

## NordPlant publications 2018-July 2024

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### References

1. Alexandersson, E., M. Keinanen, A. Chawade, and K. Himanen, *Nordic research infrastructures for plant phenotyping*. Agricultural and Food Science, 2018. **27**(1): p. 7-16.
2. Chawade, A., R. Armoniene, G. Berg, G. Brazauskas, G. Frostgard, M. Geleta, A. Gorash, T. Henriksson, K. Himanen, A. Ingver, E. Johansson, L.N. Jorgensen, M. Koppel, R. Koppel, P. Makela, R. Ortiz, W. Podyma, T. Roitsch, A. Ronis, J.T. Svensson, P. Vallenback, and M. Weih, *A transnational and holistic breeding approach is needed for sustainable wheat production in the Baltic Sea region*. Physiologia Plantarum, 2018. **164**(4): p. 442-451.
3. Koc, A., T. Henriksson, and A. Chawade, *Specalyzer—an interactive online tool to analyze spectral reflectance measurements*. Peerj, 2018. **6**.
4. Roitsch, T., L. Cabrera-Bosquet, A. Fournier, K. Ghamkhar, J. Jiménez-Berni, F. Pinto, and E.S. Ober, *Review: New sensors and data-driven approaches—A path to next generation phenomics*. Plant Science, 2019.
5. Abdi, A.M., N. Boke-Olén, H. Jin, L. Eklundh, T. Tagesson, V. Lehsten, and J. Ardö, *First assessment of the plant phenology index (PPI) for estimating gross primary productivity in African semi-arid ecosystems*. International Journal of Applied Earth Observation and Geoinformation, 2019. **78**: p. 249-260.
6. Bentz, B.J., A.M. Jönsson, M. Schroeder, A. Weed, R.A.I. Wilcke, and K. Larsson, *Ips typographus and Dendroctonus ponderosae Models Project Thermal Suitability for Intra- and Inter-Continental Establishment in a Changing Climate*. Frontiers in Forests and Global Change, 2019. **2**(1).
7. Chawade, A., J. van Ham, H. Blomquist, O. Bagge, E. Alexandersson, and R. Ortiz, *High-Throughput Field-Phenotyping Tools for Plant Breeding and Precision Agriculture*. Agronomy-Basel, 2019. **9**(5).
8. Jin, H., A.M. Jönsson, C. Olsson, J. Lindström, P. Jönsson, and L. Eklundh, *New satellite-based estimates show significant trends in spring phenology and complex sensitivities to temperature and precipitation at northern European latitudes*. International Journal of Biometeorology, 2019. **63**(6): p. 763-775.
9. Lagergren, F., A.M. Jönsson, H. Linderson, and A. Lindroth, *Time shift between net and gross CO<sub>2</sub> uptake and growth derived from tree rings in pine and spruce*. Trees, 2019. **33**(3): p. 765-776.
10. Pavicic, M., F. Wang, K. Mouhu, and K. Himanen, *High throughput in vitro seed germination screen identified new ABA responsive RING-type ubiquitin E3 ligases in Arabidopsis thaliana*. Plant Cell, Tissue and Organ Culture (PCTOC), 2019. **139**(3): p. 563-575.
11. Reynolds, D., F. Baret, C. Welcker, A. Bostrom, J. Ball, F. Cellini, A. Lorence, A. Chawade, M. Khafif, K. Noshita, M. Mueller-Linow, J. Zhou, and F. Tardieu, *What is cost-efficient phenotyping? Optimizing costs for different scenarios*. Plant Science, 2019. **282**: p. 14-22.

