

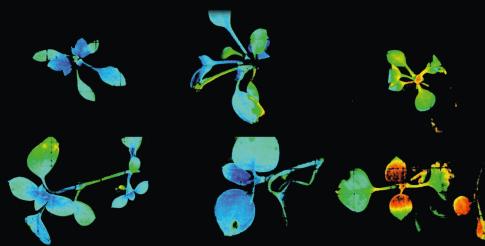


Alexander Linn (Autor)

# Integration of PAM-IMAGING Chlorophyll Fluorometry for Herbicide Sensitivity Estimations in Weed Research

Alexander Linn

Integration of PAM-IMAGING Chlorophyll  
Fluorometry for Herbicide Sensitivity  
Estimations in Weed Research



Cuvillier Verlag Göttingen  
Internationaler wissenschaftlicher Fachverlag

<https://cuvillier.de/de/shop/publications/8206>

Copyright:

Cuvillier Verlag, Inhaberin Annette Jentzsch-Cuvillier, Nonnenstieg 8, 37075 Göttingen,  
Germany

Telefon: +49 (0)551 54724-0, E-Mail: [info@cuvillier.de](mailto:info@cuvillier.de), Website: <https://cuvillier.de>

---

## Table of Contents

List of Tables .....	III
List of Figures .....	IV
List of Abbreviations.....	V
Summary .....	2
Zusammenfassung.....	4
1 General Introduction .....	7
1.1 Objectives.....	9
1.2 Structure of the Dissertation.....	9
2 Publications .....	11
2.1 Features and Applications of a Field Imaging Chlorophyll Fluorometer to Measure Stress in Agricultural Plants.....	12
2.1.1 Abstract .....	12
2.1.2 Introduction .....	13
2.1.3 Methods.....	15
2.1.4 Applications .....	19
2.1.5 Limitations .....	31
2.1.6 Perspectives.....	32
2.1.7 Conclusion.....	32
2.2 Detecting Herbicide-resistant <i>Apera spica-venti</i> with a Chlorophyll Fluorescence Agar Test .....	34
2.2.1 Abstract .....	34
2.3 In-field Classification of Herbicide-resistant <i>Papaver rhoes</i> and <i>Stellaria media</i> using an Imaging Sensor of the Maximum Quantum Efficiency of Photosystem II .....	35
2.3.1 Summary .....	35
3 General Discussion.....	37



## Table of Contents

---

3.1 Chlorophyll Fluorescence in Agriculture .....	38
3.2 Detection of Herbicide-resistant <i>Apera spica-venit</i> .....	41
3.3 In-field Identification of Herbicide-resistant <i>Papaver rhoes</i> and <i>Stellaria media</i> Plants .....	43
4 General References .....	48