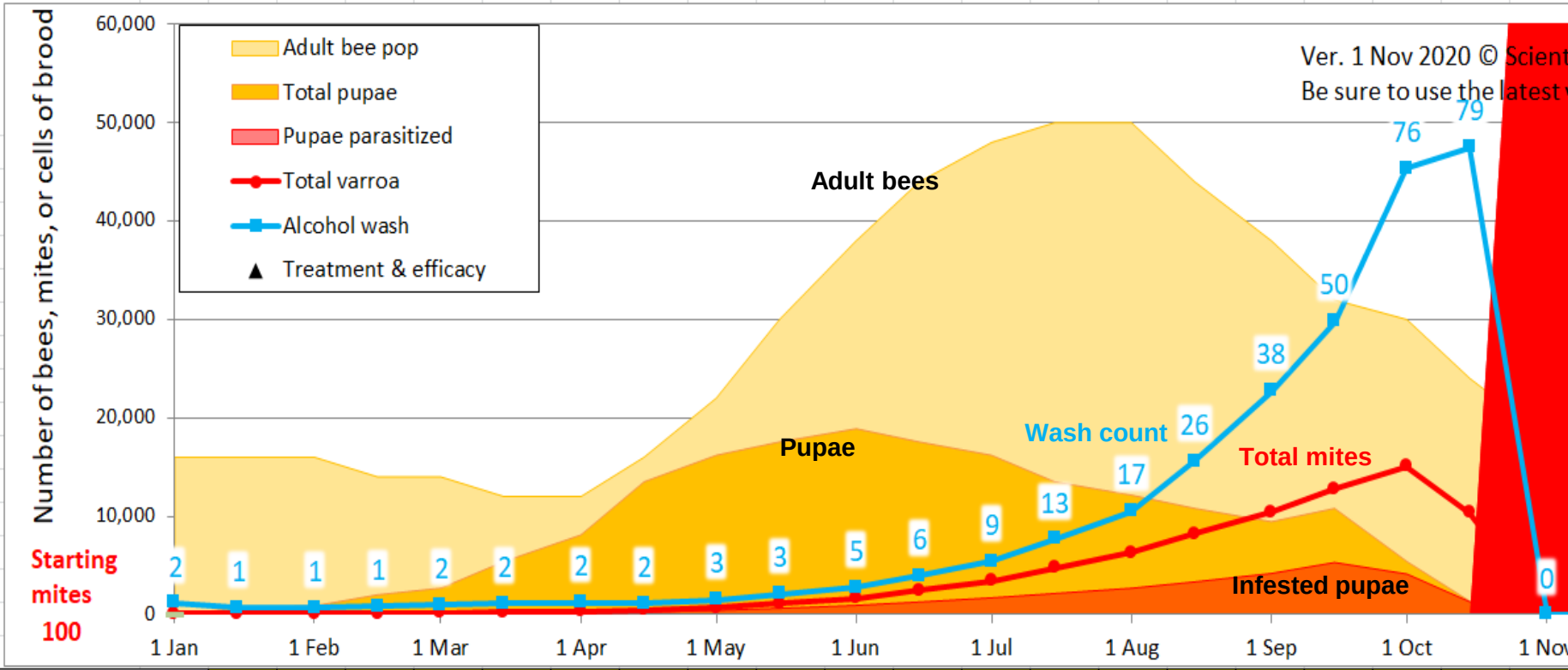

I make cup holders
for easy counting

You can strain and reuse the detergent or alcohol solution

Monitor the mites; don't allow counts to climb above:

