

## Dr. Bálint Jákli

Publikationen in begutachteten Zeitschriften und begutachtete Tagungsbände

### 2018

Hou, W.; Yan, J.; **Jákli, B.**; Lu, J.; Ren, T.; Cong, R. & Li, X. (2018): Synergistic effects of nitrogen and potassium on quantitative limitations to photosynthesis in rice (*Oryza sativa* L.). *J. Agric. Food Chem.* 66 (20), 5125-5132.

**Jákli, B.**; Hauer-Jákli, M.; Böttcher, F.; Meyer zur Müdehorst, J.; Senbayram, M. & Dittert, K. (2018): Leaf, canopy and agronomic water-use efficiency of field-grown sugar beet in response to potassium fertilization. *Journal of Agronomy and Crop Science* 204, 99-110.

Li, L.; **Jákli, B.**; Lu, P.; Ren, T.; Ming, J.; Liu, S.; Wang, S. & Lu, J. (2018): Assessing leaf nitrogen concentration of winter oilseed rape with canopy hyperspectral technique considering a non-uniform vertical nitrogen distribution. *Ind. Crop Prod.* 116, 1–14 .

Tavakol, E.; **Jákli, B.**; Cakmak, I.; Dittert, K.; Karlovsky, P.; Pfohl, K. & Senbayram, M. (2018) Optimized potassium nutrition improves plant-water-relations of barley under PEG-induced osmotic stress. *Plant Soil* 430, 23-35.

Tränkner, M.; **Jákli, B.** & Tavakol, E. (2018): Functioning of potassium and magnesium in photosynthesis, photosynthate translocation and photoprotection. *Physiol. Plantarum*, 163, 414-431.

### 2017

**Jákli, B.**; Tavakol, E.; Tränkner, M.; Senbayram, M. & Dittert, K. (2017) Quantitative limitations to photosynthesis in K deficient sunflower and their implications on water-use efficiency. *Journal of Plant Physiology* 209, 20-30.

### 2016

**Jákli, B.**; Tränkner, M.; Senbayram, M. & Dittert, K. (2016): Adequate supply of potassium improves plant water-use efficiency but not leaf water-use efficiency of spring wheat. *J. Plant Nutr. Soil Sci.* 179, 733-745.

Tränkner, M.; **Jákli, B.**; Tavakol, E.; Geilfus, C.M.; Cakmak, I.; Dittert, K. & Senbayram, M. (2016) Magnesium deficiency decreases biomass water-use efficiency and increases leaf water-use efficiency and oxidative stress in barley plants. *Plant Soil* 406, 409-423.

## 2011

Otieno, D.O.; K'Otuto, G.O.; **Jákli, B.**, Schröttle, P.; Maina, J.N.; Jung, E. & Onyango, J.C. (2011) Spatial heterogeneity in ecosystem structure and productivity in a moist Kenyan savanna. *Plant Ecol.* 212: 769-783.

## Redebeiträge bei Konferenzen

**Jákli, B.**; Tavakol, E.; Tränkner, M. & Dittert, K. (2017) Restricted CO<sub>2</sub> diffusion through the leaf mesophyll and not stomatal regulation limits photosynthesis in K deficient sunflower. International Plant Nutrition Colloquium (IPNC), August 21<sup>st</sup> – 24<sup>th</sup>, Copenhagen, Denmark.

**Jákli, B.**; Tränkner, M.; Tavakol, E. & Dittert, K. (2017) Restricted CO<sub>2</sub> diffusion through the leaf mesophyll and not stomatal regulation limits photosynthesis in K deficient crop plants. *Frontiers of Potassium*, January 25<sup>th</sup> – 27<sup>th</sup>, Rome, Italy.

Tränkner, M.; Tavakol, E.; **Jákli, B.** & Dittert, K. (2017) Photoprotective responses and PSII functionality under Mg deficiency. XVIII. International Plant Nutrition Colloquium (IPNC), August 21<sup>st</sup> – 24<sup>th</sup>, Copenhagen, Denmark.

**Jákli, B.**; Senbayram, M.; Tränkner, M.; Tavakol, E. & Dittert, K. (2015) Der Einfluss von Kalium auf die Wassernutzungseffizienz von Weizen – vom einzelnen Blatt zur gesamten Pflanze. International Conference of the German Society of Plant Nutrition (DGP), September 17<sup>th</sup> – 18<sup>th</sup>, Göttingen, Germany.

**Jákli, B.**; Senbayram, M.; Tränkner, M.; Tavakol, E. & Dittert, K. (2015) The role of potassium in optimizing water-use efficiency and drought adaptation - from single leaves to whole plants. 45<sup>th</sup> Annual Meeting of the Ecological Society of Germany, Austria and Switzerland (GfÖ), August 31<sup>st</sup> – September 04<sup>th</sup>, Göttingen, Germany.

Tränkner, M.; **Jákli, B.**; Tavakol, E.; Dittert, K. & Senbayram, M. (2014) Magnesium deficient barley plants have lower biomass water-use efficiency and increased sensitivity to excess light energy. 2<sup>nd</sup> Magnesium Symposium, November 4<sup>th</sup> – 6<sup>th</sup>, São Paulo, Brazil.

## Poster bei Konferenzen

Tränkner, M.; Senbayram, M.; **Jákli, B.**; Halicki, S.; Dittert, K. & Zörb, C. (2017) Comparative Study on Proteome Changes in Response to Potassium Deficiency and Drought in *Triticum aestivum* Roots. *Frontiers of Potassium Science Conference*, January 25<sup>th</sup> – 27<sup>th</sup>, Rome, Italy.

**Jákli, B.**, Senbayram, M.; Meyer zur Müdehorst, J.; Fuchs, M.; Böttcher, F.; Hertwig, F.; Lingner, A. & Dittert, K. (2016) Drone-based remote screening of water-use efficiency. 75<sup>th</sup> Congress of the International Institute for Beet Research (IIRB), February 16<sup>th</sup> – 17<sup>th</sup>, Brussels, Belgium.

**Jákli, B.**; Tränkner, M. & Senbayram, M. (2014) Effects of potassium deficiency on water use efficiency of *Triticum aestivum*. International Conference of the German Society of Plant Nutrition (DGP), September 10<sup>th</sup> – 12<sup>th</sup>, Halle (Saale), Germany.

Tavakol, E.; Tränkner, M.; **Jákli, B.**; Dittert, K. & Senbayram, M. (2014) Adequate K supply enhances tolerance to drought situations via optimized NPQ and antioxidant activity in spring wheat. International Conference of the German Society of Plant Nutrition (DGP), September 10<sup>th</sup> – 12<sup>th</sup>, Halle (Saale), Germany.

## Weitere Publikationen

**Jákli, B.** & Hertwig, F. (2017) Kaliumdüngung verbessert die Wassernutzungseffizienz – Ertrag, Evapotranspiration und Skalenabhängigkeit. 13. Tag der Agrarmeteorologie, January 11<sup>th</sup>, Deutscher Wetterdienst (DWD), Leipzig, Germany.

**Jákli, B.** (2016) The relation between potassium nutrition and water-use efficiency of crop plants – Comparative studies from leaf to field scale. 1<sup>st</sup> ed. Cuvillier Verlag, Göttingen. ISBN 978-3-7369-9430-0. eISBN 978-3-7369-8430-1.

Thiel, H. & **Jákli, B.** (2016) Kalium erhöht die Wassernutzungseffizienz pflanzlicher Systeme. Kali & Steinsalz 03/2016, 38-47.