

CURRICULUM VITAE

University of Idaho

NAME: Spackman, Jared A.

DATE: August 21, 2023

RANK OR TITLE: Assistant Professor, Endowed Barley Agronomist

DEPARTMENT: Plant Sciences

OFFICE LOCATION: Aberdeen R&E Center
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DATE OF FIRST EMPLOYMENT AT UI: August 30, 2020

DATE OF TENURE: (Untenured)

DATE OF PRESENT RANK OR TITLE: August 30, 2020

EDUCATION BEYOND HIGH SCHOOL:

Degrees:

Ph.D., University of Minnesota, Twin Cities, MN, 2020, Soil Science
M.S., University of Minnesota, Twin Cities, MN, 2018, Soil Science
B.S., Brigham Young University–Idaho, Rexburg, ID, 2014, Agronomy

Certificates and Licenses:

EXPERIENCE:

Teaching, Extension and Research Appointments:

Assistant Professor, Endowed Barley Agronomist, University of Idaho, Department of Plant Sciences, 2020 – present

Graduate Research Assistant, Nutrient Management Research Group, University of Minnesota, Department of Soil, Water, and Climate, 2014 – 2020

Teaching Assistant, SOIL 3416: Plant Nutrients in the Environment, University of Minnesota, Department of Soil, Water and Climate, 2019

Academic Administrative Appointments:

Non-Academic Employment including Armed Forces:

George Rehm Nutrient Management Fellowship, University of Minnesota, 2019 – 2020 (1 of 2 awards; \$5,000)

Minnesota's Discovery, Research, and Innovation Economy Global Food Ventures Fellowship, University of Minnesota, 2018 – 2019 (1 of 12 awards; \$29,500)

Hueg-Harrison Fellowship, University of Minnesota, 2018 – 2019 (1 of 2 awarded; \$42,000)

Consulting:

TEACHING ACCOMPLISHMENTS: (Academic and Extension teaching)

Areas of Specialization:

Nutrient Management, Soil Fertility, Barley and Wheat Agronomy

Courses Taught:

Cereals Industry Tour, PLSC 504, Summer 2022

Thesis and Research Credits, PLSC 500, University of Idaho, 2021 to present

Plant Nutrients in the Environment, SOIL 3416, University of Minnesota, Spring 2019

Students Advised:**Graduate Students:**

Advised to completion of degree

Olanrewaju Adeyemi, University of Idaho MS Plant Science, Thesis 1/4/22 – 8/17/23

Kaone Mookodi, University of Idaho MS Plant Science, Thesis 1/4/22 – 8/17/23

Prannoyaw Eeturu, University of Idaho MS Environmental Science, Non-Thesis 1/11/21– 1/5/23

Served on graduate committee

Rodrick Mwatuwa, University of Idaho PhD Plant Science, 7/13/23 – Present

Jacob Kastenbauer, University of Minnesota PhD Soil Science, 2/14/23 – Present

Chandra Maki, University of Idaho MS Plant Science, 1/12/22 – 8/17/23

Materials Developed: (non-scholarship activity)**Courses Developed:**

Plant Science 504: Cereals Industry Tour, 1 Cr

Non-credit Classes, Workshops, Seminars, Invited Lectures, etc:***Non-credit Classes:***

Jan 27, 2022 (1 hour) Experimental Design Strategies

Jan 20, 2022 (1.5 hours) Library Resources and Citation Managers for Thesis Development

Extension Workshops:

Spackman, J.A. 2023. Agronomic Mustard Production Practices as a Rotation Crop for Barley. Aberdeen Field Day. 20 July, 2023. (120 minutes).

Spackman, J.A. 2023. Nitrogen Fertilizer Rate and Timing and Humic Acid for Barley Production. Aberdeen Cereals Field Day. 20 July, 2023. (20 minutes).

Spackman, J.A. 2023. Sulfur Fertilizers in Barley Production. Idaho Falls Variety Trial Field Day. 19 July, 2023. (20 minutes).

Spackman J.A. 2023. Winter Seeded Annual Forage Cereals. Field Day. 13 July, 2023. (5 attendees, 20 minutes)

Spackman J.A. and G. Loomis. 2023. Sulfur Fertilizer Sources and Rates on Malt Barley Production. Bellevue Triangle Field Day. 11 July, 2023. (10 attendees, 180 minutes)

Spackman, J.A. 2023. Nitrogen and Sulfur Fertilizers in Barley Production. Rupert Variety Trial Field Day. 11 July, 2023. (20 minutes).

Spackman, J.A. 2023. Winter Seeded Annual Forage Cereals. Snake River Weed Management and Tour Field Day. Kimberly, ID. 28 June, 2023. (86 attendees, 10 minutes).

Spackman, J.A. 2023. Winter Seeded Annual Forage Cereals. Snake River Weed Management and

Tour Field Day. Aberdeen, ID. 27 June, 2023. (45 attendees, 10 minutes).

Sagers, J.K. and **J.A. Spackman**. Annual Forages in a Rotation. East Idaho Forage School. Mudlake, ID. 1 March, 2023 (50 attendees; 30 minutes).

Sagers, J.K. and **J.A. Spackman**. Annual Forages in a Rotation. East Idaho Forage School. Idaho Falls, ID. 1 March, 2023 (7 attendees; 30 minutes).

Sagers, J.K. and **J.A. Spackman**. Annual Forages in a Rotation. East Idaho Forage School. St. Anthony, ID. 1 March, 2023 (5 attendees; 30 minutes).

Sagers, J.K. and **J.A. Spackman**. Annual Forages in a Rotation. East Idaho Forage School. Preston, ID. 1 March, 2023 (13 attendees; 30 minutes).

Sagers, J.K. and **J.A. Spackman**. Annual Forages. Clark County Beef School. Dubois, ID. 28 Feb., 2023 (30 attendees; 30 minutes).

Spackman, J.A. 2023. Research Methods and Statistical Analysis for Beginners. Brigham Young University – Idaho Agronomy Undergraduate Students. Rexburg, ID. 16 February, 2023. (3 attendees, 90 minutes).

Spackman, J.A. 2022. Upcoming Planting Dates, Seeding Rates, and Available Moisture for Dryland Winter Wheat Study. Small Grain Summer Field Day. Soda Springs, ID. 21 July, 2022. (27 attendees, 15 minutes).

Spackman, J.A. 2022. Nitrogen Management Research in Small Grains. Small Grain Summer Field Day. Idaho Falls, ID. 20 July, 2022. (15 attendees, 15 minutes)

Spackman, J.A. 2022. Nitrogen Management Research in Small Grains. University of Idaho - Limagrain Cereal Seeds Field Day. 19 July, 2022. (100 attendees, 20 minutes).

Spackman, J.A. 2022. Barley Classes and Their Uses. Aberdeen Twilight Tour. Aberdeen, ID. 14 July, 2022. (360 attendees, 180 minutes).

Spackman, J.A. 2022. Upcoming Planting Dates, Seeding Rates, and Available Moisture for Dryland Winter Wheat Study. Small Grain Summer Field Day. Rockland, ID. 29 June, 2022. (17 attendees, 15 minutes).

Spackman, J.A. 2022. Barley Research Program Updates – Fertility Management. Scoular Field Day. Jerome, ID. 28 June, 2022. (52 attendees, 20 minutes).

Spackman, J.A. and J. Bevan. 2022. Nitrogen Management for Cereal Production. Pesticide and Nutrient Management Field Day. Aberdeen, ID. 28 June, 2022. (55 attendees, 20 minutes).

Spackman, J.A. 2022. Nitrogen Management for Cereal Production. Snake River Weed Management and Tour Field Day. Kimberly, ID. 22 June, 2022. (55 attendees, 15 minutes).

Spackman, J.A. 2022. Nutrient Management in Annual Forages and Small Grains. Rexburg, ID. 20 May, 2022. (34 attendees, 25 minutes).

Spackman, J.A. 2022. Nutrient Management in Annual Forages and Small Grains. Aberdeen, ID. 19 May, 2022. (17 attendees, 25 minutes).

Spackman, J.A. 2021. Introduction to the Barley Agronomy Program. Summer Cereal Field Day. Ashton, ID. 29 July, 2021. (20 attendees, 10 minutes).

Spackman, J.A. 2021. Introduction to the Barley Agronomy Program. Summer Cereal Field Day. Aberdeen, ID. 21 July, 2021. (80 attendees, 15 minutes).

