

Msc Umwelt und Natürliche Ressourcen / Msc Environment and Natural Resource – Master Thesis

Arbeitstitel / Working Title	Automated monitoring of <i>Drosophila suzukii</i>	
MRU / Forschungsgruppe	Agrofoodsystems, Biodiversity & Ecosystems / Research Group for Viticulture	
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Abstract	<p>The spotted wing drosophila <i>D. suzukii</i> is an invasive pest that has been in evidence for some years in the areas of fruit, berry and wine growing. Unlike domestic drosophilidae, <i>D. suzukii</i> lay their eggs in ripe intact fruit, which then collapses after a short time and can no longer be marketed. In extreme cases, this can lead to a total loss of harvest.</p> <p>Today, monitoring takes place by means of cup traps. An automated process would allow comprehensive monitoring of the <i>D. suzukii</i> population and thus help find the answers to scientific questions about the biology of the insect. In addition, it would allow threshold values to be defined according to the population density and development stage of each crop, which in turn would allow a specific recommendation for action.</p> <p>We are developing an automated monitoring method in an international project with partners from the Netherlands and Scotland. A Master's thesis could make a substantial contribution to the success of the project.</p> <p>Possible tasks depending on the progress of the project and the current state of research:</p> <ul style="list-style-type: none"> • Colour selection experiments (laboratory and field) • Trap form selection (laboratory and field) • Attractant/sticky trap combination tests (laboratory) • Glue/attractant combination tests (laboratory) 	

	<ul style="list-style-type: none">• Trap test in the field in various berry crops, cherries and wine. Application of traps in the various wine- and fruit-growing areas. Exchange and analysis of cases over the total flight time of the <i>D. suzukii</i> .
Erforderliche Kompetenzen	Background / interest in pest management strategies, insect trap development, insect behavior and physiology. Interest to contribute to research within international collaborations.
Bemerkungen	The topic of each Master's thesis is adjusted to correspond to the current state of research. It is not a must but the student is encouraged to write the thesis in English