NCERA 222 2020

Extension Publications

Midwest Vegetable Production Guide. 2021. Ohio State University Extension Bulletin 948. Tilmon, K. J. and A. Michel. 2020. Update on field crop insects: Asiatic garden beetle and soybean gall midge.

Proceedings of the Ohio Commercial Pesticide Applicator 2019 Recertification Conference, pp 190-191. Ohio State University Extension.

Tilmon, K. J. and A. Michel. 2020. Update on field crop insects: Asiatic garden beetle and soybean gall midge.

Proceedings of the Ohio Private Pesticide Applicator Recertification Conference. Ohio State University Extension. Philip, B.N. 2020.

Bed Bugs [Fact Sheet HYG-2105]. The Ohio State University. <https://ohioline.osu.edu/factsheet/hyg-2105>

Pest Management in Wisconsin Field Crops, 2021 (IPM assisted with content, revised)

Commercial Vegetable Production, 2021 (IPM assisted with content, revised) Early Season Corn Insect Damage (new) IPM Decision aid: Managing corn rootworms and Bt Resistance (revised) Hemp Insect Profiles (new) Corn Rootworm Management in Wisconsin

Mueller, D., Wise, K. and Sisson, A. 2020. Corn Disease Management – Corn Disease Loss Estimates From the United States and Ontario, Canada – 2019. Crop Protection Network. CPN 2007-19.

Bradley, C., Allen, T., Tenuta, A., Mehl, K., and Sisson, A. 2020. Soybean Disease Management – Soybean Disease Loss Estimates From the United States and Ontario, Canada – 2018. Crop Protection Network. CPN 1018-18.

Kleczewski, N., Kaur, N., Bergstrom, G., Bradley, C., Chilvers, M., Collins, A., Cowger, C., DeWolf, E., Friskop, A., Koehler, A., Mehl, H., Paul, P., Salgado, J., Sisson, A., Smith, D., Wise, K., and Young-Kelly, H. 2020. Small Grains Disease Management – Stagonospora Nodorum Leaf and Glume Blotch. Crop Protection Network. CPN 3003.

Sisson, A., Mueller, D., and Robertson, A. 2020. Fungicide Use on Hail Damaged Corn and Soybean. Integrated Crop Management Blog. crops.extension.iastate.edu/blog/adam-sisson-alison-robertson-daren-mueller/fungicide-use-hail-damaged-corn-and-soybean.

Mueller, D., Wise, K. and Sisson, A. 2020. Corn Disease Management – Corn Disease Loss Estimates From the United States and Ontario, Canada – 2018. Crop Protection Network. CPN 2007-18.

Smith, D., Bradley, C., Chilvers, M., Esker, P., Malvick, D., Mueller, D., Peltier, A., Sisson, A., Wise, K., Tenuta, A., and Faske, A. 2020. Soybean Disease Management – White Mold. Crop Protection Network. CPN 1005. Reviewer. Telenko, D. et al. 2020. Corn Disease Management – Tar Spot. Crop Protection Network. CPN 2012.

Wise, K., Bradley, C., Giesler, L., Johnson, B., Legleiter, T., Licht, M., Mueller, D., Chilvers, M., Freije, A., Sisson, A., Tenuta, A., and Young-Kelly, H. 2020. Soybean Disease Management – Soybean Seedling Diseases. Crop Protection Network. CPN 1008. doi.org/10.31274/cpn-20190620-018. Crop Protection Network Web Book Creation Tool. 2020. Example: Https://cropprotectionnetwork.org/series/field-crop-scouting/publications/preface. Sisson, A.J.,

Mueller, D.S., Poss, E., Dear, D. 2020. Disease Severity and Defoliation Training Webtool. Crop Protection Network. Doi.org/10.31274/cpn-20200722-0.

Knodel, J.J., P. Beauzay, M.A. Boetel, T.J. Prochaska and A. Chirumamilla. 2020. 2021 North Dakota Field Crop Insect Management Guide E1143 (revised). NDSU Ext., Fargo, ND. Calles-

Torrez, V., P.B. Beauzay, A.H. Knudson and J.J. Knodel. 2020. Soybean Gall Midge and White-mold Gall Midge in Soybean E2006. NDSU Extension, Fargo, ND. (\*Printing supported by USDA NIFA CCPM EIP)

Calles-Torrez, V. and J.J. Knodel. 2020. Common Arthropod Pests of Corn E2004. NDSU Extension, Fargo, ND. (\*Printing supported by USDA NIFA CCPM EIP) Knodel, J.J. and V. Calles-Torrez, V. 2020. Common Arthropod Pests of Soybean E2005. NDSU Extension, Fargo, ND. (\*Printing supported by USDA NIFA CCPM EIP)

