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Bee Informed Partnership Real Time Disease Load Monitoring Report

Beekeeper: S16-SABF
10/28/16

Year: 2016

Report date:

Sample Kit Code: S16-SABF

Varroa (mites per 100 bees)

Hive	May	June	July	August	September	October
S16-SABF-1	1.3	7.0	3.1	20.8	20.4	8.1
S16-SABF-2	5.5	0.0	2.5	2.7	2.6	14.8
S16-SABF-3	0.0	2.0	1.0	1.2	7.7	20.6
S16-SABF-4	5.5	7.5	3.7	8.0	24.1	35.3
S16-SABF-5	0.0	0.0	0.0	5.0	6.4	10.8
Your Monthly Average	2.45 ±3.48 (5)	3.32 ±4.61 (5)	2.07 ±1.93 (5)	7.53 ±9.76 (5)	12.25 ±11.71 (5)	17.92 ±13.38 (5)
USHBS Average	3.12 ±0.41 (325)	1.88 ±0.21 (526)	3.24 ±0.35 (448)	4.0 ±0.3 (607)	6.12 ±0.5 (726)	7.73 ±0.62 (603)
Tier4 Average	2.09 ±0.63 (168)	2.04 ±0.45 (263)	2.9 ±0.46 (290)	3.22 ±0.51 (294)	4.75 ±0.76 (273)	7.07 ±2.36 (52)
Tier4 Last Year Average	1.44 ±0.36 (184)	1.94 ±0.38 (248)	2.28 ±0.4 (256)	3.7 ±0.61 (270)	4.88 ±0.82 (249)	6.97 ±1.23 (176)

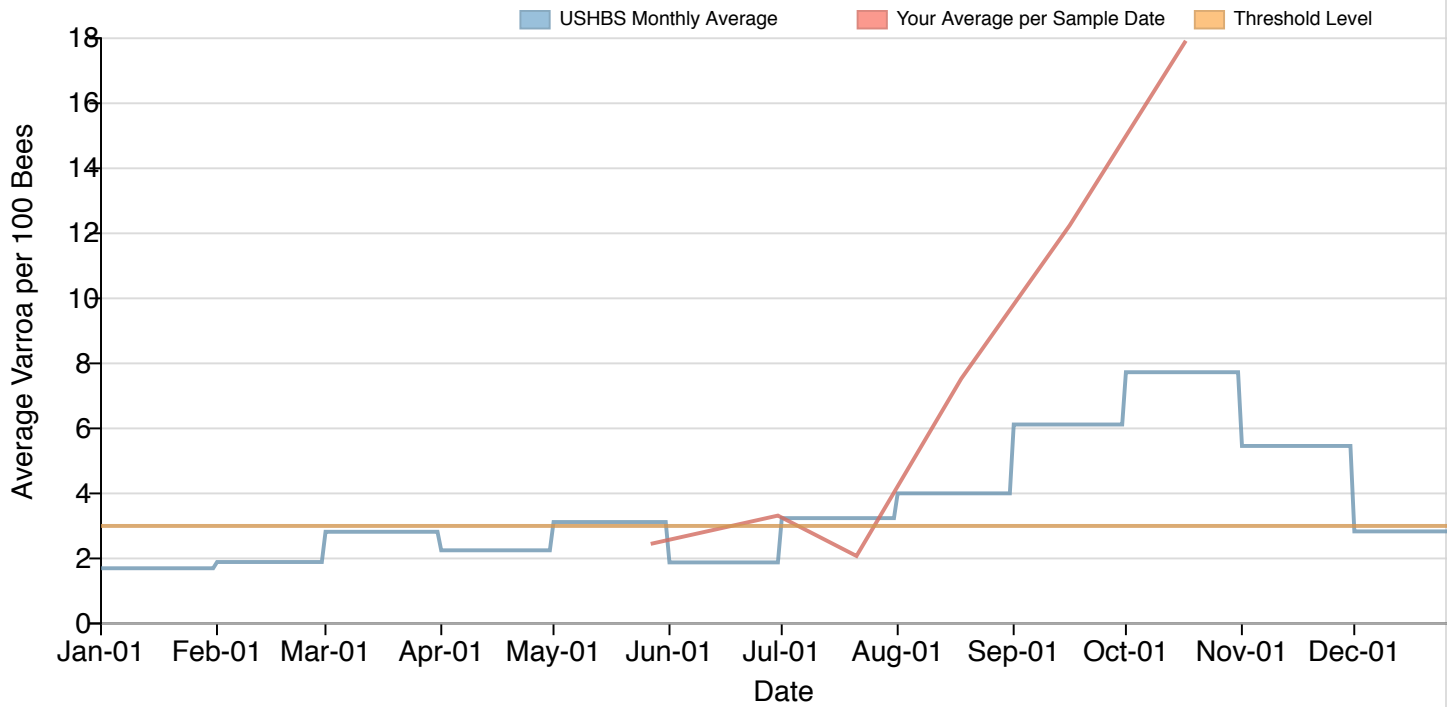
- Tier 4 Average, Last Year includes Tier 4 data starting in June 2013.
- APHIS Honey Bee Disease Survey is a national effort sponsored by USDA Animal and Plant Health Inspection Service (APHIS) in collaboration with the Agricultural Research Service (ARS) and University of Maryland (UMD). To date, the data provided for the APHIS monthly average is a composite of data from 2009 - Present.
- Data presented: average ± 95% Confidence Interval (# of samples)
- We consider => 5 mites per 100 bees (highlighted in red) as approaching a high threshold at or beyond where you may want to consider some varroa mite control strategy. This will fluctuate based on your bees brood cycle.
- If you collected two sets of samples within the same calendar month, they are reported in the two separate closest months in this table. Example, samples collected on May 30th may show up in the June column if you already have samples collected earlier in May.

