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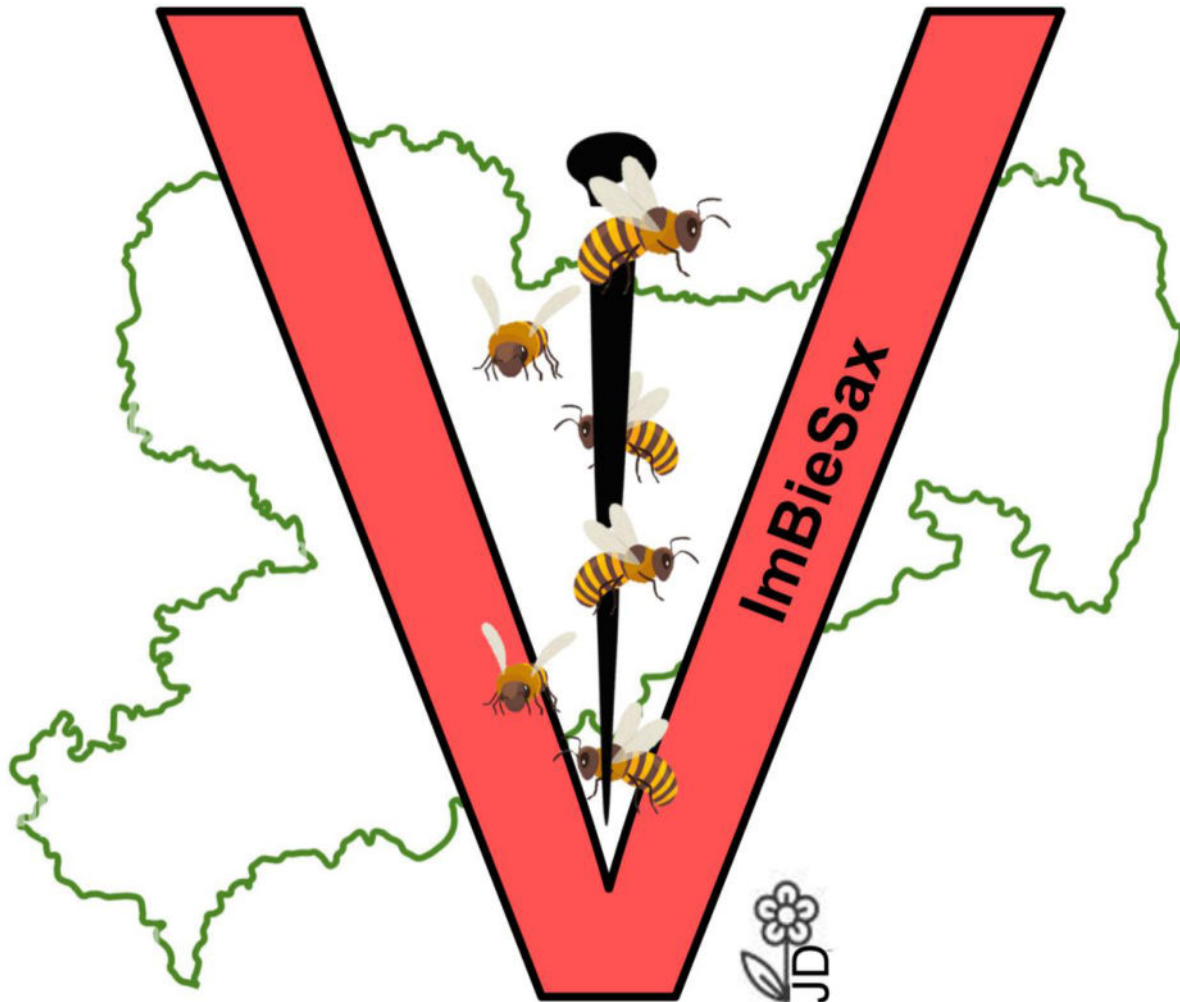
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The honeybee, third most important production animal in Germany due to its pollination service, is harmed by a wide range pathogens. In contrast to other livestock, the beekeepers cannot easily consult a veterinarian on bee health issues. Aim of this project was to implement a veterinary service for beekeepers to support monitoring and improving bee health. During 2023-2024, 121 apiaries throughout all regions of Saxony/Germany were advised by a veterinarian and student assistants. Site visit, examinations and sampling were adapted to every specific case. Bee samples were investigated for Acute-Bee-Paralysis-Virus(ABPV), Chronic-Bee-Paralysis-Virus(CBPV), Deformed-Wing-Virus A(DWV-A) and B(DWV-B), Black-Queen-Cell-Virus(BQCV) and Sacbrood-Virus (SBV) by RT-PCR. Additionally, they were checked for infestation with *Nosema* spp. by microscopic examination and *Varroa destructor* by washing method. Honeysamples were tested for American Foulbrood(AFB).

Furthermore, beekeepers were asked to fill in a questionnaire-based knowledge–attitude–practice–(KAP)-analysis. After analysis of 69 fully completed surveys, participants were 90% amateur beekeepers from all experience levels. All participating beekeepers appreciated the possibility to consult a veterinarian and considered it important to gain knowledge on bee health. KAP-analysis showed AFB, *Varroa* and wax moth to be the most widely known bee diseases. Beekeepers in Saxony most often control the *Varroa* mite by measuring the natural mitefall and 55% treat their colonies in accordance with the damage threshold. Mainly, biotechnical methods, formic acid and oxalic acid are used for treatment. A total of 5.271 laboratory examinations were performed. SBV and BQCV were the most prevalent viruses with 81.7% and 93.4%, whereas ABPV was lowest (0.5%). DWV-B exhibited a prevalence of 38.7% and CBPV 19.3%. SBV, BQCV and DWV-B were distributed throughout all regions. CBPV could be found in 12/13 districts, ABPV in 2/13. *Varroa* mites were present in 67.6 % of the samples.

