

# Swetabh Patel

## Postdoctoral Research Associate

University of Nebraska-Lincoln, NE  
**Mobile:** +1-515-598-6111  
**Email:** [spatel29@unl.edu](mailto:spatel29@unl.edu) | [swetabh87@gmail.com](mailto:swetabh87@gmail.com)  
[Research Gate](#) | [LinkedIn](#) | [Google Scholar](#)

---

### AREAS OF EXPERTISE

---

- Nutrient management
- Soil Fertility and Plant Nutrition
- Soil and water quality
- Cropping system
- Cover crops
- Sustainable Agriculture

---

### EDUCATION

---

- **Ph.D., Iowa State University, USA** **2020**  
**Major: Crop Production & Physiology**  
**Minor: Plant Breeding**  
**Dissertation Title:** *“Intercropping and relay cropping to increase productivity, resilience, and long-term sustainability of corn and soybean cropping systems in Iowa” (Funded by USDA- NIFA).*  
**Major Advisor:** Dr. Andrew Lenssen and Dr. Kenneth Moore
- **M.S. Soil Science (Soil fertility), Iowa State University, USA** **2016**  
**Thesis Title:** *“Rye cover crop biomass, nutrient composition, and crop management” (Funded by USDA- NIFA).*  
**Major Advisor:** Dr. John Sawyer, Professor
- **B.S. Agriculture, Banaras Hindu University, India** **2012**

---

### PROFESSIONAL EXPERIENCE

---

#### Postdoctoral Research Associate, University of Nebraska-Lincoln **April 2022 – Present**

- Designed and implemented USDA funded research project to optimize corn yield and reduce nitrate leaching.
- Worked with various sources of nitrogen (manure, urea, UAN) in combination with best management practices (cover crop, wood chips, no till) to reduce nitrate leaching from agricultural fields.
- Gained experience working with lysimeters to estimate nitrate leaching to ground water.
- Working with Root Zone Water Quality Model to understand the effect of various management practices on water quantity, water quality and crop production.

#### Assistant Scientist, Kansas State University, USA **May 2021 – March 2022**

- Helped with successful establishment and implementation of Department of Energy funded study focused on measuring greenhouse gas emission (GHG) and generating a gold standard data for dryland grain sorghum.

- Investigated how yield is affected by spatial variability, soil profile nitrate and availability of soil moisture in dryland sorghum.
- Involved with successful implementation of dry bean (Pinto bean) study looking at the effect of seeding rate and row spacing on different varieties.
- Helped with data collection in durum wheat study investigating the effect of seeding rate and planting date on various varieties.
- Gained experience using neutron probe to measure soil moisture at deeper soil profile.

**Postdoctoral Research Associate, USDA, DFRC, USA.**

**May 2020 – April 2021**

- Designed and implemented research trials involving corn and alfalfa intercropping.
- Applied various fertilizer management strategy (starter and sidedress) and screened several corn hybrids to improve corn yield when intercropped with alfalfa.
- Extensive experience with collecting corn root biomass and soil samples at different growth stages.
- Used SPAD meter to measure leaf chlorophyll and radiometer to estimate crop canopy temperature.

**Graduate Research Assistant, Iowa State University, USA**

**2013 – 2020**

- Extensive assistance and involvement in graduate research project examining different management techniques (cover crop, corn-alfalfa intercropping, relay cropping, starter fertilizer and tillage) to enhance the productivity and sustainability of corn and soybean cropping systems when integrated with different cover crops.
- Collected significant number of soil samples from field using hand push probe as well as Giddings soil probe; analyzed it for soil nitrate content using colorimetric method.
- Collected corn and rye biomass samples from the field.
- Learned to identify various weed community in corn, soybean and alfalfa cropping system.
- Used crop canopy sensor to estimate NDVI (Normalized Difference Vegetative Index) values for corn.
- Used Accupar to measure leaf area index (LAI).
- Accustomed with the use of FieldScout TDR 300 Soil Moisture Meter to measure soil volumetric water content.
- Experience with infield soil temperature and soil compaction measurement using FieldScout SC 900 Soil Compaction Meter (Penetrometer).
- Experience with root biomass sampling using root ingrowth tube method.
- Widely involved in leadership, student government, outreach, committee activities and research conferences.

