# Laura L. Ingwell Purdue University, 901 W. State St West Lafayette, IN 47907

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#### Education

**Doctor of Philosophy (Ph.D.), Entomology**, University of Idaho, May 2014 Advisor: Dr. Nilsa A. Bosque-Pérez

Dissertation title: The *Barley yellow dwarf virus-Rhopalosiphum padi* pathosystem: an examination of host plant-virus-vector interactions

Masters of Science (M.S.), Ecology, University of Rhode Island, December 2009

Advisor: Dr. Evan L. Preisser

Thesis title: Naturally-occurring resistance among eastern hemlock (*Tsuga canadensis*) to the invasive hemlock woolly adelgid (*Adelges tsugae* Annand; HWA)

Bachelor of Science (B.S.), Biology, University of Wisconsin-Milwaukee, May 2006

### Current Position

Assistant Professor, Department of Entomology, Purdue University, Aug 2019-present

### Peer Reviewed Publications (17 total)

- Ternest, J.J, **Ingwell, L.L.**, Foster, R.E. and I. Kaplan. 2020. Comparing prophylactic versus threshold-based insecticide programs for striped cucumber beetle (Coleoptera: Chrysomelidae) management in watermelon. Journal of Economic Entomology DOI:10.1093/jee/toz346
- Guan, W., Maynard, E.T., Aly, B., Zakes, J., Egel, D.S. and L.L. Ingwell. 2019. Parthenocarpic cucumber cultivar evaluation in high-tunnel production. HortTechnology DOI: 10.21273/HORTTECH04370-19.
- **Ingwell, L.L.** and I. Kaplan. 2019. Insect exclusion screens reduce cucumber beetle infestations in high tunnels, increasing cucurbit yield. Journal of Economic Entomology 112(4):1765-1773.
- Carillo, J., **Ingwell, L.L.**, Li, X. and I. Kaplan. 2019. Domesticated tomatoes are more vulnerable to negative plant-soil feedbacks than their wild relatives. Journal of Ecology DOI: 10.1111/1365-2745.13157.
- **Ingwell, L.L.**, Avila-Ruiz, D.A., Foster, R.E. and I. Kaplan. 2018. Tailoring insect biocontrol for high tunnels. Biological Control DOI: 10.1016/j.biocontrol.2018.04.012.
- **Ingwell, L.L.**, Thompson, S.L., Kaplan, I. and R.E. Foster. 2017. High Tunnels: Protection for, rather than from, insect pests? Pest Management Science DOI: 10.1002/ps.4634.

- **Ingwell, L.L.**, LaCroix, C.J., Rhoades, P.R., Karasev, A.V. and N.A. Bosque-Pérez. 2017. Agroecological and environmental factors influence Barley yellow dwarf viruses in grasslands in the US Pacific Northwest. Virus Research DOI: 10.1016/j.virusres.2017.04.010.
- Sadeghi, S.E., Bjur, J., **Ingwell, L.L.**, Unger, L., Bosque-Pérez, N.A., and S.D. Eigenbrode. 2016. Interactions between *Metopolophium festucae cerealium* (Hemiptera: Aphididae) and Barley yellow dwarf virus (BYDV-PAV). Journal of Insect Science **16**(1): 21; 1-6. DOI: 10.1093/jisesa/iev160.
- **Ingwell, L.L** and N.A. Bosque-Pérez. 2015. New experimental hosts of *Barley yellow dwarf virus* among wild grasses with implications for grassland habitats. Plant Pathology **64**(6): 1300-1307. DOI 10.1111/ppa.12387.
- **Ingwell L.L.**, Bosque-Pérez N.A., 2015. The invasive weed *Ventata dubia* is a host of *Barley yellow dwarf virus* with implications for an endangered grassland habitat. Weed Research **55**(1): 62-70. DOI 10.1111/wre.12110.
- **Ingwell, L.L.**, R. Zemetra, C. Mallory-Smith and N.A. Bosque-Pérez. 2014. *Arundo donax* infection with *Barley yellow dwarf virus* has implications for biofuel production and nonmanaged habitats. Biomass and Bioenergy **66**: 426-433. DOI http://dx.doi.org/10.1016/j.biombioe.2014.03.043.
- Roosien, B.K., R. Gomulkiewicz, **L.L. Ingwell**, N.A. Bosque-Pérez, D. Rajabaskar and S.D. Eigenbrode. 2013. Conditional vector preference aids the spread of plant pathogens: Results from a model. Environmental Entomology **42**(6): 1299-1308.
- **Ingwell, L.L.**, M. Miller-Pierce, R.T. Trotter III, and E.L. Preisser. 2012. Vegetation and invertebrate community response to eastern hemlock decline in southern New England. Northeastern Naturalist **19**(4): 541-558.
- **Ingwell, L.L.**, S.D. Eigenbrode, and N.A. Bosque-Pérez. 2012. Plant viruses alter insect behavior to enhance their spread. Scientific Reports **2**: 578 DOI 10.1038/srep00578.
- **Ingwell, L.L.** and E. Preisser. 2011. Using citizen science programs to identify host resistance in pest-invaded forests. Conservation Biology **25**(1): 182-188.
- **Ingwell, L.L.**, S.J. Wright, K.K. Becklund, S.P. Hubbell, and S.A. Schnitzer. 2010. The impact of lianas on 10 years of tree growth and mortality on Barro Colorado Island, Panama. Journal of Ecology **98**: 879-887.
- **Ingwell, L.L.**, J. Brady, M. Fitzpatrick, B. Maynard, R. Casagrande, and E. Preisser. 2009. Intraspecific variation in *Tsuga canadensis* foliar chemistry. Northeastern Naturalist **16**(4): 585-594.

