

## Milos Zaric

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### Education

**PhD** in Weed Science, Agronomy and Horticulture Department, University of Nebraska-Lincoln, 2023. Dissertation entitled “**Challenges and Strategies in Weed and Herbicide Management for Industrial Hemp**” (Sam Wortman, advisor and Greg Kruger, co-advisor)

**MS** in Weed Science, Agronomy and Horticulture Department, University of Nebraska-Lincoln, 2020. Thesis entitled “**Effects of Tank Contamination and Impact of Drift-Reducing Agents on Weed Control in Response to Dicamba Applications.**” (Greg Kruger, advisor)

**MS** in Weed Science, Department for Plant Protection, University of Belgrade, Republic of Serbia, 2017. Thesis entitled “**Effects of Crop Rotations and Fertilizer Methods on Weed Seed Bank in Corn.**” (Sava Vrbnicanin, advisor)

**BS** in Agronomy, Department for Plant Protection, University of Belgrade, Republic of Serbia, 2016. (Sava Vrbnicanin, advisor)

### Research Experience

Being a member of the Pesticide Application Technology Laboratory from 2017 helped me to be involved in a larger team where I have gained experience helping other students with their projects (some of the research conducted already highlighted in publications). As of 2020, I got involved with mentoring undergraduate student researchers (domestic and international) and developing research around a diversity of topics. In addition to this, I was helping with the development of diverse research work (wind tunnel, greenhouse, and field) with PAT Lab through experimental design suggestions, setting up trials, working on evaluations, data collection, maintenance, and statistical analysis per predetermined protocols.

### Extension Experience

My PhD work has allowed me to interact directly with industrial hemp and hops (economically important crops from Cannabinaceae family) producers who may not have been able to connect with the needed expertise. Partnering with producers in developing on-farm research has led to extension programming and greater producer engagement across Nebraska.

### Teaching Experience

- Weed Contest Preparation (AGRO Ind. Study 496/896) and Invasive Plants (AGRO 426/826) (invited speaker); Spring 2020, 2022, 2023.  
Developed workshops for future stakeholders (class enrolment ~100 students) to expand knowledge about the pesticide application complexity, how properly to calibrate pesticide delivery systems and how to use available technology to enhance weed control and mitigate off-target movement.
- Plants, Landscapes & the Environment (AGRO/HORT/TLMP 100 Section 700); 2021-2022 (190 students).
- Weed Contest Preparation (AGRO Ind. Study 496/896); Spring 2021.

Helped to redesign and structure Weed Contest Preparation class that transitioned from one to two credit hours for undergraduate and graduate students that included covering topics over a 15-week period on: (1) Weed Identification; (2) Unknown Herbicide Identification; (3) Application Technology; (4) Sprayer Calibration; (5) Problem Solving and Recommendation.

### Selected Extension Talks and Symposiums

- **2024** Crop Production Clinics. Pesticide Application Technology (Decision-making and Calibration of Pesticide Delivering Equipment & What's New in Industry (**TBD**)). Western and Central Nebraska.
- **2023** Crop Production Clinics. Pesticide Application Technology (Decision-making and Calibration of Pesticide Delivering Equipment (~500 participants)). Western, Central, and Eastern Nebraska.
- **2022 and 2023** Custom Applicators Trainings (~150 participants). Hastings, Nebraska.
- **2022** Crop Production Clinics. The Complexity of Pesticide Application Technology (~300 participants). Western, Central, and Eastern Nebraska.
- **2021** Nebraska Hops Growers Annual Meeting. Pesticide Application in Specialty Crops.
- **2021** Crop Production Clinics. Why does proper spray cleanout matters? Western, Central, and Eastern Nebraska (Virtual Meeting).
- **2018 - 2021** Wilbur Ellis –Pesticide Applicator Trainings (> 500 participants).
- **2019** Symposium. The What, How, and Why of Dicamba Tank Clean-Out. Potential Impact of Dicamba Tank Contamination on Non-Dicamba Tolerant Soybean (130 participants).
- **2019** North Dakota State University and Extension Service Tour (100 participants). North
- **2018** Weeds Exposure to Herbicide Drift. United States Environmental Protection Agency Tour (50 participants).