- **1-2 in springtime,**
- **6 during summer**

INTERPRETING A MITE WASH COUNT

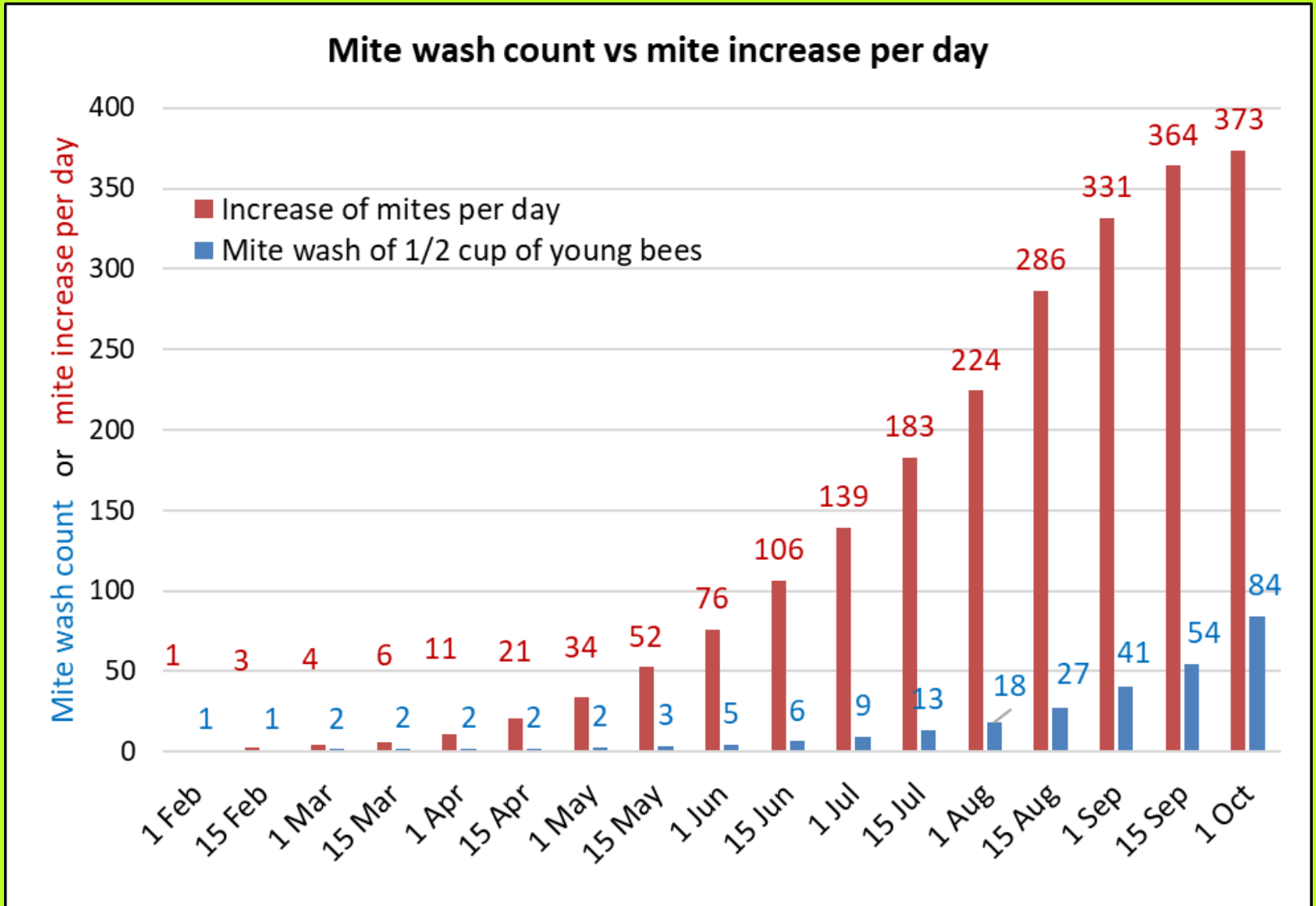


Mite reductions➔																					
Colony type*	d	D: Default colony in temperate climate, managed to prevent swarming (slight fall brood buildup																			
Mite population	100	93	93	93	93	93	291	453	713	1,111	1,675	2,452	3,447	4,732	6,273	8,210	10,398	12,739	15,042	10,329	
Mite immigration**	1	0	0	0	0	0	0	0	0	0	2	3	5	10	20	40	50	55	40	20	
% mites in brood	0%	40%	42%	50%	53%	65%	73%	78%	75%	70%	67%	63%	60%	57%	56%	56%	56%	60%	52%	42%	#VALUE

Don’t be misled by low springtime wash counts —
most of the mites are in the brood (*and reproducing*)!

UNDERSTAND EXPONENTIAL GROWTH

The more mites in a hive, the greater the number of additional mites per day (and the steeper their growth curve).



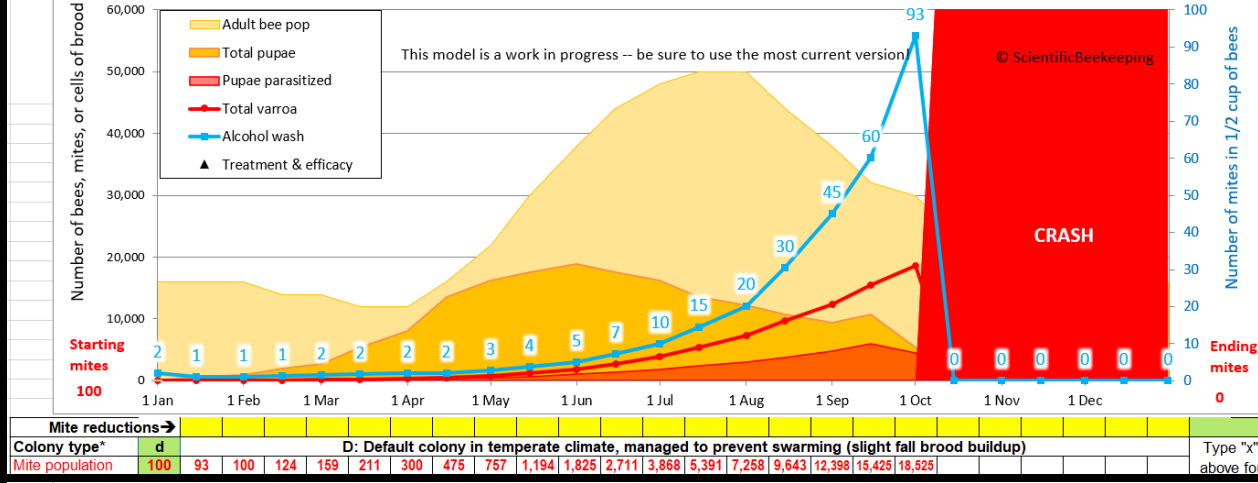
Manage varroa *proactively* rather than *reactively!*