 Knodel, J., P. Beauzay, and A. Chirumamilla. 2020. IPM – Insect Pest Management. In Sunflower Production A1331 (revised). H. Kandel (editor), NDSU Ext., Fargo, ND. Lowenstein, D.L., N. Walton, P. Beauzay, V. Calles-Torrez, G. Fauske, E. McGinnis and J. Knodel. 2020. Meet the Rare, Threatened and Endangered Insect Pollinators of North Dakota E1977. NDSU Ext., Fargo, ND. (\*Printing supported by USDA NIFA CCPM EIP)

Calles-Torrez, V., E. McGinnis, B. Laschkewitsch, H. Hatterman-Valenti and J. Knodel. 2020. Pollinator Preferences for Selected Aster, False Indigo, Bee Balm and Sedum Flowers in North Dakota H1962. NDSU Ext., Fargo, ND. Crop and Pest Report issues and selected IPM articles on arthropods:

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 2020. NDSU Extension Crop and Pest Report #1 (April 30, 2020), 20 pp. - 2020. NDSU Extension Crop and Pest Report #2 (May 7, 2020), 22 pp. - 2020. NDSU Extension Crop and Pest Report #3 (May 14, 2020), 24 pp. - 2020. NDSU Extension Crop and Pest Report #4 (May 21, 2020), 20 pp. - 2020. NDSU Extension Crop and Pest Report #5 (May 28, 2020), 15 pp. - 2020. NDSU Extension Crop and Pest Report #6 (June 4, 2020), 23 pp. - 2020. NDSU Extension Crop and Pest Report #7 (June 11, 2020), 23 pp. - 2020. NDSU Extension Crop and Pest Report #8 (June 18, 2020), 23 pp. - 2020. NDSU Extension Crop and Pest Report #9 (June 25, 2020), 19 pp. - 2020. NDSU Extension Crop and Pest Report #10 (July 2, 2020), 30 pp. - 2020. NDSU Extension Crop and Pest Report #11 (July 9, 2020), 25 pp. - 2020. NDSU Extension Crop and Pest Report #12 (July 16, 2020), 20 pp. - 2020. NDSU Extension Crop and Pest Report #13 (July 23, 2020), 18 pp. - 2020. NDSU Extension Crop and Pest Report #14 (July 30, 2020), 21 pp. - 2020. NDSU Extension Crop and Pest Report #15 (August 6, 2020), 22 pp. - 2020. NDSU Extension Crop and Pest Report #16 (August 13, 2020), 14 pp. - 2020. NDSU Extension Crop and Pest Report #17 (August 27, 2020), 22 pp. - 2020. NDSU Extension Crop and Pest Report #18 (September 10, 2020), 14 pp. - 2020. NDSU Extension Crop and Pest Report #16 (September 24, 2020), 24 pp. Zeleznik, J., and Knodel, J.J. 2020. Cankerworms – time to begin scouting. NDSU Extension Crop and Pest Report #1 (April 30, 2020). Knodel, J.J. 2020. Canola flea beetles emerging. NDSU Extension Crop and Pest Report #2 (May 7, 2020). Knodel, J.J., and Beauzay, P.B. 2020. Wet soil conditions favorable for wireworms. NDSU Extension Crop and Pest Report #3 (May 14, 2020). Knodel, J.J. 2020. Be tick smart. NDSU Extension Crop and Pest Report #3 (May 14, 2020). Knodel, J.J. 2020. Get ready to scout for cutworms. NDSU Extension Crop and Pest Report #4 (May 21, 2020). Prochaska, T.J., and Knodel, J.J. 2020. Pea leaf weevil emerging. NDSU Extension Crop and Pest Report #5 (May 28, 2020). Knodel, J.J. 2020. Grasshoppers emerging. NDSU Extension Crop and Pest Report #6 (June 4, 2020). Knodel, J.J. 2020. Monitor for alfalfa weevil. NDSU Extension Crop and Pest Report #6 (June 4, 2020). Zeleznik, J., and Knodel, J.J. 2020. Tent caterpillars on trees and shrubs. NDSU Extension Crop and Pest Report #6 (June 4, 2020). Knodel, J.J. 2020. Migratory insects. NDSU Extension Crop and Pest Report #7 (June 11, 2020). Knodel, J.J., and Friskop, A. 2020. IPM crop survey starts. NDSU Extension Crop and Pest Report #7 (June 11, 2020). Knodel, J.J. 2020. Scout for cereal aphids. NDSU Extension Crop and Pest Report #8 (June 18, 2020). Knodel, J.J. 2020. Update on alfalfa weevil degree days. NDSU Extension Crop and Pest Report #8 (June 18, 2020). Knodel, J.J. 2020. Armyworm in rye. NDSU Extension Crop and Pest Report #9 (June 25, 2020). Knodel, J.J. 2020. What midge forecast. NDSU Extension Crop and Pest Report #9 (June 25, 2020). Knodel, J.J. 2020. Scout for barley thrips. NDSU Extension Crop and Pest Report #10 (July 2, 2020). Knodel, J.J. 2020. Wheat midge update. NDSU Extension Crop and Pest Report #10 (July 2, 2020). Knodel, J.J. 2020. Sunflower moth arrives early to ND. NDSU Extension Crop and Pest Report #10 (July 2, 2020). Knodel, J.J. 2020. Sunflower insect trapping update. European corn borer emerging. NDSU Extension Crop and Pest Report #11 (July 9, 2020). Knodel, J.J. 2020. Wheat midge update. NDSU Extension Crop and Pest Report #11 (July 9, 2020). Knodel, J.J. 2020. ‘Bee’ smart about applying insecticides near apiaries. NDSU Extension Crop and Pest Report #12 (July 16, 2020). Knodel, J.J. 2020. Grasshoppers hopping. NDSU Extension Crop and Pest Report #12 (July 16, 2020). Knodel, J.J. 2020. More armyworms. NDSU Extension Crop and Pest Report #12 (July 16, 2020). Knodel, J.J. 2020. Wheat midge update. NDSU Extension Crop and Pest Report #12 (July 16, 2020). Knodel, J.J. 2020. Scout for lygus bug. NDSU Extension Crop and Pest Report #12 (July 16, 2020). Knodel, J.J. 2020. Get ready to scout for red sunflower seed weevils. NDSU Extension Crop and Pest Report #13 (July 23, 2020). Knodel, J.J. 2020. Sunflower insect trap update. NDSU Extension Crop and Pest Report #13 (July 23, 2020). Knodel, J.J. 2020. Grasshopper update. NDSU Extension Crop and Pest Report #14 (July 30, 2020). Knodel, J.J. 2020. New pollinator publication. NDSU Extension Crop and Pest Report #14 (July 30, 2020). Knodel, J.J. 2020. Red sunflower seed weevils emerging. NDSU Extension Crop and Pest Report #15 (August 6, 2020). Knodel, J.J. 2020. Update on sunflower insect trapping. NDSU Extension Crop and Pest Report #15 (August 6, 2020). Knodel, J.J. 2020. Armyworms marching west. NDSU Extension Crop and Pest Report #15 (August 6, 2020). Knodel, J.J. 2020. Grasshoppers increasing. NDSU Extension Crop and Pest Report #16 (August 13, 2020). Knodel, J.J. 2020. Continue to scout for red sunflower seed weevils. NDSU Extension Crop and Pest Report #16 (August 13, 2020). Knodel, J.J. 2020. Flea beetles feeding on canola pods. NDSU Extension Crop and Pest Report #16 (August 13, 2020). Knodel, J.J. 2020. Hornets active. NDSU Extension Crop and Pest Report #16 (August 13, 2020). Knodel, J.J. 2020. Clean grain bins to prevent grain insect infestations. NDSU Extension Crop and Pest Report #17 (August 27, 2020). Knodel, J.J. 2020. Grasshopper feeding during cool temperatures. NDSU Extension Crop and Pest Report #18 (September 10, 2020). Knodel, J.J. 2020. New pollinator publication. NDSU Extension Crop and Pest Report #18 (September 10, 2020). Knodel, J.J., Friskop, A., Beauzay, P.B., and Markell, S. 2020. Small grains IPM survey. NDSU Extension Crop and Pest Report #19 (September 24, 2020). Knodel, J.J., Friskop, A., Beauzay, P.B., and Markell, S. 2020. 2020 soybean and sunflower IPM survey. NDSU Extension Crop and Pest Report #19 (September 24, 2020).

Varenhorst, A., P. Rozeboom, E. Anderson and P. Wagner. 2020. An identification guide to alfalfa insect pests in South Dakota. South Dakota State University Extension. P-00150.

