

The **Climate and Corn-based Cropping Systems CAP (CSCAP)** is a transdisciplinary team creating new science and educational opportunities. The CSCAP team seeks to develop a suite of practices that heighten system capacity to: 1) retain and enhance soil organic matter nutrient and carbon stocks, 2) reduce off-field nitrogen losses that contribute to greenhouse gas emissions and water pollution, 3) better withstand droughts and floods, and 4) ensure productivity under different climatic conditions.

CSCAP graduate students are working hard to become discipline-based scientists as well as learning how to bridge disciplines and work collaboratively to address complex, societal challenges that will be expected in current and future scientific fields.

Each graduate student is housed within a Land Grant University and has obligations and expectations within their respective departments and colleges. It is expected CSCAP graduate students meet their institutional goals while also aligning as much as possible with the opportunities listed below. This handout provides an overview and framework of the team's approach to equip graduate students and provide a transdisciplinary experience and opportunities.

Participation in the project provides exposure to a wide range of scientists, staff, and students with varied expertise. As a result, the CSCAP serves as a platform to facilitate streamlined exchange of ideas and information that is uniquely available and not likely found elsewhere. Students will progress in their comprehension and ability to participate in transdisciplinary work as they advance through their program; the outline below is a suggested approach to increasing student capacity for transdisciplinary work. It is expected MS and PhD students will acquire many of the same traits and skill sets despite the shortened tenure of MS students. A PhD student will simply be able to explore more opportunities and potentially build a greater resume prior to graduating.



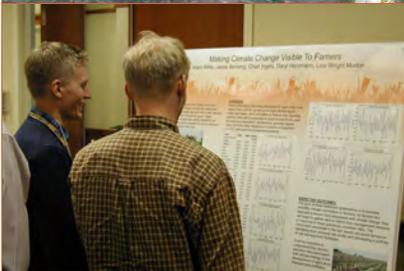
Year 1 of Graduate Program (MS and PhD)

- Develop your research project, questions and hypotheses. Add this to the comprehensive team document of research questions and hypotheses.
- Learn your discipline well.
- Attend annual CSCAP team conference.
- Present a poster at the team conference based on your experimental design, procedures, or preliminary findings.
- Attend the graduate seminar offered for CSCAP students.
- Understand the CSCAP objectives and overarching themes, such as mitigation and adaptation in agriculture; carbon, nitrogen, and water footprints; costs and benefits associated with various management practices; current and future climate expectations; farmer perceptions and actions; and ways to develop materials that extend information out to farmers, educators and the public.
- Provide feedback to your primary advisor, student leadership, and other team members on how you believe your individual research project fits into the larger picture of our project.
- Possibly attend a regional or national society meeting and present your CSCAP research.

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The 11 institutions comprising the project team include: University of Illinois; Iowa State University; Lincoln University; Michigan State University; University of Minnesota; University of Missouri; The Ohio State University; Purdue University; South Dakota State University; University of Wisconsin; and USDA-ARS Columbus, Ohio.

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Year 2 of Graduate Program (MS and PhD)

- Continue with your research project and learning your discipline well.
- Attend annual CSCAP team conference.
- Present a poster or oral presentation at the team conference based on your research findings.
- Attend the graduate seminar offered for CSCAP students.
- Provide feedback and ideas to your primary advisor, student leadership, and other team members of ways to integrate among one or more disciplines.
- Attend a regional or national society meeting and present your CSCAP research.
- Engage others outside the CSCAP by presenting your research at an institutional-based field day, departmental seminar, summer camp, etc.
- Film a 5 minute video of your research for the team external website.
- Highlight your research by writing for the CSCAP blog.
- In collaboration with Objective 5, develop an extension fact sheet.
- In collaboration with Objective 6, develop an education module or activity.

Year 3+ of Graduate Program (PhD)

- Continue with your research project and learning your discipline well.
- Attend annual CSCAP team conference.
- Present a poster or oral presentation at the team conference based on your dissertation.
- Attend the graduate seminar offered for CSCAP students.
- Provide feedback and ideas to your primary advisor, student leadership, and other team members of ways to integrate among one or more disciplines.
- Collaborate with other CSCAP members in field days, summer camps, peer-reviewed publications, extension publications, newsletters or blogs, and educational modules.
- Attend a regional or national society meeting and present your CSCAP research.
- Film a 5 minute video of your research for the team external website.
- Highlight your research by writing for the CSCAP blog.
- In collaboration with Objective 5, develop an extension fact sheet.
- In collaboration with Objective 6, develop an education module or activity.

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