12. Svystun, T., R.P. Bhalerao, and A.M. Jönsson, *Modelling Populus autumn phenology: The importance of temperature and photoperiod*. Agricultural and Forest Meteorology, 2019. **271**: p. 346-354.
13. Hupp, S., M. Rosenkranz, K. Bonfig, C. Pandey, and T. Roitsch, *Noninvasive Phenotyping of Plant–Pathogen Interaction: Consecutive In Situ Imaging of Fluorescing Pseudomonas syringae, Plant Phenolic Fluorescence, and Chlorophyll Fluorescence in Arabidopsis Leaves*. Frontiers in Plant Science, 2019. **10**: p. 1239.
14. Akhtar, S.S., M.F. Mekureyaw, C. Pandey, and T. Roitsch, *Role of Cytokinins for Interactions of Plants With Microbial Pathogens and Pest Insects*. Frontiers in Plant Science, 2020. **10**: p. 1777.
15. Fox, N. and A.M. Jönsson, *Climate effects on the onset of flowering in the United Kingdom*. Environmental Sciences Europe, 2019. **31**(1): p. 89.
16. Kumar, D., S. Kushwaha, C. Delvento, Ž. Liatukas, V. Vivekanand, J.T. Svensson, T. Henriksson, G. Brazauskas, and A. Chawade, *Affordable Phenotyping of Winter Wheat under Field and Controlled Conditions for Drought Tolerance*. Agronomy, 2020. **10**(6).
17. Gao, J., J.C. Westergaard, E.H.R. Sundmark, M. Bagge, E. Liljeroth, and E. Alexandersson, *Automatic late blight lesion recognition and severity quantification based on field imagery of diverse potato genotypes by deep learning*. Knowledge-Based Systems, 2021. **214**: p. 106723.
18. Molmann, J.A.B., S. Dalmannsdottir, A.L. Hykkerud, T. Hytonen, A. Samkumar, and L. Jaakola, *Influence of Arctic light conditions on crop production and quality*. Physiol Plant, 2021. **172**(4): p. 1931-1940.
19. Karppinen, K., D.J. Lafferty, N.W. Albert, N. Mikkola, T. McGhie, A.C. Allan, B.M. Afzal, H. Haggman, R.V. Espley, and L. Jaakola, *MYBA and MYBPA transcription factors co-regulate anthocyanin biosynthesis in blue-coloured berries*. New Phytol, 2021. **232**(3): p. 1350-1367.
20. Pandey, C., D.K. Großkinsky, J.C. Westergaard, H.J.L. Jørgensen, J. Svensgaard, S. Christensen, A. Schulz, and T. Roitsch, *Identification of a bio-signature for barley resistance against Pyrenophora teres infection based on physiological, molecular and sensor-based phenotyping*. Plant Science, 2021. **313**: p. 111072.
21. Gao, J., J.C. Westergaard, and E. Alexandersson, *Computer Vision and Less Complex Image Analyses to Monitor Potato Traits in Fields*. Methods Mol Biol, 2021. **2354**: p. 273-299.
22. Olsson, P.-O., A. Vivekar, K. Adler, V.E. Garcia Millan, A. Koc, M. Alamrani, and L. Eklundh, *Radiometric Correction of Multispectral UAS Images: Evaluating the Accuracy of the Parrot Sequoia Camera and Sunshine Sensor*. Remote Sensing, 2021. **13**(4).
23. Kelly, J., N. Kljun, L. Eklundh, L. Klemedtsson, B. Liljebladh, P.-O. Olsson, P. Weslien, and X. Xie, *Modelling and upscaling ecosystem respiration using thermal cameras and UAVs: Application to a peatland during and after a hot drought*. Agricultural and Forest Meteorology, 2021. **300**: p. 108330.
24. Kelly, J., N. Kljun, P.-O. Olsson, L. Mihai, B. Liljeblad, P. Weslien, L. Klemedtsson, and L. Eklundh, *Challenges and Best Practices for Deriving Temperature Data from an Uncalibrated UAV Thermal Infrared Camera*. Remote Sensing, 2019. **11**(5).
25. Thapa, S., V.E. Garcia Millan, and L. Eklundh, *Assessing Forest Phenology: A Multi-Scale Comparison of Near-Surface (UAV, Spectral Reflectance Sensor, PhenoCam) and Satellite (MODIS, Sentinel-2) Remote Sensing*. Remote Sensing, 2021. **13**(8).

