

2017 MCCC Iowa report

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Summary of cover crop activities in Iowa for 2017

Estimates for the total acreage of cover crops planted in Iowa in fall of 2017 were 760,000 acres. The Iowa Department of Agriculture and Land Stewardship cost-shared 177,000 acres, USDA-NRCS EQIP contracted 27,864 acres, USDA-NRCS CSP supported additional acres contracted that included cover crop enhancements, and the ADM/Unilever Sustainable Soy Continuous Improvement program supported 39,000 cover crop acres in 2017. Outreach efforts on cover crop in Iowa reached over 10,000 individuals through nearly 200 activities, including on-farm meetings, Iowa State University Extension articles, Iowa Learning Farms and Practical Farmers of Iowa outreach activities. Other cover crop outputs included publication of 13 refereed scientific articles and two PhD dissertations. For 2017, there were nine graduate students, three post-doctoral research associates, and one research associate conducting research on cover crops with support from 10 funded grant proposals.

Grant Funding obtained in Iowa with cover crop research or outreach activities (14):

Berti, M., B. Johnson, D. Ripplinger, H. Kandel, A. Wick, A. Akyuz, J. Ransom, D. Franzen, R. Gesch, F. Forcella, A. Lenssen, K. Moore, S. Wells. 2015-2019. USDA AFRI Food Security CAP, Agricultural Production Systems – Cropping Systems. A5160. A novel management approach to increase productivity, resilience, and long-term sustainability in cropping systems in the northern Great Plains.

Carlson, S., S. Gailans, and A.E. Robertson. 2017-2019. Iowa State Conservation and Water Quality. Confronting the cover crop conundrum for corn: Do farmers' BMPs mitigate seedling disease and stalk rot?

Delate, K. 2013-2017. CERES Foundation. Improving Organic No-Till Systems for Enhanced Soil Quality and Weed Management in Organic Vegetable and Grain/Forage Systems.

Delate, K., and C. Cambardella. 2009-2017. USDA CSREES Organic Research and Extension Initiative and Water Quality programs. Enhancing Farmland Water Quality and Availability through Soil-Building Crop Rotations and Organic Practices.

Delate, K., and C. Cambardella. 2017-2018. Iowa Nutrient Reduction Center. Impacts of cropping system diversity and input reduction on greenhouse gas mitigation, soil and water quality, and economic performance of Iowa grain systems.

Delate, K., Rodale Institute, and Univ. of Minnesota. 2014-2018. USDA NIFA Organic Research and Extension Initiative. Integrating Crops and Livestock in a Systems Approach to Enhance Organic Farm Stability, Safety and Resilience.

Iowa Learning Farms. 2008-2019. State Soil Conservation Committee, Iowa Department of Agriculture and Land Stewardship, Leopold Center for Sustainable Agriculture. Long-term demonstration of cover crops on Iowa farmland: Management, soil health and water quality benefits.

Iowa Learning Farms. 2015-2018. USDA-NRCS State Conservation Innovation Grant, Leopold Center for Sustainable Agriculture. Earthworms and cover crops: Unlocking the secrets of soil health through early biological indicators.

Iowa Learning Farms. 2013-2018. USDA-NRCS Federal Conservation Innovation Grant. Demonstrating cover crop mixtures on Iowa farmland: Management, soil health and water quality benefits.

Mallarino, A., M. Helmers, R. Cruse, J. Sawyer, and D. Jaynes. 2017. Iowa Nutrient Reduction Center. Impacts of cover crops on phosphorus and nitrogen loss with surface runoff.

Moore, K.J., S. Fei, D.A. Laird, A.W. Lenssen. 2017-2019. NIFA AFRI. Foundational Program – Cover Crops. Improving corn competitiveness against perennial cover crop grasses.

Nair, A., D. Brainard, A. Shaw, C. Chase, C. Bregendahl. 2014-2017. NCR-SARE Research & Education. Cover crops and strip tillage to promote soil quality, environmental sustainability, food safety, and profitability in cucurbit cropping systems.

Robertson, A., Kaspar, T., A. Lenssen, L. Leandro. 2015-2018. Iowa Nutrient Reduction Center. Cover crops influence nutrient cycling, yield and diseases of corn and soybean.

Thompson, M., M. Liebman, and M. Helmers. 2017. Iowa Nutrient Reduction Center. Limiting nitrogen immobilization in cover crop systems.

Refereed journal articles (13)

Acharya, J., M.G. Bakker, T.B. Moorman, T.C. Kaspar, A.W. Lenssen, and A.E. Robertson. 2017. Time interval between cover crop termination and planting influences corn seedling disease, plant growth, and yield. *Plant Disease* 101:591-600. <http://dx.doi.org/10.1094/PDIS-07-16-0975-RE>

Appelgate, S., A.W. Lenssen, M. Wiedenhoeft, and T. Kaspar. 2017. Cover crop options and mixes for upper Midwest corn-soybean systems. *Agronomy Journal* 109:968-984. doi:10.2134/agronj2016.08.0453

Bakker, M.G., D.K. Manter, T.B. Moorman, and T.C. Kaspar. 2017. Isolation of cultivation-resistant oomycetes, first detected as amplicon sequences, from roots of herbicide-terminated winter rye. *Phytobiomes Journal*: 1:24-35

Bartel, C.A., C.A. Banik, A.W. Lenssen, K.J. Moore, D.A. Laird, S.V. Archontoulis, and K.R. Lamkey. 2017. Establishment of perennial groundcovers for maize-based bioenergy production systems. *Agronomy Journal* 109:822-835. doi: 10.2134/agronj2016.11.0656

Bartel, C.A., C. Banik, A.W. Lenssen, K.J. Moore, D.A. Laird, and S.V. Archontoulis. 2017. Perennial groundcover for sustainable maize stover biomass production. *Crop Science* 57:3273-3290. doi: 10.2135/cropsci2017.04.0232.

Bulyaba, R., A.W. Lenssen. 2017. Influence of Bradyrhizobium and fungicide seed treatment on development and yield of cowpea, lablab, and soybean. *Crop, Forage, and Turfgrass Management*. 3. doi: 10.2134/cftm2017.01.0007

Gillette, K., T. Kaspar, L. Ma, T. Parkin, D. Jaynes, Q. Fang, J. Hatfield, G. Feyereisen, K. Kersebaum. 2017. N loss to drain flow and N₂O emissions from a corn-soybean rotation with winter rye. *Science of the Total Environment*: <https://doi.org/10.1016/j.scitotenv.2017.09.054>

Malone, R.W., Kersebaum, K.C., Kaspar, T.C., Ma, L., Jaynes, D.B., Gillette, K.L. 2017. Winter rye as a cover crop reduces nitrate loss to subsurface drainage as simulated by HERMES. *Agricultural Water Management*. 184:156-169. doi: 10.1016/j.agwat.2017.01.016

Marcillo, G.S., and F.E. Miguez. 2017. Corn yield response to winter cover crops: An updated meta-analysis. *Journal of Soil and Water Conservation* 72:226-239. doi: 10.2489/jswc.72.3.226

Phillips, H.N., B.J. Heins, K. Delate, and R. Turnbull. 2017. Impact of grazing dairy steers on winter rye (*Secale cereale*) versus winter wheat (*Triticum aestivum*) and effects on meat quality, fatty acid and amino acid profiles, and consumer acceptability of organic beef. *PLoS ONE* 12(11):e0187686. <https://doi.org/10.1371/journal.pone.0187686>

Rosesh-McNally, G., A. Basche, J. Arbuckle, J. Tyndall, F. Miguez, T. Bowman, and R. Clay. 2017. The trouble with cover crops: Farmers' experiences with overcoming barriers to adoption. *Renewable Agriculture and Food Systems* 1-12. doi:10.1017/S1742170517000096

Schenk, L., M. Bakker, T. Moorman, and T. Kaspar. 2017. Effects of cover crop presence, cover crop species selection, and fungicide seed treatment on corn seedling growth. *Renewable Agriculture and Food Systems*: doi:10.1017/S1742170517000345

Silva, E. and K. Delate. 2017. A decade of progress in organic cover crop-based reduced tillage practices in the Upper Midwestern USA. *Agriculture* 7: 44: doi:10.3390/agriculture7050044.