Benthall, K.J., Altholff, E.R., Rice, K.B. 2020. G7412 - Biology and Management of Japanese Beetle. https://extension.missouri.edu/media/wysiwyg/Extensiondata/Pub/pdf/agguides/pests/g07412.pdf Lucas, A.L., Leake, L.B., Rice, K.B. 2020. G7413 - Brown Marmorated Stink Bug in Midwest Field Crops. https://extension.missouri.edu/media/wysiwyg/Extensiondata/Pub/pdf/agguides/pests/g07413.pdf

Knezevic, S. Z., C. F. Creech, A. J. Jhala, R. N. Klein, G. R. Kruger, C. A. Proctor, C. L. Ogg, N. Lawrence, Jackson-Ziems, T. A., M. Bartels, K. Broderick, R. M Harveson, A. Timmerman, S. N.

Wegulo, S. Sivits, R. J. Wright, W. Ohnesorg and J. McMechan. 2020. 2020 Guide for Weed, Disease and Insect Management in Nebraska. 356 pp. Nebraska Extension Circular 130. 2020 Nebraska Extension On-farm research results. https://cropwatch.unl.edu/OnFarmResearch/2020\_NEOnFarmResearchBook\_WebEdition.pdf

D. Malvick. 2020. Tar Spot of Corn Found in Minnesota in 2020. UMN Extension Minnesota Crop News Goplen, J. & D. Sarangi. 2020. Scout fields now for Palmer amaranth. UMN Extension Minnesota Crop News

Goplen, J. D. Nicolai. 2020. Weed control ahead of the combine. UMN Extension Minnesota Crop News Goplen, J., D. Nicolai. 2020. MDA announces changes in use of dicamba herbicide. UMN Extension Minnesota Crop News Hanson,

B. Potter, & R. Koch. 2020. How to distinguish soybean gall midge from white mold gall midge. UMN Extension Minnesota Crop News Hanson, A.A. 2020. Seed corn maggot forecasting for 2020. UMN Extension Minnesota Crop News

Hutchison W. and A. Klodd. 2020. Hail netting reduces populations of key apple pests. Unpublished data.

Koch, R. & B. Potter. 2020. Reminders for soybean aphid management: Scouting, thresholds and insecticide selection. UMN Extension Minnesota Crop News

Malvick. D, 2020. Tar spot of corn continued to spread in Minnesota in 2020. UMN Extension Minnesota Crop News Midwest Vegetable Production Guide for Commercial Growers. 2020 editions. Authored insect control sections for legumes and cole crops. (NCR, Purdue Extension)

Nicolai, D., M. Jorgenson. 2020. Suspect pesticide drift? What to do and how to prevent it from occurring. UMN Extension Minnesota Crop News Ostlie, K., B. Potter. 2020. What's your risk from corn rootworms? Assess by scouting and join the MN Rootworm Survey Project. UMN Extension Minnesota Crop News

Potter, B. & R. Koch. 2020. Soybean gall midge - spring 2020 update. UMN Extension Minnesota Crop News

Potter, B. 2020. "Bunches" of black cutworm moths finally arrive in Minnesota: Start scheduling scouting. UMN Extension Minnesota Crop News

Potter, B., D. Malvick, T. Vollmer, A. Peltier. 2020. Foliar fungicide decisions for corn and soybeans. UMN Extension Minnesota Crop News

Potter., B. 2020. Pest alert: Scout for armyworm and soybean gall midge. UMN Extension Minnesota Crop News

Russell, M. G. Wyatt, C. LaCanne. 2020. Controlling buckthorn: the who, what, where, when and how. UMN Extension Minnesota Crop News Stahl, L., J. Goplen. 2020. Options after dicamba registrations vacated.

UMN Extension Minnesota Crop News: Wiersma, J. 2020. Fusarium Head Blight, Fungicides and Rye? UMN Extension Minnesota Crop News Podcasts IPM Podcast for Field Crops Dec. 30, 2020. What exactly is IPM anyways? Sept. 20, 2020. Weed management in fall and what to do with weed escapes Aug. 19, 2020. Soybean gall midge, spider mites, and corn rootworm in southern Minnesota Aug. 7, 2020. Soybean and corn diseases in late summer and what to plan for next year Aug. 3, 2020. What’s in the toolbox? Aphids and other soybean insects in 2020. What’s Killing my Kale? Episode 12: Spray programs for organic tomatoes (7/16/2020) Episode 6: Organic management of SWD (4/10/2020) Episode 5: The economic impact of SWD on the Minnesota berry industry (4/10/2020)

2020 Illinois Field Crop Scouting Manual (https://pubsplus.illinois.edu/products/field-crop-scouting-manual-book) 2020 Applied Research Results (https://uofi.app.box.com/v/2020PestPathogenARB) Blog articles written for the new CropCENTRAL Commercial Agriculture website (https://farmdoc.illinois.edu/field-crop-production) and the Home, Yard, and Garden Pest Newsletter (<http://hyg.ipm.illinois.edu/>)

Dobbins, C. L., B. Erickson, B. Nielsen, T. Vyn, B. Johnson, K.A. Wise. 2020. Purdue Crop Cost and Return Guide. Purdue Univ. Coop Ext. Pub. ID-166-W.