The project gave an overview of the distribution of honeybee diseases, but further investigation and support of the beekeepers over a longer period of time are needed to estimate the real value of the veterinary specialist counselling. As veterinarians are trained in herd-health-management, multifactorial health problems and the prevention, diagnosis and therapy of diseases their involvement at apiaries can benefit bee health.



Implementation and testing of a **veterinary specialist counselling** on bee health for beekeepers in Saxony

Dr. Julia Dittes

Apimondia, København, 25/09/2025



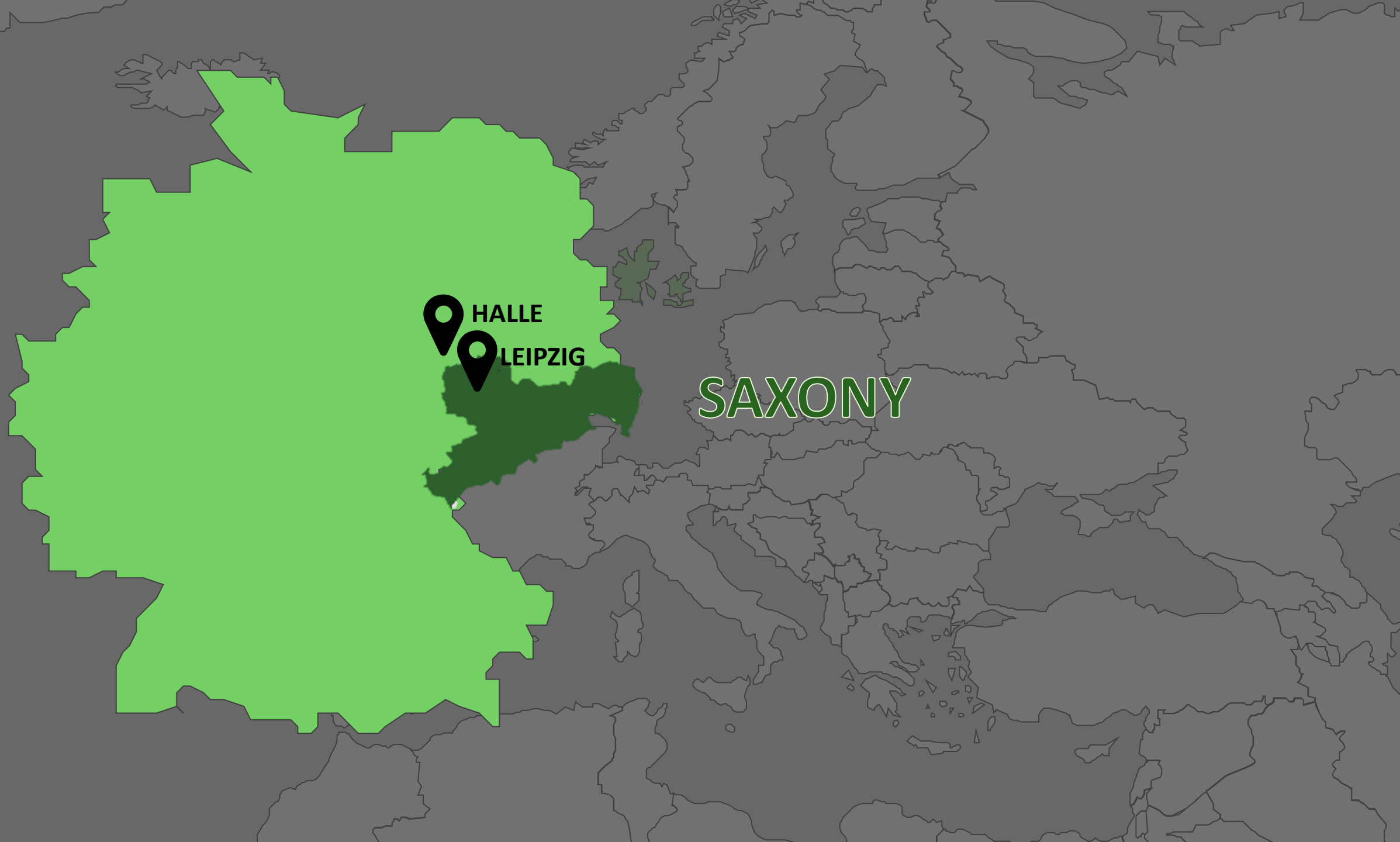
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SAXONY