Proceedings (6)

Acharya, J., Kaspar, T., Lenssen, A. W. and Robertson, A.E. 2017. Effect of fungicide seed treatments for managing corn seedling diseases following a winter rye cover crop. *Phytopathology* 108:S (in press)

Acharya, J., Kaspar, T., Lenssen, A. W. and Robertson, A.E. 2017. The risk of seedling disease of corn caused by *Pythium* increases with proximity of the corn seedling to terminated winter rye cover crop plants. *Phytopathology* 108:S (in press)

Acharya, J., Kaspar, T.C., Robertson, A.E. 2017. Fungicide seed treatments for evaluating the corn seedling disease complex following a winter rye cover crop. In: *Proceedings of American Phytopathological Society North Central Division Meeting, June 14-16, 2017, Champaign, Illinois.*

Moorman, T.B., Tomer, M.D., Jaynes, D.B., Kaspar, T.C., Parkin, T.B., Malone, R.W., Isenhardt, T.M. 2017. Long-term research and monitoring of conservation practice effects in Iowa watersheds. In: *proceedings of UCOWR/NIWR Annual Conference, June 13-15, 2017, Fort Collins, Colorado.* Available: http://ucowr.org/files/2017_Conference/proceedings/2017.pdf.

Robertson, A.E., Kaspar, T. Acharya, J., Mueller, D., Leandro, L. 2017. Disease risks associated with cover crops in corn and soybean production. *Proceedings of the 29th Integrated Crop Management*, Ames, IA. <https://store.extension.iastate.edu/Product/15312>

Sawyer, J.E., S. Patel, J. Pantoja, D.W. Barker, and J.P. Lundvall. 2017. Nitrogen dynamics with a rye cover crop. p. 161-167. *In Proc. 29th Annual Integrated Crop Manag. Conf., Ames, IA. 29-30 Nov. 2017.* Iowa State Univ., Ames. <https://store.extension.iastate.edu/Product/15312>

Theses and Dissertations (2)

Bartel, Cynthia. Fall 2017. Managing perennial cover crops for sustainable corn stover biomass production. In press.

Gailans, Stefans. Fall 2017. Evaluating alternative, diverse cropping systems that include canola, wheat, and red clover in Iowa. In press.

Graduate students with research projects on cover crops, Iowa State University and USDA-ARS NLAE (9)

Name	Major Professor	Title
Bartel, Cynthia	A. Lenssen & K. Moore	Managing perennial cover crops for sustainable corn stover biomass production
Gailans, Stephans	M. Wiedenhoef	Evaluating alternative, diverse cropping systems that include canola, wheat, and red clover in Iowa
Kruse, Raymond	Ajay Nair	Summer cover crops for fall vegetable production
Marcillo, Guillermo	F. Miguez	Winter rye cover crop influence on cash crop productivity: Statistical and modeling approaches
Patel, Swetabh	A. Lenssen & K. Moore	A novel management approach to increase productivity, resilience, and long-term sustainability of cropping systems in the northern Great Plains
Schenck, Lara	T. Kaspar & A. Robertson	Winter rye cover crop effect on corn seedling pathogens
Sklenar, Tim	A. Lenssen	Cover crop termination timing and biomass removal: Impact on soybean systems
Tillman, Jennifer	Ajay Nair	Strip tillage systems in cucurbit production
Witt, Mike	A. Lenssen	Variation in Maize Hybrid Germplasm Performance following a Winter Rye Cover Crop

Post-doctoral researchers and research associates with projects on cover crops at Iowa State University and USDA-ARS NLAE (4)

Name	Co-workers	Title
Ms. Jyotsna Acharya	A. Robertson	Investigating the causes of corn yield decreases following cereal rye winter cover crop
Dr. Matt Bakker	T. Kaspar & T. Moorman	Investigating the causes of corn yield decreases following cereal rye winter cover crop
Dr. Chumki Banik	D. Laird	Managing perennial cover crops for sustainable corn stover biomass production: Temporal variation in soil nitrate-N
Dr. Cynthia Bartel	Lenssen & K. Moore	A novel management approach to increase productivity, resilience, and long-term sustainability of cropping systems in the northern Great Plains

Iowa State University Extension and Outreach Bulletins, Articles, Webinars, and Blogs

Delate, K., R. Johnson, and R. Breach. 2017. Comparison of Organic and Conventional Crops at the Neely-Kinyon Long-term Agroecological Research (LTAR) Site, 2016. Organic Agriculture Website. Iowa

State University, Ames, IA:

<http://extension.agron.iastate.edu/organicag/researchreports/nk16ltar.pdf>

Delate, K., R. Johnson, and M. Rees. 2017. Evaluation of Organic Soybean Varieties and Organic Popcorn Varieties and Fertilization, Southeast Research Farm, 2016. Organic Agriculture Website. Iowa State University, Ames, IA:

<http://extension.agron.iastate.edu/organicag/researchreports/crawf16soybeanpopcorn.pdf>

Robertson, A.E. 2017. Insights into factors affecting risk of seedling disease. SeedWorld Webinar, 19 Oct 2017. (110 online attendees)

Meeting Abstracts, Poster-Oral presentations at scientific meetings, Experiment station reports, and departmental seminars (18)

Acharya, J., A. Robertson, T. Kaspar, A. Lenssen. 2017. The risk of seedling disease of corn caused by *Pythium* increases with proximity of the corn seedling to terminated winter rye cover crop plants. Annual American Phytopathological Society meetings, 5-9 August 2017, Austin, TX.

Bartel, C.A., C. Banik, A.W. Lenssen, K.J. Moore, D.A. Laird, S.V. Archontoulis. 2017. Living mulch establishment in row crop systems for sustainable biofuels production. Oral presentation at the Iowa State University Undergraduate Agronomy Club Meeting, Ames, IA.

Bartel, C.A., C. Banik, A.W. Lenssen, K.J. Moore, D.A. Laird, S.V. Archontoulis. 2017. Living mulch establishment in row crop systems for sustainable biofuels production. Oral presentation at the Eastern Iowa Hay Producers Association Annual Meeting, Welton, IA.

Bartel, C.A., C.A. Banik, A.W. Lenssen, K.J. Moore, D.A. Laird, S.V. Archontoulis, K.R. Lamkey. 2017. Establishment of perennial groundcover for maize-based bioenergy production systems. Northern Research Farm 2016 Annual Progress Report.

Bulyaba, R. and A.W. Lenssen. 2017. Influence of *Bradyrhizobium* Inoculation and Fungicide Seed Treatment on Development and Yield of Cowpea, Lablab, and Soybean. International Bean and Cowpea conference, Ouagadougou, Burkina Faso, August 2017.