### Publications

- Brankov Milan, Milena Simic, Theresa Piskackova, **Milos Zaric**, Milos Rajkovic, Natalija Pavlovic, Vesna Dragicevic. "A post-emergence herbicide program for weedy sunflower (*Helianthus annuus* L.) control in maize." *Phytoparasitica* (2024) – Accepted for Publication
- Robert Klein, Cody Creech, **Milos Zaric**. "Drought and Poor Stands Will Make Weed Control in Wheat Stubble Difficult This Year." CropWatch. Extension Publication (2023). Available at: <https://cropwatch.unl.edu/2022/weed-control-wheat-stubble-difficult-this-year>
- Brankov Milan, Bruno Canella Vieira, Guilherme Sousa Alves, **Milos Zaric**, Greg R. Kruger. "Particle drift potential of mesotrione and rimsulfuron plus thifensulfuron-methyl tank mixture in a low-speed wind tunnel." *Plant Protection Science* (2023).
- Brankov Milan, Bruno Canella Vieira, Guilherme Sousa Alves, **Milos Zaric**, Barbara Vukoja, Trenton Houston, Greg R. Kruger. "Adjuvant and nozzle effects on weed control using mesotrione and rimsulfuron plus thifensulfuron-methyl." *Crop Protection* (2023), Volume 167, 106 - 209, <https://doi.org/10.1016/j.cropro.2023.106209>.
- Brankov Milan, Guilherme Sousa Alves, Bruno Canella Vieira, **Milos Zaric**, Barbara Vukoja, Trenton Houston, Greg R. Kruger. "Particle drift simulation of mesotrione and rimsulfuron plus thifensulfuron-methyl mixture to field and vegetable crops." *Environ Sci Pollut Res* 30 (2023), 38226–38238. <https://doi.org/10.1007/s11356-022-24938-x>.
- Canella Vieira, B., Guilherme Sousa Alves, Barbara Vukoja, Vinicius Velho, **Milos Zaric**, Trenton W Houston, Bradley K Fritz, and Greg R Kruger. "Spray drift potential of dicamba plus S-Metolachlor formulations." *Pest Management Science* (2021). <https://doi.org/10.1002/ps.6772>.
- Alves, Guilherme Sousa, Greg R. Kruger, João Paulo A. R. da Cunha, Denise G. de Santana, Luís André T. Pinto, Frederico Guimarães, and **Milos Zaric**. "Dicamba spray drift as influenced by wind speed and nozzle type." *Weed Technology* 31, no. 5 (2017): 724–31. <https://doi.org/10.1017/wet.2017.61>.

### Publications (Waiting for Approval)

- Gizotti de Moraes Jesaelen, **Milos Zaric**, Maxwell C. Oliveira, Bradley K. Fritz; Rodrigo Werle, Cody F. Creech, Bruno C. Vieira, Joe D. Luck, Jeffrey A. Golus, and Greg R. Kruger. "Impact of drift reducing adjuvants on spray pattern uniformity and solution physical properties of dicamba tank-mixtures." *Plos One*.
- **Zaric Milos**, Bruno C. Vieira, Guilherme S. Alves, Barbara Vukoja, Sam E. Wortman, Julie Peterson, Greg R. Kruger. "Industrial hemp biomass negatively affected by herbicide drift from corn and soybean herbicides." *Industrial Crops and Products*.