## **TEACHING EXPERIENCE**

---

**Teaching Assistant, Iowa State University, USA**

**Spring 2018**

**Course Name:** Agron 526 Field Plot Technique

**Instructor:** Dr. Kenneth Moore

**Total number of students attended:** 25

**Duties:**

- Managed the lab for the class helping students with SAS codes and conducted problem solving sessions.
- Managed online materials and web interface using teaching software.
- Corrected and graded assigned homework, quizzes, exams, and projects.

## MENTORING EXPERIENCE

---

- Mentored 11 undergraduates and three graduate students to support their advancement in research activity. These include, but are not limited to: **2013 – Present**
  - Co-advising an online MS student.
  - Finding appropriate research problems.
  - Developing and executing research protocols.
  - Training mentees in several field and lab techniques.
  - Executing lab/field tasks in a timely manner to meet study objectives.
  - Training mentees in collecting research data and statistical analysis using MS excel, and SAS.
  - Writing Letter of Recommendation (LOR) for graduate school.

## PUBLICATIONS

---

### PEER REVIEWED ARTICLES

10. Patel, S., Iqbal, J., Shapiro, C., 2022. Optimizing Corn Production Using Target Soil Test Values in a Long-Term Phosphorus Trial in Nebraska. *Agronomy Journal* (submitted).
9. Patel, S., Bartel, C.A., Lenssen, A.W., Moore, K.J. and Berti, M.T., 2021. [Stem Density, Productivity, and Weed Community Dynamics in Corn-Alfalfa Intercropping](#). *Agronomy*, 11(9), p.1696.
8. Cecchin, A., Pourhashem, G., Gesch, R.W., Mohammed, Y.A., **Patel, S.**, Lenssen, A.W. and Berti, M.T., 2021. [The Environmental Impact of Ecological Intensification in Soybean Cropping Systems in the US Upper Midwest](#). *Sustainability*, 13(4), p.1696.
7. **Patel, S.**, Lenssen, A.W., Moore, K.J., Mohammed, Y.A., Gesch, R.W., Wells, M.S., Johnson, B.L., Berti, M.T. and Matthees, H.L., 2021. [Interseeded pennycress and camelina yield and influence on row crops](#). *Agron. J.*
6. Berti, M.T., Cecchin, A., Samarappuli, D.P., **Patel, S.**, Lenssen, A.W., Moore, K.J., Wells, S.S. and Kazula, M.J., 2021. [Alfalfa Established Successfully in Intercropping with Corn in the Midwest US](#). *Agronomy*, 11(8), p.1676.
5. Cecchin A., G. Pourhashem, R. G. Gesh, A. W. Lenssen, Y. A. Mohammed, **S. Patel**, M. T. Berti. 2020. [Environmental trade-offs of relay-cropping winter cover crops with soybean in a maize-soybean cropping system](#). *Agri. Systems*.

4. Mohammed, Y. A., **S. Patel**, H. L. Matthees, A. W. Lenssen, B. L. Johnson, M. S. Wells, F. Forcella, M. T. Berti and R. W. Gesch. [Soil Nitrogen in Response to Interseeded Cover Crops in Maize–Soybean Production Systems](#). *Agron*. 2020; 10-1439
3. Forcella, F., **Patel, S.**, Lenssen, A.W., Hoerning, C., Wells, M.S., Gesch, R.W. and Berti, M.T., 2021. [Weather and landscape influences on pollinator visitation of flowering winter oilseeds \(field pennycress and winter camelina\)](#). *Journal of Applied Entomology*, 145(4), pp.286-294.
2. Mohammed Y. A., Matthees H. L., Gesch R. W., **Patel S.**, Forcella F., Aasand K., Steffl N., Johnson B. L., Wells S. M., Lenssem A. W. 2020. [Establishing winter annual cover crops by interseeding into Maize and Soybean](#). *Agron J.* (1–14)
1. **Patel, S.**, J.E. Sawyer, J.P. Lundvall. 2019. [Can management practices enhance corn productivity in a rye cover crop system?](#) *Agron J.*