- Ingwell, L.L. 2020. Overwintering pests. Veg. Crops Hotline. Issue 669
- **Ingwell, L.L.** 2020. The utility of yellow sticky cards. Reprinted in Illinois Fruit and Vegetable News. Vol. 26, No. 3, March 26, 2020.
- Ingwell, L.L. 2020. The utility of yellow sticky cards. Veg Crops Hotline. Issue 669
- **Ingwell, L.L.** 2019. Considerations as you prepare for winter production. Veg. Crops Hotline. Issue 666.
- Maynard, L. and L.L. Ingwell. 2019. Sweet corn insect observations. Veg. Crops Hotline. Issue 665
- Bledsoe, L., **Ingwell, L.L.**, Krupke, C., Long, E.Y., Obermeyer, J. and C. Sadof. 2019. Hover flies. Veg Crops Hotline. Issue 665
- Bledsoe, L., **Ingwell, L.L.**, Krupke, C., Long, E.Y., Obermeyer, J. and C. Sadof. 2019. Hover flies. Facts for Fancy Fruit. Issue 19-11
- Oberymeyer, J., Krupke, C., Long, E.Y., **Ingwell, L.L.,** Bledsoe, L., and C. Sadof. 2019. Annoying swarms of 'bees' and mystery 'worms' on corn! Pest and Crops Newsletter. Issue 2019.23
- Maynard, L., Egel, D. and **L.L. Ingwell.** 2019. Wilting Cucurbits! What could it be? Veg. Crops Hotline. Issue 665
- **Ingwell, L.L.**, Leach, A.B. and D. Egel. 2019. Whitefly identification and control. Veg. Crops Hotline. Issue 664
- **Ingwell, L.L.** 2019. Corn earworm trapping is underway. Veg. Crops Hotline. Issue 661. Retrieved from https://vegcropshotline.org/article/corn-earworm-trapping-is-underway/
- Guan, W. and **L.L. Ingwell. 2019**. Watch for two-spotted spider mites on high tunnel cucumbers. Veg. Crops Hotline. Issue 659. Retrieved from https://vegcropshotline.org/article/watch-for-two-spotted-spider-mites-on-high-tunnel-cucumbers/
- **Ingwell, L.L.** and D. Egel. 2019. Insecticides kill insects. Veg. Crops Hotline. Issue 658. Retrieved from https://vegcropshotline.org/article/insecticides-kill-insects/
- **Ingwell, L.L.** and D. Egel. 2019. Seedcorn maggots and wireworms in cucurbits. Veg. Crops Hotline. https://vegcropshotline.org/article/seed-corn-maggots-and-wireworms-in-cucurbits/