Spackman, J.A. 2021. Introduction to the Barley Agronomy Program. UI Cookie Tour. Springfield, ID. 13 July, 2021. (15 attendees, 15 minutes).

Spackman, J.A. 2021. Introduction to the Barley Agronomy Program. Summer Cereal Field Day. Rockland, ID. 29 June, 2021. (20 attendees, 10 minutes).

Spackman, J.A., F.G. Fernández, B. Carlson, and D.E. Kaiser. 2018. Evaluating variable rate nitrogen prescription technologies. Field School for Ag. Professionals. St. Paul, MN. 25 July 2018. (120 attendees; 360 minutes).

Kaiser, D.E., P. Pagliari, **J.A. Spackman,** J.D. Clark, L. Leverich, and N. Ricks. 2017. Measuring soil physical properties: What do they tell you? Field School for Ag. Professionals. St. Paul, MN. 28 July 2017. (98 attendees; 45 minutes).

Kaiser, D.E., **J.A. Spackman,** J.D. Clark, and L. Leverich. 2017. Diagnosis of problems associated with foliar application of nutrients in corn and soybean. Field School for Ag. Professionals. St. Paul, MN. 28 July 2017. (50 attendees, 30 minutes).

Seminars:

J.A. Spackman. 2023. Tools for Sustainable Nitrogen Management in the US Corn Belt: Promoting Productivity, Profitability, and Environmental Protection. Iowa State University Agronomy Departmental Seminar. Ames, IA. 3 May 2023. (40 attendees, 60 minutes).

Mookodi, K., **J.A. Spackman,** A. Adjesiwor. First-year evaluation of precipitated calcium carbonate as a lime amendment in Eastern Idaho. Plant Sciences Departmental Seminar. Kimberly, ID. 24 Feb. 2023. (Zoom 17 attendees; 35 minutes)

Spackman, J.A. and F.J. Fernández. 2022. Nitrogen fertilizer cycling using ¹⁵N stable isotopes. Aberdeen Research and Extension Center. Soil and Water Systems Departmental Seminar. Aberdeen, ID. 10 March 2022. (Zoom 22 attendees; 60 minutes)

Spackman, J.A. 2021. Soil vs Fertilizer Derived Nitrogen Utilization in Corn. Aberdeen Research and Extension Center. Plant Sciences Departmental Seminar. Aberdeen, ID. 29 Jan. 2021. (Zoom 25 attendees; 35 minutes)

Invited Extension Lectures:

Spackman, J.A. University of Idaho and Shell Introductory Workshop on Dairy Sustainability: Nutrient Management in Small Grains. 10 May, 2023. (20 attendees, 10 minutes).

Spackman, J.A., J. Sagers, R. Findlay, J. Pandey. Annual Cereals as Forage. Bingham County Coop. Blackfoot, ID. 2 March, 2023 (70 attendees; 30 minutes).

Spackman, J.A. Nitrogen Fertility for Small Grains. Southern Idaho Cereal School. Preston, ID. 10 Feb. 2023 (20 attendees; 30 minutes)

Spackman, J.A. Nitrogen Fertility for Small Grains. Southern Idaho Cereal School. Grace, ID. 10 Feb. 2023 (25 attendees; 30 minutes)

Spackman, J.A. Nitrogen Fertility for Small Grains. Southern Idaho Cereal School. Ashton, ID. 9 Feb. 2023 (25 attendees; 30 minutes)

Spackman, J.A. Nitrogen Fertility for Small Grains. Southern Idaho Cereal School. Idaho Falls, ID. 9 Feb. 2023 (50 attendees; 30 minutes)

Spackman, J.A. Nitrogen Fertility for Small Grains. Southern Idaho Cereal School. Pocatello, ID. 8

Feb. 2023 (61 attendees; 30 minutes)

Spackman, J.A. Nitrogen Fertility for Small Grains. Southern Idaho Cereal School. Burley, ID. 7 Feb. 2023 (60 attendees; 30 minutes)

Spackman, J.A. Soil Factors That Influence Nutrient and Chemical Transport. Agri-Service Training. Twin Falls, ID. Jan. 31, 2023. (125 attendees, 60 minutes).

Spackman, J.A. Nitrogen and Sulfur Management: Improving Fertilizer Efficiency. Heartland Agriculture Chemigation Training. Burley, ID. 10 Jan. 2023. (150 attendees, 120 minutes).

Spackman, J.A. and Rogers, C. 2022. Nitrogen and Sulfur Fertilizer Management and Managing Water for Barley Production. Tri-State Grain Growers Convention. Coeur d'Alene, ID. 1 Dec. 2022. (18 attendees, 60 minutes)

Spackman, J.A. 2022. Nitrogen Management: Increasing Fertilizer Efficacy. Valley Ag Agronomists Meeting. Jackpot, NV. 18 Nov. 2022. (60 minutes)

Spackman, J.A. 2022. Sustainable Barley Production in Idaho. Heineken Trade Tour. Baltimore, MD. 8 Nov. 2022. (9 attendees, 90 minutes)

Spackman, J.A. 2022. Idaho Barley Production. Constellation Trade Tour. Aberdeen, ID. 12 May 2022. (13 attendees, 2 hours)

Spackman, J.A. 2022. Factors that Affect Chemigation Efficacy. Agri-Service Applicator Operator Training. Virtual. 18 Mar. 2022. (100 attendees, 50 minutes).

Spackman, J.A. and P. Eeturu. 2022. Annual Cereal Forage Production. Blackfoot Forage School. 3 Mar. 2022. (27 attendees, 40 minutes).

Spackman, J.A. and P. Eeturu. 2022. Annual Cereal Forage Production. Mudlake Forage School. 3 Mar. 2022. (55 attendees, 40 minutes).

Spackman, J.A. and P. Eeturu. 2022. Annual Cereal Forage Production. Preston Forage School. 2 Mar. 2022. (32 attendees, 40 minutes).

Spackman, J.A. 2022. Nitrogen and Sulfur Fertility Research Updates for Barley and Wheat. Southern Idaho Cereal School. Aberdeen, ID. 2 Feb. 2022. (141 attendees, 30 minutes).

Spackman, J.A. 2022. Urea and Urea Additives for Eastern Idaho Nitrogen Management. Valley Ag Agronomist Meeting. American Falls, ID. 27 Jan. 2022. (3 attendees, 90 minutes).

Spackman, J.A. 2022. Factors that Affect Chemigation Efficacy. Agri-Service Applicator Operator Training. Virtual. 13 Jan. 2022. (139 attendees, 50 minutes).

Spackman, J.A. 2021. Idaho Barley Production. Heineken Trade Tour. Salt Lake City, UT. 11 Nov. 2021. (12 attendees, 30 minutes)

Spackman, J.A. 2021. Fertility Management for Cereal Production. Breeding Class. University of Idaho. Aberdeen, ID. 18 Oct. 2021. (8 attendees, 120 minutes).

Spackman, J.A., J. Sagers, M. Cramer. 2021. Forages and Opportunities for Graduate School. Brigham Young University – Idaho. Rexburg, ID. 7 July, 2021. (16 attendees, 120 minutes)

Spackman, J.A. 2021. Roots in the Ground. Direct Seed Workshop. Idaho Falls, ID. 11 March, 2021. (56 attendees, 10 minutes)

Spackman, J.A. 2021. Graduate School Opportunities at the University of Idaho for Brigham Young University–Idaho Undergraduates. BYU-Idaho Soil Science Class, Rexburg, ID. 19 February, 2021. (88 attendees, 5 minutes).

Spackman, J.A. 2021. Soil Texture, Makeup, and Composition: How it Impacts Nitrogen Cycling. Agricultural Updates for Certified Crop Advisors. Aberdeen, ID. 12 Feb. 2021. (Zoom; 60 minutes)

Spackman, J.A. 2021. Low Protein Concerns in Barley. Southern Idaho Cereal School. Aberdeen Research and Extension Center. 3 Feb. 2021 (Zoom 169 attendees; 15 minutes)

Spackman, J.A. 2021. Nitrogen Management in Cereals. Southern Idaho Cereal School. Aberdeen Research and Extension Center. 2 Feb. 2021 (Zoom 182 attendees; 30 minutes)

Spackman, J.A., G.D. Paiao, and F.G. Fernández. 2019. Nitrogen BMPs for South Central Minnesota. Southern Research and Outreach Center Agronomy Field Tour. Waseca, MN. 18 June 2019. (82 attendees; 30 minutes)

Spackman, J.A. 2019. Urea in crop production: Increasing efficacy with additives, placement, and time of application. Corn and Soybean Crop Update Workshop for Crop Producers. Pine City, MN. 5 March 2019. (54 attendees; 60 minutes).

