

## APRIL 2006 TEST EVALUATION & WHAT THE NUMBERS TELL YOU.

**CONCLUSION:** After 12 years of using formic acid and testing at the same time of year, we found that:

- The results of testing at other times, randomly and after the treatment, are irrelevant. Only tests before each treatment at the same time of the year (in our case August and April) will tell you the true situation in the hive as these results directly effect the winter and summer brood stock.
- **Test after the treatment.** In many instances, the natural drop after August treatment was higher than before the treatment. Why is this? Is it because mites exposed to the acid continue to die in great numbers long after the treatment has ended or is it because summer mite is just dying off? The only true measure of August treatment success is how many mites are in the same hive the following spring.
- Treatment efficacy is the multiple of natural drop caused by the treatment applied. While this number is a very good indicator of treatment efficacy in August, it will vary with the size of the colony and the level of infestation. It may or may not produce as reliable indication in April.
- **RESULTS:** While Apistan, Gabon, and 2 MiteGone pads in the fall produce efficacy on the borderline, this treatment still keeps the spring level (8.5-8.8 mites natural drop) below the economical damage threshold. Using three half pads undisputedly produced the best results with 2.5 mites natural drop in April. This is a very desirable mite level and follow up treatment with two more pads will keep the mite count low until August. Do not try to save each hive. Let the most aggressive mite die with the less resistant colonies. Some natural selection is good.

Hive Number & Location O = Outside circle I = Inside circle Test for Treatment	Natural Drop Fr: Apr 12 (11am) To: Apr 14 (4 pm) Total x.45 Group 53Hr 24Hr Avg.			Pesticide Drop Fr: Apr 14 (4pm) To: Apr 15 (4 pm) Total x1 Group 24Hr 24Hr Avg.			Treatment Efficacy Pesticide Resistance Multiple Of Group Natural Drop Avg.		Hive Evaluation 2 Story Langstroth Frames of: Brood (notes) Bees			
							↓	↓		↓	↓	
<b>AUGUST:</b> Apistan 2 strips in top box Gabon 3 strips in top box  <i>APRIL: 2-half pads 12 g acid</i>		21	9.5		*43			4.5			15	7
	O2	10	4.5	8.8	5			1.1			10	5
	O3*	64	28.8		4			0.13			10	4
	O4*	3	1.4		15			10.7			15	6
	O5	28	12.6		4			0.3	1.5		12	4
	O6	21	9.5		3	12.3		*0.1			8	3
	O7*	4	1.8	8.5	30			*16.6			12	6
	O8	12	5.4		*1			0.2			12	3
	O9*	40	18.0		7			0.3			12	4
	O10	24	10.8		30			3.0			18	7
<b>AUGUST:</b> 21 days 2 pads 12 g / day 21 day 3 pads 18g / day  <i>APRIL: 3-half pads 18 g acid</i>	I 1	23	10.3		*16			1.6			15	5
	I 2	20	9.0	8.8	*0			* inf	11.6		10	3
	I 3*	12	5.1		4			0.9			15	5
	I 4	16	7.2		13			*1.8			10	3
	I 5*	72	32.4		18			0.5	0.8		10	3
	I 6*	46	20.7		*9			0.4			8	3
	I 7	6	2.7	2.5	2			0.9				18
	I 8	6	2.7		2		1.6		0.8		10	3
	I 9*	1	0.5		*0				* inf		B/D	3
	I 10	5	2.2		1			0.5			15	7

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

\*To achieve olympic average the highest, lowest & problematic figures are deleted from the count.