

# LEONARDO VOLPATO

## Postdoctoral Research Associate

Michigan State University - East Lansing, MI.  
February 2021 to present

## EDUCATION

- 2009 • **Instituto Federal do Triângulo Mineiro - IFTM**  
T.E. in Technical Course in Agriculture 📍 Uberlandia, Brazil
- 2014 • **Federal University of Viçosa - UFV**  
B.S. in Agronomy 📍 Viçosa, Brazil
- 2016 • **Federal University of Viçosa - UFV**  
M.S. in Plant Breeding 📍 Viçosa, Brazil  
  
Thesis: Selection of soybean progeny for grain yield with the use of mixed models
- 2020 • **Federal University of Viçosa - UFV**  
Ph. D. in Plant Breeding 📍 Viçosa, Brazil  
  
Thesis: High-throughput phenotyping for soybean plant maturity date and wheat plant height using unmanned aerial system

## RESEARCH EXPERIENCE

- 2018 | 2019 • **Visiting Student**  
International Maize and Wheat Improvement Center - CIMMYT 📍 Mexico City, Mexico
  - Supported the entire remote sensing components of wheat and maize plant breeding trials.
  - Performed drone imagery and software analyses.
  - Conducted missions and collected data for HTP using Unmanned Aerial System (UAS).
  - Pipeline developed for measuring agronomic trait such as plant height, biomass, lodging and biologic stress using UAS.
- 2019 | 2020 • **Visiting Research Scholar**  
University Of Minnesota 📍 Minneapolis, USA
  - Applied remote sensing approaches in the soybean variety development pipeline.
  - Conducted field data analyses using drone imagery.
  - Worked collaboratively with other graduate students and technicians.
  - Pipeline implemented in R to estimate plant maturity date using HTP/UAS methods
- 2010 | 2014 • **Intern**  
Federal University of Viçosa - UFV 📍 Viçosa, Brazil
  - Resistance of *Spodoptera frugiperda* (Lepidoptera: Noctuidae) to proteins from *Bacillus thuringiensis*
  - Evaluation of tropical maize (*Zea mays* L.) lines for nitrogen use efficiency
  - Selection within and between families of ornamental pepper (*Capsicum* spp.)

## PROFESSIONAL/ACADEMIC EXPERIENCE

- 2011 | 2012 • **AgroPlan-UFV - Junior Enterprise Agronomy**  
Federal University of Viçosa - UFV 📍 Viçosa, Brazil

## CONTACT INFO

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## STATISTICAL SOFTWARE


R, Python, and GIS tools.

## EXPERIENCED AREAS

Statistical and bioinformatics analysis, mixed models, GxE interaction, Genotyping and Phenotyping.

## RESEARCH STRENGTHS

Full experience with remote sensing analysis, drone imagery use and HTP pipelines, Genomic selection and Multi-trait multi-environment models.

- 2013 | 2014 ● **Teaching assistant in Agriculture Entomology**  
Federal University of Viçosa - UFV  Viçosa, Brazil
- 2014 ● **Regulation of seeds and seedlings, Intern**  
Federal Agriculture, Livestock and Supply - MAPA  Viçosa, Brazil
- 2015 | 2017 ● **Academic group coordinator**  
GenMelhor-UFV - Study Group of Genetics and Breeding  Viçosa, Brazil



## SELECTED PUBLICATIONS AND POSTERS

- 2018 ● **Selection of inbred soybean progeny: an approach with population effect.**  
Plant Breeding, v. 138, p. i-iv, 451-672.  
**Volpato, L.;** Simiqueli, G.F.; Alves, R.S.; Rocha, J. R. A. S. C.; Del Conte, M. V.; Resende, M. D. V.; Carneiro, P. C. S.; Silva, F. L.
- 2019 ● **A. Multi-trait multi-environment models in the genetic selection of segregating soybean progeny.**  
PLoS One, v. 14, p. e0215315.  
**Volpato, L.;** Alves, R.S.; Teodoro, P.E.; Resende, V. M. D.; Nascimento, M.; Nascimento, A. C. C.; Ludke, W.H.; Lopes, S. F.
- 2019 ● **SNP markers associated with soybean partial resistance to Phytophthora sojae.**  
Crop Breeding and Applied Biotechnology, v. 19, p. 31-39  
Ludke, W. H.; Schuster, I.; Nora, T. D.; Oliveira, A. B.; Soares, B. A.; **Volpato, L.;** Silva, F. L.
- 2020 ● **Inference of population effect and progeny selection via a multi-trait index in soybean breeding.**  
Acta Scientiarum. Agronomy, v. 43, p. 10.4025/actasci  
**Volpato, L.;** Rocha, J. R. A. S. C.; Alves, R. S.; Ludke, W. H.; Oliveira, A. B.; Silva, F. L.
- 2021 ● **High Throughput Field Phenotyping for Plant Height Using UAV-Based RGB Imagery in Wheat Breeding Lines: Feasibility and Validation.**  
Frontiers in Plant Science, v. 12, p. 591587  
**Volpato, L.;** Pinto, F.; González-Pérez, L. ; Thompson, I. G. ; Borem, A.; Reynolds, M.; Gérard, B.; Molero, G.; Rodrigues, F. A.
- 2021 ● **High Throughput Field Phenotyping for Plant Height Using UAV-Based RGB Imagery in Wheat Breeding Lines: Feasibility and Validation.**  
The Plant Phenome J.,10.1002/ppj2.20018  
**Volpato, L.;** Dobbels. A.; Borem, A.; Lorenz, A. J.
- 2021 ● **Genomic selection with rapid cycling: Current insights and future prospects.**  
Crop Breeding and Applied Biotechnology. 21(S): e394721S14  
**Volpato, L.;** Bernardeli, A.; Gomez, F.



## LANGUAGE

- **Portuguese**  
Native
- **English**  
Fluent
- **Spanish**  
Working knowledge