Spackman, J.A., G.D. Paiao, and F.G. Fernández. 2018. Managing urea-based fertilizers for improved corn production. 2018 Crops and Soils Day at the Univ. of Minnesota Northwest Research and Outreach Center, Crookston, MN. 18 July 2018. (128 attendees; 30 minutes).

Spackman, J.A., F.G. Fernández, and J.D. Clark. 2017. How to manage urea and other forms of nitrogen effectively in south central Minnesota. 2017 Agronomy Field Tour at the Univ. of Minnesota Southern Research and Outreach Center, Waseca, MN. 20 June 2017. (59 attendees; 15 minutes).

Honors and Awards:

SCHOLARSHIP ACCOMPLISHMENTS:

Publications, Exhibitions, Performances, Recitals:

Refereed/Adjudicated:

Walsh O.S., **Spackman J.A.**, Adjesiwor A.T., Lamichhane R., and Owusu Ansah E. 2021. Varietal response of wheat and barley to nitrogen. *Crops and Soils*. 54(5): 52–53.
<https://doi.org/10.1002/crso.20137>

Walsh O.S., **Spackman J.A.**, Adjesiwor A.T., Lamichhane R., and E. Owusu Ansah. 2021. Teaming Up to Improve Fertilizer Nitrogen Guidelines for Idaho Wheat and Barley. AgProud - Idaho, Fall 2021

Walsh O.S., **Spackman J.A.**, Adjesiwor A.T., Lamichhane R., and E. Owusu Ansah. 2021. Response to Applied Nitrogen: Getting to Know Idaho Wheat and Barley. *Crops & Soils*, Fall 2021.

Peer Reviewed/Evaluated:

Journals

Mookodi, K.L., **J.A. Spackman**, and A.T. Adjesiwor. 2023. Urea Ammonium Nitrate as the Carrier for Pre-plant Burndown Herbicides. *Agrosystems, Geosciences & Environment*.
<https://doi.org/10.1002/agg2.20404>

Alexander, J.R., **J.A. Spackman**, M.L. Wilson, F.G. Fernández, and R.T. Venterea. 2021. Capture efficiency of four chamber designs for measuring ammonia emissions. *Agrosystems, Geosciences and*

Environment. 4:e20199. <https://doi.org/10.1002/agg2.20199>

Paiao, G.D., F.G. Fernández, **J.A. Spackman**, D.E. Kaiser, S. Weisberg. 2020. Integrating canopy sensing and soil nitrogen for improved corn nitrogen management. *Agron. J.* 113(2):1996–2005. <https://doi.org/10.1002/agg2.20566>

Spackman, J.A. and F.G. Fernández. 2020. Microplot design and plant and soil sample preparation for 15nitrogen analysis. *JOVE*. 159:e61191. doi:10.3791/61191

Paiao, G.D., F.G. Fernández, **J.A. Spackman**, D.E. Kaiser, S. Weisberg. 2020. Ground-based optical canopy sensing technologies for corn-nitrogen management in the Upper Midwest. *Agron. J.* 112(4):2998–3011. doi:10.1002/agg2.20248

Spackman, J.A., F.G. Fernández, J.A. Coulter, D.E. Kaiser, G.D. Paiao. 2019. Soil texture and precipitation influence optimal time of nitrogen fertilization for corn. *Agron. J.* 111:1–13. doi:10.2134/agronj2018.09.0605

Other: (reports, proceedings, papers, citations and references, performances)

Reports

Spackman, J.A. 2023. WERA-103 State Annual Report 2023.

Proceedings Papers

Spackman, J.A., F.G. Fernández, and K.P. Fabrizzi. 2019. 4R nitrogen management for corn production on Upper Midwest soils. In: Proc. 49th North Central Ext.-Industry Soil Fert. Conf., Des Moines, IA. 5-6 Nov. 2019. <https://northcentralfertility.com/proceedings/?action=abstract&id=6394>

Fernández, F.G., J.D. Clark, K.P. Fabrizzi, G.D. Paiao, and **J.A. Spackman**. 2018. In nitrogen management one size does NOT fit all! In: Proc. of the 30th Annual Integrated Crop Management Conference. Ames, IA. 28-29 Nov. 2018. Iowa State University, Ames, IA p. 69–74.

Spackman, J.A. 2018. Soil nitrogen management is impacted by soil texture and weather. In: Proc. 48th North Central Ext.-Industry Soil Fert. Conf., Des Moines, IA. 14-15 Nov. 2018. International Plant Nutrition Institute, Brookings, SD. p. 127–128. <https://northcentralfertility.com/proceedings/?action=abstract&id=6545>

Spackman, J.A., F.G. Fernández. 2016. In-season soil nitrogen as a predictor of corn grain yield. In: Proc. 46th North Central Ext.-Industry Soil Fert. Conf., Des Moines, IA. 4-5 Nov. 2016. International Plant Nutrition Institute, Brookings, SD. p. 111–117.

Paiao, G.D., F.G. Fernández, D.E. Kaiser, and **J.A. Spackman**. 2015. Comparison of canopy sensing technologies for corn nitrogen management in Minnesota. In: Proc. 45th North Central Ext.-Industry Soil Fert. Conf., Des Moines, IA. 4-5 Nov. 2015. International Plant Nutrition Institute, Brookings, SD. p. 133–141. <https://northcentralfertility.com/proceedings/?action=abstract&id=6394>

Refereed/Adjudicated (currently scheduled or submitted):

Peer Reviewed/Evaluated (currently scheduled or submitted):

Mookodi, K., D. Tarkalson, and **J.A. Spackman**. *In Review*. Precipitated calcium carbonate effects on soil properties and early barley development. *Crop, Forage, and Turfgrass Management*.

Mookodi, K.L., J.A. Spackman, and A.T. Adjesiwor. *In Review*. Urea ammonium nitrate as the carrier for preplant burndown herbicides. *Agrosystems, Geosciences, and Environment*.

Presentations and Other Creative Activities:**Professional Meeting Papers, Workshops, Showings, Recitals:***International Conference Presentations and Abstracts*

Mookodi, K.L., **J.A. Spackman**, and A. Adjesiwor. 2022. Comparison of Hybrid Rye with Other Small Grains for Forage in Southern Idaho. ASA-CSSA-SSSA Annual Meetings. Baltimore, MD. 6 – 9 Nov. 2022.

Mookodi, K.L., A. Adjesiwor, and **J.A. Spackman**. 2022. Urea Ammonium Nitrate as the Carrier for Preplant Herbicides. ASA-CSSA-SSSA Annual Meetings. Baltimore, MD. 6 – 9 Nov. 2022.

Lamichhane, R., O.S. Walsh, **J.A. Spackman**, E. Nambi, E. Owusu Ansah, and F.E. Bautista. 2022. Use of Remote Sensing Tools for Yield and Protein Estimation in Spring Barley (*Hordeum vulgare L.*). ASA-CSSA-SSSA Annual Meetings. Baltimore, MD. 6 – 9 Nov. 2022.

Spackman, J.A., O.S. Walsh, A. Adjesiwor, J. Bevan, O. Adeyemi, J. Sagers, and R. Findlay. 2022. Nitrogen Fertilizer Rate and Timing Implication for Malt, Food, and Feed Barley Production in Southern Idaho. ASA-CSSA-SSSA Annual Meetings. Baltimore, MD. 6 – 9 Nov. 2022.

Spackman, J.A., J. Bevan, O.S. Walsh, A. Adjesiwor, O. Adeyemi, J. Sagers, and R. Findlay. 2022. Nitrogen Fertilizer Rate and Timing Implication for Hard Red, Hard White, and Soft White Wheat Production in Southern Idaho. ASA-CSSA-SSSA Annual Meetings. Baltimore, MD. 6 – 9 Nov. 2022.

Adeyemi, O., **J.A. Spackman**, J. Sagers, Z. Hong, J. Marshall, J. Bevan, and R. Findlay. 2022. Barley Yield and Protein Response to Nitrogen and Sulfur Rates and Application Timing. ASA-CSSA-SSSA Annual Meetings. Baltimore, MD. 6 – 9 Nov. 2022.