### Conference Oral Presentations

- Andrea Rilaković, Ruby Anderson, Bruno Canella Vieira, **Milos Zaric**, Jeffrey Golus, Ana Velez, Greg Kruger, Brian Krienke, Turner Dorr, Daran Rudnick, Julie Peterson (2023). Efficiency and efficacy of insecticide application technologies for western bean cutworm. Entomology Society of America North Central Branch (NCB-ESA), Oklahoma City, OK.
- **Milos Zaric**, Kasey P. Schroeder, Thiago H. Vitti, Christopher Proctor, Jeffrey A. Golus, Kelly W. Bruns, Sam E. Wortman (2022). Volunteer Hemp Resilience to Spring Burndown Herbicide Application in Soybean and Corn. 77th Annual Meeting of the North Central Weed Science Society, St. Louis, Missouri.
- **Milos Zaric**, Marija Savic, Greg R. Kruger, Kelly W. Bruns, Sam E. Wortman (2022). Comparison of ACCase Inhibiting Herbicides for use in Industrial Hemp. 75th Annual Meeting of the Western Society of Weed Science, Newport Beach, California.
- **Milos Zaric**, Jeff A. Golus, Kelly W. Bruns, Sam E. Wortman (2022): Volunteer Hemp Resilience to Spring Burndown Herbicide Application in Soybean Influenced by Selection of Active Ingredient. 10th International IPM Symposium Denver, Colorado.
- **Milos Zaric**, Bruno Canella Vieira, Marija Savic, Barbara Vukoja, Guilherme Sousa Alves, Greg R. Kruger (2020): Assessment of Industrial Hemp Susceptibility to Off-target Movement of Commonly Applied Corn and Soybean Postemergence Herbicides. 75th Annual Meeting of the North Central Weed Science Society, virtual.
- **Milos Zaric**, Guilherme S. Alves, Bruno Canella Vieira, Jeffrey A. Golus, Greg R. Kruger (2019). Dicamba Simulated Tank-Contamination in Common Postemergence Non-Dicamba-Tolerant Soybean Herbicide Programs. Oral presentation, 74th Annual Meeting of the North Central Weed Science Society, Columbus, Ohio.
- Guilherme S. Alves, Bruno Canella Vieira, **Milos Zaric**, Barbara Vukoja, Arthur F. Teodoro Duarte, Pedro H. Alves Correa, Kasey P. Schroeder, Greg R. Kruger (2019). Buffer Zone Width Effect on Spray Drift from Applications on Soybean and Corn Using an Air Induction Nozzle. Oral presentation, 74th Annual Meeting of the North Central Weed Science Society, Columbus, Ohio.
- **Milos Zaric**, Kasey P. Schroeder, Arthur F. Teodoro Duarte, Bruno Canella Vieira, Jesaelen Gizotti de Moraes, Jeffrey A. Golus, Greg R. Kruger (2019). Impact of Various Formulations of Dicamba with Approved Drift Reducing Agents on Pesticide Applications. American Society for Testing and Materials, 40th Symposium on Pesticide Formulation and Delivery Systems: Innovative Formulation, Application and Adjuvant Technologies for Agriculture. Houston, Texas.
- **Milos Zaric**, Bruno Canella Vieira, Jesaelen Gizotti de Moraes, Jeffrey A. Golus, Greg R. Kruger (2018). Impact of Different Glyphosate Solutions on Control of Common Lambsquarters (*Chenopodium album* L.) American Society for Testing and Materials, 39th Symposium on Pesticide Formulation and Delivery Systems: Innovative Formulation, Application and Adjuvant Technologies for Agriculture. Washington, District of Columbia.

- **Milos Zaric**, Guilherme Sousa Alves, Bruno Canella Vieira, Jeffrey A. Golus, Greg R. Kruger (2018). Dicamba Simulated Tank-contamination Injury from Post-emergence Herbicide Applications on Non-dicamba-tolerant soybean. 73rd Annual Meeting of the North Central Weed Science Society, Milwaukee, Wisconsin.
- **Milos Zaric**, Jesaelen G. Moraes, Andre O. Rodrigues, Debora O. Latorre, Bruno C. Vieira, Greg R. Kruger (2017). Nozzle Selection and Adjuvant Impact the Efficacy of Glyphosate and PPO-inhibiting Herbicide Tank-Mixtures. 72nd Annual Meeting of the North Central Weed Science Society, St. Louis, Missouri.