ImBieSax

ImBieSax

started in 07/2023
current project till
12/2026

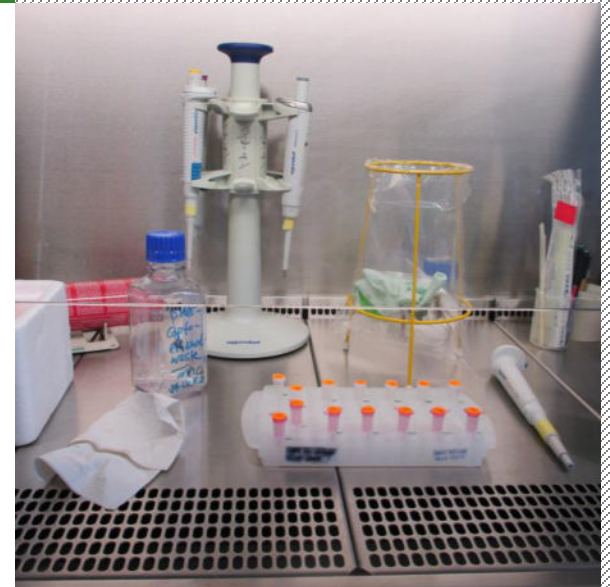
taking samples
depending on the
problem



veterinary site
visits and
examination of the
bee colonies



laboratory
diagnostics





KAP-analysis with
veterinarians and
vet students



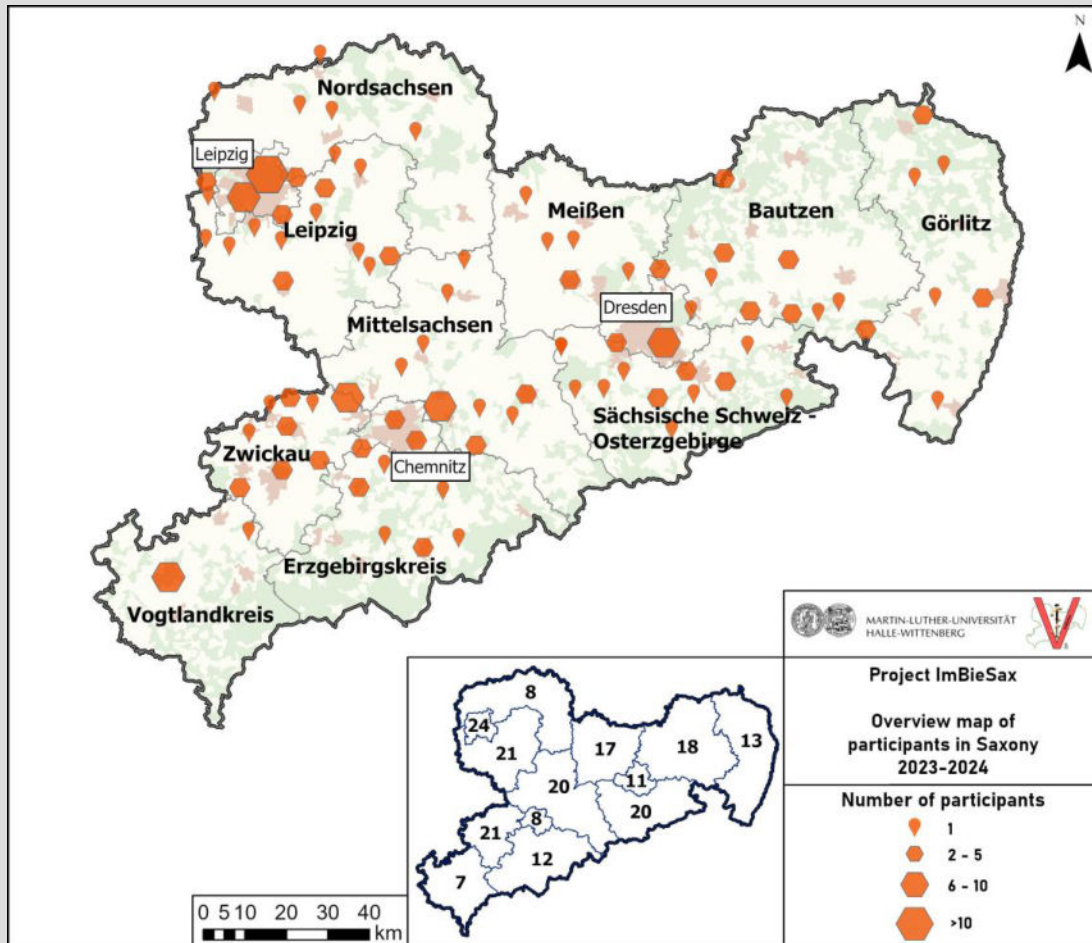
KAP-analysis with
the beekeepers



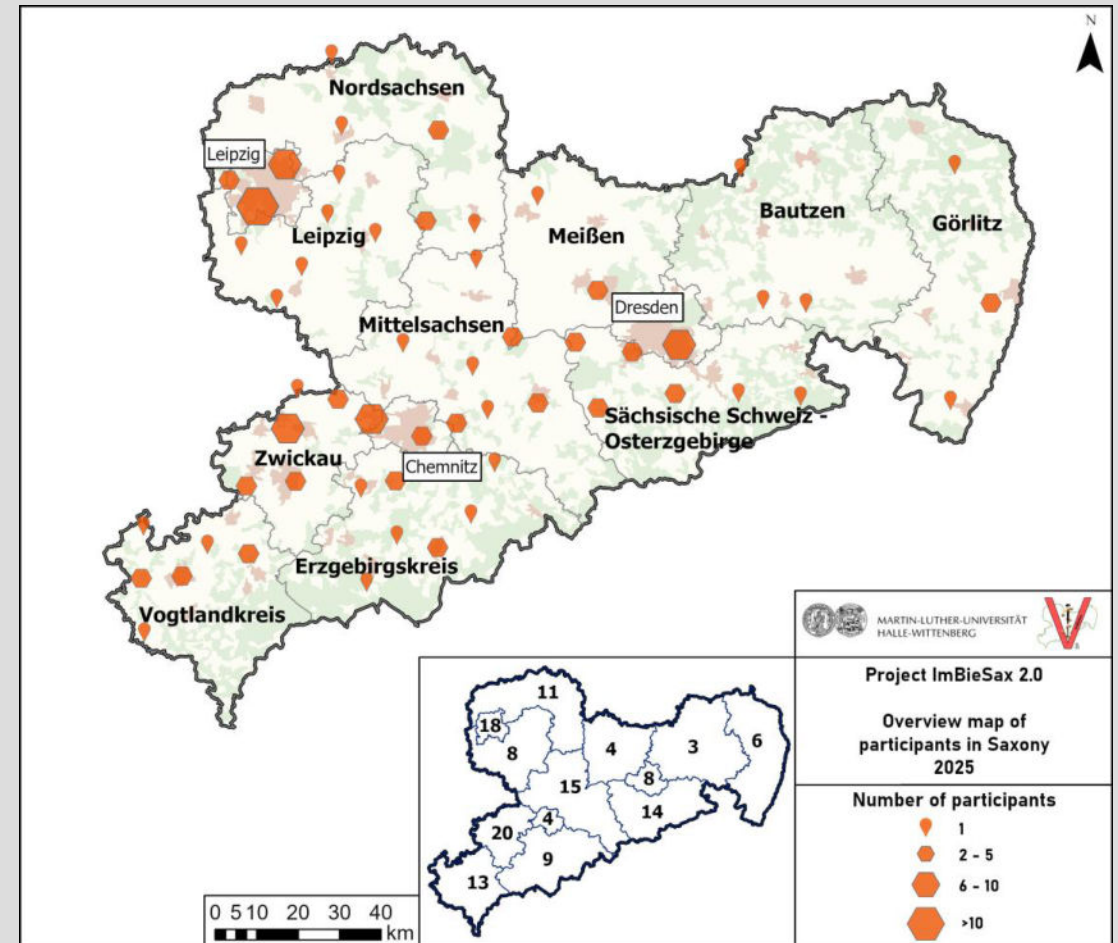
data analysis and
implementation of
a consultancy
programme