Nosema (millions of spores per bee)

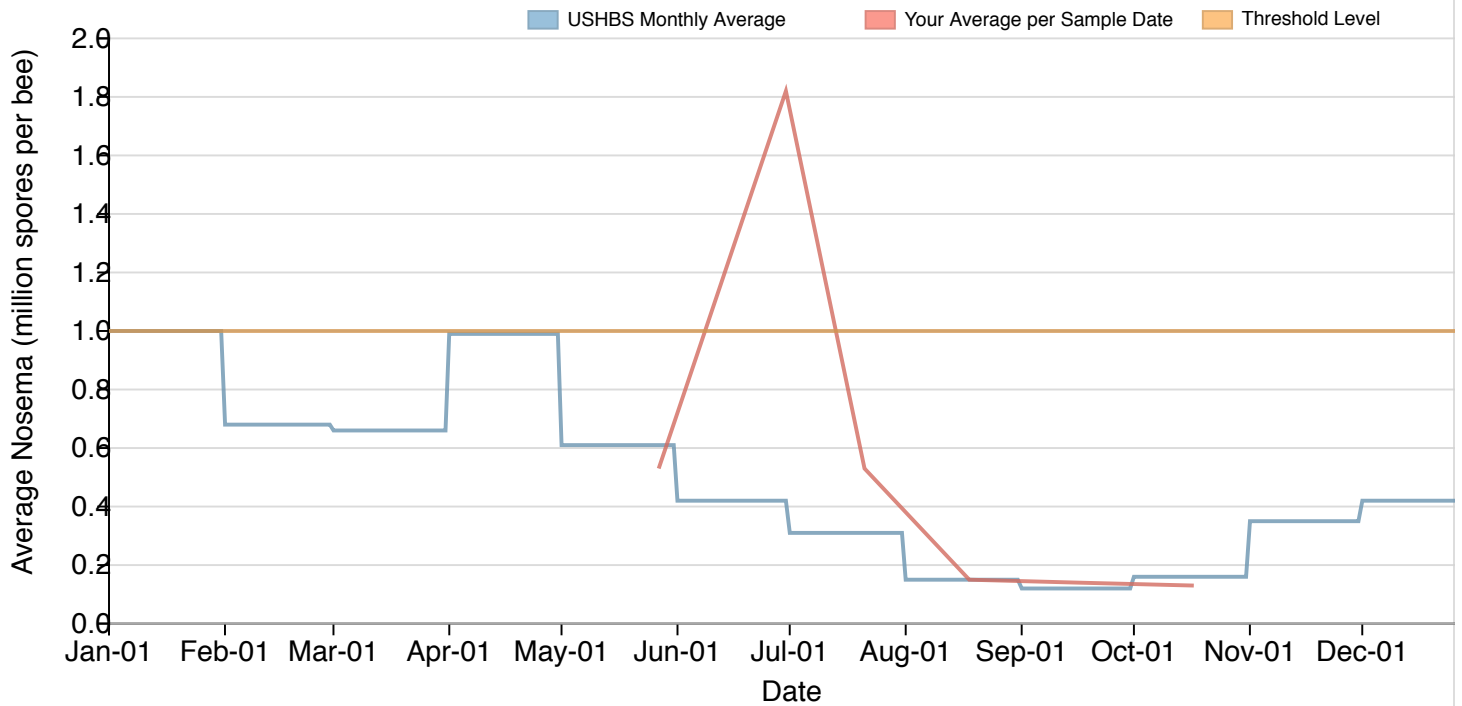
Hive	May	June	July	August	September	October
S16-SABF-1	0.0	0.2	0.0	0.0	0.0	0.0
S16-SABF-2	1.4	0.1	2.5	0.0	0.2	0.0
S16-SABF-3	0.5	0.1	0.0	0.0	0.1	0.0
S16-SABF-4	0.6	8.7	0.2	0.8	0.4	0.7
S16-SABF-5	0.2	0.1	0.0	0.0	0.0	0.0
Your Monthly Average	0.53 ±0.67 (5)	1.82 ±4.74 (5)	0.53 ±1.34 (5)	0.15 ±0.42 (5)	0.14 ±0.21 (5)	0.13 ±0.36 (5)
USHBS Average	0.61 ±0.14 (325)	0.42 ±0.07 (527)	0.31 ±0.07 (448)	0.15 ±0.04 (605)	0.12 ±0.02 (725)	0.16 ±0.03 (603)
Tier4 Average	0.48 ±0.17 (168)	0.21 ±0.08 (263)	0.18 ±0.08 (289)	0.13 ±0.04 (294)	0.22 ±0.11 (273)	0.11 ±0.08 (52)
Tier4 Last Year Average	0.86 ±0.2 (184)	0.39 ±0.12 (248)	0.16 ±0.04 (256)	0.26 ±0.09 (270)	0.24 ±0.1 (249)	0.43 ±0.21 (176)