Gerber, C., S. M. Brouder, E. P. Christmas, J. Faghihi, B. C. Joern, W. G. Johnson, J. F. Loven, G. Nice, R. L. Nielsen, J. L. Obermeyer, G. E. Ruhl, G. E. Shaner, G. C. Steinhardt. 2020. . Corn and Soybean Field Guide. Purdue Univ. Coop. Ext. Pub. ID-179.

 Guan, W., Ingwell, L. L., & Egel, D. S. S. (2020). High tunnel cucumber production guide. https://doi.org/https://extension.entm.purdue.edu/publications/ID-521/ID-521-W.pdf Johnson, W. 2020 (ed.) United Soybean Board Take Action Program.. <https://iwilltakeaction.com/weeds>

Loux, M., A. Dobbels, W. G. Johnson, T. Legleiter, B. Young, and A. Hager. 2020. revised annually. Weed Control Guide for Ohio, Indiana, and Illinois. Joint publication: Ohio State Univ Coop. Ext. Bul. 789 and Purdue Univ. Coop. Pub. WS16. 176 pp.

Phillips, B., Maynard, E. T., Egel, D. S. S., Ingwell, L. L., & Meyers, S. L. (2020). Midwest Vegetable Production Guide for Commercial Growers 2021 (p. 295). West Lafayette, IN: Purdue University

**Webinars**

Jasinski, J.R. (2020). Increase Engagement with 3D Field Scale Models. Paper presented at Extension Annual Conference, Columbus, OH.

Jasinski, J.R. (2020). Using Mustard Cover Crops to Reduce Plectosporium on Pumpkin. Paper presented at Ohio Produce Network, Columbus, OH.

Jasinski, J.R. (2020). Pumpkin Treatment Decisions Affecting Pollinators. Great Lakes Expo, Grand Rapids, MI.

Jasinski, J.R. (2020). Mustard Cover Crops as a Biofumigant. Great Lakes Expo, Grand Rapids, MI.

Jasinski, J.R. (2020). Review of mustard cover crop biofumigation in pumpkin. Great Lakes Vegetable Working Group, West Lafayette, IN.

Jasinski, J.R.; Welty, C.; Fox Vik, K. (2020). Re-distribution of Samurai Wasp (Trissolcus japonicus) on Fruit Farms in Ohio. Entomological Society of America National Meeting - Virtual, Annapolis, MD.

Jasinski, J.R.; Vernot, K. (2020). Can Mustard Cover Crops Reduce Plectosporium Blight in Pumpkin? National Association of County Agricultural Agents National Meeting, Virginia Beach, VA.

Provided content for Badger Crop Connection Webinar series (5) Pest Management Update Meetings (3) Wisconsin Agri-business Annual Meeting Midwest Food Products Association Winter Meeting (3) IPM Program Staff assisted with a Research Webinar for County Extension Staff IPM Program assisted with 5 Pesticide Applicator training sessions.

International IPM activities: •

Rozeboom, P. 2020. Integrated Pest Management – Using PAMS to the Fullest. SDSU Extension Pest and Crop Webinar and Q&A. 8/27/2020.

 Strunk, C. 2020. Soybean Cyst Nematode – The Silent Yield Robber. SDSU Extension Pest and Crop Webinar and Q&A. 8/20/2020.

Shaffer, G. 2020. Weed Control, Now and Then. SDSU Extension Pest and Crop Webinar and Q&A. 8/13/2020..

Wagner, P. 2020. Blister Beetles in Alfalfa: What You Need to Know. SDSU Extension Pest and Crop Webinar and Q&A. 8/6/2020.

Byamukama, E. 2020. Mid-late Season Corn and Soybean Diseases to Scout For. SDSU Extension Pest and Crop Webinar and Q&A. 7/30/2020.

Kleinjan, J. 2020. 2020 Spring Wheat Varieties. SDSU Extension Pest and Crop Webinar and Q&A. 7/23/2020.

Davis, J. 2020. 2020 Midseason Economic Check-up. SDSU Extension Pest and Crop Webinar and Q&A. 7/16/2020.

Kleinjan, J. 2020. A Review of the Oat Varieties in the 2020 Crop Performance Testing Trials. SDSU Extension Pest and Crop Webinar and Q&A. 7/16/2020.