Adeyemi, O., **J.A. Spackman**, J. Bevan. 2022. Comparison of Sulfur Fertilizer Products and Their Effects on Malt Barley Production. ASA-CSSA-SSSA Annual Meetings. Baltimore, MD. 6 – 9 Nov. 2022.

Spackman, J.A. Irrigated Spring Barley Yield, Grain Quality, and Malt Quality Response to Nitrogen and Sulfur Fertilization. (*Oral Presentation and Abstract*). 23rd North American Barley Researchers Workshop and 43rd Barley Improvement Conference. Sacramento, CA. 22–24 Sep. 2022.

Lamichhane, R., O.S. Walsh, **J.A. Spackman**, A.T. Adjesiwor, E. Nambi, E. Owusu Ansah, and J.R. McClintock-Chess. 2021. Variety Response of Spring Barley to Applied Nitrogen: Nitrogen Use Efficiency and Soil Health (*Oral Presentation and Abstract*). ASA-CSSA-SSSA Annual Meetings. Salt Lake City, UT. 7-10 Nov. 2021.

Lamichhane, R., O.S. Walsh, **J.A. Spackman**, A.T. Adjesiwor, E. Nambi, E. Owusu Ansah, and J.R. McClintock-Chess. 2021. Variety Response of Spring Barley to Applied Nitrogen: Nitrogen Use Efficiency and Soil Health (*Poster Presentation and Abstract*). ASA-CSSA-SSSA Annual Meetings. Salt Lake City, UT. 7-10 Nov. 2021.

Lamichhane, R., O.S. Walsh, **J.A. Spackman**, A.T. Adjesiwor, E. Nambi, E. Owusu Ansah, and J.R. McClintock-Chess. 2021. Variety Response of Spring Wheat to Applied Nitrogen: Nitrogen Use Efficiency and Soil Health (*Oral Presentation and Abstract*). ASA-CSSA-SSSA Annual Meetings. Salt Lake City, UT. 7-10 Nov. 2021.

Lamichhane, R., O.S. Walsh, **J.A. Spackman**, A.T. Adjesiwor, E. Nambi, E. Owusu Ansah, and J.R. McClintock-Chess. 2021. Variety Response of Spring Wheat to Applied Nitrogen: Nitrogen Use Efficiency and Soil Health (*Poster Presentation and Abstract*). ASA-CSSA-SSSA Annual Meetings. Salt Lake City, UT. 7-10 Nov. 2021.

Spackman, J.A., Z. Hong, and J. Marshall. 2021. Barley Response to Nitrogen and Sulfur Fertilization. ASA-CSSA-SSSA Annual Meetings. Salt Lake City, UT. 7-10 Nov. 2021.

Adjesiwor, A.T., **J.A. Spackman**, and O. Walsh. Urea Ammonium Nitrate as the Carrier for Preplant Herbicides. ASA-CSSA-SSSA Annual Meetings. Salt Lake City, UT. 7-10 Nov. 2021.

Bhuasl, R. and **J.A. Spackman**. 2021. Comparison of the Effect of Urea and Urea + Humic Acid for Barley Production. ASA-CSSA-SSSA Annual Meetings. Salt Lake City, UT. 7-10 Nov. 2021.

Eeturu, P., **J.A. Spackman**, J. Sagers, and R. Findlay. 2021. Influence of Nitrogen Rate on Forage Barley and Oat Yield. ASA-CSSA-SSSA Annual Meetings. Salt Lake City, UT. 7-10 Nov. 2021.

Spackman, J.A., F.G. Fernández. 2020. Soil Cycling Dynamics of ¹⁵N Enriched Urea on Upper Midwest Soils. ASA-CSSA-SSSA Annual Meetings, Virtual. 9-13 Nov. 2020.

Spackman, J.A., F.G. Fernández. ¹⁵Nitrogen Enriched Urea Fertilizer Recovery by Corn on Upper Midwest Soils. ASA-CSSA-SSSA Annual Meetings, Virtual. 9-13 Nov. 2020.

Spackman, J.A., F.G. Fernández, G.D. Paiao, and K.P. Fabrizzi. 2019. Farming like a pro: A 4R approach. ASA-CSSA-SSSA Annual Meetings, San Antonio, TX. 10-13 Nov. 2019.

Spackman, J.A., F.G. Fernández, G.D. Paiao. 2019. Recovery of nitrogen-15 fertilizer by corn on Upper Midwest soils. ASA-CSSA-SSSA Annual Meetings, San Antonio, TX. 10-13 Nov. 2019. Abstract 118935

Spackman, J.A., F.G. Fernández, G.D. Paiao, and K.P. Fabrizzi. 2019. Source and timing of nitrogen application to enhance Upper Midwest corn production. ASA-CSSA-SSSA Annual Meetings, San Antonio, TX. 10-13 Nov. 2019. Abstract 119010

Alexander, J.R., **J.A. Spackman**, M. Wilson, R.T. Venterea, F.G. Fernández. 2019. Optimizing ammonia acid trap chamber design and sampling methods. ASA-CSSA-SSSA Annual Meetings, San Antonio, TX. 10-13 Nov. 2019. Abstract 119254

Spackman, J.A., F.G. Fernández. 2019. Corn uptake of ¹⁵N enriched urea. 17th Annual International Nitrogen Use Efficiency Conf., Columbia, MO. 5-7 Aug. 2019.

Spackman, J.A., F.G. Fernández. 2018. Fate of ¹⁵N enriched urea fertilizer in corn. ASA-CSSA-SSSA Annual Meetings, Baltimore, MD. 4-7 Nov. 2018. Paper 104-1125.
<https://scisoc.confex.com/scisoc/2018am/meetingapp.cgi/Paper/112079>

Spackman, J.A., F.G. Fernández, G.D. Paiao. 2018. Evaluating nitrogen fertilizer source and timing for corn grain yield. ASA-CSSA-SSSA Annual Meetings, Baltimore, MD. 4-7 Nov. 2018. Paper 45-8.
<https://scisoc.confex.com/scisoc/2018am/meetingapp.cgi/Paper/112039>

Spackman, J.A., F.G. Fernández, J.A. Coulter, and D.E. Kaiser. 2017. Tracking soil nitrogen fertility across Minnesota. ASA-CSSA-SSSA Annual Meetings, Tampa, FL. 22-25 Oct. 2017. Paper 109-1.
<https://scisoc.confex.com/crops/2017am/webprogram/Session16694.html>

Paiao, G.D., F.G. Fernández, D.E. Kaiser, and **J.A. Spackman**. 2016. Active canopy sensing and soil nitrogen content for corn nitrogen management in Minnesota. ASA-CSSA-SSSA Annual Meetings, Phoenix, AZ. 6-9 Nov. 2016. Paper 33-1. <https://scisoc.confex.com/scisoc/2016am/webprogram/Session15855.html>

Spackman, J.A., F.G. Fernández, G.D. Paiao, J.A. Coulter, D.E. Kaiser. 2016. In-season nitrogen availability for corn as influenced by source, time, and rate of fertilizer nitrogen. ASA-CSSA-SSSA Annual Meetings, Phoenix, AZ. 6-9 Nov. 2016. Paper 72-15.
<https://scisoc.confex.com/scisoc/2016am/webprogram/Paper100284.html>

Fernández, F.G., **J.A. Spackman**, and G.D. Paiao. 2016. In-season nitrogen applications: How late is too late? 14th Annual International Nitrogen Use Efficiency Conf., Boise, ID. 8-10 Aug. 2016. http://nue.okstate.edu/Nitrogen_Conference2016/Idaho.htm

Paiao, G.D., **J.A. Spackman**, F.G. Fernández, D.E. Kaiser, and J.A. Lamb. 2015. Comparison of ground based canopy sensing technologies for corn nitrogen management in Minnesota. ASA-CSSA-SSSA Annual Meetings, Phoenix, AZ. 6-9 Nov. 2016. Paper 155-12. <https://scisoc.confex.com/scisoc/2015am/webprogram/Paper92660.html>

Spackman, J.A., F.G. Fernández, J.A. Lamb, and G.D. Paiao. 2015. Pre-Plant and split nitrogen applications: When and what nitrogen source. ASA-CSSA-SSSA Annual Meetings, Minneapolis, MN. 6-9 Nov. 2016. Paper 155-2. <https://scisoc.confex.com/scisoc/2015am/webprogram/Paper92613.html>

Spackman, J.A. and J.D. Williams. 2013. Comparison of nitrogen and Nutrisphere-nitrogen fertilizer for seed safety in wheat. ASA-CSSA-SSSA Annual Meetings, Tampa, FL. 3-6 Nov. 2016. Paper 23-24. <https://scisoc.confex.com/scisoc/2013am/webprogram/Paper79505.html>

Regional Conference Presentations and Abstracts

T. Jacobsen, **J.A. Spackman**, Mookodi, K., J. Sagers, K. Schroeder, and J. Bevan. 2023. First-Year Evaluation of Precipitated Calcium Carbonate as a Lime Amendment in Eastern Idaho. University of Idaho Annual Extension Conference. Sun Valley, ID. 11 – 12 Apr. 2023.