### Conference Poster Presentations

- Gabriel S. Lemes, Aleksandra Pantic, Jeffrey A. Golus, **Milos Zaric** (2023). Wind-Speed Effects on Pattern Displacement: Insights from Wind-Tunnel Trials. 78th Annual Meeting of the North Central Weed Science Society, Minneapolis, Minnesota.
- Aleksandra Pantic, Gabriel S. Lemes, Jeffrey A. Golus, **Milos Zaric** (2023). Analysis of Droplet Size and Spray Dynamics Across Nozzles with Different Fan Angles for Precision Application. 78th Annual Meeting of the North Central Weed Science Society, Minneapolis, Minnesota.
- Andrea Rilaković, Ruby Anderson, Bruno Canella Vieira, **Milos Zaric**, Jeffrey A. Golus, Ana Velez, Greg R. Kruger, Brian Krienke, Turner Dorr, Darran Rudnick, Julie Peterson (2023). Western Bean Cutworm (*Striacosta albicosta*) Chemical Management in Intensive Corn Production in North America. International Working Group of Ostrinia and other maize pests (IWGO), Nairobi, Kenya.
- Alina Gava, Tairis Duarte, **Milos Zaric**, Jeffrey A. Golus, Kelly Bruns (2022). Phytotoxicity, Plant Height, and Biomass Response of Two Industrial Hemp Cultivars to Quizalofop-ethyl Mixtures with Various Adjuvants. 77th Annual Meeting of the North Central Weed Science Society, St. Louis, Missouri.
- Tairis Duarte Vasconcelos, Alina Gava, Zachary Halsted, Barbara Houston, Kasey P. Schroeder, Jeffrey A. Golus, **Milos Zaric** (2022). Employment of Multiple-fan Nozzles and Application Volume Affected Spray Coverage and Herbicide Efficacy in Three Troublesome Broadleaf Species. 77th Annual Meeting of the North Central Weed Science Society, St. Louis, Missouri.
- **Milos Zaric**, Marija Savic, Greg R. Kruger, Kelly W. Bruns, Sam E. Wortman (2022). Comparison of ACCase Inhibiting Herbicides for Use in Two Industrial Hemp Cultivars. 77th Annual Meeting of the North Central Weed Science Society, St. Louis, Missouri.
- **Milos Zaric**, Bruno Canella Vieira, Barbara Vukoja, Guilherme Sousa Alves, Greg R. Kruger, Kelly W. Bruns, Sam E. Wortman (2022). Industrial Hemp Biomass Negatively Affected by Herbicide Drift from Corn and Soybean Postemergence Herbicides. 75th Annual Meeting of the Western Society of Weed Science, Newport Beach, California.
- Andrea Rilakovic, Ruby Anderson, Alisson da Silva Santana, **Milos Zaric**, Jeffrey Golus, Greg R. Kruger, Ana Velez, Julie Peterson (2022). Comparison of Aerial and Chemigation Insecticide Applications for Western Bean Cutworm Management. 10th International IPM Symposium Denver, Colorado.
- Andrea Rilaković, Ruby Anderson, **Milos Zaric**, Julie Peterson (2022). Arthropod Abundance in Industrial Hemp in Central Nebraska. Entomology Society of America North Central Branch (NCB-ESA), Oklahoma City, OK.
- Alina Gava and **Milos Zaric** (2021). Tolerance of Volunteer Hemp to Spring Burndown Herbicides in Soybean. 76th Annual Meeting of the North Central Weed Science Society, Grand Rapids, Michigan.

- Nina Pejovic, **Milos Zaric**, Jesaelen Gizotti de Moraes (2021). Effectiveness of Glufosinate on Troublesome Warm-Season Weeds as Influenced by Carrier Volume and Ammonium Sulfate. 76th Annual Meeting of the North Central Weed Science Society, Grand Rapids, Michigan.
- Marija Savic, **Milos Zaric**, Jeffrey A. Golus, Kasey P. Schroeder, Greg R. Kruger (2020). Comparison of Available ACC-ase Inhibiting Herbicides for Use in Industrial Hemp. 75th Annual Meeting of the North Central Weed Science Society, virtual.
- Ruby Anderson, **Milos Zaric**, Andrea Rilaković, Greg R. Kruger, Julie Peterson (2020). Diversity and abundance of arthropods in industrial hemp fields of Nebraska. Entomology Society of America Annual Meeting (ESA), virtual.
- **Milos Zaric**, Guilherme S. Alves, Kasey P. Schroeder, Jeffrey A. Golus, Greg R. Kruger (2019). Effects of Sublethal Doses of Dicamba in Combination with ACCase-Inhibiting Herbicides in Roundup Ready Soybean. 74th Annual Meeting of the North Central Weed Science Society, Columbus, Ohio.
- **Milos Zaric**, Jesaelen G. Moraes, Greg R. Kruger (2018). Physical Properties of Various Glyphosate Formulations as Critical Components for Common Lambsquarters (*Chenopodium album* L.) Control. 73rd Annual Meeting of the North Central Weed Science Society, Milwaukee, Wisconsin.
- **Milos Zaric**, Karla A. Romero, Jeffrey A. Golus, Greg R. Kruger (2017). Efficacy of Glufosinate and Dicamba Tank-Mixtures on Common Lambsquarters, Palmer Amaranth, Corn, and Grain Sorghum. 72nd Annual Meeting of the North Central Weed Science Society, St. Louis, Missouri.
- Markola Saulic, Ivica Djalovic, **Milos Zaric**, Ivana Petrovic, Milica Pejic, Mica Grujic, Andjela Obradovic, Dragana Bozic, Sava Vrbnicanin (2016). Effect of Crop Rotation on Weed Seed Bank. Poster Session, 7<sup>th</sup> IWSS Congress, Prague, Czech Republic.
- **Milos Zaric**, Ryan S. Henry, Greg R. Kruger (2015). Control of Common Lambsquarters (*Chenopodium album*) Using Different Glyphosate Formulations. 70th Annual Meeting of the North Central Weed Science Society, Indianapolis, Indiana.