Delate, K., and C. Cambardella. 2017. Effect of Field History and Tillage on Crop Productivity and Soil Quality in Organic No-till Soybean Systems. American Society of Agronomy Annual Conference, October 25, 2017, Tampa, FL:

<https://scisoc.confex.com/scisoc/2017am/webprogram/Paper108375.html>

Delate, K., R. Johnson, and C. Cambardella. 2017. Improving Soil Conservation and Crop Performance through Reduced Tillage and Cover Crop-based Rotations in Organic Squash Production, September 19, 2017, ASHS Annual Conference, Waikoloa, HI:

<https://ashs.confex.com/ashs/2017/meetingapp.cgi/Paper/26947>

Dose, Heather, Russ Gesch, Frank Forcella, Burton Johnson, Kyle Aasand, M.S. Wells, Andy Lenssen, Swetabh Patel, Marisol Berti. 2017. Determining optimum time to seed winter cover crops into

standing corn and soybean in the northern Corn Belt. Agricultural Production Symposium, University of Minnesota. April.

Dose, Heather, Russ Gesch, Frank Forcella, Kyle Aasand, Nicholas Steffl, Burton Johnson, M. Scott Wells, Swetabh Patel, Andrew Lenssen, Marisol Berti. 2017. Intensifying production in the northern Corn Belt by incorporating cash cover crops. Annual ASA-CSSA-SSSA International Meetings, Tampa, FL.

Fawcett, Jim; Mitchell, Tyler; Rogers, Jim; and Rossiter, Lyle. 2017. On-Farm Cover Crop Trials. *Farm Progress Reports*: Vol. 2016 : Iss. 1 , Article 9.

Available at: <http://lib.dr.iastate.edu/farmprogressreports/vol2016/iss1/9>

Krzton-Presson, John; Nair, Ajay; and Shaw, Angela. 2017. Effects of Tillage and Cover Crops on Muskmelon Production and Food Safety. *Farm Progress Reports*: Vol. 2016: Iss. 1, Article 27.

Available at: <http://lib.dr.iastate.edu/farmprogressreports/vol2016/iss1/27>

Lundvall, John; Patel, Swetabh; and Sawyer, John. 2017. Enhancing Corn Yield in a Winter Cereal Rye Cover Crop System in Southwest Iowa. *Farm Progress Reports*: Vol. 2016: Iss. 1, Article 11.

Available at: <http://lib.dr.iastate.edu/farmprogressreports/vol2016/iss1/11>

Lundvall, John; Patel, Swetabh; 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.

Available at: <http://lib.dr.iastate.edu/farmprogressreports/vol2016/iss1/67>

Lundvall, John; Patel, Swetabh; and Sawyer, John. 2017. Enhancing Corn Yield in a Winter Cereal Rye Cover Crop System in Northwest Iowa." *Farm Progress Reports*: Vol. 2016: Iss. 1, Article 115.

Available at: <http://lib.dr.iastate.edu/farmprogressreports/vol2016/iss1/115>

Lundvall, John; Patel, Swetabh; and Sawyer, John. 2017. Enhancing Corn Yield in a Winter Cereal Rye Cover Crop System in Southeast Iowa. *Farm Progress Reports*: Vol. 2016: Iss. 1, Article 139.

Available at: <http://lib.dr.iastate.edu/farmprogressreports/vol2016/iss1/139>

Marcillo, G., and F.E. Miguez. 2017. Towards sustainability in maize systems: Modeling biomass response to planting density and evaluating its impact on US maize production. XXII Latin American maize meeting, Quevedo-Ecuador, September 2017.

Neu, Kristine and Nair, Ajay. 2017. Effect of Planting Date and Cultivar on Cereal Rye Development and Termination for Organic No-Till Production Systems. *Farm Progress Reports*: Vol. 2016: Iss. 1, Article 26. Available at: <http://lib.dr.iastate.edu/farmprogressreports/vol2016/iss1/26>

Thicke, F. and K. Delate. 2017. Organic No-Till for Field Crops. Midwest Organic Conference (MOSES), February 24, 2017, LaCrosse, WI: <https://mosesorganic.org/wp-content/uploads/2013/08/MOSES-2017-Program.pdf>

Popular Press articles

1/5/17 Midwest Cover Crops Council to Discuss Making Cover Crops Work

<http://www.extension.iastate.edu/article/midwest-cover-crops-council-discuss-making-cover-crops-work> A pair of Iowa State University professors will represent the state at the 2017 Midwest Cover Crops Council Conference in Grand Rapids, Mich. 15 March 2017.

The Newton Daily News. Midwest cover crops council to discuss making cover crops work. 10 Jan 2017. <http://www.newtondailynews.com/2017/01/10/midwest-cover-crops-council-to-discuss-making-cover-crops-work/aopcdeg/> and in some large, unknown number of Iowa newspapers that copied or paraphrased the ISU news release on the MCCC meeting in Grand Rapids.

Des Moines Register. 14 March 2017. Study: Who's using cover crops in Iowa? Hardly anyone. <https://www.desmoinesregister.com/story/money/agriculture/2017/03/14/study-whos-using-cover-crops-iowa-hardly-anyone/99168598/>

Biofuels Digest. 26 April 2017. Iowa State researcher looking at how to balance stover demand with soil needs. <http://www.biofuelsdigest.com/bdigest/2017/04/27/iowa-state-researcher-looking-at-how-to-balance-stover-demand-with-soil-needs/>

Ron Lyseng, The Western Producer. 25 May 2017. Trials test grass and corn as roommates. <http://www.producer.com/2017/05/trials-test-grass-and-corn-as-roommates/>

Clean Water Iowa. 25 September 2017. Public-private partnership drives conservation adoption statewide. <https://www.cleanwateriowa.org/news-latest/2017/9/25/public-private-partnership-drives-conservation-adoption-statewide>

Iowa Department of Agriculture. 26 October 2017. Deadline to seed cereal rye cover crop extended additional 2 weeks statewide. <http://www.iowaagriculture.gov/press/2017press/press10262017b.asp>

Iowa Department of Agriculture. 16 November 2017 Iowa farmers using cover crops may be eligible for crop insurance premium reduction. <http://www.iowaagriculture.gov/press/2017press/press11162017.asp>

Natural Resources Defense Council. 17 November 2017. Iowa breaks new ground with innovative cover crop incentive. <https://www.nrdc.org/experts/lara-bryant/iowa-breaks-new-ground-innovative-cover-crop-incentive>

Field Days

Iowa Learning Farms / Practical Farmers of Iowa Collaborative Project Iowa Learning Farms (ILF) Cover Crop Working Group January-December, 2017

Field Days	Meetings	Publications/Educational Materials
Feb. 22, Nashua RNR Cover Crop Workshop, Floyd = 60	Jan. 4 Sheldon Crop Advantage Series (CAS) Meeting, O'Brien = 27	35 ILF cover crop blog posts Webinar/Podcasts