R. Findlay, **J.A. Spackman**, Adeyemi, O., J. Sagers, J. Marshall, Z. Hong, and J. Bevan. 2023. Barley Yield and Protein Response to Nitrogen and Sulfur Rates and Application Timing. University of Idaho Annual Extension Conference. Sun Valley, ID. 11 – 12 Apr. 2023.

J. Sagers, **J.A. Spackman**, Pandey, J., R. Findlay, and J. Bevan. 2023. Optimizing Nitrogen Fertilizer Rates for Annual Cereal Forage Production. University of Idaho Annual Extension Conference. Sun Valley, ID. 11 – 12 Apr. 2023.

Adeyemi, O., **J.A. Spackman**, J. Sagers, J. Marshall, Z. Hong, R. Findlay, and J. Bevan. 2023. Barley Yield and Protein Response to Nitrogen and Sulfur Rates and Application Timing. Western Nutrient Management Conference. Reno, NV. 8 – 10 Mar., 2023.

Mookodi, K., **J.A. Spackman**, J. Sagers, T. Jacobsen, K. Schroeder, and J. Bevan. 2023. First-Year Evaluation of Precipitated Calcium Carbonate as a Lime Amendment in Eastern Idaho. Western Nutrient Management Conference. Reno, NV. 8 – 10 Mar., 2023.

Bevan, J., **J.A. Spackman**, J. Sagers, R. Findlay, O. Adeyemi, O. Walsh, and A. Adjesiwor. 2023. Nitrogen Fertilizer Rate and Timing Implications for Malt Food, and Feed Barley Production in Southern Idaho. Western Nutrient Management Conference. Reno, NV. 8 – 10 Mar., 2023.

Pandey, J., **J.A. Spackman**, J. Sagers, R. Findlay, and J. Bevan. 2023. Optimizing Nitrogen Fertilizer Rates for Annual Cereal Forage Production. Western Nutrient Management Conference. Reno, NV. 8 – 10 Mar., 2023.

Collins, C., E. Loera, R. Reid, and **J.A. Spackman**. 2023. Using Calcium Hydroxide for Lime Incubation Studies and Moisture Effects on Liming. Western Nutrient Management Conference. Reno, NV. 8 – 10 Mar., 2023.

Walsh, O., **J.A. Spackman**, and A.T. Adjesiwor. Agronomy Reports. 2022. Updated on ISAID Barley and Wheat Fertility Studies. ISAID Annual Meeting and Regenerative Ag Workshop. Twin Falls, ID. 3 Oct. 2022.

Spackman, J.A. Z. Hong, and J. Marshall. 2021. Barley Response to Nitrogen and Sulfur Fertilization. University of Idaho Annual Extension Conference. Moscow, ID. 4 Apr. 2022.

Eeturu, P., **J.A. Spackman**, J. Sagers, and R. Findlay. 2021. Influence of Nitrogen Rate on Forage Barley and Oat Yield. University of Idaho Annual Extension Conference. Moscow, ID. 4 Apr. 2022.

Spackman, J.A. 2021. Nitrogen Management Strategies for Barley and Wheat. Far West Agribusiness Association Winter Conference. Spokane, WA. 14 Dec., 2021. (26 attendees, 60 minutes).

Walsh O.S., **Spackman J.A.**, Adjesiwor A.T., Lamichhane R., and Owusu Ansah E.. 2021. Varietal Response of Spring Barley to Applied Nitrogen. Proc. of the Western Nutrient Management Conference

Walsh O.S., **Spackman J.A.**, Adjesiwor A.T., Owusu Ansah E., and Lamichhane R. 2021. Varietal Response of Spring Wheat to Applied Nitrogen. Proc. of the Western Nutrient Management Conference

Spackman, J.A., F.G. Fernandez 2021. ¹⁵N Uptake and Use Efficiency in Corn in Response to Fertilizer Rate and Timing. Western Nutrient Management Conference, Virtual. 2 – 4 March, 2021.

Spackman, J.A. 2021. Corn N Use from Soil vs Fertilizer in Minnesota – A Brief Summary. 7th Annual Nitrogen: Minnesota's Grand Challenge & Compelling Opportunity Conference, Virtual. 9 – 10 Feb. 2021. (256 attendees; 15 minutes)

Spackman, J.A. 2021. Corn N Use from Soil vs Fertilizer in Minnesota. 7th Annual Nitrogen: Minnesota's Grand Challenge & Compelling Opportunity Conference, Virtual. 9 – 10 Feb. 2021. (256 attendees; 25 minutes)

Spackman, J.A., F.G. Fernández. 2020. Corn Uptake of Soil- and Fertilizer-Derived Nitrogen in Response to Rate and Timing of Fertilizer Application. 50th North Central Ext.-Industry Soil Fert. Conf., Virtual. 18-19 Nov. 2020.

Spackman, J.A., F.G. Fernández. 2019. ¹⁵N-labeled urea use efficiency in corn cropping systems. 2019 Production Agriculture Symposium. St. Paul, MN. 8 Mar. 2019.

Spackman, J.A. 2019. Nitrogen fertilizer source and timing considerations for corn in Minnesota. 2019 Production Agriculture Symposium. St. Paul, MN. 8 Mar. 2019. (58 attendees; 15 min.)

Patents:

Grants and Contracts Awarded:

Spackman, J.A. (PI). Spring Malt Barley Varieties' Response to Sulfur, Phosphorus, Potassium, and Nitrogen Fertilizer. Start Date 1 Jul. 2023 – 30 Jun. 2024. \$5000. Amount allocated to J.A. Spackman \$5000.

Spackman, J.A. (PI). Barley Agronomy Program Technician Support. Proposal award number: V220050. Start Date 1 Jul. 2022 – 30 Jun. 2023. \$20,000. Amount allocated to J.A. Spackman \$20,000.

Spackman, J.A. (PI), T. Jacobsen, J. Hatch, J. Sagers, J. Gibbons. Precipitated Calcium Carbonate to Remediate Acidic Eastern Idaho Soils. Western Sustainable Agriculture Research and Education. Start Date 1 Sept. 2023 – 31 Aug. 2026. Total \$75,000; Amount allocated to J.A. Spackman \$75,000.

Spackman, J.A. (PI). Barley Response to Phosphorus and Potassium Fertilizer. Fertilizer Recommendation Support Tool. Start Date 1 July 2023 – 30 June 2024. Total \$10,000; Amount allocated to J.A. Spackman \$10,000.

Spackman, J.A. (PI), A.T. Adjesiwor, and O.S. Walsh. Active Canopy Sensors to Prescribe In-Season Supplemental Nitrogen for Barley. Idaho Barley Commission. Proposal award number: V221098. Start Date 1 Jul. – 30 Jun. 2024. \$33,479; Amount allocated to J.A. Spackman \$33,479.

Spackman, J.A. (PI), K. Schroeder, T. Jacobsen, J. Hatch, J. Sagers, and J. Gibbons. Precipitated Calcium Carbonate to Remediate Acidic Eastern Idaho Soils. Idaho Barley Commission. Start Date 1 Jul. – 30 Jun. 2024. \$26,058; Amount allocated to J.A. Spackman \$26,058.

Spackman, J.A. (PI), J. Bevan, J. Pandey, R. Findlay, J. Sagers, J. Hatch, T. Jacobsen, J. Walling, S. Whitcomb. Malt Barley Yield and Grain Metabolite Response to Nitrogen and Sulfur Grown Outside the Snake River Plain. Idaho Barley Commission. Start Date 1 Jul. – 30 Jun. 2024. \$31,089; Amount allocated to J.A. Spackman \$31,089.

Spackman, J.A. (PI), J. Bevan, J. Pandey, K. Khadka. Evaluation of Nitrogen, Phosphorus, and Sulfur Fertilization, Seeding Rates, and Timing of Nitrogen Application for Irrigated Yellow Mustard. Idaho Oilseed Commission. Start Date 1 Jul. – 30 Jun. 2024. \$22,094; Amount allocated to J.A. Spackman \$22,094.