- **Ingwell, L.L.** 2019. Pest Monitoring. Veg. Crops Hotline. Issue 657. Retrieved from https://vegcropshotline.org/article/pest-monitoring/
- Egel, D. and **L.L. Ingwell.** 2019. Tomato spotted wilt virus. Veg. Crops Hotline. Issue 655. Retrieved from https://vegcropshotline.org/article/tomato-spotted-wilt-virus/
- Egel, D., Guan, W. and **L.L. Ingwell**. 2019. Susceptibility of melon varieties to bacterial wilt. Veg. Crops Hotline. Issue 655. Retrieved from https://vegcropshotline.org/article/susceptibility-of-melon-varieties-to-bacterial-wilt/
- **Ingwell, L.L.** 2018. What's eating my squash? Veg. Crops Hotline. Issue 651. Retrieved from https://vegcropshotline.org/article/whats-that-eating-my-squash/
- Foster, R.E. and **L.L. Ingwell**. 2018. Why your insecticide may not be working as well as you would like. Veg. Crops Hotline. Issue 648. Retrieved from https://vegcropshotline.org/article/why-your-insecticide-may-not-be-working-as-well-as-you-would-like/
- Ingwell, L.L., Foster, R.E. and D. Egel. 2018. Spider mites on cucurbit crops. Veg. Crops Hotline. Issue 646. Retrieved from https://vegcropshotline.org/article/spider-mites-on-cucurbit-crops/
- Guan, W., Egel, D., and **L.L. Ingwell**. 2018. Bacterial wilt of cucumbers grown in a high tunnel. Veg. Crops Hotline. Issue 643. Retrieved from http://vegcropshotline.org/article/bacterial-wilt-of-cucumbers-grown-in-a-high-tunnel/
- Egel, D. and **L.L. Ingwell.** 2018. Pollinator health and foliar fungicide use. Veg. Crops Hotline. Issue 642. Retrieved from https://vegcropshotline.org/article/pollinator-health-and-foliar-fungicide-use/
- Foster, R. E. and **L.L. Ingwell**. 2018. Organic control methods for striped cucumber beetles. Veg. Crops Hotline. Issue 641. Retrieved from https://vegcropshotline.org/article/organic-control-methods-for-striped-cucumber-beetles/
- **Ingwell, L.L.** 2018. Aphids in high tunnels. Veg. Crops Hotline. Issue 640. Retrieved from https://vegcropshotline.org/article/aphids-in-high-tunnels-2/
- Egel, D. and **L.L. Ingwell**. 2018. Tomato viruses in greenhouse. Veg. Crops Hotline. Issue 640. Retrieved from https://vegcropshotline.org/article/tomato-viruses-ingreenhouse/
- **Ingwell, L.L.** 2017. Two-spotted spider mite control. Veg. Crops Hotline. Issue 631. Retrieved from https://vegcropshotline.org/article/two-spotted-spider-mite-control/
- **Ingwell, L.L.** [PurdueExtenstionEntm]. (2017, May 18). Installing high tunnel insect exclusion screen [Video File]. Retrieved from https://youtu.be/U1BYxOXc-RM

- **Ingwell, L.L.** and I. Kaplan. 2017. High tunnel screening for insect pest management. Veg. Crops Hotline. Issue 624. Retrieved from https://vegcropshotline.org/article/high-tunnel-screening-for-insect-pest-management/
- **Ingwell, L.L.** 2016. Aphid management in winter green production in high tunnels. Veg. Crops Hotline. Issue 622. Retrieved from https://vegcropshotline.org/article/aphid-management-in-winter-green-production-in-high-tunnels/
- **Ingwell, L.L.** 2016. Considerations and suppliers for biological control. Veg. Crops Hotline. Issue 616. Retrieved from https://vegcropshotline.org/article/considerations-and-suppliers-for-biological-control/
- **Ingwell, L.L.** and R.E. Foster. 2016. Augmentation biological control in high tunnels. Veg. Crops Hotline. Issue 615. Retrieved from https://vegcropshotline.org/article/augmentation-biological-control-in-high-tunnels/
- R.E. Foster and **L.L. Ingwell**. 2016. Aphids in high tunnels. Veg.Crops Hotline. Issue 614. Retrieved from https://vegcropshotline.org/article/aphids-in-high-tunnels/