Varenhorst, A. 2020. Update on the Soybean Gall Midge. SDSU Extension Pest and Crop Webinar and Q&A. 7/2/2020.

Bly, A. 2020. Every Acre Counts. SDSU Extension Pest and Crop Webinar and Q&A. 6/25/2020.

Bauder, S. 2020. Maintaining Round Bale Value through Proper Storage Techniques. SDSU Extension Pest and Crop Webinar and Q&A. 6/18/2020.

Beck, R. 2020. Proper Identification and Management of Palmer Amaranth. SDSU Extension Pest and Crop Webinar and Q&A. 6/11/2020.

Karki, D. 2020. Transitioning to Soil Health Systems: Role of Cover Crops. SDSU Extension Pest and Crop Webinar and Q&A. 6/11/2020.

Rozeboom, P. 2020. Using IPM – Pest Management Strategies for Diverse Production. SDSU Extension Pest and Crop Webinar and Q&A. 6/4/2020.

Varenhorst, A. 2020. Early Season Insect Pests. SDSU Extension Pest and Crop Webinar and Q&A. 5/28/2020.

Byamukama, E. 2020. Scouting for Early Season Diseases in Field Crops. SDSU Extension Pest and Crop Webinar and Q&A. 5/28/2020.

Varenhorst, A. 2020. How Does the Weather Affect Insect Pests? SDSU Extension Pest and Crop Webinar and Q&A. 5/21/2020.

Bauder, S. 2020. The Simple Guide to Understanding Ag Research. SDSU Extension Pest and Crop Webinar and Q&A. 5/21/2020.

Schaffer, G. 2020. Weed Control on a Budget. SDSU Extension Pest and Crop Webinar and Q&A. 5/14/2020. 20. Edwards, L. 2020. Early Summer Climate Outlook. SDSU Extension Pest and Crop Webinar and Q&A. 5/14/2020.

Benthall, K.J. and Rice, K.B. 2020. On the move: Attract-and-kill tactic for Japanese beetles. 2020 Joint North Central and Southwester Branch Virtual Student Competition.

Stahl. L., L. Benken, A. Rieck-Hinz, M. Anderson, & P. Bongard.. July 14, 16, 21, & 23, 2020. Essential Row Crop Management - Summer 2020 series: <https://extension.umn.edu/courses-and-events/essential-row-crop-management-online>

Goplen, J. B. McNeill. July 23, 2020. Virtual Youth Crop Scouting Competition: <https://blog-crop-news.extension.umn.edu/2020/07/virtual-youth-crop-scouting-competition.html>

Miller. R. Aug. 31., 2020. Cover Crop Virtual Field Day: <https://www.youtube.com/watch?v=ucUREU4tjiI>

Potter, B. Aug. 11, 2020. Corn Rootworm Plot Tour (SW MN virtual tour): <https://www.youtube.com/watch?v=N8oMyB8uGGY>

Nicolai, D. Dec. 8-10, 2020. Crop & Pest Management Connect: <https://blog-crop-news.extension.umn.edu/2020/11/crop-pest-management-connect.html>

Leaf, T. & A. Hanson. Dec. 15, 2020. Integrated Pest Management Concepts and Benefits. Joint webinar with Minnesota Department of Agriculture: https://www.eventbrite.com/e/integrated-pest-management-concepts-and-benefits-tickets-129338654397

Take Action Weed Science Webinar Series (7 Sessions Feb-March) Statewide Virtual EMG Basic

Training- Insect ID and Control". (October 2020). Small Farm Education Field Day and Webinar Series". (August 2020).

 Statewide 2020 Home Vegetable Gardening-Session 2 COVID". (April 2020). Emerald Ash Borer University Webinar Series (10 sessions in 2020). Purdue Landscape Report Webinar Q&A(6 sessions in 2020)