## CONFERENCE PROCEEDINGS

1. Sawyer, J. E., **Patel, S.**, J. Pantoja, D.W. Barker, and J.P. Lundvall. 2017. Nitrogen dynamics with a rye cover crop. Proceedings from Integrated Crop Management Conference, Ames, IA. p.161-167. [Agronext.iastate.edu/soilfertility/info/NitrogenDynamics-RyeCoverCrop\\_ICM2017.pdf](#)
2. **Patel, S.**, J.E. Sawyer, J.P. Lundvall, and J. Hall. 2015. Root and shoot biomass and nutrient composition in a winter rye cover crop. In Proc. Of 45<sup>th</sup> North Central Extension-Industry Soil Fertility Conference, IA. 4-5 Nov. [Northcentralfertility.com/proceedings/?action=abstract&id=4137](#)
3. Khandelwal, A., **S. Patel**, K.K. Singh. 2011. Turning poverty in to prosperity into Indo-Gangetic plain. International conference held on managing sustainable development of Rural Economy and Agri-Business. BHU, Varanasi, India

## FIELD REPORTS

6. Forcella, F., **Patel, S.**, Lenssen, A.W., Hoerning, C., Wells, M.S., Gesch, R.W. and Berti, M.T., 2020. Winter oilseed pollinators in IA and MN in 2017 and 2018. [https://conservancy.umn.edu/handle/11299/214095](#)
5. Lundvall, John; **Patel, S.**; and Sawyer, J. (2017) "Enhancing Corn Yield in a Winter Cereal Rye Cover Crop System in Southeast Iowa," *Farm Progress Reports*: Vol. 2016: Iss. 1, Article 139. [https://dr.lib.iastate.edu/entities/publication/4213834b-836e-4df2-9d36-03a2bff5ba6e](#)
4. Lundvall, John; **Patel, S.**; and Sawyer, J. (2017) "Enhancing Corn Yield in a Winter Cereal Rye Cover Crop System in Northwest Iowa," *Farm Progress Reports*: Vol. 2016: Iss. 1, Article 115. [https://dr.lib.iastate.edu/entities/publication/dd7b884b-669f-42c0-9d9d-9de225c1621a](#)

3. Lundvall, J.; **Patel, S.**; and Sawyer, John (2017) "Enhancing Corn Yield in a Winter Cereal Rye Cover Crop System in Northeast Iowa," *Farm Progress Reports*: Vol. 2016: Iss. 1, Article 67. <https://dr.lib.iastate.edu/entities/publication/f2f5301c-a503-4701-bfba-ec83a8896522>
2. Sawyer, J.E.; **Patel, S.**; Lundvall, J.P. Enhancing corn yield in a rye cover cropping system. *Agron. Rep.* 016, 3. <https://dr.lib.iastate.edu/entities/publication/3005aefb-a580-499f-b314-d6abb7b1122c>
1. **Patel, S.**; Lundvall, J.; and Sawyer, J. (2016). Enhancing Corn Yield in a Winter Cereal Rye Cover Cropping System, *Farm Progress Reports*: Vol. 2015: Iss. 1, Article 128. <https://dr.lib.iastate.edu/entities/publication/563007de-26b9-470d-ba30-de067a3b1d15>

## IN PREPARATION

1. **Patel, S.** and Grabber, J., Fertilizer Management to Improve Yield of Corn Silage Interseeded with Alfalfa. (Target Journal "Agronomy J")