### Funding (\$ total)

- Mary S. Rice Grant. "Acquisition of an Imants Rotary Spader to support specialty crop research". Purdue University, 2020 \$10,000
- Purdue AgSEED. "Investigation of spectral light quality as a pest management tool for hemp production". PI 2020 \$50,000
- USDA FAS Borlaug International Agricultural Science and Technology Fellowship. "Integrated Pest Management in hydroponic crops". Co-PI. 2018 \$46,660
- Mary S. Rice Grant. "Irrigation equipment for specialty crop research at multiple PACs". Purdue University, 2018 \$10,000
- Purdue AgSEED. "Investigating the role of symbiotic microbes in transmission of insect-vectored plant pathogens". Co-PI 2018 \$50,000
- USDA NCR-SARE. "Improving seedless cucumber production to diversify high tunnel crops in the North Central Region". Co-PI. 2017 \$200,000
- Mary S. Rice Grant. "High tunnel maintenance and crop protections of specialty crops research". Purdue University, 2017 \$10,000
- Mary S. Rice Grant. "Updates to Meigs high tunnels". Purdue University, 2016 \$6,000
- NIFA USDA AFRI-ELI Postdoctoral Fellowship. "Integrating epidemiology, vector control, and natural crop resistance to manage a devastating beetle-transmitted cucurbit pathogen". 2016-2017 \$150,000
- Mary S. Rice Grant. "Rotary plow and other accessories for the BCS tractor to facilitate research in high tunnels". Purdue University, 2015 \$7,125
- USDA-AFRI Student Travel Grant. ESA Annual Mtg. Austin, TX, Nov. 2013 \$500 Graduate and Prof. Student Association Travel Award. (U. Idaho). 2012-2013 \$450
- Pacific Branch of the Entomological Society of America Travel Award 2013 \$200
- Graduate and Prof. Student Association Travel Award. (U. Idaho). 2010-2011 –\$623 URI Graduate Research Grant 2009 \$800

#### Awards

Purdue College of Agriculture Team Award, Indiana Small Farm Conference Committee, 2019

2<sup>nd</sup> Place PhD Student Paper Pres. ESA Pacific Branch Mtg. Waikoloa, HI, March 2011 1<sup>st</sup> Place Oral Pres., Northeastern Biol. Grad. Student Conf. Halifax, NS 2009 – \$100 Student Leadership Award. ESA Pacific Branch Mtg. Lake Tahoe, Nevada, April 2013 Dept. of Biological Sciences Graduate Student Teaching Award (URI) 2008-2009

### *Invited Seminars (8 total)*

University of Illinois Urbana Champaign, Dept. Crop Science – Urbana, IL, Feb. 2017 Montana State University, Dept. Research Centers – Bozeman, MT, Nov. 2016 Oregon State University, Dept. Crop and Soil Science – Corvalis, OR, April 2016 University of Wisconsin Green Bay, Dept. Biology – Green Bay, WI, Dec. 2015 Loyola University, Institute of Environmental Sustainability – Chicago, IL, Feb. 2015 Purdue University Calumet, Dept. Biology – Hammond, IN, Feb. 2015 Purdue University, EcoLunch Seminar Series – West Lafayette, IN, Oct. 2014 Purdue University, Entomology Seminar Series – West Lafayette, IN, Aug. 2014

### Organized Symposia

Pacific Branch Entomological Society of America Annual Meeting – April 7-10, 2013 Co-organized student symposium entitled "Diffusion of Innovations- A 50 year anniversary"