207 Ps.



136 Ps.

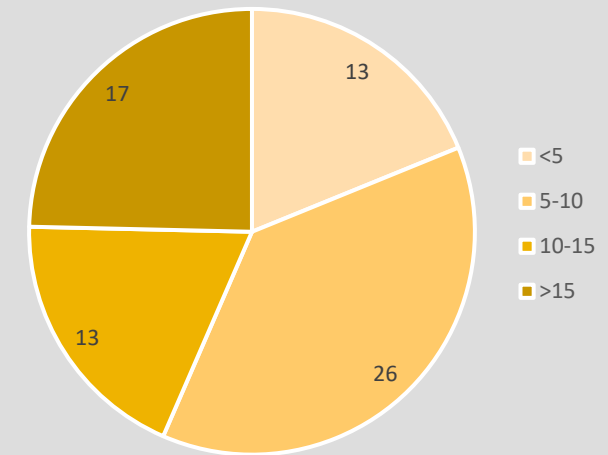




First results of KAP analysis

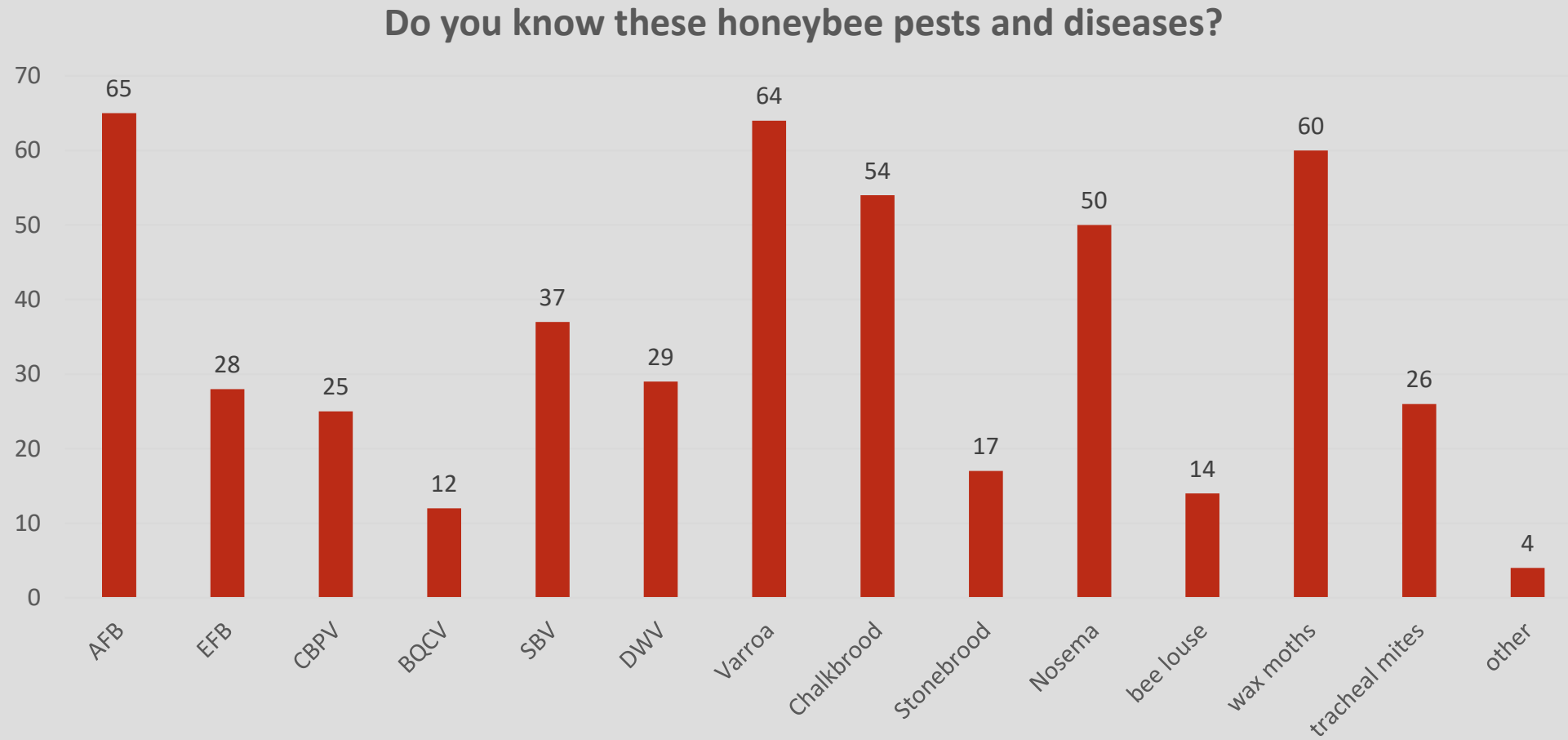
- Demographic data
- Knowledge, attitude, practice analysis
- Beekeepers were asked before site visit

