**2020 MCCC Michigan State Report**

**Contact Information**
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### RESEARCH - On-going cover crop research (by primary discipline)

<table>
<thead>
<tr>
<th>Name(s)</th>
<th>Project title/objective</th>
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<tbody>
<tr>
<td><strong>COMMODITY SPECIFIC</strong></td>
<td>Management of Rye Cover Crops and Influence on Weed Control, Soybean Cyst Nematode and Soybean Production. Michigan Soybean Checkoff (2020)</td>
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<tr>
<td>Baas, D. and B. Wilke</td>
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<tr>
<td>Bird, G., M. Quintanilla, Phil Kaatz and Ned Berkey</td>
<td>Trap crop development for soybean cyst nematode management (2018-2021)</td>
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<tr>
<td>Bird, G., M. Quintanilla</td>
<td>Impact of cover crops in seed potato production systems (2018-2020)</td>
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<tr>
<td>Hayden, Z.D. and M. Quintanilla</td>
<td>Investigation of Brassica cover crops for nutrient cycling and nematode suppression in muck celery production. MI Celery Research, Inc., 2018-2021</td>
</tr>
<tr>
<td>Renner, Baas, Kravchenko, and Tiemann.</td>
<td>The Role of Cover Crop Mixtures across Varying Field Topography. Project GREEEN. 2019-2021 $45,000</td>
</tr>
<tr>
<td>Renner, Tiemann, Basso and Sprague.</td>
<td>Early interseeding of cover crops in corn: Crop productivity and soil health. USDA-Agriculture &amp; Food Research Initiative. 2017-2020 $500,000.</td>
</tr>
<tr>
<td>Sprague et al.</td>
<td>Innovative strategies to manage glyphosate-resistant horseweed (marestail) in soybean. Michigan Soybean Promotion Committee (2020) $26,000</td>
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<tr>
<td>Sprague, C. L, and B. Stiles II</td>
<td>Cover crops and other strategies to manage</td>
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<tr>
<td>Project Title</td>
<td>Details</td>
</tr>
<tr>
<td>---------------</td>
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<tr>
<td>Glyphosate-resistant horseweed (marestail) in Roundup Ready sugarbeet. Michigan Sugar Company (2020)</td>
<td>$15,000.</td>
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<tr>
<td>Quintanilla, M., D. Baas, J. Conner and B. Werling</td>
<td></td>
</tr>
<tr>
<td>SOIL FERTILITY</td>
<td>Designing a better cover crop interseeding system including evaluation of corn row spacing, interseeding equipment, tillage, manure and cover crop species. (2019-Present)</td>
</tr>
<tr>
<td>Renner, K., C. Sprague, B. Basso, L. Tiemann, and A. Brooker.</td>
<td></td>
</tr>
<tr>
<td>SOIL SCIENCE/ HEALTH/ BIOLOGY- OTHER</td>
<td>Long Term Ecological Research (LTER) with some rotations including cover crops (1989-Present)</td>
</tr>
<tr>
<td>N. Haddad et al.</td>
<td>Soil health for intensive production: Understanding and addressing key constraints for vegetable systems on sandy soils. USDA NIFA, 2019-2022</td>
</tr>
<tr>
<td>K. Renner, D. Baas, A. Kravchenko, Lisa Tiemann and K. Ortner</td>
<td>Long-Term Agroecosystem Research (LTAR) including cover crops as component of aspirational crop systems (2020 - Long Term)</td>
</tr>
<tr>
<td>Snapp, S., J. Blesh, and V. Morrone</td>
<td>Developing multi-purpose cover crop mixtures for forage, soil health and cropping system benefits (2015-Present)</td>
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<tr>
<td>Wilke, B., T. Robbins, H. Straub &amp; D. Baas</td>
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<tr>
<td>PUBLICATIONS, EXTENSION/OUTREACH</td>
<td>Bulletins and Factsheets</td>
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</table>

2020 MCCC Michigan Report


**MSU Extension News Articles**


● Fronczak, Sarah. 2020. Cover crops can be used to prevent nitrogen loss. *MSUE Ag News, online January 20, 2020*. [https://www.canr.msu.edu/news/cover_crops_can_be_used_to_prevent_nitrogen_loss](https://www.canr.msu.edu/news/cover_crops_can_be_used_to_prevent_nitrogen_loss)

● Jean, M. Is a single species or multi-species cover crop better? MSUE News. (3/25/2020) [https://www.canr.msu.edu/news/is-a-single-species-or-multi-species-cover-crop-better](https://www.canr.msu.edu/news/is-a-single-species-or-multi-species-cover-crop-better)


● Fronczak, Sarah. 2020. Cover crops can be used to prevent nitrogen loss. *MSUE Ag News, online January 20, 2020*. [https://www.canr.msu.edu/news/cover_crops_can_be_used_to_prevent_nitrogen_loss](https://www.canr.msu.edu/news/cover_crops_can_be_used_to_prevent_nitrogen_loss)


Other Articles


**WEBSITES, PODCASTS, WEBINARS, & VIDEOS**

● Cassida, K. MSU Cover Crop Variety Trials. Online Feb. 14, 2020. [https://www.youtube.com/watch?v=3AAJuM7wTSg](https://www.youtube.com/watch?v=3AAJuM7wTSg) (webinar)

● Michigan State University Extension Cover Crops Team, [https://www.canr.msu.edu/cover_crops/](https://www.canr.msu.edu/cover_crops/) (website)

