DEREK MICHAEL WRIGHT

I graduated with a BSc in Biology from the *University of Regina* in 2012, followed by a MSc in Agrobiotechnology from *Justus-Liebig-Universität Gießen* (*University of Giessen, Germany*) in 2015. I now work in the Plant Sciences department at the *University of Saskatchewan* and have been involved in four research projects (AGILE, EVOLVES, P2IRC & ACTIVATE) with lentil (*Lens culinaris*).

I have done extensive work with a lentil diversity panel, NAM and inter-specific RIL populations. I am very fluent in R and have plenty of experience with data analysis such as modeling, PCA, GxE, GWAS and QTL analyses. I have recently been working with data acquisition from UAV and seed imaging systems and can handle data wrangling and visualization of large, high-throughput data sets.

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RESEARCH EXPERIENCE & EDUCATION

Current | 2015

University of Saskatchewan
Research Assistant — Saskatoon, Saskatchewan, Canada

- Coordinate field trials
- Seed setup
- Post-harvest processing
- Data collection & analysis
- Presentations
- Collaborations

2015

Cargil Specialty Seeds and Oils
Research Assistant (Internship) — Aberdeen, Saskatchewan, Canada

- Data collection & analysis
- Pathology (blackleg)

2015 | 2013

M.Sc. in Agrobiotechnology
University of Giessen — Giessen, Hesse, Germany

- Biotechnology and Genomics
- Molecular Phytopathology
- Plant Microbe Interactions
- Plant Protection and Bioengeneering
- Microbial-Food-Biotechnology
- Applied Statistics and Bioinformatics
- Molecular Plant Breeding
- Molecular Entomology
- Tissue Culturing and Genetic Transformation

2012 | 2007

B.Sc. Biology
University of Regina — Regina, Saskatchewan, Canada

- Limnology
- Environmental Microbiology
- Global Biogeochemistry
- Stable Isotope Ecology
- Vertebrate Animal Biology
- Advanced Plant Physiology
- Molecular Genetics
- Bacterial Genetics

PACKAGES

agData: an R package containing agricultural data sets
https://derekmichaelwright.github.io/agData/
devtools::install_github("derekmichaelwright/agData")

gwaspr: an R package for plotting GWAS results
https://derekmichaelwright.github.io/gwaspr/
devtools::install_github("derekmichaelwright/gwaspr")

Skills

- Photography
- Biology &Genomics
- Data Analytics & Visualization
- The R Project

Contact

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- wrightmderek@gmail.com
- derek.wright@usask.ca
- @DerekMWright
- github.com/derekmichaelwright

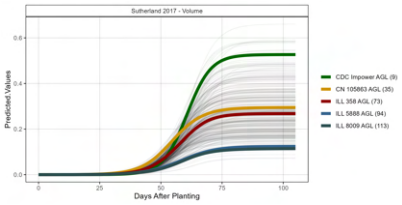
Website

derekmichaelwright.github.io/dblogr/

PUBLICATIONS

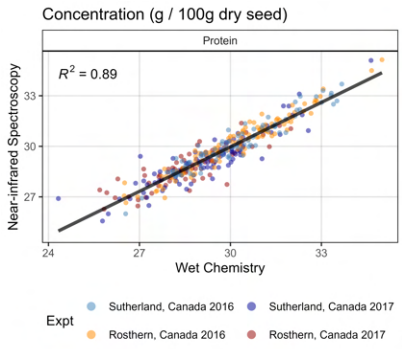
2025

Disecting lentil crop growth across multi-environment trials using unoccupied aerial vehicles and genome-wide association studies
The Plant Phenome Journal. In review.
github Script



2025

Breeding potential of cultivated lentil for increased protein and amino acid concentrations in the Northern Great Plains
Crop Science. 65(3): e70085.
github Script



2024

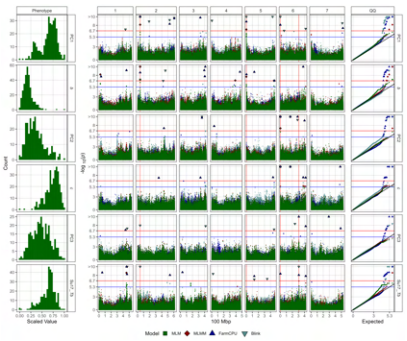
Grazing preferences of three species of amoebae on cyanobacteria and green algae
The Journal of Eukaryotic Microbiology. e13018: 1-14.

2023

Mass Spectrometry-Based Untargeted Metabolomics Reveals the Importance of Glycosylated Flavones in Patterned Lentil Seed Coats
Journal of Agricultural and Food Chemistry. 71(7): 3541–3549.

2022

Focusing the GWAS *Lens* on days to flower using latent variable phenotypes derived from global multi-environment trials
The Plant Genome. 16(1): e20269.
github Script



2021

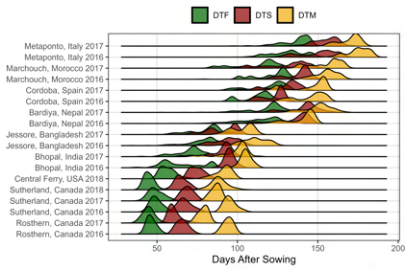
Strategic Identification of New Genetic Diversity to Expand Lentil (Lens culinaris Medik.) Production (Using Nepal as an Example)
Agronomy. 11(10): 1933.
github Script

2020

Genomic selection for lentil breeding: Empirical evidence
The Plant Genome. 13(1):e20002.

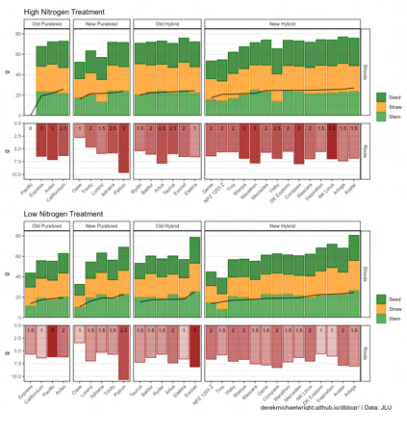
2020

Understanding photothermal interactions can help expand production range and increase genetic diversity of lentil (*Lens culinaris* Medik.)
Plants, People, Planet. 3(2): 171-181.
github Script



2015

Influence of heterozygosity on nitrogen use efficiency in hybrid and purebred lines of *Brassica napus* (L.)
University of Giessen MSc Thesis
Script



Investigating seed size, shape, color, and patterning in a lentil using high throughput imaging
unpublished