Years of beekeeping experience





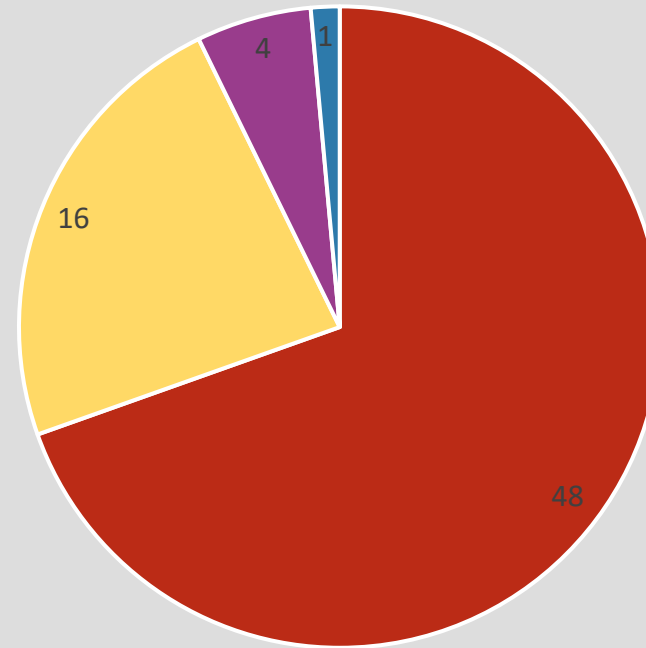
Knowledge





Attitude

How useful do you find a veterinary health counselling for honeybees?

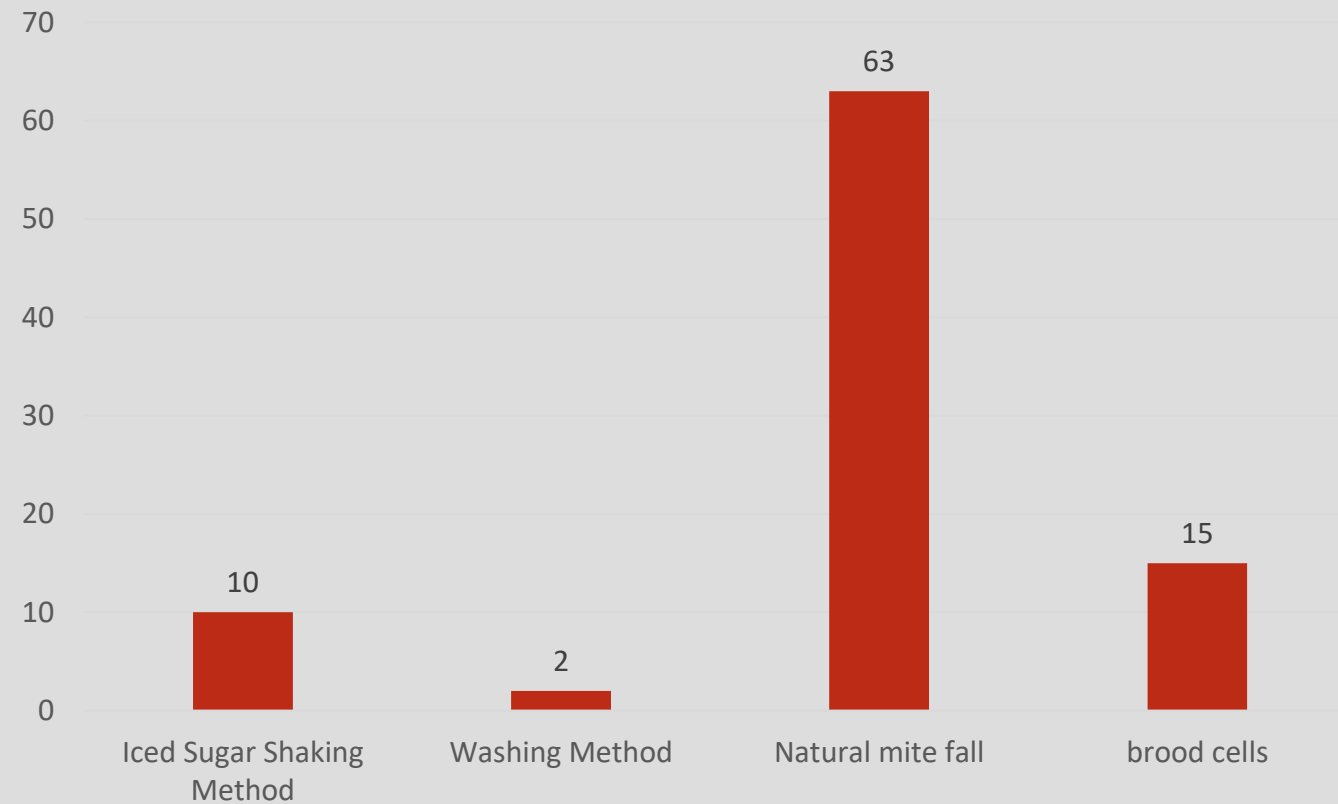


■ very useful ■ useful ■ less useful ■ not useful



Practice

How do you analyse the varroa mite load in your colonies?