- Tier 4 Average, Last Year includes Tier 4 data starting in June 2013.
- APHIS Honey Bee Disease Survey is a national effort sponsored by USDA Animal and Plant Health Inspection Service (APHIS) in collaboration with the Agricultural Research Service (ARS) and University of Maryland (UMD). To date, the data provided for the APHIS monthly average is a composite of data from 2009 - Present.
- Data presented: average ± 95% Confidence Interval (# of samples)
- We consider => one million spores per bee (highlighted in red) to be the acceptable threshold in a hive. Your nosema levels will fluctuate with temperature and the hives sun exposure every month.

Average Varroa per 100 Bees in 2016 for Your Samples Compared to the National Average



Average Nosema in Million Spores per Bee in 2016 for Your Samples Compared to the National Average



All Samples for year

Hive	Sampling Date	Queen Status	Brood Pattern	Frames of Adults	Frames of Brood	Full Frames of Food	Particular Observation	Recent Management	# Bees in Sample	# Mites / 100 Bees	Millions of Spores per Bee
S16-SABF-1	May 27, 2016	QNS	4	8.0			9 frames each, 5 queen cells formed, in medium only	feeding management		1.32	0.00
S16-SABF-2	May 27, 2016	QL	0	6.0			put frame of brood in that had queen cells, feed only in hive	requeen feeding management	146	5.48	1.40
S16-SABF-3	May 27, 2016	QR	5	10.0			1 deep filled with brood, added deep/10 frame	feeding management		0.00	0.50
S16-SABF-4	May 27, 2016	QL	3	4.0			honey bound, 4 frames, queen cells added (5th ch.)	feeding management		5.45	0.55
S16-SABF-5	May 27, 2016	QR	5	10.0			added deep 1 week ago	feeding management		0.00	0.20
S16-SABF-1	June 30, 2016	QS	5	12.0			2.5 capped frames, rest nectar, D: 3 capped brood 0.5 open brood, M Brood: 6 hatching, 2 frames open brood, 2 frames pollen/light nectar			6.99	0.20
S16-SABF-2	June 30, 2016	QNS	3	5.5			Trace pollen-reversed pollen trap, D1: 2 spots brood, 2 H/N, b1: M frame; brood ~ 2 brood, a lot of capped and old larva	management		0.00	0.05
S16-SABF-3	June 30, 2016	QR	5	12.5			bottom box full of brood and pollen, 3 frames 2nd deep, light on honey/nectar			2.04	0.10

All Samples for year

Hive	Sampling Date	Queen Status	Brood Pattern	Frames of Adults	Frames of Brood	Full Frames of Food	Particular Observation	Recent Management	# Bees in Sample	# Mites / 100 Bees	Millions of Spores per Bee
S16-SABF-4	June 30, 2016	QS	5	24.0			2 M on bottom, 3D above, top D half capped honey, D-brood 3-4 frames, D: 4-5 brood, removed 1 medium-empty/undrawn, deeps as supers	management		7.55	8.65
S16-SABF-5	June 30, 2016	QS	5	15.0			brood most frames bottom 3 frames brood top light on honey/nectar			0.00	0.10
S16-SABF-1	July 21, 2016	QS	4	6.0			D 9 frames, added 1 frame, 2 mediums- 10 frames on one, 9 frames on one, needs feeding, put on jar feeder	management		3.13	0.00
S16-SABF-2	July 21, 2016	QS	2	2.0			2 deeps w/ 9 frames, needs feeding, empty frames, consolidate to 1 deep			2.55	2.45
S16-SABF-3	July 21, 2016	QS	3	6.0			2 deeps, 10 frames each, light on feed, needs feeding	management		0.96	0.00
S16-SABF-4	July 21, 2016	QR	4	8.0			removed medium (empty) to consolidate to 3 deeps (lot of honey frames)	treatment management		3.74	0.20