Feb. 23, Central City RNR Cover Crop Workshop, Linn = 23	Jan. 5, Okoboji CAS Meeting, Dickinson = 21	May 30, Conservation Chat Ep. 31: Bob Hartzler
Feb. 28, Knoxville RNR Cover Crop Workshop, Marion = 50	Jan.10, Storm Lake CAS Meeting, Buena Vista = 25	Jun. 1, PFI Podcast Ep. 4, Maggie McQuown and Steve Turman
Mar. 8, Sioux Center RNR Cover Crop Workshop, Sioux = 39	Jan. 19, Waterloo CAS Meeting, Black Hawk = 120	Jun. 29, Conservation Chat Ep. 32: Eileen Kladvico
Mar. 9, Eldora RNR Cover Crop Workshop, Hardin = 35	Jan. 24, Le Mars CAS Meeting, Plymouth = 47	Jul 31, ILF Conservation Chat Ep. 33: Shane Wulf and Josh Balk
Mar. 29, Lacina Cover Crop Field Day, Union = 29	Jan. 25, Iowa City CAS Meeting, Johnson = 55	Aug. 31, ILF Conservation Chat Ep. 34: Chris Foss and Kristi Heffelmeier
Jun. 8, Fred Abels Field Day, Grundy = 42	Jan. 26, Denison CAS Meeting, Crawford = 50	Nov. 29, ILF Conservation Chat Ep. 37: Ben Johnson
Jun. 13, Larry Haren Field Day, Hamilton = 56	Jan. 28, Iowa Farm Bureau Young Farmers Conference, Polk = 75	Dec. 13, ILF Webinar: Tom Kaspar
Jul. 12, Cinnamon Ridge Farms Field Day, Scott = 43	Feb. 2, Lower Skunk River Field Day, Henry = 55	Factsheet/Research Publications
Aug. 1, Lee Tesdell Field Day, Polk = 31	Mar. 2, Hawkeye Power Farming Show, Black Hawk = 18	Jan., "Winter Cereal Rye Cover Crop Effect on Cash Crop Yield – Year 8" ILF/PFI
Aug. 9, Dickinson County Field Day, Dickinson = 79	Mar. 7, Growmark RNR Cover Crop Workshop, Polk = 34	Jan., "Talking With Your Tenant – Cover Crops" ILF
Aug. 30, Gilmore City Field Day, Pocahontas = 40	Mar. 10, North Raccoon WQI Cover Crop Workshop, Buena Vista = 38	Mar., "Seeding Technique and Date Effect on Cover Crop Establishment" ILF/PFI
Aug. 31, John Peck Field Day, Jefferson = 54	Aug. 1, Poster Symposium at SWCS Conference, Madison	Sep., "Reducing Soil Erosion with Rye Cover Crops", ILF
Sep. 13, Jon Kiel Field Day, Sioux = 58	Dec. 8, Conservation Learning Lab Meeting, Story = 25	Wallaces Farmer
Nov. 7, Wassenaar Field Day, Jasper = 51		Feb., "Cover crop workshops planned" ILF
Nov. 8, Lindaman Field Day, Butler = 29		Feb., "The latest on corn, nitrogen and rye cover crops" ILF
Nov. 15, Bayer Field Day, Poweshiek = 29		Mar., "Talking with your tenant' new series from ILF" ILF
Nov. 16, Johnson Field Day, Floyd = 38		Mar., "How cover crops affect corn, soybean yield" ILF
Nov. 21, Upper Iowa Field Day, Winneshiek = 57		Apr., "Starting the conservation dialogue with cover crops" ILF
Nov. 28, Walnut Creek Workshop, Montgomery = 42		Apr., "Cover crop acres grow despite tighter budgets" ILF
Nov. 30, Sampson Workshop, Story = 42		May, "Cover crop after small grains" PFI
Dec. 6, Elk Run Workshop, Carroll = 33		Jun., "Conservation Podcast shares farmers' link to land" ILF
		Aug., "Communication can aid water quality" ILF
		Oct., "Iowa Nutrient Reduction Strategy creates a more resilient Iowa economy" ILF

Dec. 13, East Pott. Workshop, Pottawattamie = 40		Nov., "Reducing nutrient loss in watershed"
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Practical Farmers of Iowa Cover Crop Work in 2017

1. Publications

Newspaper and trade publications

Secured **12** articles in print publications;

1. "Weed Suppression and Cover Crops: Finding the Facts." Wallaces Farmer. February 2017.
<http://www.wallacesfarmer.com/cover-crops/weed-suppression-and-cover-crops-finding-facts>
2. "Making Cover Crop Mixes Pay Off." Wallaces Farmer. March 2017.
<http://www.wallacesfarmer.com/cover-crops/making-cover-crop-mixes-pay>
3. "Rotationally Raised: Livestock II – Grazing Summer-seeded Cover Crop Mixes" Wallaces Farmer. Nick Ohde. April 12, 2017. <http://www.wallacesfarmer.com/farm-operations/rotationally-raised-livestock-ii-grazing-summer-seeded-cover-crop-mixes>
4. "Cover Crop after Small grains" Wallaces Farmer. Nick Ohde. May 17, 2017.
<http://www.wallacesfarmer.com/cover-crops/cover-crop-after-small-grains>
5. "Interseeding Cover Crops in Corn" Wallaces Farmer. Nick Ohde. June 22, 2017.
<http://www.wallacesfarmer.com/cover-crops/interseeding-cover-crops-corn>
6. "On-Farm Research Allows Farmer to Cut Hay Costs" Wallaces Farmer. Nick Ohde. Jul 18, 2017.
<http://www.wallacesfarmer.com/cover-crops/farm-research-allows-farmer-cut-hay-costs>
7. "Choosing a seeding method for cover crops" Wallaces Farmer. Alisha Bower. July 20, 2017.
<http://www.wallacesfarmer.com/cover-crops/choosing-seeding-method-cover-crops>
8. "Using cover crops with short-season corn, beans" Wallaces Farmer. Nick Ohde. August 28, 2017. <http://www.wallacesfarmer.com/cover-crops/using-cover-crops-short-season-corn-beans>
9. "Cover crops add value when grazed" Wallaces Farmer. Meghan Filbert. August 31, 2017.
<http://www.wallacesfarmer.com/cover-crops/cover-crops-add-value-when-grazed>
10. "Youthful energy, sweat equity buoy cover crop businesses." Wallaces Farmer. Alisha Bower. Sept 22, 2017. <http://www.wallacesfarmer.com/cover-crops/youthful-energy-sweat-equity-buoy-cover-crop-businesses>
11. "Get N Plan for Corn Following Cover Crop." Wallaces Farmer. Nick Ohde. Dec 28, 2017.
<http://www.wallacesfarmer.com/cover-crops/get-n-plan-corn-after-cover-crop>
12. "Spring Seeded Cover Crops." Wallaces Farmer. Alisha Bower. Nov 22, 2017.
<http://www.wallacesfarmer.com/cover-crops/spring-seeded-cover-crops>

Practical Farmers research reports

Published **13** reports from on-farm research trials where farmers compared the ecological and economic resilience of cover crop systems to a control on their farms.