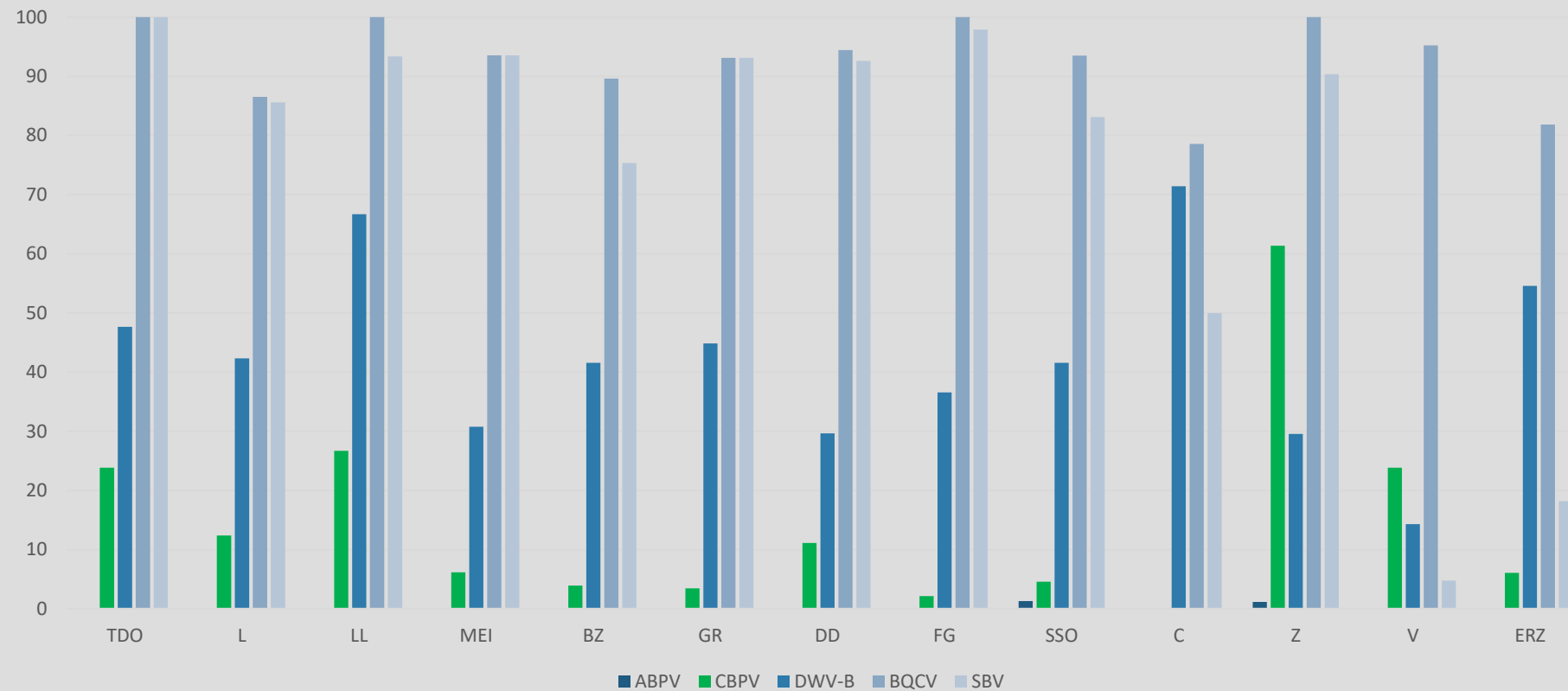
First results of laboratory diagnostics 2023-24

Overview of laboratory diagnostics

	Type of examination	total number of samples	positive samples	%	negative samples
	AFB	193	1	0.52	192
	ABPV	825	4	0.49	821
	CBPV	825	159	19.27	666
→	DWV-A	616	0	0	616
	DWV-B	829	321	38.72	475
→	BQCV	821	767	93.42	54
→	SBV	821	671	81.73	149
→	Varroa	241	163	67.63	78
	<i>Nosema</i> spp.	110	14	12.73	96

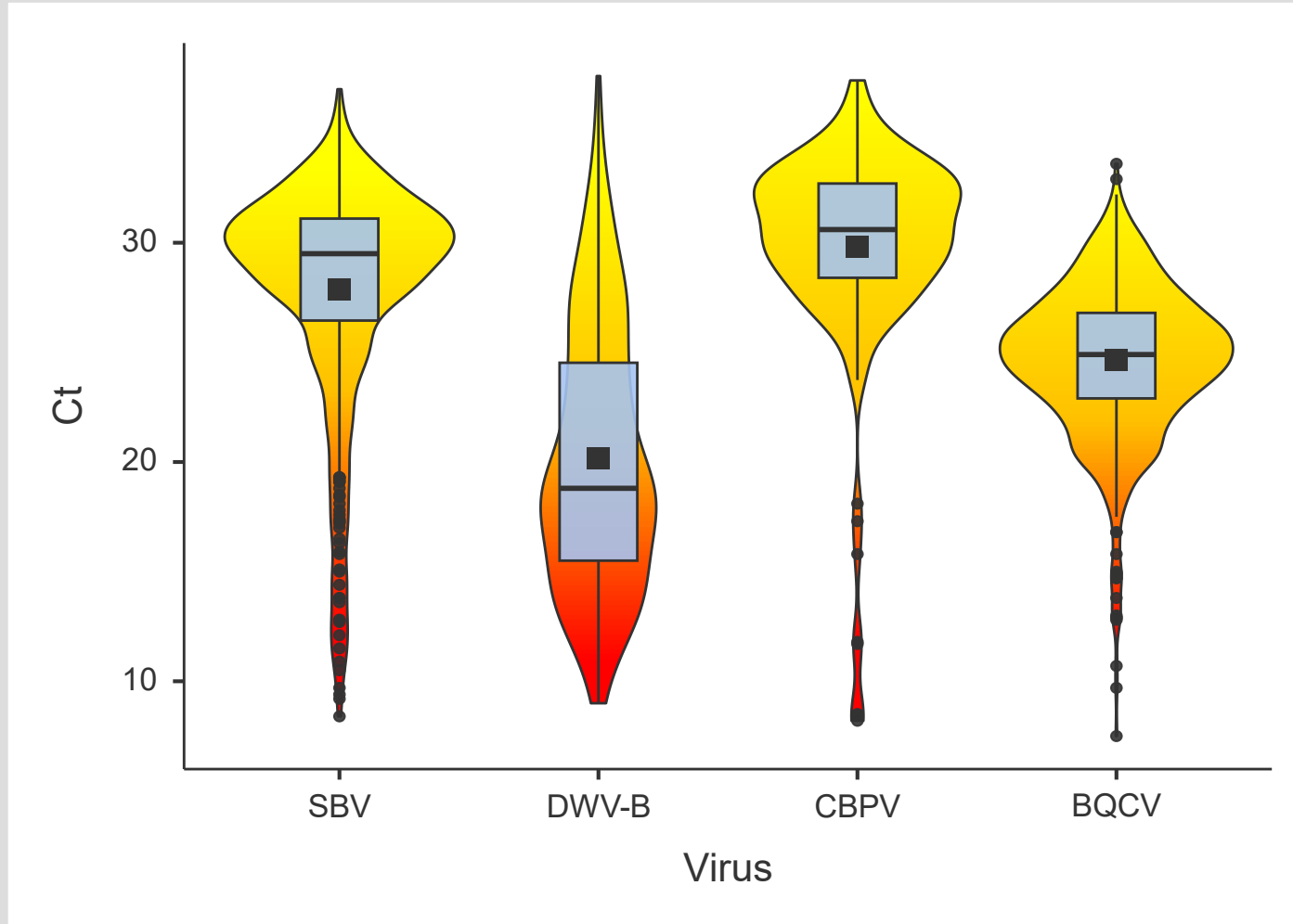
AFB – American Foulbrood, ABPV – acute bee paralysis virus, CBPV – chronic bee paralysis virus, DWV-A/B – deformed wing virus A/B, BQCV – black queen cell virus, SBV – sac brood virus