## CONFERENCE/PROFESSIONAL MEETING PRESENTATIONS

---

### ORAL PRESENTATIONS

7. **Patel, S.**, Iqbal, J., Shapiro, C. 2022. Optimizing Corn Production Using Target Soil Test Values in a Long-Term Phosphorus Trial in Nebraska. *ASA, CSSA and SSSA International Annual Meetings*. Baltimore, MD. <https://scisoc.confex.com/scisoc/2022am/meetingapp.cgi/Paper/142884>
6. **Patel, S.**, Tomlinson, P., Haag, L.A., Santos, E.A. 2022. Spatial Variability in Profile Soil Nitrate, Nutrient Update, Grain Yield, and Nutrient Removal in a Commercial Dryland Grain Sorghum Field <https://greatplainsoilfertility.org/program/oral>
5. Tomlinson, P., Santos, E.A., **Patel, S.**, Haag, L.A. 2022. Measuring N<sub>2</sub>O Emissions from Dryland Sorghum Production Using Gas Chamber and Eddy Covariance Flux Methods. <https://greatplainsoilfertility.org/program/oral>
4. **Patel, S.**, LA Haag, F Allan, AS Auld. 2021. Effect of Seeding Rate and Planting Date on Irrigated Winter Durum Wheat Yield in Western Kansas. *ASA, CSSA and SSSA International Annual Meetings*. <https://scisoc.confex.com/scisoc/2021am/meetingapp.cgi/Paper/138904>
3. **Patel, S.**, A.W., Lenssen, K.J., Moore. 2019. Relay Cropping Soybean with Oil Seed Cover Crops. *ASA, CSSA and SSSA International Annual Meetings*. <https://scisoc.confex.com/scisoc/2019am/meetingapp.cgi/Paper/122726>
2. **Patel, S.**, A.W., Lenssen, K.J., Moore, M.T., Berti, R.W., Gesch. 2018. Establishing Field Pennycress and Winter Camelina As Cash Cover Crop in Corn Soybean Rotation System. *ASA, CSSA and SSSA International Annual Meetings*. <https://scisoc.confex.com/scisoc/2018am/meetingapp.cgi/Paper/113651>
1. **Patel, S.**, A.W., Lenssen, K.J., Moore, M.T., Berti, R.W., Gesch, H.L., Dose 2017. Integrating and Managing Oilseed Cash Cover Crops in a Corn and Soybean Rotation System. *ASA, CSSA and SSSA International Annual Meetings*.

<https://scisoc.confex.com/scisoc/2017am/meetingapp.cgi/Paper/108089>)

## POSTER PRESENTATIONS

12. **Patel, S.** and Grabber, J., Fertilizer Management to Improve Yield of Corn Silage Interseeded with Alfalfa. In *ASA, CSSA and SSSA International Annual Meetings (2020) VIRTUAL*. ASA-CSSA-SSSA.  
(<https://scisoc.confex.com/scisoc/2020am/prelim.cgi/Paper/127107>)
11. **Patel, S.**, Lenssen, A.W., Moore, K.J. and Berti, M.T. 2019. November. Increasing Overall Productivity By Inter Cropping Corn and Alfalfa. ASA, CSSA and SSSA International Annual Meetings.  
(<https://scisoc.confex.com/scisoc/2019am/meetingapp.cgi/Paper/122768>)
10. Mohammed, Y. A., Matthees, H., Gesch, R., **Patel, S.**, Forcella, F., Aasand, K., Steffl, N., Johnson, B. L., Wells, S. S., & Lenssen, A. W. 2019. Winter Annual Cover Crops and Inter-Seeding Dates Evaluation in Upper Midwest, USA. *ASA-CSA-SSSA International Annual Meeting. San Antonio, TX, USA*.  
(<https://scisoc.confex.com/scisoc/2019am/meetingapp.cgi/Paper/119662>)
9. **Patel, S.**, Lenssen, A.W., Moore, K.J. and Berti, M.T. 2018. Management and Productivity of Corn and Alfalfa Intercropping. *ASA-CSA-SSSA International Annual Meeting. Baltimore, MD, USA*.  
<https://scisoc.confex.com/scisoc/2018am/meetingapp.cgi/Paper/113692>
8. Mohammed Y. A., Matthees H. L., Gesch R. W., **Patel S.**, Forcella F., Johnson B. L., Wells S. M., Lenssem A. W. 2019. *Association for the Advancement of Industrial Crops annual meeting. Tucson, AZ*.
7. Berti, M. T., B. L. Johnson, H., Kandel, J. Ransom, A. Wick, D. Franzen, D. Ripplinger, J. Nowatzki, A. Peterson, M. S. Wells, A. W. Lenssen, **S. Patel**, R. W. Gesch, F. Forcella, and H. L. Matthees. 2018. Cropsys-CAP- a novel management approach to increase productivity, resilience, and long-term sustainability of cropping systems in the northern Great Plains-Research update. *Association for the Advancement of Industrial Crops annual meeting. Ontario, Canada*.
6. **Patel, S.**, Lenssen, A.W., Moore, K.J. and Berti, M.T. and Gesch, R.W. 2018. Integrating oilseed cash cover crops in a corn and soybean rotation system in Iowa. *Midwest Cover Crop Council annual meeting. Fargo, ND, USA*.
5. **Patel, S.**, John E. Sawyer and John P. Lundvall. 2016. Root and shoot biomass and nutrient composition in a winter rye cover crop. *International ASA-CSSA-SSSA meeting, Phoenix, AZ*. <https://scisoc.confex.com/crops/2016am/webprogram/Paper100371.html>
4. **Patel, S.**, John E. Sawyer and John P. Lundvall. 2015. Enhancing corn yield in a winter rye cover crop system. *International ASA-CSSA-SSSA meeting 2015. Minneapolis, MN*.  
<https://scisoc.confex.com/crops/2015am/webprogram/Paper92288.html>

