

10 YEARS SHELF LIFE TREATMENT EFFICACY TEST CHART MITEGONE PADS AND METHOD 65% FORMIC ACID August 2014

APRIL 2015

August Treatment TWO 5" Pads – One pad for every 5 frames of bees											Multiple of		April Treatment – TWO 5" pads						
Location Hive NO O=Outside I=inside circle From yard		Hive Evaluation S-single 8 frame +feeder August: 20 Frames of: Lbs Bees Brood			Natural Drop Fr: Aug 20 – 10am To: Aug 23 – 10 am Total hours 36____ Total 24 Hr Gr Avg			Pesticide Drop Fr: Aug 23 – 10am To: Aug 24 – 10am Total hours 24____ Total 24 Hr Gr Avg			Treatment Efficacy Or Resistance Gr Avg		Natural Drop Fr: Apr 10 – 10 am To: Apr 13 – 10 am Total hours____x____ Total 24Hr Gr Avg			Hive and ,or Group Spring Evaluation [No] Frames of: Notes Bees Brood			
Main	I 1	40	7	4	6	2		18	18		9x								
Main	O1	35	5	3	3	1		8	8		8x								
Main	I 2	50	8	5-6	7	2.33		209	209		89x								
Main	O2	45	8	5	1	0.30		109	109		369x								

Total Natural Drop Before Treatment Collected for 3-5 Days _____
 Natural Drop interpolated to 24 Hours _____
 Pesticide drop interpolated into 24 hours _____
 Pesticide drop collected during the first 24 to 48 hours after application _____

RESULTS ABSTRACT: Above chart and Efficacy multiple clearly demonstrate the shelf life of filled kits is 10 YEARS.

Material: In 2004 first DK-20 Containing 20—5" pads each, were designed and manufactured 50 of these kits were filled with formic acid and 12 were put aside for SHELF LIFE TESTING. Each year starting in 2005 one kit was used in the August treatment period and efficacy was monitored ageist the hives being treated with freshly filled pads.

From 2005 to 2009 on 2 deep colonies at 3 pads each. 2010 to 2012 on single 10 frame colonies and as our system of wintering progress in 2013 and 2014 on 8 frame colonies in standard deep box with 2 frame feeder using 2 pads each.

Multiple of treatment efficacy or resistance: is a ratio between 24 hours prorated natural drop and first 24 hour drop of applied pesticide. Higher the multiple= higher efficacy see:

<http://www.mitegone.com/pdfpages/Test%20Evaluation%20September%202003.pdf>

It explains: in detail how it is done and what it means. The numbers of mites are for the average 2 high colony having 30 000 bees.

The difference of testing results between men made pesticides and natural substances controlling mites.

Observations: While all our hives are treated each year in April and used for pollination and then sold in form of artificial swarms. Hives tested in august are result of 120 mating units set up in May and are terminated and united eliminating failing or not performing Queens. Tested Queens are sold on end of July to reduce population to 72 wintered units. It is obvious that weaker units harbour les mites and have lesser efficacy treatment results, the strong ones outperform the results we experienced wit APISTAN before resistance.