Detection rate of viruses in 13 saxonian regions (%)

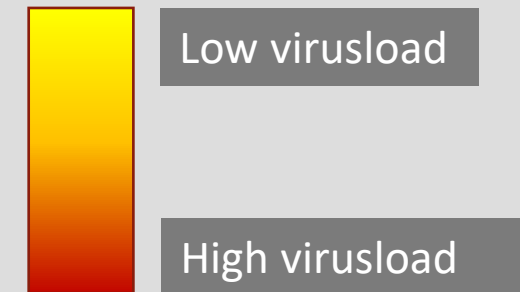


ABPV – acute bee paralysis virus, CBPV – chronic bee paralysis virus, DWV-B – deformed wing virus B, BQCV – black queen cell virus, SBV – sac brood virus

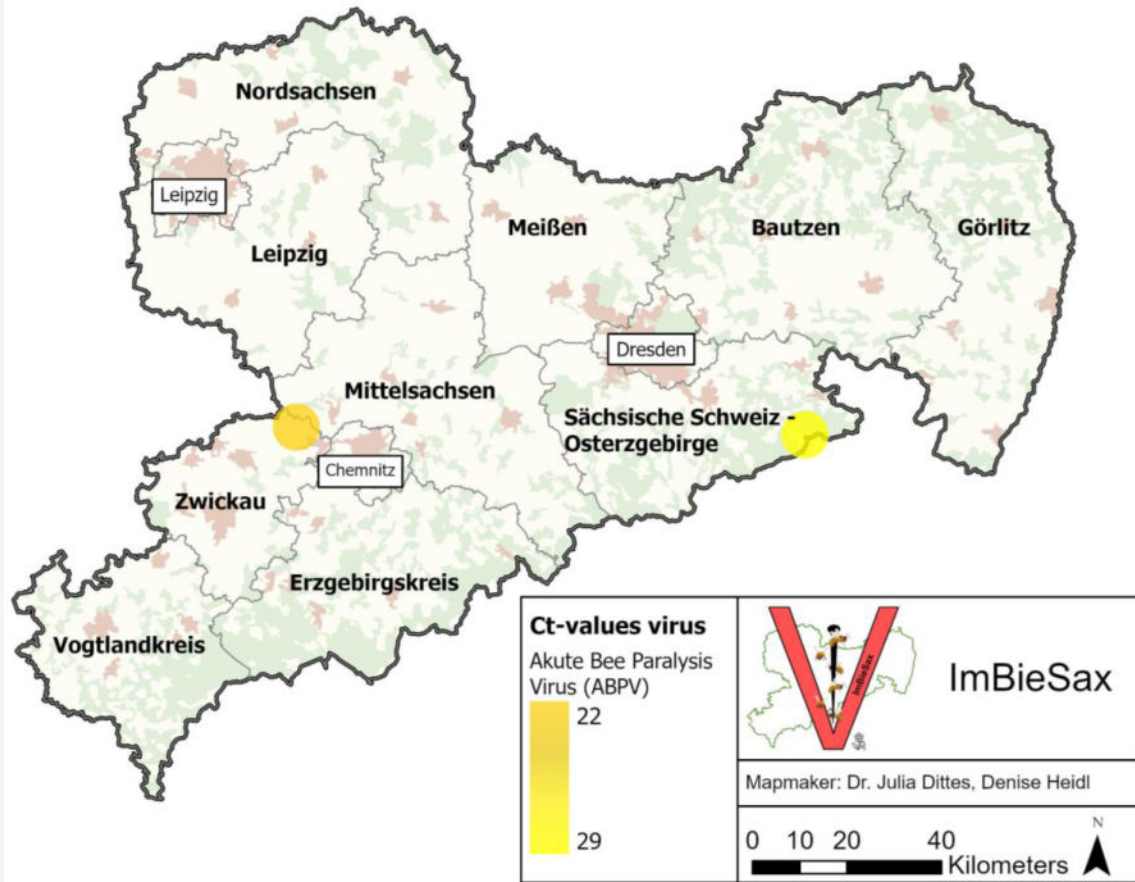
detection rate of honeybee viruses 2023-2024