1. "Effect on Corn of Green Manure Cover Crops Established with Cereal Rye Seed Crop" Practical Farmers Research Report. March 2017. <http://www.practicalfarmers.org/farmer-knowledge/research-reports/2017/effect-corn-green-manure-cover-crops-established-cereal-rye-seed-crop/>
2. "Winter Cereal Rye Cover Crop Effect on Cash Crop Yield" Practical Farmers Research Report. January 2017. <http://www.practicalfarmers.org/farmer-knowledge/research-reports/2017/winter-cereal-rye-cover-crop-effect-cash-crop-yield-4/>
3. "Seeding Technique and Date Effect on Cover Crop Establishment" Practical Farmers Research Report. March 2017. <http://www.practicalfarmers.org/farmer-knowledge/research-reports/2017/seeding-technique-date-effect-cover-crop-establishment/>
4. "Interseeding Cover Crops in Seed Corn at the V4-V6 Stage" Practical Farmers Research Report. June 2017. <http://practicalfarmers.org/farmer-knowledge/research-reports/2017/interseeding-cover-crops-seed-corn-v4-v6-stage/>
5. "Accommodating Cover Crops with Early Maturing Corn and Soybeans" Practical Farmers Research Report. August 2017. <http://www.practicalfarmers.org/farmer-knowledge/research-reports/2017/27170/>
6. "Cover Crop Variety Trial 2016-2017" Practical Farmers Research Report. July 2017. <http://www.practicalfarmers.org/farmer-knowledge/research-reports/2017/cover-crop-variety-trial-2016-2017/>
7. "Roll-Crimping Cover Crops and Soybean Seeding Date." Stefan Gailans. November 2017. <http://practicalfarmers.org/farmer-knowledge/research-reports/2017/roll-crimping-cover-crops-soybean-seeding-date/>
8. "Winter Cereal Rye Cover Crop Effect on Cash Crop Yield." Stefan Gailans. November 2017. <http://practicalfarmers.org/farmer-knowledge/research-reports/2017/winter-cereal-rye-cover-crop-effect-cash-crop-yield-5/>
9. "N Fertilizer Strategies for Corn Following Cover Crop." Stefan Gailans. November 2017. <http://practicalfarmers.org/farmer-knowledge/research-reports/2017/n-fertilizer-strategies-corn-following-cover-crop/>
10. "Rolling Cover Crops and Soybean Row-Width." Stefan Gailans. November 2017. <http://practicalfarmers.org/farmer-knowledge/research-reports/2017/rolling-cover-crops-soybean-row-width/>
11. "Spring-Seeded Brassica Cover Crops." Stefan Gailans. October 2017. <http://practicalfarmers.org/farmer-knowledge/research-reports/2017/spring-seeded-brassica-cover-crops/>
12. "Winter Feed Monitoring on a Grass-Fed Cattle Farm." Meghan Filbert. December 2017.

<http://www.practicalfarmers.org/farmer-knowledge/research-reports/2017/winter-feed-monitoring-grass-fed-cattle-farm/>

13. “Brassica Yield Following Grazed and Un-Grazed Cover Crops.” Liz Kolbe. December 2017. <http://www.practicalfarmers.org/farmer-knowledge/research-reports/2017/brassica-yield-following-grazed-un-grazed-cover-crops/>

PFI Newsletter

Published **1** newsletter articles on cover crops;

1. “Partnering to Put More Cover Crops on the Landscape” The Practical Farmer. Alisha Bower. Spring 2017. Print.

Practical Farmers blog

Published **50** blog posts related to cover crops;

1. “RESEARCH REPORT: Effect on Corn of Green Manure Cover Crops” Practical Farmers Blog. Stefan Gailans. March 30, 2017. <http://www.practicalfarmers.org/blog/2017/03/30/research-report-effect-corn-green-manure-cover-crops/>
2. “How Does Seeding Date and Method Affect Cover Crop Performance?” Practical Farmers Blog. Stefan Gailans. March 22, 2017. <http://practicalfarmers.org/blog/2017/03/22/seeding-date-method-affect-cover-crop-performance/>
3. “ASA Scouting Plan for Cover Crop Success” Practical Farmers Blog. Alisha Bower. March 21, 2017. <http://practicalfarmers.org/blog/2017/03/21/asa-webinar-lays-scouting-plan-cover-crop-success/>
4. “Are Cover Crops the New Pest Sherriff in Town? ASA Webinar Weighs the Evidence” Practical Farmers Blog. Alisha Bower. March 16, 2017. <http://practicalfarmers.org/blog/2017/03/16/cover-crops-new-sheriff-town-asa-webinar-weighs-evidence/>
5. “A Primer for Meeting Farmers’ Top Cover Crop Germplasm Needs” Practical Farmers Blog. Sarah Carlson. March 9, 2017. <http://practicalfarmers.org/blog/2017/03/13/primer-meeting-farmers-top-cover-crop-germplasm-needs/>
6. “Rotationally Raised, Episode 11: Livestock II, Grazing Summer-seeded Cover Crop Mixes” Practical Farmers Blog. Nick Ohde. March 9, 2017. <http://practicalfarmers.org/blog/2017/03/09/25171/>
7. “Double Check Herbicide Labels if Planning to Graze Cover Crops” Practical Farmers Blog. Meghan Filbert. March 9, 2017. <http://practicalfarmers.org/blog/2017/03/09/double-check-herbicide-labels-planning-graze-cover-crops/>
8. “ASA Cover Crop Webinars Feature Practical Farmers, Don’t Miss Next Week’s” Practical Farmers Blog. Alisha Bower. February 3, 2017. <http://practicalfarmers.org/blog/2017/02/03/asa-cover-crop-webinars-feature-practical-farmers-dont-miss-next-weeks/>

9. "Practical Farmers Use EQIP to Build Business – Deadline Mar 17 for EQIP 2017" Practical Farmers Blog. Alisha Bower. March 1, 2017. <http://practicalfarmers.org/blog/2017/03/01/practical-farmers-use-eqip-build-business-deadline-mar-17-eqip-2017/>
10. "Water Quality Monitoring at the 2017 Annual Conference" Practical Farmers Blog. Stefan Gailans. February 20, 2017. <http://practicalfarmers.org/blog/2017/02/20/water-quality-monitoring-2017-annual-conference/>
11. "Cover Crop Economics Survey: Participate Today!" Practical Farmers Blog. Alisha Bower. February 14, 2017. <http://practicalfarmers.org/blog/2017/02/14/participate-today-cover-crop-economics-survey/>
12. "Roller-Crimper at the 2017 Annual Conference" Practical Farmers Blog. Stefan Gailans. February 13, 2017. <http://practicalfarmers.org/blog/2017/02/13/roller-crimper-2017-annual-conference/>
13. "Maintaining Bottom Lines while also Conserving the Soil Resource" Practical Farmers Blog. Stefan Gailans. February 1, 2017. <http://practicalfarmers.org/blog/2017/02/01/maintaining-bottom-lines-also-conserving-soil-resource/>
14. "Winter Cereal Rye Cover Crop Effect on Cash Crop Yield, Year 8" Practical Farmers Blog. Stefan Gailans. January 24, 2017. <http://practicalfarmers.org/blog/2017/01/24/winter-cereal-rye-cover-crop-effect-cash-crop-yield-year-8/>
15. "Field Day Recap: Grazing Cover Crops with Wade Dooley" Practical Farmers Blog. Meghan Filbert. April 6, 2017. <http://www.practicalfarmers.org/blog/2017/04/06/field-day-recap-grazing-cover-crops-wade-dooley/>
16. "Field Day Recap: Cover Crops for Corn and Soybeans with Jack Boyer" Practical Farmers Blog. Stefan Gailans. April 13, 2017. <http://www.practicalfarmers.org/blog/2017/04/13/field-day-recap-cover-crops-corn-soybeans-jack-boyer/>
17. "Field Day Recap: Grazing Cover Crops with Bruce Carney" Practical Farmers Blog. Meghan Filbert. April 18, 2017. <http://www.practicalfarmers.org/blog/2017/04/18/field-day-recap-grazing-cover-crops-bruce-carney/>
18. "Field Day Recap: Cover Crops for Corn and Soybeans with Ward Van Dyke" Practical Farmers Blog. Alisha Bower. April 19, 2017. <http://www.practicalfarmers.org/blog/2017/04/19/field-day-recap-cover-crops-corn-soybeans-ward-van-dyke/>
19. "Field Day Recap: Cover Crops in Corn and Soybeans with Russ Brandes" Practical Farmers Blog. Sally Worley. April 19, 2017. <http://www.practicalfarmers.org/blog/2017/04/19/field-day-recap-cover-crops-corn-soybeans-russ-brandes/>
20. "Field Day Recap: Grazing Cover Crops with Mark Schleisman" Practical Farmers Blog. Meghan Filbert. April 26, 2017. <http://www.practicalfarmers.org/blog/2017/04/26/field-day-recap-grazing-cover-crops-mark-schleisman/>