### *Invited Symposium Presentations (15 total)*

- Pecenka, J., **Ingwell, L.L.,** Foster, R.E., Krupke, C., and I. Kaplan. 2019. Implementing IPM to improve pollinator health and profitability of Midwestern agroecosystems. Entomological Society of America North Central Branch Annual Meeting. Cincinnati, OH. March 17-20, 2019.
- Ternest, J., **Ingwell, L.L.,** Kaplan, I., and R.E. Foster. 2019. Comparing prophylactic vs. threshold based pest management and its impact on pollinators in commercial watermelon fields. Entomological Society of America North Central Branch Annual Meeting. Cincinnati, OH. March 17-20, 2019.
- Skidmore, A., Pecenka, J., Grijalva, I., Krupke, C., **Ingwell, L.L.,** Foster, R.E., Yaninek, S., and I. Kaplan. 2019. Ecosystem service bundling: Integrating predator and pollinator responses to insecticides in midwestern cropping systems. Entomological Society of America North Central Branch Annual Meeting. Cincinnati, OH. March 17-20, 2019.
- Hung, K-L., Kaplan, I., **Ingwell, L.L.,** and K. Goodell. 2018. Relative roles of pesticide management and landscape context in determining pest pressure, predator abundance, and pollinator visitation in pumpkin fields. Entomological Society of America Annual Meeting, Vancouver, BC, Canada. November 11-14, 2018.

- **Ingwell, L.L.** 2018. Urban food production and entomological opportunities. Entomological Society of America North Central Branch Annual Meeting. Madison, WI. March 18-21, 2018.
- Szendrei, Z., T. Wood, Y. Zhang, **L.L. Ingwell** and I. Kaplan. 2018. Quantifying health risks to honey bees in pickling cucumbers in agroecosystems in Michigan. Entomological Society of America North Central Branch Annual Meeting. Madison, WI. March 18-21, 2018.
- **Ingwell, L.L.** and N.A. Bosque-Pérez. 2017. Landscape factors to consider when managing vector-borne pathogens. Entomological Society of America North Central Branch Annual Meeting. Indianapolis, IN. June 4-7, 2017.
- **Ingwell, L.L.,** R. Foster and I. Kaplan. 2017. Lessons learned in high tunnel vegetable production: The good, the bad and the wilty. Entomological Society of America North Central Branch Annual Meeting. Indianapolis, IN. June 4-7, 2017.
- **Ingwell, L.L.** and N.A. Bosque-Pérez. 2016. Factors affecting aphid-luteovirus interactions in agricultural and non-managed ecosystems. International Congress of Entomology in conjunction with the Entomological Society of America Annual Meeting. Orlando, FL. Sept. 25-30, 2016.
- **Ingwell, L.L.**, N.A. Bosque-Pérez, and I. Kaplan. 2016. Examining vector-pathogen-host plant interactions: insights from a virus and bacterium. Entomological Society of America North Central Branch Annual Meeting. Cleveland, OH. June 5-8, 2016.
- Bosque-Pérez, N.A., **L.L. Ingwell**, D. Rajabaskar, and S.D. Eigenbrode. 2012. Plant-virus-vector interactions: Insights from Luteovirus pathosystems. Fifth Plant Virus Ecology Network Workshop. Lawrence, Kansas. September 10-13, 2012.
- **Ingwell, L.L.**, and N.A. Bosque-Perez. 2012. Using molecular tools to study plant virus-vector interactions. Entomological Society of America Pacific Branch Annual Meeting, Portland, Oregon. March 25-28, 2012.
- Bosque-Pérez, N.A., **L.L. Ingwell**, and S.D. Eigenbrode. 2011. The influence of virus-induced changes in plants on aphid vectors and potential impacts on virus disease epidemiology. American Phytopathological Society Caribbean Division and Entomological Society of America South Eastern Branch Joint Meeting. San Juan, Puerto Rico. March 19-22, 2011.
- **Ingwell, L.L.**, N.A. Bosque-Pérez, and S.D. Eigenbrode. 2011. Viruliferous and nonviruliferous aphids differ in their responses to Barley yellow dwarf virus-infected plants. 4th Plant Virus Ecology Ntk Wkshp, Montpellier, France. May 29-Jun. 1, 2011.

Roosien, B.K., R. Gomulkiewicz, **L.L. Ingwell**, N.A. Bosque-Pérez, and S.D. Eigenbrode 2011. Plant infection status and acquisition of virus affect vector behavior and the spread of plant viruses: Results from a model. 4th Plant Virus Ecology Ntk Wkshp, Montpellier, France. May 29-Jun. 1, 2011.