Spackman, J.A. (PI), A.T. Adjesiwor, and O.S. Walsh. Active Canopy Sensors to Prescribe In-Season Supplemental Nitrogen for Wheat. Idaho Wheat Commission. Proposal award number: V221099. Start Date 1 Jul. – 30 Jun. 2024. \$33,479; Amount allocated to J.A. Spackman \$33,479.

Spackman, J.A. (PI) and J. Hatch. Planting Dates, Seeding Rates, and Available Moisture for Dryland Winter Wheat Yields. Idaho Wheat Commission. Proposal award number: V221096. Start Date 1 Jul. – 30 Jun. 2024. \$33,090; Amount allocated to J.A. Spackman \$33,090.

Spackman, J.A. (PI), A.T. Adjesiwor, J. Gibbons, T. Jacobsen, J. Sagers, and K. Schroeder. Liming for Improved Nutrient Utilization and Weed Management in Wheat. Idaho Wheat Commission. Proposal award number: V221099. Start Date 1 July 2022 – 30 June 2023. Total \$29,415, Amount allocated to J.A. Spackman \$29,415.

Creech, E., M. Yost, M. Krause, G. Cardon, **J.A. Spackman**, and S. Windes. Improving Nitrogen Management in Southeast Idaho Dryland Winter Wheat. Idaho Wheat Commission. Proposal award number: V230023. Start Date 1 July 2022 – 30 June 2023. Total \$12,298, Amount allocated to J.A. Spackman \$12,298.

Hutchinson, P.J.S., **J.A. Spackman** (CoPI), X. Liang, C. Jackson, B. Beutler, D. Gunn., and A. Adjesiwor. Fiber Hemp Research and Extension Project. University of Idaho Extension Innovative Project Grants. Start Date 1 Apr. 2023 – 31 Dec. 2023. \$9,994; Amount allocated to J.A. Spackman \$0.

Spackman, J.A. (PI). Fall Forage Cereals for Forage Yield and Livestock Feed Quality. University of Idaho Extension Innovative Project Grants. Start Date 1 Apr. 2023 – 31 Dec. 2023. \$5,000; Amount allocated to J.A. Spackman \$5,000.

Findlay, R. (PI), **J.A. Spackman** (CoPI), J. Sagers, and K. Mookodi. Use of High-Nitrogen Fixing Annual Alfalfa Cultivars as a Nitrogen Source for Subsequent Small Grain Crops. University of Idaho Extension Innovative Project Grants. Start Date 1 Apr. 2023 – 31 Dec. 2023. \$5,000; Amount allocated to J.A. Spackman \$0.

Spackman, J.A. (PI). Barley Agronomy Program Technician Support. Proposal award number: V220050. Start Date 1 Jul. 2022 – 30 Jun. 2023. \$20,000. Amount allocated to J.A. Spackman \$20,000.

Spackman, J.A. (PI), Z. Hong (CoPI), and J. Marshall (CoPI). Barley Yield and Protein Response to Nitrogen and Sulfur Fertilization. Idaho Barley Commission. Proposal award number: V211208. Start Date 1 July 2022 – 30 June 2023. Total \$32,000; Amount allocated to J.A. Spackman \$28,000.

Spackman, J.A. (PI). Barley Yield and Protein Response to Nitrogen and Sulfur Fertilization. Stukenholtz Lab, Inc. Start Date 1 July 2022 – 30 June 2023. Total In-Kind Sample Analysis \$215,400; Amount allocated to J.A. Spackman \$215,400.

Spackman, J.A. (PI), Z. Hong (CoPI), and J. Marshall (CoPI). Irrigated Spring Malt Barley Yield, Grain Quality, and Malt Quality Response to Nitrogen and Sulfur Fertilization. American Malting Barley

Association, Inc. Proposal award number: V220224. Start Date 1 July 2022 – 30 June 2023. \$5000

Spackman, J.A. (PI) and A. Adjesiwor. Liming for Improved Nutrient Utilization and Weed Management in Wheat. Idaho Wheat Commission. Proposal award number: V211207. Start Date 1 July 2022 – 30 June 2023. Total \$33,523, Amount allocated to J.A. Spackman \$29,000.

Spackman, J.A. (PI), O. Walsh, and A. Adjesiwor. Active Canopy Sensors to Prescribe In-season Supplemental Nitrogen for Wheat. Idaho Wheat Commission. Proposal award number: V220080. Start Date 1 July 2022 – 30 June 2023. Total \$34,844, Amount allocated to J.A. Spackman \$30,500

Spackman, J.A. (PI), O. Walsh (CoPI), and A. Adjesiwor (CoPI). Active Canopy Sensors to Prescribe In-Season Supplemental Nitrogen for Barley. Idaho Barley Commission. Proposal award number: V211205. Start Date 1 July 2022 – 30 June 2023. Total \$16,364, Amount allocated to J.A. Spackman \$16,364.

Spackman, J.A. (PI) and J. Hatch. Planting Dates, Seeding Rates, and Available Moisture for Dryland Winter Wheat Yields. Idaho Wheat Commission. Proposal award number: V220080. Start Date 1 July 2022 – 30 June 2023. Total \$28,295, Amount allocated to J.A. Spackman \$28,295.

Sagers, J. (PI), **J.A. Spackman** (CoPI), J. Findlay (CoPI), and J. Hatch (CoPI). Timing of Forage Cereal Harvest on Yield and Livestock Feed Quality Year 2. University of Idaho Extension Innovative Project Grants. Start Date 1 Feb. 2022 – 31 Dec. 2022. \$9,995; Amount allocated to J.A. Spackman \$4,169.

Spackman, J.A. (PI), J. Sagers, (CoPI), J. Findlay (CoPI), and J. Hatch (CoPI). Optimizing Nitrogen Fertilizer Rates for Annual Cereal Forage Production. University of Idaho Extension Innovative Project Grants. Start Date 1 Feb. 2022 – 31 Dec. 2022. \$10,000; Amount allocated to J.A. Spackman \$9,500.

Spackman, J.A. (PI). University of Idaho Extension Internship Support. Start Date Jan 1. 2022 – December 30, 2022. \$6,800. Amount allocated to J.A. Spackman \$6,800.

Adjesiwor, A. (PI) and **J.A. Spackman** (CoPI). Pre-plant Burndown Herbicide Efficacy and Barley Crop Safety. Idaho Barley Commission. Proposal award number: V220036. Start Date 1 July 2022 – 30 June 2023. Total \$11,906; Amount allocated to J.A. Spackman \$610.

Adjesiwor, A. (PI) and **J.A. Spackman** (CoPI). Pre-plant Burndown Herbicide Efficacy and Wheat Crop Safety. Idaho Wheat Commission. Proposal award number: V220037. Start Date 1 July 2022 – 30 June 2023. Total \$11,906; Amount allocated to J.A. Spackman \$1,215.

Adjesiwor, A.T. (PI), O. Walsh (CoPI), and **J.A. Spackman** (CoPI). Integrating Cereal Cover Crops and Soil-applied Herbicides for Weed Control in Dry Beans. Idaho State Department of Agriculture. Proposal award number: V220287. Start Date October 2021 – September 2024. Amount allocated to J.A. Spackman \$945.

Spackman, J.A. (PI), O. Walsh, and A. Adjesiwor. Active Canopy Sensors to Prescribe In-season Supplemental Nitrogen for Wheat. Idaho Wheat Commission. Start Date 1 July 2021 – 30 June 2022. Total \$26,500, Amount allocated to J.A. Spackman \$25,746.

Spackman, J.A. (PI) and A. Adjesiwor. Liming for Improved Nutrient Utilization and Weed Management in Wheat. Idaho Wheat Commission. Start Date 1 July 2021 – 30 June 2022. Total \$30,894, Amount allocated to J.A. Spackman \$18,553.

Spackman, J.A. (PI), Z. Hong (CoPI), and J. Marshall (CoPI). Irrigated Spring Malt Barley Yield, Grain Quality, and Malt Quality Response to Nitrogen and Sulfur Fertilization. American Malting Barley Association, Inc. Start Date 1 July 2021 – 30 June 2022. \$4,500

Spackman, J.A. (PI). Barley Yield and Protein Response to Nitrogen and Sulfur Fertilization. Stukenholtz Lab, Inc. Start Date 1 July 2021 – 30 June 2022. Total In-Kind Sample Analysis \$215,400;

Amount allocated to J.A. Spackman \$215,400.