21. "Three New Resources for Cover Crop Success" Practical Farmers Blog. Alisha Bower. May 22, 2017. <http://www.practicalfarmers.org/blog/2017/05/22/three-new-cover-crop-resources-success/>
22. "Member Spotlight – Maggie McQuown of Red Oak" Practical Farmers Blog. Tamsyn Jones. June 8, 2017. <http://www.practicalfarmers.org/blog/2017/06/08/member-spotlight-maggie-mcquown-red-oak/>
23. "RESEARCH REPORT: Interseeding Cover Crops into Seed Corn at V4" Practical Farmers Blog. Stefan Gailans. June 13, 2017. <http://www.practicalfarmers.org/blog/2017/06/13/research-report-interseeding-cover-crops-seed-corn-v4/>
24. "Field Day Recap: Cover Crops and Strip Tillage" Practical Farmers Blog. Sarah Carlson. June 13, 2017. <http://www.practicalfarmers.org/blog/2017/06/13/field-day-recap-cover-crops-strip-tillage/>
25. "Field Day Recap: Grazing Cover Crops with Matt Schuiteman" Practical Farmers Blog. Meghan Filbert. June 16, 2017. <http://www.practicalfarmers.org/blog/2017/06/16/field-day-recap-grazing-cover-crops-matt-schuiteman/>
26. "On-Farm, Episode 010: Wendy Johnson – Joia Food Farm." Practical Farmers Blog. Nick Ohde. July 13, 2017. <http://www.practicalfarmers.org/blog/2017/07/13/farm-episode-010-wendy-johnson-joia-food-farm/>
27. "Member Spotlight – Robert Alexander, of Granville." Practical Farmers Blog. Tamsyn Jones. July 14, 2017. <http://www.practicalfarmers.org/blog/2017/07/14/member-spotlight-robert-alexander-granville/>
28. "Member Spotlight – Wendy Johnson and Johnny Rafkin, of Charles City." Practical Farmers Blog. Tamsyn Jones. July 27, 2017. <http://www.practicalfarmers.org/blog/2017/07/27/member-spotlight-wendy-johnson-johnny-rafkin-charles-city/>
29. "RESEARCH REPORT: Cover Crop Variety Trial 2016-17." Practical Farmers Blog. Stefan Gailans. July 28, 2017. <http://www.practicalfarmers.org/blog/2017/07/28/research-report-cover-crop-variety-trial-2016-17/>
30. "Field Day Recap: Ridge-Till, Weed Management and Oat Production." Practical Farmers Blog. Nick Ohde. July 31, 2017. <http://www.practicalfarmers.org/blog/2017/07/31/field-day-recap-ridge-till-weed-management-oat-production/>
31. "On-Farm, Episode 014: Chris Teachout." Practical Farmers Blog. Nick Ohde. August 9, 2017. <http://www.practicalfarmers.org/blog/2017/08/09/farm-episode-014-chris-teachout/>
32. "Member Spotlight – Teresa and Rodne Wendt, of Stanwood." Practical Farmers Blog. Tamsyn Jones. August 11, 2017. <http://www.practicalfarmers.org/blog/2017/08/11/member-spotlight-teresa-rodne-wendt-stanwood/>

33. "RESEARCH REPORT: Accomodating Cover Crops." Practical Farmers Blog. Stefan Gailans. August 23, 2017. <http://www.practicalfarmers.org/blog/2017/08/23/research-report-accommodating-cover-crops/>
34. "On-Farm, Episode 017: Maria and Ron Rosmann – Rosmann Family Farms." Practical Farmers Blog. Nick Ohde. August 31, 2017. <http://www.practicalfarmers.org/blog/2017/08/31/farm-episode-017-maria-ron-rosmann-rosmann-family-farms/>
35. "Field Day Video Recap: Soil Regeneration and Cover Crops." Practical Farmers Blog. Stefan Gailans. September 14, 2017. <http://www.practicalfarmers.org/blog/2017/09/14/field-day-recap-look-soil-regeneration/>
36. "Aerially Seeding Cover Crops." Practical Farmers Blog. Nick Ohde. September 25, 2017. <http://www.practicalfarmers.org/blog/2017/09/25/aerially-seeding-cover-crops/>
37. "RESEARCH REPORT: Spring-Seeded Brassica Cover Crops." Practical Farmers Blog. Stefan Gailans. October 17, 2017. <http://www.practicalfarmers.org/blog/2017/10/17/research-report-spring-seeded-brassica-cover-crops/>
38. "Peter Kraus's Buckwheat Sourdough Recipe." Practical Farmers Blog. Nick Ohde. November 1, 2017. <http://www.practicalfarmers.org/blog/2017/11/01/peter-krauss-buckwheat-sourdough-recipe/>
39. "Guest Blog: Reflection on a Bus Trip to Dave Brandt's Farm." Practical Farmers Blog. Sally Hertz Gran. November 3, 2017. <http://www.practicalfarmers.org/blog/2017/11/03/sally-gran/>
40. "RESEARCH REPORT: Rolling Cover Crops and Soybean Row- Width." Practical Farmers Blog. Stefan Gailans. November 15, 2017. <http://www.practicalfarmers.org/blog/2017/11/15/research-report-rolling-cover-crops-soybean-row-width/>
41. "How to Successfully Implement Cover Crop Requirements in Public Leases." Practical Farmers Blog. Alisha Bower. November 15, 2017. <http://www.practicalfarmers.org/blog/2017/11/15/add-cover-crop-requirements-public-leases/>
42. "Cover Crop-Crop Insurance Pilot Program." Practical Farmers Blog. Sarah Carlson. November 16, 2017. <http://www.practicalfarmers.org/blog/2017/11/16/cover-crop-crop-insurance-pilot-program/>
43. "RESEARCH REPORT: N Fertilizer Strategies for Corn Following Cover Crop." Practical Farmers Blog. Stefan Gailans. November 20, 2017. <http://www.practicalfarmers.org/blog/2017/11/20/research-report-n-fertilizer-strategies-corn-following-cover-crop/>
44. "Winter Cereal Rye Cover Crop Effect on Cash Crop Yield, Year 9." Practical Farmers Blog. Stefan Gailans. November 30, 2017. <http://www.practicalfarmers.org/blog/2017/11/30/winter-cereal-rye-cover-crop-effect-cash-crop-yield-year-9/>

45. "RESEARCH REPORT: Roll-Crimping Cover Crops and Soybean Seeding Date." Practical Farmers Blog. Stefan Gailans. December 4, 2017. <http://www.practicalfarmers.org/blog/2017/12/04/research-report-roll-crimping-cover-crops-soybean-seeding-date/>
46. "2017 Cooperators' Program: What You Should Know." Practical Farmers Blog. Steve Carlson. December 6, 2017. <http://www.practicalfarmers.org/blog/2017/12/06/2017-cooperators-program/>
47. "2018 Conference Sneak-Peek: Q&A With Keith Berns on 'carbonomics'." Practical Farmers Blog. Tamsyn Jones. December 8, 2017. <http://www.practicalfarmers.org/blog/2017/12/08/2018-conference-sneak-peek-ga-keith-berns-carbonomics/>
48. "Corn Following a Legume Cover Crop." Practical Farmers Blog. Alisha Bower. December 14, 2017. <http://www.practicalfarmers.org/blog/2017/12/14/corn-following-legume-cover-crop/>
49. "Education Credits for Crop Advisors at the PFI Annual Conference." Practical Farmers Blog. Sarah Carlson. December 18, 2017. <http://www.practicalfarmers.org/blog/2017/12/18/education-credits-crop-advisors-pfi-annual-conference/>
50. "RESEARCH REPORT: Winter Feed Monitoring on a Grass-Fed Cattle Farm." Practical Farmers Blog. Meghan Filbert. December 22, 2017. <http://www.practicalfarmers.org/blog/2017/12/22/research-report-winter-feed-monitoring-grass-fed-cattle-farm/>