### Invited Extension Presentations (26 total)

- **Ingwell, L.L.,** Pecenka, J. and S. Shepherd. 2020. Updates on the impacts of pesticide use on pollinator health. Southwest Indiana Melon Meeting. French Lick, IN. March 13, 2020.
- **Ingwell, L.L.,** Long, E.Y., and S. Meyers. 2020. Meet the new Purdue Specialists in Entomology and Horticulture & Landscape Architecture. Indiana Horticulture Conference and Expo. February 11-13, 2020.
- **Ingwell, L.L.** and E.Y. Long. 2020. Intro to the spray guide and new entomologists. Indiana Horticulture Conference and Expo. February 11-13, 2020.
- **Ingwell, L.L.** 2020. LED spectral light quality as a tool for pest management in CEA. Indiana Horticulture Conference and Expo. February 11-13, 2020.
- **Ingwell, L.L.** 2020. Keeping aphids under control. Indiana Horticulture Conference and Expo. February 11-13, 2020.
- **Ingwell, L.L. 2020.** Light choices for hemp pest management. Indiana Horticulture Conference and Expo. February 11-13, 2020.
- Egel, D., Maynard, E., **Ingwell, L.L.**, Meyers, S., and E.Y. Long. 2020. Introducing the new online format of the Midwest Vegetable Production Guide (ID-56). Indiana Horticulture Conference and Expo. February 11-13, 2020.
- **Ingwell, L.L.** 2020. Reducing pollinator exposure to pesticides. Illiana Vegetable Growers Symposium. Sherrerville, IN. Jan. 7, 2020.
- **Ingwell,** L.L. 2020. Managing insects for high tunnels. Illiana Vegetable Growers Symposium. Sherrerville, IN. Jan. 7, 2020.
- **Ingwell, L.L.** 2019. Insect management in hydroponic production. Greenhouse and Indoor Hydroponic Workshop. West Lafayette, IN. September 5, 2019.
- Wood, T., Zhang, Y. Kaplan, I., **Ingwell, L.L.,** and Z. Szendrei. 2019. Does chemical management affect pickling cucumber pollination? Annual meeting of the Michigan commercial beekeeper's association. Grand Rapids, MI. July 26, 2019.
- Wood, T., Zhang, Y., Kaplan, I., **Ingwell, L.L.,** and Z. Szendrei. 2019. The impact of landscape and pollen diet composition on neonicotinoid exposure for honey bees in intensive agriculture. Saginaw Valley research and extension center field day.

- Frankenmuth, MI. March 11, 2019.
- **Ingwell, L.L.**, Pecenka, J. and I. Kaplan. 2019. Pollinator Safety: Balancing pest management and exposure risks. Southwest Indiana Melon Meeting. French Lick, IN. March 8, 2019.
- **Ingwell, L.L.,** T. Wood, and K.J. Hung. 2019. What's happening with pollinators in cucumber and pumpkin? Indiana Horticulture Congress. February 12-14, 2019.
- **Ingwell, L.L.** 2018. Managing mites and insects in controlled environments. 2018 Northeast Indiana Landscape and Turf Seminar. Fort Wayne, IN. October 19, 2018.
- **Ingwell, L.L.** 2018. Insect pest management and pollinator stewardship in pumpkins. Pumpkin Field Day at the Ewing Demo Center. Ewing, IL. September 6, 2018.
- **Ingwell, L.L.** 2018. Biological control of insects in hydroponic production. Greenhouse and Indoor Hydroponic Workshop. West Lafayette, IN. September 5, 2018.
- **Ingwell, L.L.** 2018. Pest management in high tunnels. Indiana Small Farm Conference. Danville, IN. March 1-3, 2018.
- **Ingwell, L.L.** 2018. Insect and mite management in greenhouse production. Indiana Horticultural Congress. Indianapolis, IN. February 13-15, 2018.
- **Ingwell, L.L.** 2017. Pest management in high tunnels. Hamilton County Beginning Farmer Tour and Workshop. Noblesville, IN. September 27, 2017.
- **Ingwell, L.L.** 2017. Pollinators in home gardens. Pinney-Purdue Vegetable and High Tunnel Field Day. Wanatah, IN. August 15, 2017.
- **Ingwell, L.L.** 2017. Pollinators in pumpkin production. Pinney-Purdue Vegetable and High Tunnel Field Day. Wanatah, IN. August 15, 2017.
- **Ingwell, L.L.** 2017. High tunnel cucumber beetle management. Indiana Horticultural Congress. Indianapolis, IN. Jan. 10-12, 2017.
- **Ingwell, L.L.**, R. Foster and I. Kaplan. 2016. Biological control in high tunnels. Indiana Horticultural Congress. Indianapolis, IN. Jan. 19-21, 2016.
- **Ingwell, L.L.**, R. Foster and I. Kaplan. 2015. Experiences with biological control in high tunnels. Indiana Horticultural Congress. Indianapolis, IN. Jan. 20-22, 2015.