Spackman, J.A. (PI), O. Walsh (CoPI), and A. Adjesiwor (CoPI). Active Canopy Sensors to Prescribe In-Season Supplemental Nitrogen for Barley. Idaho Barley Commission. Start Date 1 July 2021 – 30 June 2022. Total \$24,778, Amount allocated to J.A. Spackman \$24,002.

Walsh, O. (PI), **J.A. Spackman** (CoPI), A. Adjesiwor (CoPI), and D. Jayawardena (CoPI). Soil Health Sampling for Updating Barley Fertilizer Guide. Idaho Barley Commission. Start Date 1 July 2021 – 30 June 2022. Total \$42,666, Amount allocated to J.A. Spackman \$15,258.

Spackman, J.A. (PI), Z. Hong (CoPI), and J. Marshall (CoPI). Barley Yield and Protein Response to Nitrogen and Sulfur Fertilization. Idaho Barley Commission. Start Date 1 July 2021 – 30 June 2022. Total \$29,653; Amount allocated to J.A. Spackman \$27,653.

Adjesiwor, A. (PI) and **J.A. Spackman** (CoPI). Pre-plant Burndown Herbicide Efficacy and Barley Crop Safety. Idaho Barley Commission. Start Date 1 July 2021 – 30 June 2022. Total \$11,906; Amount allocated to J.A. Spackman \$1,177.

Spackman, J.A. (PI), J. Hogge (CoPI), and N. Ghirmire (CoPI). Survey of Idaho Small Grain Producer's Management Practices. Idaho Barley Commission. Start Date 1 July 2021 – 30 June 2022. \$4,995; Amount allocated to J.A. Spackman \$4,995.

Hogge, J. (PI), **J.A. Spackman** (CoPI). Timing of Forage Cereal Harvest on Yield and Livestock Feed Quality. University of Idaho Extension Innovative Project Grants. Start Date 1 Feb. 2021 – 31 Dec. 2021. \$9,995; Amount allocated to J.A. Spackman \$4,169.

Spackman, J.A. (PI), J. Hogge (CoPI), N. Ghirmire (CoPI). Survey of Idaho Small Grain Producer's Management Practices. University of Idaho Extension Innovative Project Grants. Start Date 1 Feb. 2021– 31 Dec. 2021. \$4,995.

Spackman, J.A. (PI). Contrasting Barley Varieties' Grain Yield and Protein Responses to Nitrogen and Sulfur Fertilizer Rates and Application Timing. Proposal award number: V201221. Start Date 1 Dec. 2020 – 30 Nov. 2021. \$20,000. Amount allocated to J.A. Spackman \$20,000.

Spackman, J.A. (PI), J. Alexander (CoI), G. Paiao (CoI), S. Menegaz (CoI). University of Minnesota College of Food, Agriculture, and Natural Resource Science Graduate Student Board Professional Development Grant for an Informal Group of Students, University of Minnesota, College of Food, Agriculture, and Natural Resource Science, 2019, \$400.

Spackman, J.A. (PI). College of Food, Agriculture and Natural Resource Science Graduate Student Board Professional Development Grant Individual Award, University of Minnesota, College of Food, Agriculture, and Natural Resource Science, 2018, \$250.

Honors and Awards:

SSSA Soil Fertility, Plant Nutrition, and Soil/Plant Analysis Ph.D. Oral 1st place, 2019 (\$500)

NUE Workshop (Columbia, MO) Granular Data Hack-a-thon team competition 1st place, 2019

UMN Production Agriculture Symposium 3rd place poster, 2019

ASA Nutrient Management and Soil and Plant Analysis Division 1st place Ph.D. poster, 2018

ASA-CSSA-SSSA Graduate Student Leadership Conference Award, 2017

International Plant Nutrition Institute Scholar Award, 2016. (35 total awards for 14 countries; \$2,000)

North Central Extension- Industry Soil Fertility Conference Outstanding Graduate Student Award, 2016

Outstanding Student Award from the Department of Agribusiness, Plant and Animal Science at Brigham Young University-Idaho, 2014

American FFA Degree, 2010

Graduate Student Awards:

National Association of Plant Breeders George Washington Carver Scholar Award, Olanrewaju Adeyemi 2022

Excellent Scholar Award, Journal of American Academic Research, Olanrewaju Adeyemi 2022

ASA-CSSA-SSSA Bayer Encompass Fellow Award, Olanrewaju Adeyemi 2022

University of Idaho Graduate and Professional Students Association Travel Award, \$665, Olanrewaju Adeyemi 2022

ASA-CSSA-SSSA Weedy and Invasive Plant Species Division 2nd place MS Oral, Kaone Mookodi, 2022

SERVICE:

Major Committee Assignments:

National

Idaho State Project Collaborator. Fertilizer Recommendations Support Tool: Liming Rate Recommendation Study; Study Lead: Dr. Robert Miller, 2022 to present.

Idaho State Project Collaborator. Fertilizer Recommendations Support Tool: Soil Depth Study; Study Lead: Dr. Steve Culman, 2021 to present.

Idaho State Representative- Fertilizer Recommendation Support Tool (FRST) Legacy Database National Committee, 2020 to present.

Regional

Conference Chairman. WERA103: Western Nutrient Management Conference. 2022 to 2023

Advisory Board Member. Western Variety Testing Database Project; Project Lead: Dr. Julia Piaskowski, 2021 to present.

Member: WERA103: Nutrient Management and Water Quality, 2020 to present.

Planning Committee Member- Graduate Student Representative: 48th North Central Extension-Industry Soil Fertility Conference. Des Moines, IA. 2018.

Planning Committee Member- Graduate Student Representative: 46th North Central Extension-Industry Soil Fertility Conference. Des Moines, IA. 2016.

State

Member: Idaho Grain Producers Association Research and Risk Management Committee, 2021 to present.

District

Search Committee Member. Extension Educator Madison County- Agronomy/Cropping Systems and 4-H Youth Development Extension Educator Search Committee, 2022.

County

University

Member: University of Idaho Southern Idaho Forage School Planning Committee, 2022 – Present

Member: University of Idaho Southern Idaho Cereal School Planning Committee, 2021 – Present

Member: University of Minnesota Council of Graduate Students Grants Committee, 2016 – 2018

College

Reviewer: University of Idaho College of Agriculture and Life Sciences RC Heimsch Research Award, 2023

Reviewer: University of Idaho College of Agriculture and Life Sciences Outstanding Junior Student Awards, 2023

Reviewer: University of Idaho College of Agriculture and Life Sciences Outstanding Sophomore Student Awards, 2022

Member: University of College of Agriculture and Life Sciences Annual Extension Meeting Planning Committee: Poster Session Lead, 2022

Reviewer: University of Idaho College of Agriculture and Life Sciences Outstanding Senior Student Awards, 2021- 2022

Member: Idaho Sustainable Agriculture Initiative for Dairy, 2021 – Present

Reviewer: University of Idaho College of Agriculture and Life Sciences Outstanding Freshman Student Awards, 2021

Member: University of Idaho Soil Fertility/Best Management Practices Committee, 2020 - present.

Graduate Student Representative: University of Minnesota College of Food, Agriculture and Natural Resource Sciences Graduate and Research Policy and Review Committee, 2018 – 2019

Graduate Student Representative: University of Minnesota College of Food, Agriculture and Natural Resource Sciences Alumni Society, 2018 – 2019

Chair: University of Minnesota College of Food, Agriculture and Natural Resource Sciences Graduate Student Board, 2018 – 2019

Chair: University of Minnesota College of Food, Agriculture and Natural Resource Sciences Alumni Society Grants Committee, 2018 – 2019

Chair: University of Minnesota St. Paul Campus Science in Seconds Graduate Student Committee, 2018

Member: University of Minnesota College of Food, Agriculture and Natural Resource Sciences Graduate Student Board, 2017

Departmental

Member: University of Idaho Third Year Review Committee; Dr. Gustavo de Almeida Teixeira , 2023.

Member: University of Idaho Search Committee for Plant Science Department Forage Specialist, 2023.

Chair: University of Idaho Search Committee for Barley Agronomy Lab Post-doctoral Scholar, 2022.

Chair: University of Idaho Search Committee for Barley Agronomy Lab Research Specialist, 2021.