Other publication materials

1. 2017 Cover Crop Directory http://practicalfarmers.org/app/uploads/2017/03/2017-CC-Directory_Online.pdf
2. Corn Following a Cereal Rye Cover Crop <http://practicalfarmers.org/app/uploads/2017/04/Rye-into-Corn-5.11.17.pdf>
3. Cover Crop Decision Tree <http://practicalfarmers.org/app/uploads/2017/02/Cover-Crop-Decision-Tree-and-Seeding-Only.pdf>
4. Developing a Winning Cover Crop Plan with Your Customer <http://practicalfarmers.org/app/uploads/2017/05/Cover-Crop-Questionnaire-Only-1.pdf>
5. Aerially Seeding Cover Crops. Video. Practical Farmers Youtube Channel. September 25, 2017.
6. Field Day Recap: Soil Regeneration and Cover Crops. Video. Practical Farmers Youtube Channel. Ken Rulon. September 14, 2017.

2. On-farm research projects

- In 2017, PFI worked with 23 PFI farmers who conducted 32 on-farm research trials related to cover crops.
- Particularly noteworthy were two trials in 2017 that confirmed findings from 2016 and 2015: Delaying cereal rye cover crop termination until within 1-3 days of soybean planting can reduce weed pressure and costs.
- Three trials in 2017 confirmed findings from 2016 as well as anecdotal evidence: Delaying cereal rye cover crop termination until within 1-3 days of corn planting had an adverse effect on corn yield. This has led us to recommend to farmers that a cereal rye cover crop should be terminated 10-14 days before planting corn. Trials that will investigate the application of N fertilizer with the corn planter, as well as sampling for corn seedling pathogens, are the follow ups to the trials in 2016 and 2017.
- We concluded five years of cover crop species testing. Cereal rye and other small grains species tended to be the best performers in our 2016-17 cover crop variety trial that also included brassica and legume species.

3. Outreach

Field Days/Workshops/Conferences/Meetings

54 PFI farmer members and staff organized and held **99 cover crop field days, workshops, conference sessions, webinars, meetings, and presentations** at different locations around Iowa with a total number of **6980** people attending or watching.

Event Date	Event Description	Location	# of Attendees
1/10/17	Crop Advantage Series	Storm Lake	30
1/19/17	Conserving \$\$ and Soil	Ames, IA	35
1/20/17	A Decade of Cover Crops Research	Ames, IA	100
1/20/17	Insects and Soil Health with Jonathan Lundgren	Ames, IA	118
1/21/17	Cover Crops 201	Ames, IA	85
1/21/17	Cover Crops and Conservation on Rented Ground	Ames, IA	45
1/21/17	Grazing Cover Crops	Ames, IA	79
1/21/17	Growing Profitable Small Grains in Iowa	Ames, IA	117
1/21/17	Introduction to Cover Crops for Vegetables	Ames, IA	64
1/21/17	Roller-Crimping Cover Crops	Ames, IA	76
1/21/17	Water Quality Monitoring	Ames, IA	37
1/24/17	ADM/Unilever Sust Soy	Ankeny	60
1/24/17	NoTill on the Plains - Cover Crops 201		90
1/25/17	Crop Advantage Series	Denison	50
1/25/17	Meeting	Redwood Falls, MN	22
1/26/17	Freeborn Co Soil Health	Albert Lea, MN	100
2/1/17	World Agriculture Exp	Tulare, CA	20
2/2/17	ASA Live Webinar		30

2/2/17	Cover Crop Field Day at Whiterock Conservancy	Coon Rapids	30
2/2/17	Whiterock Conservancy Cover Crop Field Day.	Coon Rapids, IA	35
2/7/17	Spirit Lake NRCS	Spirit Lake	90
2/8/17	Moville NRCS	Moville	80
2/14/17	Harvesting, Storing and Feeding Rye to Cattle		159
2/14/17	Love Your Soil	Monticello	100
2/15/17	Meeting	Fergus Falls, MN	155
2/21/17	More Opportunities for Cover Crops		114
2/22/17	Meeting	Colfax, WI	51
3/1/17	SWCD Cover Crop Meeting	Adel	10
3/6/17	SWCD Cover Crop Meeting	Perry	5
3/7/17	Tabor NRCS	Tabor	55
3/8/17	Cover Crops/Small Grains with Brown Forman	Louisville, KY	10
3/9/17	Michigan State roundtable		30
3/14/17	Midwest Cover Crops Council Annual Meeting	Grand Rapids, MI	60
3/14/17	Midwest Cover Crop Council Meeting workshop	Michigan	60
3/22/17	Iowa Water Conference	Ames, IA	35
3/22/17	Meeting	Minnesota	34
3/23/17	NWF research champs training	Regional	10
3/23/17	Meeting	Willmar, MN	255
3/28/17	Grazing Cover Crops	Albion, IA	29
3/28/17	Meeting	Comfrey, MN	131
3/29/17	Cover Crops for Corn and Soybeans	Reinbeck, IA	39
3/29/17	Meeting	Marshall, MN	119
3/30/17	Chichataqua Bottoms Greenbelt workshop	Maxwell, IA	25
3/30/17	Grazing Cover Crops	Maxwell, IA	40
3/30/17	MN Soil Health MTG	New Prague, MN	50
3/31/17	Field Day with Iowa State University students from Dr. Lisa Schulte-Moore's class	Slater	20
4/4/17	Cover Crops for Corn and Soybeans	Hancock	30
4/6/17	Cover Crops for Corn and Soybeans	Leighton	51
4/10/17	Agron 260, ISU class	Ames	85
4/10/17	TNC Boone River FD	LuVerne, IA	35
4/11/17	Grazing Cover Crops	Lake City	46
4/21/17	Agron 212, ISU class	Ames	80

4/27/17	Meeting	Cottage Grove, MN	55
5/5/17	Farmer Town Hall w/ Sonny Perdue	Nevada	200
5/25/17	Pioneer Farm Tour w/ Sandy Endicott		2
5/30/17	Grazing Cover Crops	Sioux Center	65
6/3/17	Area Farm Tour w/ Sylvain Cornett		4
6/8/17	Strip-till cover crop	Holland	50
6/15/17	In-field and edge conservation	Montgomery	42
6/20/17	Meeting	Morgan, MN	53
6/22/17	Meeting	LeMars, IA	42
6/26/17	Farmer's Fridge to GHF	Grinnell	5
6/27/17	SFL Learning Journey	Boone	35
6/27/17	SFL Learning Journey	Minburn	10
6/27/17	SFL Learning Journey	Slater	10
6/29/17	Hybrid rye, Kernza, petting small grains for hog feeding trials	New Hampton	102
6/29/17	Small Grains Workshop	Maquoketa	30
6/29/17	Meeting	Renville, MN	95
6/30/17	Beginning Farmer Meeting		17
7/4/17	Cover crops, small grains, livestock	Carroll, OH	15
7/17/17	CDI Banquet. State Conservation Award Speech		400
7/19/17	Grundy County Fair	Grundy Center	60
7/25/17	Meeting	Bird Island, MN	18
8/1/17	Cover Crop Economics: Thoughts and Data		80
8/1/17	Iowa Learning Farms Field Day	Slater	30
8/1/17	Iowa Women in Agriculture conference	Ankeny, IA	100
8/1/17	SWCS Conference	Madison, WI	50
8/4/17	CI Cover Crop Working Group Mtg	West Des Moines	30
8/7/17	ISU Horticulture Research Station Field Day	Gilbert	170
8/10/17	Farm Tour		45
8/14/17	509 learns about PFI	Ames	20
8/15/17	On-farm tour with South African members. Ray Archuleta		14
8/21/17	Interseeding Cover Crops for Iowa Seed Corn Water Quality Initiative		45
8/24/17	International Pioneer Agronomy Conference		120
8/29/17	Cover crops, interseeding, hybrid rye	Shenandoah	100
8/30/17	Cover Crops for Supply Chains	Oak Brook	10
9/9/17	Cover Crop Field Day	Wellman	60