● Michigan Forage Connection, [https://forage.msu.edu/](https://forage.msu.edu/) (website)

● MSU Soil Fertility Research, [https://soil.msu.edu/](https://soil.msu.edu/) (website)

● MSU Weeds, [https://www.canr.msu.edu/weeds/](https://www.canr.msu.edu/weeds/) (website)
● Cover Crop Webinar Series, 5 topics, Online Feb - Mar, 2020. 1,248 total views. Available at https://www.youtube.com/channel/UCi2IQ7_ObhxIKEWai9rHnXw/videos

● Cover Crop Video Series, 16 topics, Online January 9, 2020. 8,174 total views. Available at https://www.youtube.com/channel/UCi2IQ7_ObhxIKEWai9rHnXw/videos

● From the Field, MSU Virtual Cover Crop Field Day Videos, Online September 2, 2020. Complete field day video (104 views) available at https://www.canr.msu.edu/videos/cover-crops-virtual-field-day, associated video segments (359 views) available at https://www.youtube.com/channel/UCi2IQ7_ObhxIKEWai9rHnXw/videos.

● Revised MCCC Cover Crop Decision Tool Tutorial, Online September 2, 2020. 437 views. Available at https://www.youtube.com/watch?v=l5YrsLD-i-8&feature=emb_logo

● Jean, M. Series 4 Episode 1: Cover Crops, Carryover and Termination. Monica Jean, MSU Extension field crops educator, sits down with Christy Sprague, weed Extension specialist, to discuss cover crops and weed management. Listen to Series 2 Episode 1 on iTunes

● Jean, M. Series 4 Episode 2: In a Pickle with Specialty Crops and Cover Crops. Monica Jean and Paul Gross, MSU Extension field crops educators, sit down with Nathan Clarke, a farmer in Midland County, to discuss cover crops and conservation tillage practices with dry beans and pickles. Listen to Series 4 Episode 2 on iTunes

● Jean, M. Series 4 Episode 3: One Canadian’s Approach to Cover Crops. Monica Jean and Paul Gross, MSU Extension field crops educators, sit down with Woody Van Arkel, a farmer from Ontario, Canada, to discuss cover crops integration into his corn, soybeans, wheat and sugarbeet rotation. Listen to Series 4 Episode 3 on iTunes

● Jean, M. Series 4 Episode 4: What does the Cover Crop do for my Farm? Monica Jean, MSU Extension field crops educator, sits down with Dustin Mulock, a farmer from Ontario, Canada, to discuss biofences, companion cropping and nutrient management with cover crops. Listen to Series 4 Episode 4 on iTunes

● Jean, M. Series 4 Episode 5: Can you help me with my Cover Crop? Monica Jean, MSU Extension field crops educator, sits down with Dean Baas, MSU Extension sustainable agriculture educator, to discuss 101 cover crop planning and how to get help with your cover crop. Listen to Series 4 Episode 5 on iTunes

● Jean, M. Cover Crop: Skip Row Interseeded Corn https://www.youtube.com/watch?v=d9m-la88cQo&t=16s Video: Virtual Field Day with AgroExpo

● Jean, M. Cover Crop: Frost Seeding Red Clover in Wheat https://www.youtube.com/watch?v=6uh-uFKPLwQ Video: Virtual Field Day with AgroExpo

● Jean, M. Cover Crops: Weed Suppression https://www.youtube.com/watch?v=Fl6HR8RMUss Video: Virtual Field Day with AgroExpo

● Jean, M. Cover Crops: Mixtures https://www.youtube.com/watch?v=LWH304MZX3k&t=123s Video: Virtual Field Day with AgroExpo

● Jean, M. Cover Crops: Soil Health https://www.youtube.com/watch?v=E36Fyp8pTOc Video: Virtual Field Day with AgroExpo

● Jean, M. Cover Crops: Species Selection https://www.youtube.com/watch?v=btdVSaq0bbQ Video: Virtual Field Day with AgroExpo


**PUBLICATIONS, REFEREED**


**THESES and DISSERTATIONS**

PRESENTATIONS, EXTENSION

Grower Field Days
- Sept 2, 2020. From the Field, MSU Virtual Cover Crop Field Day. Demonstrations and farmer interviews from five locations around the state. Seven concurrent cover crop topic breakout sessions were held led by educators and specialists. (96 attending)

Grower Meetings
- Jan. 15, 2020. MSU Cover Crop Variety Trials. MABA Conference, Lansing, MI. (45 attending)

Conservation Districts/NRCS/Drain Commission Field Days/Meetings
- Feb. 26, 2020. How Cover Crops can increase the health of your soil. Grant, MI. (65 attended)

PRESENTATIONS, SCIENTIFIC/SOCIETY

**MICHIGAN STATE UNIVERSITY COURSES THAT DISCUSS COVER CROPS**

CSS 101- Introduction to Crop Science  
CSS101L- Introduction to Crop Science Lab  
CSS 126- Introduction to Weed Management  
CSS 201- Forage Crops  
CSS 212- Advanced Crop Production  
CSS 326- Weed Science  
CSS 360- Soil Biology  
CSS 442 Agricultural Ecology  
CSS/BSE/FOR 467- BioEnergy Feedstock Production  
CSS480- Soil Fertility and Nutrient Management  
CSS 488- Agricultural Cropping Systems: Integration & Problem Solving  
ENT 205H- Pests Society and the Environment  
ENT 479- Organic Pest Management  
HRT 251- Organic Farming Principles & Practices  
HRT 341- Vegetable Production & Management