Member: University of Idaho Search Committee for the Wheat Quality Laboratory Manager, 2020.

Graduate Student Representative: University of Minnesota Land and Atmospheric Science Department Faculty Consultative Committee, 2017 to 2018

President: University of Minnesota Land and Atmospheric Science Department Graduate Student Committee, 2017 to 2018

Vice President: University of Minnesota Land and Atmospheric Science Department Graduate Student Committee, 2016 to 2017

Professional and Scholarly Organizations:

Memberships

National Barley Growers Association, 2022 to present.

Craft Maltsters Guild, 2021

Soil Science Society of America (SSSA), 2015 to present

American Society of Agronomy (ASA), 2015 to present

Crop Science Society of America (CSA), 2015 to present

Minnesota Association of Professional Soil Scientists, 2015

Committee Assignments

Soil Science Society of America (SSSA) Soil Testing Calibrations to Maximize Nutrient Uptake and Yield Potential Oral Session, Moderator, 2022

Editorial Services

Reviewer: Western Nutrient Management Conference. 2023. (40 Proceedings Papers and/or Abstracts)

Reviewer: Crops and Soils Magazine. 2022. (1 Article)

Reviewer. *University of Idaho Extension*. 2022 – 2023. (3 Articles)

Reviewer. *Agrosystems, Geosciences & Environment*. 2020 – 2021. (2 Article)

Reviewer. *Archives of Agronomy and Soil Science*. 2020 (1 Article)

Reviewer. *Agronomy Journal*. 2015; 2019 (2 Articles)

Reviewer. *Scientific Reports*. 2019 (1 Article)

Offices Held

Western Nutrient Management Conference Program Director. 2022 – 2023.

Outreach Service:

Popular Press Articles

Walsh O.S., **Spackman J.A.**, Adjesiwor A.T., Lamichhane R., and Owusu Ansah E. 2021. Improving Fertilizer Recommendations for Sustainable Idaho Cereals Production and Enhanced Soil Health. *Traders' Dispatch*.

Spackman, J.A. A message from Dr. Jared Spackman, UI Idaho Barley Commission endowed barley agronomist – Important small grains survey coming soon. *Idaho Grain Producers Association Magazine*. Winter 2020. <https://www.idahograin.org/wp-content/uploads/2020/12/Idaho-Grain-Winter-2020.pdf>

Spackman, J.A. and F.G. Fernández. 2020. Controlled-release nitrogen fertilizer products. *Morning Ag Clips*. <https://www.morningagclips.com/controlled-release-nitrogen-fertilizer-products/> (Accessed May 10, 2020)

Spackman, J.A. and F.G. Fernández. 2020. Are controlled release fertilizers worth the cost? *Minnesota Crop News*. Univ. of Minnesota Ext. <https://blog-crop-news.extension.umn.edu/2020/05/are-controlled-release-nitrogen.html>. (accessed 4 May 2020)

Spackman, J.A. and F.G. Fernández. 2019. Planting or nitrogen application: With a wet spring, which one comes first? *Morning Ag Clips*. <https://www.morningagclips.com/planting-or-nitrogen-application/> (accessed 29 April 2019)

Spackman, J.A. and F.G. Fernández. 2019. Planting or nitrogen application: With a wet spring, which one comes first? *Minnesota Crop News*. Univ. of Minnesota Ext. <https://blog-crop-news.extension.umn.edu/2019/04/planting-or-nitrogen-application-with.html>. (accessed 25 April 2019)

Interview Articles

UI to start study on dryland wheat soil moisture in southern Idaho. *Capital Press*. https://www.capitalpress.com/ag_sectors/grains/ui-to-start-study-on-dryland-wheat-soil-moisture-in-southern-idaho/article_062e2a08-1fef-11ed-9c01-b796cb1a9245.html Aug. 19, 2022.

Jaynes, L. 2022. Hybrid rye: A bane turned blessing. *Ag Proud Idaho*. <https://www.agproud.com/articles/55602-hybrid-rye-a-bane-turned-blessing>. Aug. 8, 2022.

Carlson, B. 2021. UI surveys barley, wheat producers. *Capital Press*. *Ag Weekly* https://www.capitalpress.com/ag_sectors/grains/ui-surveys-barley-wheat-producers/article_623b39aa-9722-11eb-95ab-435b89e49faf.html (*Interview Article*, accessed 7 Apr. 2021).

Idaho Barley Commission. Nov. 13, 2020. Idaho Grain Market Report. (*Interview Article*)

Carlson, B. 2020. New UI barley agronomist to survey growers. *Capital Press*. *Ag Weekly* https://www.capitalpress.com/ag_sectors/grains/new-ui-barley-agronomist-to-survey-growers/article_e9bdf52c-239e-11eb-9791-8bd4f0e3d4a5.html (*Interview Article*, accessed 10

Nov. 2020)

Newspaper Articles

Workshops-seminars-tours organized

Hutchinson, P., **J.A. Spackman**, and A. Adjesiwor. Pesticide and Nutrient Management Field Day. Aberdeen, ID. 28 June, 2022.

Spackman, J.A., J. Sagers, R. Findlay, D. Callister, S. Fannesbeck, J. Hatch, X. Liang, and R. Patterson. Forage Field Day. Rexburg, ID. 20 May, 2022.

Spackman, J.A. J. Sagers, R. Findlay, D. Callister, T. Sorensen, X. Liang, A. Adjesiwor, R. Patterson, S. Fannesbeck, and K. Killpack. Forage Field Day. Aberdeen, ID. 19 May, 2022.

Extension impact statements

Spackman, J.A. J. Sagers, R. Findlay, D. Callister, T. Sorensen, X. Liang, A. Adjesiwor, R. Patterson, S. Fannesbeck, and K. Killpack. Forage Production Field Day. 19 May, 2022.

Spackman, J.A. J. Sagers, R. Findlay, D. Callister, T. Sorensen, X. Liang, A. Adjesiwor, R. Patterson, S. Fannesbeck, and K. Killpack. Mudlake, Preston, and Blackfoot Forage School. 3 Mar. 2022.

Community Service:

Secretary, local church group, 2022 – Present

Sunday-school Instructor, 2020 – 2022

Assistant Scoutmaster for Boy Scouts of America Troop 906, 2017 – 2019

Market Science booth at Nokomis Farmers Market, 2018

Self Reliance Specialist: Find a Better Job. Group lead to assist four adult participants to develop skills to prepare for and obtain a job. 2017

Weekly music leader for children (age 2 to 10), 2016 – 2017

Honors and Awards:

Boy Scouts of America Eagle Scout Award, 2005

PROFESSIONAL DEVELOPMENT: (workshops and seminars attended)

Teaching:

Lachat Trained, St. Paul. MN. 2019

Interactive Learning 101 training course, Center for Educational Innovation, St. Paul, MN. 2016

Scholarship:

8th Annual Nitrogen: Minnesota's Grand Challenge and Compelling Opportunity Conference. Online. 15 Feb, 2022.

Proposal Development Academy: Developing a 5-year research funding plan, University of Idaho Office of Research and Economic Development, Online Classroom, January – April 2021.

Measures of Soil Nitrogen Cycling, SSSA and Soil Health Institute, Online Classroom, 2020

Decision Support System for Agrotechnology Transfer (DSSAT) International Training Program, Griffin, GA. 2018

Outreach:

The Art of Giving and Receiving Constructive Feedback. University of Idaho Extension Professional Development. Virtual. Nov. 18, 2020.

Speaking Science: Communicating with Media, Funders, Policymakers, and the Public. St. Paul, MN. 2018

Institute for Agricultural Professionals Field School, St. Paul, MN. 2015

Administration/Management:

Creating a Respectful Community, University of Idaho, 2021

Diversity and Inclusion, University of Idaho, 2021 – 2022

Fire Safety in the Workplace, University of Idaho, 2021 – 2022

Stewardship of Resources, University of Idaho, 2021

IT Security Awareness, University of Idaho, 2021 – 2022

IRB Investigators and Student Researchers, CITI Program, 2021

Bloodborne Pathogens, University of Idaho, 2020

Laboratory Safety, University of Idaho, 2020

Safety Matters, University of Idaho, 2020

Hazard Communication Guide for Supervisors, University of Idaho, 2020

Office Safety and Ergonomics, University of Idaho, 2020

Working Outdoors, University of Idaho, 2020

Banner Navigation, University of Idaho, 2020

Basic Biosafety, University of Idaho, 2020