9/11/17	Measuring Soil Health Practices	national	25
9/18/17	Keynote Address	Valencia, Spain	250
9/20/17	Meeting	Danube, MN	62
9/21/17	Cover Crop Field Day-Rock Creek	Osage	30
9/22/17	Cover Crop Field Day	Eagle Grove	35
10/12/17	Ecuadorian Ag Professionals @ PFI	Ames	15
10/25/17	Watershed Academy	Boone	40
11/3/17	Cover Crops for Water Quality	Des Moines	6
11/6/17	Cover Crops for Water Quality	Fairmount, MN	3
11/8/17	Cover Crops for Water Quality	Cedar Rapids	3
11/13/17	Cover Crops for Risk Management	Corning	40
11/14/17	Cover Crops for Source Water Training	Ames	3
11/16/17	FFA Days	Lamoni	150
11/19/17	Iowa Organic Conference	Iowa City, IA	30
11/21/17	“We Have Ag” Colloquium panel discussion	Mankato, MN	17
11/21/17	Cover Crops for Risk Management	Slater	55
11/28/17	Cover crops for Crop Insurance	regional	200
11/28/17	Three Experiences with Roller-Crimping Cover Crops		97
11/29/17	Conservation Infrastructure Initiative Conference	Slater	80
11/30/17	Integrated Crop Management Conference	Ames	129
12/1/17	Meeting	Bloomington, MN	42
12/7/17	National Cover Crop Conference	Indianapolis	30
12/12/17	Integrating Livestock and Cover Crops for Profit in Kansas		59
12/13/17	Iowa Learning Farms Cover Crop Workshop	Oakland	40
12/19/17	Integrating Livestock and Cover Crops for Profit in Nebraska		39

Webinars

1. “More Opportunities for Cover Crops” Farminar. February 23, 2017. 26 participants. 88 archived views. <http://practicalfarmers.org/farmer-knowledge/farminar-archive/opportunities-cover-crops/>
2. “Harvesting, Storing, and Feeding Rye to Cattle” Farminar. February 15, 2017. 18 participants. 141 archived views. <http://practicalfarmers.org/farmer-knowledge/farminar-archive/harvesting-storing-feeding-rye-cattle/>
3. “Cover Crop Economics: Thoughts and Data.” Cover Crop Working Group Webinar. August 1, 2017. 80 archived views. <http://www.practicalfarmers.org/farmer-knowledge/farminar->

[archive/cover-crop-economics-thoughts-data/](#)

4. Three Experiences with Roller-Crimping Cover Crops.” Farminar. November 28, 2017. 37 participants. 60 archived views. <http://www.practicalfarmers.org/farmer-knowledge/farminar-archive/three-experiences-roller-crimping-cover-crops/>
5. “Integrating Livestock and Cover Crops for Profit in Nebraska.” Farminar. December 19, 2017. 19 participants. 20 archived views. <http://www.practicalfarmers.org/farmer-knowledge/farminar-archive/integrating-livestock-cover-crops-profit-nebraska/>
6. “Integrating Livestock and Cover Crops for profit in Kansas.” Farminar. December 13, 2017. 24 participants. 35 archived views <http://www.practicalfarmers.org/farmer-knowledge/farminar-archive/integrating-livestock-cover-crops-profit-kansas/>

Organic cover crop-related Extension and Outreach activities

Presentations on Cover Crop Research:

Date	Location	Title	Audience Number
January 17	Hort 424 Class, Dept. of Horticulture, Iowa State University, Ames, IA	Organic Agriculture	32
February 17	Horticulture In-Service Training	Extension Organic Horticulture Update	20
February 24	MOSES Organic Conference, La Crosse, WI	Organic No-Till for Field Crops	75
March 2	USDA Listening Session on Future of Agriculture, Washington, D.C.	Innovations in Organic Agriculture	105
March 15	Horticulture Dept., University of Florida, Gainesville, FL	Organic Livestock Production and Regulations	22
March 23	Agronomy Dept., Purdue University, West Lafayette,	Organic Agriculture Program	64
March 30	Brenton Center, ISU	Leopold Center Projects (video)	
April 20	Rodale Institute, Kutztown, PA	Food Safety Considerations in Integrated Crop-Livestock Systems	10
May 17	National Press Corps Annual Conference, Des Moines, IA	Soil and Water Quality in Organic vs. Conventional Systems	84
August 22	Neely-Kinyon Field Day, Greenfield, IA	Overview of Organic Experiments: LTAR, Organic No-Till and	45

		Integrated Crop-Livestock	
August 31	Organic Field Day, University of Wisconsin, Madison, WI	Soil Quality in Organic Farming	106
September 7	SERF Field Day, Crawfordsville, IA	Organic No-Till Soybean and Barley Research	40
September 9	Rodale Institute, Kutztown, PA	Organic Pioneer Award Presentation	225
September 19	ASHS Annual Conference, Waikoloa, HI	Improving Soil Conservation and Crop Performance through Reduced Tillage and Cover Crop-based Rotations in Organic Squash Production	82
October 25	American Society of Agronomy Annual Conference, Tampa, FL	Effect of Field History and Tillage on Crop Productivity and Soil Quality in Organic No-till Soybean Systems	74
November 20	Iowa Organic Conference, Iowa City, IA	Integrating Crops and Livestock	56
November 28	Hort 530 Class, Dept. of Horticulture, Iowa State University, Ames, IA	Agroecological Research	4

Total: 16 presentations

Audience: 1,044 participants

Field Days:

Date	Location	Title	Audience Number
August 22	Neely-Kinyon Field Day, Greenfield, IA	Overview of Organic Experiments: LTAR, Organic No-Till and Integrated Crop-Livestock	45
August 31	Organic Field Day, University of Wisconsin, Madison, WI	Soil Quality in Organic Farming	106
September 7	SERF Field Day, Crawfordsville, IA	Organic No-Till Soybean and Barley Research	40

Conferences:

February 24	MOSES Organic Conference, La Crosse, WI	Organic No-Till for Field Crops	75
May 17	National Press Corps Annual Conference, Des Moines, IA	Soil and Water Quality in Organic vs. Conventional Systems	84
September 19	ASHS Annual Conference, Waikoloa, HI	Improving Soil Conservation and Crop Performance through Reduced Tillage and Cover	82

		Crop-based Rotations in Organic Squash Production	
October 25	American Society of Agronomy Annual Conference, Tampa, FL	Effect of Field History and Tillage on Crop Productivity and Soil Quality in Organic No-till Soybean Systems	74
November 20	Iowa Organic Conference, Iowa City, IA	Integrating Crops and Livestock	56