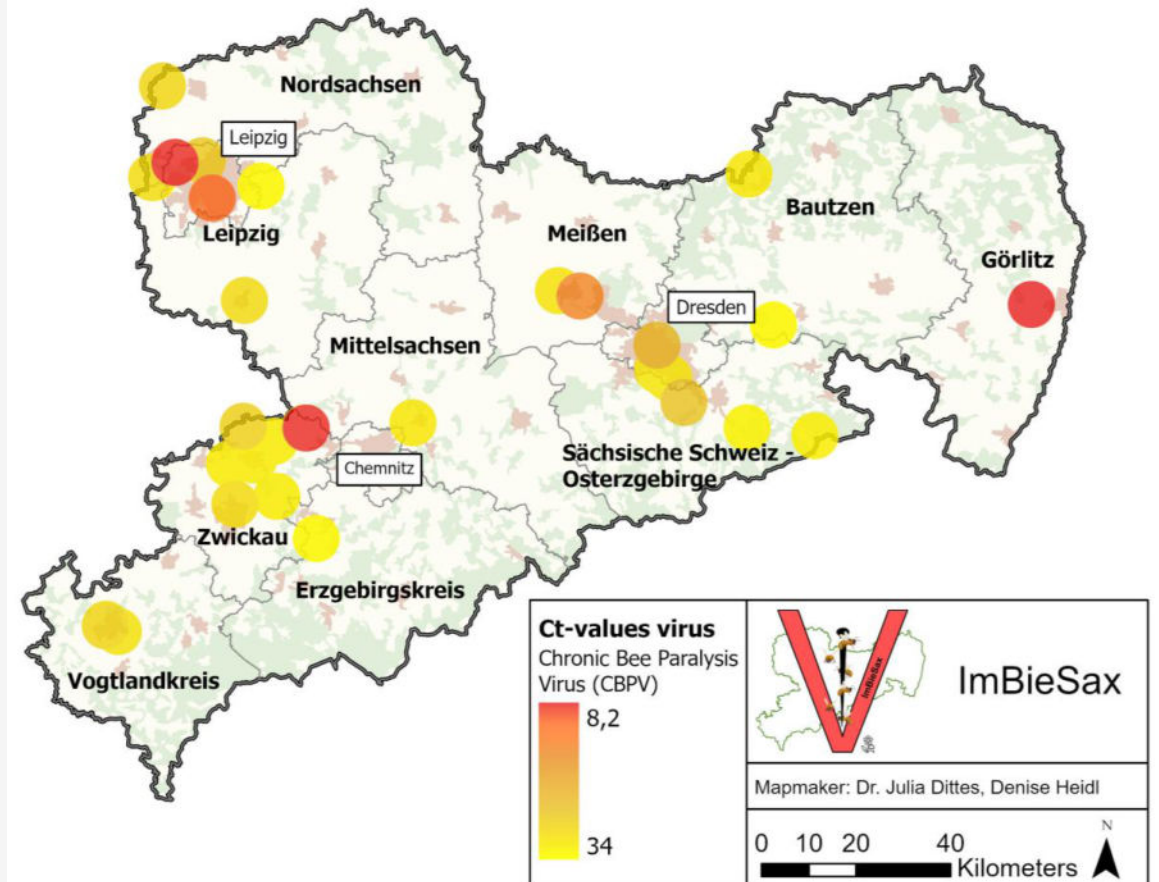
Ct – virusload (threshold cycle)
SBV – sac brood virus
DWV-B – deformed wing virus B
CBPV – chronic bee paralysis virus
BQCV – black queen cell virus



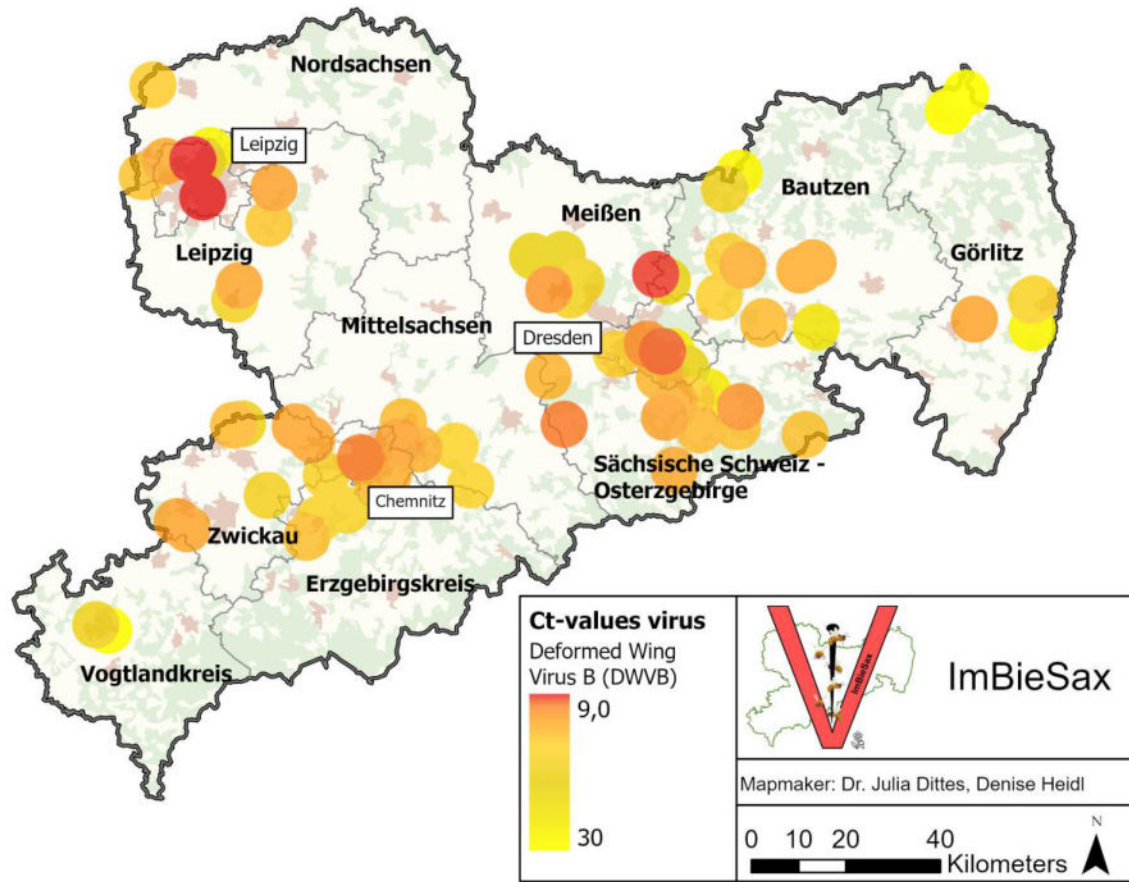
Acute-Bee-Paralysis-Virus



Chronic-Bee-Paralysis-Virus



Deformed Wing Virus



Take-Home-Message

- Positive feedback of beekeepers
- Cases with successful counselling
- Data on honey bee health
- Necessity of more data to evaluate long term effects



Acknowledgements

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- Denise Heidl
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Thank you for your
attention!
Questions? Don't be(e) shy!

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