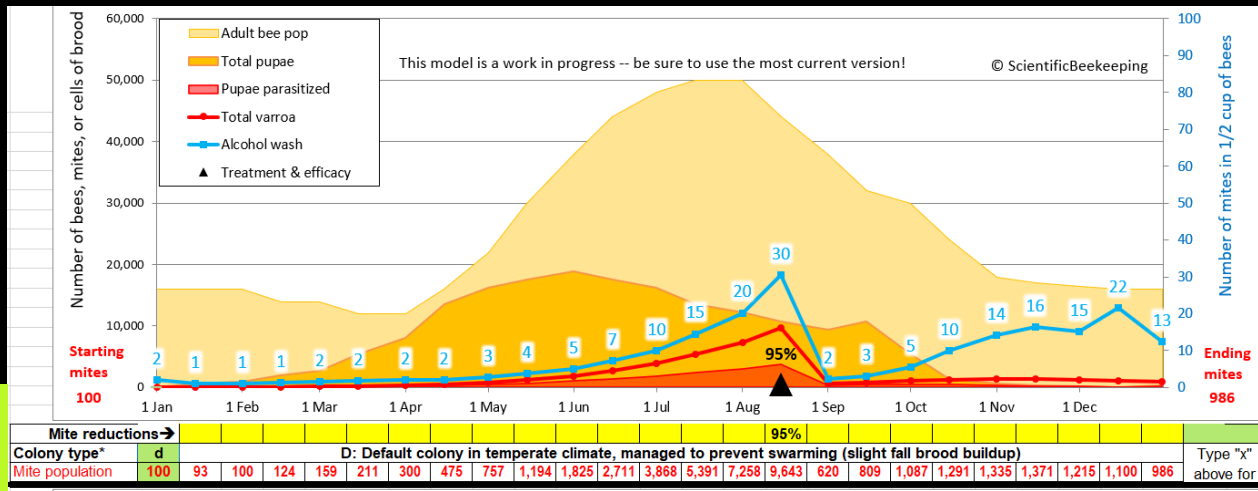
Default – no treatment against varroa ➔

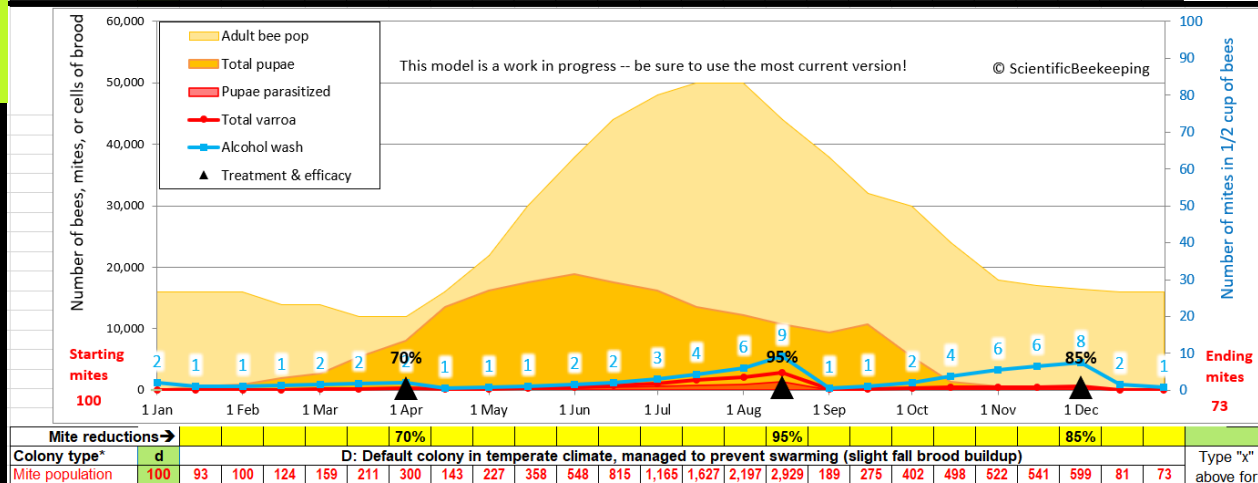
***Reactive* management – poor colony performance➔**

You get the most bang for the buck by controlling mites prior to swarm season

***Proactive* mite management – best colony performance and sustainable ➔**







Monitor your mite levels to ensure healthy productive colonies!