3. **Patel, S.**, and Sawyer J. 2015. Root and shoot biomass and nutrient composition in a winter rye cover crop. *45<sup>th</sup> North Central Extension-Industry soil fertility conference. 4-5 Nov. 2015. Des Moines, IA.*
2. **Patel, S.**, and Sawyer, J. 2015. Root and shoot biomass and nutrient composition in a winter rye cover crop. *Corn-based Cropping Systems Project (USDANIFA). 16-17 Oct. USDA Whitten patio, Washington, D.C.*
1. **Patel, S.**, and Sawyer J. 2014. Root and shoot biomass and nutrient composition in a winter rye cover crop. *Annual meeting of the Corn-based Cropping Systems Project (USDANIFA). 6-9 Aug. 2015 Nebraska City, NE*

## INVITED TALK

- **Patel, S.** Effect of alfalfa intercropping on corn grain and forage biomass yield. *Invited talk* Iowa State Spring In-Service. 22<sup>nd</sup> March. **2021**
- **Patel, S.** Can certain hybrid traits and fertilizer management improve corn silage yield when intercropped with alfalfa. Spring webinar series. 21<sup>st</sup> April-USDA Dairy Forage Research Center. **2021**

## MEDIA/IN NEWS

<https://ianrnews.unl.edu/4rs-nutrient-stewardship-field-day-featured-nutrient-management-and-water-quality-research>

## EXTENSION/OUTREACH

---

- Poster presentation and field demonstration at Haskell Lab Science & Ag Family Field Day. August 10. Concord, NE. **2023**
- Informed and educated farmers, extension educators and stakeholders regarding the integrated use of manure and mulch on nitrate reduction and corn yield through poster presentation and field demonstration. UNL Soil Health School. Aug. 1. Concord, NE. **2023**
- Help organize the UNL 2023 4Rs Field Day and presented valuable insights from long-term Phosphorus trial in Nebraska. July 6. ENREC, Mead, NE. **2023**
- Engaged farmers and stakeholders talking about “Optimizing Corn Production Using Target Soil Test Values in a Long-Term Phosphorus Trial in Nebraska” at UNL’s Soil School, Jan 31<sup>st</sup>. Lincoln, NE. **2023**
- Extension talks about Nebraska Phosphorus fertility update. UNL’s Crop Production Clinic. Jan 24<sup>th</sup> at Kearney, NE. **2023**
- Extension talks about Nebraska Phosphorus fertility update. UNL’s Crop Production Clinic. Jan 20<sup>th</sup>, at York, NE. **2023**
- Extension talks about Nebraska Phosphorus fertility update. UNL’s Crop Production Clinic. Jan 19<sup>th</sup> at Hastings, NE. **2023**
- Extension talks about Nebraska Phosphorus fertility update. UNL’s Crop Production Clinic. Jan 18<sup>th</sup> at Kearney, NE. **2023**
- Extension talks about Nebraska Phosphorus fertility update. UNL’s Crop Production Clinic.