**YOUTUBE**

https://www.youtube.com/channel/UCzcWaLH3mx7HUKh4OF7bYPA/featured

Black Cutworms, Scouting and ID in Corn Crops, Sporecaster, the Soybean White Mold Forecaster app, Sporecaster, the science behind the smartphone app,Scouting Japanese Beetles on Corn and Soybean, IPM Management Soybean Variety and Breeding Trials, Resistance to White Mold Research Update: Soybean Variety and Sporecaster app Organic No-till Corn Into Cereal Rye and Hairy Vetch Cover Crop Wisconsin Agricultural Outlook Forum January 28, 2020 Paul Mitchell – 2020 Wisconsin Farm Income Mark Stephenson, 2020 Dairy Situation and Outlook Ted Haney, 2020 Canadian Perspective on Industrial Hemp Tyler Mark, 2020 Kentucky Perspective on Industrial Hemp Paul Mitchell, 2020 Wisconsin Perspective on Industrial Hemp Brenda Boetel, 2020 Grain and Livestock Situation and Outlook Steve Deller, 2020 Contribution of Agriculture to the Wisconsin Economy Tessa Conroy, 2020 Wisconsin Economy Situation and Outlook Dawn Thilmany, 2020 Colorado Perspective on Industrial Hemp Fusarium Head Blight (FHB) of Wheat and Barley, Management Recommendations White Mold of Soybean and its Management Manure Tracker App: Basic Field Records Manure Tracker App, Getting Started Manure Tracker App: Advanced Field Records Manure Tracker App: Exporting Records for SnapPlus Waterhemp Herbicide Resistance Update and Management in Soybeans Soil Sampling Basics: Pulling Soil Cores and Submitting Samples Researching Fungicide Applications for Grain-Corn, Effect on Yield & Cost Recovery Keynote: Finding success with diverse small grains Keynote: What does farm resiliency look like? Cropping system strategies Working with macro-and micro-nutrients in your soil Transitioning to organic grain production Harvest and post harvest tips for long-term grain quality Turning problems into solutions: Farmer panel Build fertility and provide N with cover crops Organic no-till systems Organic no-till systems Alternative small grains: Buckwheat Alternative small grains: Winter wheat Alternative small grains: Rye, winter wheat, spelt, open pollinated corn Alternative grains: Kernza Innovative weed management tools Innovative weed management tools Ecological weed management in organic systems Ecological management for tough weeds: Canada Thistle Ecological management for tough weeds: Ragweed More beneficial insects through habitat enhancement Building healthy soil microbial communities Organic market options Guide financial decisions with the OGRAIN Compass A farmer’s view of the OGRAIN Compass Hemp research: What we have learned Unlisted Videos Tarspotter App 2020 walkthrough Shelby Ellison Hemp Variety Trial Smith Sludge Soybean trials Laboski PK corn update Laboski PK Soybean update Grey Leaf Spot and Northern Corn Leaf Blight Research Plots Diseases of Wheat, 2020 PMU Diseases of Corn, 2020 PMU Diseases of Soybean, 2020 PMU