### Awards

- 2022 First place Poster Presentation NCWSS – Agronomic and Specialty Crops
- 2022 Milton E. Mohr Fellowship
- 2022 Outstanding AHGSA Graduate Student Award
- 2022 Second place Poster Presentation WSWS – Agronomic Crops
- 2022 Srdjan Cirovic's Memorial Scholarship Award
- 2021 Srdjan Cirovic's Memorial Scholarship Award
- 2020 First place Oral Presentation NCWSS – Agronomic and Specialty Crops
- 2020 Farmers National Company Fellowship
- 2019 First place Video Contest NCWSS – Extension Talk
- 2015 First-place Undergraduate Student Poster at NCWSS
- 2010, 2011, 2012 Borka Vucic Fund for the Education of Young Serbian Farmers

### Grants

- 2024-2027 National Crop Insurance Services (Response of Hops (*Humulus lupulus* L.) to Simulation of Hail Damage) \$150,000 (**in review**)
- 2022 IANR CASNR The CHS Stewardship College Club Mini-Grants \$1000 (**awarded**)
- 2021 IANR funding support for GTA \$8333 (**awarded**)

**Leadership**

- Supervised, mentored, and developed research from 2020 for undergraduate and graduate research scholars (12) visiting PAT Lab from Brazil, India, Republic of Serbia, United States.
- Agronomy and Horticulture Graduate Student Association – Elevator Speech Seminar Committee 2021-2022.
- Nebraska Hops Growers Association Board of Directors (Advisor) 2020-present.
- Agronomy and Horticulture Graduate Student Association – Seminar Committee Chair 2020-2022.
- NCWSS Board of Directors Graduate Student Representative 2019 – 2020.

**Mentored Student Achievements**

North Central Weed Science Society

76<sup>th</sup> (2021) Annual Meeting Grand Rapids, Michigan

**Nina Pejovic** Second-place in Undergraduate Competition Section for Weed Biology, Ecology & Management

77<sup>th</sup> (2022) Annual Meeting St. Louis, Missouri

**Alina Gava** Second-place in Undergraduate Competition Section for Weed Biology, Ecology, and Management / Horticulture & Specialty crops

78<sup>th</sup> (2023) Annual Meeting Minneapolis, Minnesota

**Gabriel de Souza Lemes** First Place in Undergraduate Competition Section for Equipment and Application Methods

**Aleksandra Pantic** Third Place in Undergraduate Competition Section for Equipment and Application Methods

2023 Weed Science Society of American National Weed Science Contest (Union City, Tennessee):

**Alina Gava Thomlinson**

First-place Team Sprayer Calibration in Western Group

Second-place Overall Undergraduate Team in Western Group

Second-place Undergraduate Individual (Weed Identification) in Western Group

**Aleksandra Pantic**

First-place Team Sprayer Calibration in Western Group

Second-place Overall Undergraduate Team in Western Group

Third-place Undergraduate Individual (Weed Identification) in Western Group

**Membership in Professional Societies**

- Northcentral IPM Hemp Working Group
- Western IPM Hemp Working Group
- Weed Science Society of America
- North Central Weed Science Society
- Western Society of Weed Science
- ASTM International