All Samples for year

Hive	Sampling Date	Queen Status	Brood Pattern	Frames of Adults	Frames of Brood	Full Frames of Food	Particular Observation	Recent Management	# Bees in Sample	# Mites / 100 Bees	Millions of Spores per Bee
S16-SABF-5	July 21, 2016	QS	4	7.0			2 deeps w/ 10 frames, good brood pattern, some capped honey, grid band- 1 varroa mite, 2 SHB (lots of drones), needs to be fed			0.00	0.00
S16-SABF-1	Aug. 18, 2016	QR	5	20.0			top M some honey/syrup, deep: 4 solid frames brood. 3 empty, 9 frames bottom M, lots of pollen, vertivle combs	feeding		20.83	0.00
S16-SABF-2	Aug. 18, 2016	QS	5	12.0			12 August: 7 frames of bees added using newspaper combine, removed empty/damages combs, 18 Aug: looked great, light stores	feeding management		2.73	0.00
S16-SABF-3	Aug. 18, 2016	QR	4	16.0			Med tight brood, 8 frames top/6 fr. Bottom, very light on stores, outer frames undrawn and beebread, bit of nectar	feeding management		1.17	0.00
S16-SABF-4	Aug. 18, 2016	QS	4	20.0			top box mostly empty, small patch brood, 8 frames brood all stages, good amount bee bread, still 4-6 frames H but getting light	management		7.95	0.75

All Samples for year

Hive	Sampling Date	Queen Status	Brood Pattern	Frames of Adults	Frames of Brood	Full Frames of Food	Particular Observation	Recent Management	# Bees in Sample	# Mites / 100 Bees	Millions of Spores per Bee
S16-SABF-5	Aug. 18, 2016	QR	5	18.0			brood 6 top/ 4 bottom box capped honey outer frames good amount bee bread	feeding management		4.97	0.00
S16-SABF-1	Sept. 16, 2016	QS	4	5.5			deep centered between 2 mediums, top box approx 4 honey, some empty, put deep w/ stores in bottom, empty mediums up top	feeding treatment management		20.40	0.00
S16-SABF-2	Sept. 16, 2016	QS	4	6.0			1 deep had been added, combined w/ this one, 1 frame broken	feeding treatment management		2.58	0.20
S16-SABF-3	Sept. 16, 2016	QS	4	6.5			7 frame top, 3-4 brood all stages, pollen seen, 6 frames bees	feeding treatment management		7.69	0.10
S16-SABF-4	Sept. 16, 2016	QS	4	5.0			top and bottom box light, bees/brood in center box	treatment management		24.14	0.40
S16-SABF-5	Sept. 16, 2016	QS	4	6.0			bottom box Capped brood but light, reversed deeps, killed approx 25 SHB	feeding treatment management		6.43	0.00
S16-SABF-1	Oct. 17, 2016	QR	2	5.0			removed 1 empty medium, upper medium pretty empty (some pollen and nectar), middle medium pretty empty, 9 frames on upper medium	feeding treatment		8.07	0.00

All Samples for year

Hive	Sampling Date	Queen Status	Brood Pattern	Frames of Adults	Frames of Brood	Full Frames of Food	Particular Observation	Recent Management	# Bees in Sample	# Mites / 100 Bees	Millions of Spores per Bee
S16-SABF-2	Oct. 17, 2016	QS	2	6.0			top deep is empty, will be removed eventually (perhaps)	feeding treatment		14.83	0.00
S16-SABF-3	Oct. 17, 2016	QS	2	6.0			light on food stores	feeding treatment		20.61	0.00
S16-SABF-4	Oct. 17, 2016	QNS	2	4.0			top deep had 4 empty frames, dead brood/varroa, couple of queen cups, loads of varroa mites on board, MAQS put on	feeding treatment		35.26	0.65
S16-SABF-5	Oct. 17, 2016	QS	3	6.0			light on food stores, need to keep feeding	feeding treatment		10.84	0.00

- Hive # highlighted in blue indicates hive scale installed. Yellow indicates pollen trap installed.