26. Samkumar, A., D. Jones, K. Karppinen, A.P. Dare, N. Sipari, R.V. Espley, I. Martinussen, and L. Jaakola, *Red and blue light treatments of ripening bilberry fruits reveal differences in signalling through abscisic acid-regulated anthocyanin biosynthesis*. Plant Cell Environ, 2021. **44**(10): p. 3227-3245.
27. Pavicic, M., K. Overmyer, A.U. Rehman, P. Jones, D. Jacobson, and K. Himanen, *Image-Based Methods to Score Fungal Pathogen Symptom Progression and Severity in Excised Arabidopsis Leaves*. Plants (Basel), 2021. **10**(1).
28. Trivedi, P., L. Klavins, A.L. Hykkerud, J. Kviesis, D. Elferts, I. Martinussen, M. Klavins, K. Karppinen, H. Häggman, and L. Jaakola, *Temperature has a major effect on the cuticular wax composition of bilberry (*Vaccinium myrtillus L.*) fruit*. Frontiers in Plant Science, 2022. **13**.
29. Samkumar, A., K. Karppinen, T.K. McGhie, R.V. Espley, I. Martinussen, and L. Jaakola, *Flavonoid biosynthesis is differentially altered in detached and attached ripening bilberries in response to spectral light quality*. Frontiers in Plant Science, 2022. **13**.
30. Roitsch, T., K. Himanen, A. Chawade, L. Jaakola, A. Nehe, and E. Alexandersson, *Functional phenomics for improved climate resilience in Nordic agriculture*. Journal of Experimental Botany, 2022. **73**(15): p. 5111-5127.
31. Pollari, M., N. Sipari, S. Poque, K. Himanen, and K. Mäkinen *Effects of Poty-Potexvirus Synergism on Growth, Photosynthesis and Metabolite Status of Nicotiana benthamiana*. Viruses, 2023. **15**, DOI: 10.3390/v15010121.
32. Jammer, A., S.S. Akhtar, D.B. Amby, C. Pandey, M.F. Mekureyaw, F. Bak, P.M. Roth, and T. Roitsch, *Enzyme activity profiling for physiological phenotyping within functional phenomics: plant growth and stress responses*. Journal of Experimental Botany, 2022. **73**(15): p. 5170-5198.
33. Pottier, D., T. Roitsch, and S. Persson, *Cell wall regulation by carbon allocation and sugar signaling*. The Cell Surface, 2023. **9**: p. 100096.
34. Qi, C., M. Sandroni, J. Cairo Westergaard, E. Høegh Riis Sundmark, M. Bagge, E. Alexandersson, and J. Gao, *In-field classification of the asymptomatic biotrophic phase of potato late blight based on deep learning and proximal hyperspectral imaging*. Computers and Electronics in Agriculture, 2023. **205**: p. 107585.
35. Faehn, C., M. Reichelt, A. Mithofer, T. Hytonen, J. Molmann, and L. Jaakola, *Acclimation of circadian rhythms in woodland strawberries (*Fragaria vesca L.*) to Arctic and mid-latitude photoperiods*. BMC Plant Biol, 2023. **23**(1): p. 483.
36. Amundsen, M., L. Jaakola, K. Aaby, I. Martinussen, N. Kelanne, S. Tuominen, O. Laaksonen, B. Yang, and A.L. Hykkerud, *Effect of ripening temperature on the chemical composition of lingonberries (*Vaccinium vitis-idaea L.*) of northern and southern origin*. Food Res Int, 2023. **167**: p. 112738.
37. Pavicic, M., K. Mouhu, J. Hautsalo, D. Jacobson, M. Jalli, and K. Himanen, *Image-based time series analysis to establish differential disease progression for two Fusarium head blight pathogens in oat spikelets with variable resistance*. Front Plant Sci, 2023. **14**: p. 1126717.
38. Leiva, F., R. Dhakal, K. Himanen, R. Ortiz, and A. Chawade, *The Combination of Low-Cost, Red-Green-Blue (RGB) Image Analysis and Machine Learning to Screen for Barley Plant Resistance to Net Blotch*. Plants (Basel), 2024. **13**(7).
39. Bouras, E., P.O. Olsson, S. Thapa, J.M. Diaz, J. Albertsson, and L. Eklundh, *Wheat Yield Estimation at High Spatial Resolution through the Assimilation of Sentinel-2 Data into a Crop Growth Model*. Remote Sensing, 2023. **15**(18).

40. Abdelghafour, F., S.R. Sivarajan, I. Abdelmeguid, M. Ryckewaert, J.M. Roger, R. Bendoula, and E. Alexandersson, *Including measurement effects and temporal variations in VIS-NIRS models to improve early detection of plant disease: Application to*
- in potatoes.* Computers and Electronics in Agriculture, 2023. **211**.
41. Resjo, S., J. Willforss, A. Large, V. Siino, E. Alexandersson, F. Levander, and E. Andreasson, *Comparative proteomic analyses of potato leaves from field-grown plants grown under extremely long days.* Plant Physiol Biochem, 2024. **215**: p. 109032.
42. Ramšak, Ž., R.S. Sajeevan, and E. Alexandersson, *Trends and Emerging Methods in Potato -Omics, in Approaches for Potato Crop Improvement and Stress Management*, S.M.P. Khurana, J.E. Bradshaw, and V. Bhardwaj, Editors. 2024, Springer Nature Singapore: Singapore. p. 67-98.