- Jan 12<sup>th</sup> at Beatrice, NE. 2023
- Extension talks about Nebraska Phosphorus fertility update. UNL's Crop Production Clinic. Jan 11<sup>th</sup> at ENREEC, NE. 2023
- Extension talks about Nebraska Phosphorus fertility update. UNL's Crop Production Clinic. Jan 10<sup>th</sup>, at Norfolk, NE. 2023
- Used rainfall simulator and findings from long term tillage and crop rotation trial to engage farmers, farming community and school kids to educate them about effect on crop production and soil health. UNL Haskell Ag Lab Family Field Day, Concord, NE. August 3<sup>rd</sup>. 2022
- Educated farmers about impact of row spacing on light interception. Dry Bean Field Day. Sept 7<sup>th</sup>. Goodland, KS 2021
- Participated in a field day to learn more about water quality research projects at the Uthe Farm near Ames, IA. 2019
- Participated in Iowa Soybean Research Center Summer Farm Tour. 2019
- Participated in Iowa Soybean Research Center Summer Farm Tour. 2018
- In person conversation with farmers, industry people and other stakeholders. 2008 – present
- Rural Agricultural Work Experience (RAWE) for 6 months as organized by IAS, BHU, India. 2012

## SERVICE

---

### INSTITUTIONAL

- **Fall Seminar Committee Chair** 2019  
Organized the Agronomy Department fall seminar series.
- **President** 2018  
Agronomy Graduate Student Club-Iowa State University
- **Iowa State GPSS Senator** 2018 – 2020  
Acted as a liaison between Agronomy department and Graduate and Professional Student Senate
- Core member of Agronomy outstanding graduate student award committee. 2018
- **Volunteer for Integrated Crop Management Conference.** 2014-2019  
Worked at information desk and scanned for CCA credits. Ames, IA

### PROFESSIONAL

- **Journal Reviewer** 2020 – Present  
Reviewed following manuscripts for journals:
  - ✓ D. Gawęda, M. Haliniarz. 2022. The yield and weed infestation of winter oilseed rape (*Brassica 2 napus* L. ssp. *oleifera* Metzg) in various tillage systems. *Agriculture*. (In review)
  - ✓ Mohammed, Y.A., Gesch, R.W., Wells, S.S., Heller, N.J., Lindsey, A.J., Hard, A.W., Phippen, W.B. and Bedeker, B. 2023. Yield tradeoffs of early corn harvest to enhance pennycress establishment. *Agronomy Journal*.
  - ✓ Anwar, M., Islam, A.K.M., Yeasmin, S., Rashid, M., Juraimi, A.S., Ahmed, S. and Shrestha, A., 2021. Weeds and their responses to management efforts in a changing climate. *Agronomy*, 11(10), p.1921.



- ✓ Antonio J. Carpio, María-Auxiliadora Soriano, María-Auxiliadora Soriano, Francisco S. Tortosa. The Self-Seeding of *Anthemis arvensis* L. for Cover Crop in Olive Groves under Intense Rabbit Grazing. *Agronomy* 2020, 10:1412.