Principles of Pruning - Included Bark 21-Jan-20 Principles of Pruning - Making a Good Cut 21-Jan-20 Principles of Pruning - When & Why to Prune 21-Jan-20 Drone Uses for Agriculture Roadshow 22-Jan-20 Morel and Oyster Mushroom Certification Workshops Iowa State University 18-Feb-20 Fungicide Resistance in Soybeans (Frogeye Leaf Spot & Brown Spot) 2-Mar-20 Harrison County Science Policy Tour 7-Apr-20 Story County Weed Resistance 7-Apr-20 Befriend Your Cations 22-Apr-20 High Tunnel Controllers 22-Apr-20 Irrigation Controllers 22-Apr-20 Japanese beetle 22-Apr-20 Know Your Soil 22-Apr-20 Need help with a plant problem? Get in touch with your Plant Clinic 22-Apr-20 Resources to Manage Vegetable Diseases and Insects 22-Apr-20 Resources to Scout and Identify Vegetable Diseases and Insects 22-Apr-20 Squash Bug and Squash Vine Borer 22-Apr-20 Tomato & Tobacco Hornworm 22-Apr-20 Gardening While Isolated Part One: Starting Your Garden From Seeds 24-Apr-20 Colorado Potato Beetle 27-Apr-20 Cucumber Beetles 27-Apr-20 Gardening While Isolated Part Two: Fertilizing Your Seedlings 29-Apr-20 Gardening While Isolated: Part Three: Organic Pest Management 11-May-20 Early Season Planting (What Could Go Wrong?) 12-May-20 Early Season Planting: Soil Temperature, Hypocotyls, Radicles and Cotyledons 13-May-20 How to Plant a Container Grown Tree 13-May-20 Safe Mushroom Foraging Part I: Common Spring Mushrooms in Iowa 14-May-20 Safe Mushroom Foraging: Spring Webinar Part 1 Q&A 16-May-20 Gardening While Isolated: Part Four: Transplanting and Fertilizing 18-May-20 Corn Growth and Development 21-May-20 Crop Scouting Tips and Tricks 21-May-20 Diplodia Tip Blight of Pine Trees 21-May-20 Disease Identification 21-May-20 Insect Pest Identification 21-May-20 Soybean Growth and Development 21-May-20 Stand Assessments 21-May-20 Weed Identification 21-May-20 Don't SNUB those GRUBS 22-May-20 Black Knot of Plum and Cherry Trees 26-May-20 Dothistroma Needle Blight of Pine Trees 26-May-20 Frost Damage (Early Season Planting) 28-May-20 Sidewall Compaction 28-May-20 Tips for Hunting Wild Edible Mushrooms 16-Jun-20 Weed ID: Common lambsquarters 16-Jun-20 Welcome to Class Ag Educators Podcast Season 2 23-Jun-20 Weed ID: Woolly cup grass and foxtails 25-Jun-20 Bagworms (They're out of the bag!) 26-Jun-20 Bagworms: They are not worms, but they are in a bag! 26-Jun-20 Weed ID: Smartweeds (Polygonaceae) 2-Jul-20 Will cereal rye cover crop suppress weeds? 9-Jul-20 Weed ID: Pigweed VS. Waterhemp (Amaranthus species) 14-Jul-20 Alfalfa and Potato Leafhopper Video (Control, Damage, Insecticide) 24-Jul-20 Corn Rootworm Damage (This really happens?!?) 24-Jul-20 Weed ID: Canada thistle 30-Jul-20 Weed ID: Musk thistle 30-Jul-20 Weed ID: Bull thistle 3-Aug-20 Weed ID: Field thistle 5-Aug-20 Weed ID: Wild carrot 14-Aug-20 Weed ID: Wild parsnip 14-Aug-20 Weed ID: Poison Hemlock 25-Aug-20 Weed ID: Eastern Black Nightshade (Solanaceae family) 28-Aug-20 Top 5 "Derecho" corn injuries 4-Sep-20 Weed ID: Horsenettle (Solanaceae family) 4-Sep-20 WEED ID: Buffalobur (Solanaceae family) 7-Sep-20 ISU Neely-Kinyon Farm Organic Field Day 2020 9-Sep-20 WEED ID: Jimsonweed (Solanaceae family) 9-Sep-20 Safe Mushroom Foraging Part II: Common fall mushrooms in Iowa 11-Sep-20 ISU Horticulture Research Station Virtual Field Day: Summer cover crops for vegetable production 18-Sep-20 Volunteer Corn (Thanks Derecho!) 21-Sep-20 Baby Praying Mantis...They've Hatched VIDEO! 24-Sep-20 Praying Mantis Video 24-Sep-20 Squash bees (Hanging out in the garden!) 25-Sep-20 Squash Bug (NOT Stink Bug...or Squash Vine Borer!) 25-Sep-20 Compost spreader in action 28-Sep-20 HOW ARE THESE WEEDS SURVIVING?!? Herbicide Resistance Screening in Waterhemp 1-Oct-20 This Radish is HUGE! (Cover Crop Research) 9-Oct-20 How to Identify Insects: Incomplete metamorphosis vs complete metamorphosis 15-Oct-20 How to Identify Plant Diseases: Signs and Symptoms 15-Oct-20 How to Identify Weeds: Monocots vs. Dicots 15-Oct-20 WEED ID: Yellow Nutsedge (Tiger Nuts or Chufa!) 15-Oct-20 Weed ID: Giant Foxtail, Green Foxtail and Yellow Foxtail - How to distinguish the differences! 16-Oct-20 Bad Lip Reading - GARDEN TOUR 19-Oct-20 Home Garden Tour: Integrated Pest Management Tips 19-Oct-20 Mowing for Monarchs - Can mowing milkweed help the monarchs? 20-Oct-20 Weed ID: Grasses (Barnyard grass, Large crabgrass & Fall panicum) 23-Oct-20 Late Season Scouting for Weeds (Those Pesky ESCAPES!) 9-Nov-20 Where To Find Soybean Gall Midge 20-Nov-20 Crop Scouting: WHAT is Crop Scouting and WHY should we do it 23-Nov-20 Weed ID: Garlic mustard 3-Dec-20 WEED ID: Poison Ivy & Virginia Creeper (Look-a-likes!) 10-Dec-20 WEED ID: Burdock (Thanks for Velcro!) 14-Dec-20 Tiny Insects Discovered on Plants (Oyster Shell Scale) 23-Dec-20

https://www.youtube.com/playlist?list=PLlldDb7IZYqK0Tqnl8o32\_AKQw-GZ1v3s

138 produced in 2020. IPM Youtube page - https://www.youtube.com/muipm

Multiple IPM related videos were published in 2020 available at marketjournal.unl.edu

Soybean Gall Midge Scouting: https://www.youtube.com/watch?v=Bt9DkgOQVpw Managing foreign material in soybean: Pre-harvest preparations: <https://www.youtube.com/watch?v=yiI85RTsVXw>

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**Book Chapters**

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