- **Oral Session Moderator** 2022  
Agricultural Management Practices and Their Impact on Water Quality Oral I and II. ASA, CSA and SSSA annual meetings. Baltimore, MD.
- **Judge for Diversity Poster Contest.** 2021  
ASA, CSSA, SSSA International meetings. Salt Lake City, UT.
- **Judge for the ASA, CSSA, SSSA Diversity Poster Contest.** 2021  
Helped judge five undergraduate student posters.
- **Judge for SASES student poster competition** 2020  
Helped judge 11 undergraduate posters at ASA-CSA-SSSA annual meeting.
- **Judge for SASES student poster competition** 2020  
ASA-CSA-SSSA International meetings. Virtual.
- **Judge for graduate student poster competition** 2019  
ASA-CSA-SSSA annual meetings. San Antonio, TX.
- **Session Co-Chair** 2018  
Moderated Cover crop Oral session. ASA, CSA and SSSA annual meetings. Baltimore, MD.

## COMMUNITY

- Serving as Subject Expert: Agronomy for AIASA-ICC 2022-Present
- **Invited as judge for Science Bound Science Fair** 2020  
Reviewed projects and judged posters for junior high school students at Weeks Middle School. Feb. 6. Des Moines, IA.
- **Invited speaker at Des Moines High School** 2019  
Interacted with visiting students from Denmark and talk about Agronomy department at Iowa State and current state of Iowa agriculture.
- **Judge for Junior High Students' Projects** 2018  
State Science and Technology Fair of Iowa (SSTFI), Iowa State University (ISU) Extension & Outreach, ISU Extension 4-H Youth Development, IA, USA. March 22.
- **Volunteered for State Fair of Iowa** 2017  
Represented and provided information about Agronomy Department at Iowa State University
- **Volunteered at World Food Prize.** 2015  
Helped at information desk.
- **Volunteered at Iowa Farm Progress Show.** 2014  
Provided support and guidance as a translator for non-English speaking attendees. Boone, IA.
- **Volunteer for Iowa State football games** 2013-2016  
Helped with ticketing and ushering and raised money for student organization 'Sankalp' to be sent to developing country NGO's.

## PROFESSIONAL AFFILIATIONS

---

- Soil Science Society of America (SSSA)

- American Society of Agronomy (ASA)
- Crop Science Society of America (CSSA)
- National Postdoctoral Association (NPA)
- All India Agricultural Students Association (AIASA)
- Gamma Sigma Delta: Honor Society of Agriculture
- Practical Farmers of Iowa (PFI)
- Active member of a USDA-NIFA funded transdisciplinary, multi-institutional team comprised of 140 members working to identify adaptive strategies for Midwest agricultural systems to climate change: Climate and Corn-based Cropping Systems Coordinated Agricultural Project ([sustainablecorn.org](http://sustainablecorn.org)); USDA-NIFA Award No. 2011-68002-3019

## HONORS and AWARDS

---

- **Graduate Student Travel Grant (PAG)** **2017**  
Attended ASA, CSA and SSSA annual meeting in , Tampa, FL, USA.
- **Award (\$300)** **2016**  
2<sup>nd</sup> position in MS poster competition (Soil fertility) in International ASA-CSSA-SSSA meeting. 6-9 Nov., Phoenix, AZ.
- **Award (\$300)** **2015**  
Outstanding graduate student award in North Central Extension-Industry soil fertility conference, November 2015, Des Moines, IA.
- **Scholarship** **2013 – 2020**  
Graduate Research Assistantship (GRA) at Iowa State University, IA, USA.

## REFERENCE LIST

---

- **Dr. Kenneth J Moore, Distinguished Professor**  
Iowa State University, Department of Agronomy, Ames, IA.  
Phone: (515) 294-5482 | E-mail: [kjmoore@iastate.edu](mailto:kjmoore@iastate.edu)
- **Dr. Lucas Haag, Associate Professor**  
Kansas State University, Northwest Research Extension Center, Colby, KS.  
Phone: (785) 443-4806 | E-mail: [lhaag@ksu.edu](mailto:lhaag@ksu.edu)
- **Dr. John Grabber, Research Agronomist**  
USDA Dairy Forage Research Center, Madison, WI.  
Phone: (608) 419-0684 | E-mail: [john.grabber@usda.gov](mailto:john.grabber@usda.gov)