### Contributed Presentations (28 total)

**Ingwell, L.L.** and Mohamed, R. 2019. Environmental factors that impact biological control under cover. Entomological Society of America North Central Branch Annual

- Meeting. Cincinnati, OH. March 17-20, 2019.
- Pecenka, J., Foster, R., **Ingwell, L.L.,** Krupke, C., and I. Kaplan. 2018. Response of pests and pollinators to multiple routes of insecticide exposure across adjacent cropping systems. Entomological Society of America Annual Meeting, Vancouver, BC, Canada. November 11-14, 2018.
- Ternest, J., **Ingwell, L.L.,** I. Kaplan, and R. Foster. 2018. Integrated pest and pollinator management: Evaluating grower practices and insect communities on commercial watermelon farms. Entomological Society of America Annual Meeting, Vancouver, BC, Canada. November 11-14, 2018.
- Wood, T.J., Kaplan, I., **Ingwell, L.L.,** and Z. Szendrei. 2018. The impact of landscape and pollen diet composition on neonicotinoid exposure for honey bees in intensive agriculture. Entomological Society of America Annual Meeting, Vancouver, BC, Canada. November 11-14, 2018.
- **Ingwell, L.L.** and I. Kaplan. 2017. New approaches to managing cucumber beetles and bacterial wilt. Entomological Society of America Annual Meeting, Denver, CO. November 5-8, 2017.
- Bosque-Pérez, N.A., and **L.L. Ingwell**. 2016. The prevalence of Barley yellow dwarf viruses in grassland habitats is influenced by diverse agroecological and environmental factors. 2<sup>nd</sup> International Conference on Wild Plant Pathosystems. Helsinki, Finland. August 28-31, 2016.
- **Ingwell, L.L.**, C. LaCroix, P.R. Rhoades, and N.A. Bosque-Pérez. 2016. Virus infection in an endangered grassland habitat. 13<sup>th</sup> Plant Virus Epidemiology Symposium. Avignon, France. June 6-10, 2016.
- **Ingwell, L.L.**, Foster, R., and I. Kaplan. 2015. Biological control in high tunnel agriculture: An effective pest management tool? Entomological Society of America Annual Meeting, Minneapolis, MN. November 15-18, 2015
- **Ingwell, L.L.**, Foster, R., and I. Kaplan. 2014. Predator conservation in protected agriculture. Entomological Society of America Annual Meeting, Portland, OR. November 16-19, 2014
- **Ingwell, L.L.**, N. A. Bosque-Pérez, S. D. Eigenbrode, and L.M. Unger. 2013. Examining vector movement among infected and noninfected hosts in the *Rhopalosiphum padi-Barley yellow dwarf virus*-wheat pathosystem. Entomological Society of America Annual Meeting, Austin, TX. November 10-13, 2013.
- Bosque-Pérez, N.A. and **L.L. Ingwell**. 2013. *Barley/Cereal yellow dwarf viruses* in prairie and grassland habitats in the US Pacific Northwest. 1<sup>st</sup> International Conference on Wild Plant Pathosystems. Olomouc, Czech Republic, July 2-5, 2013.

- **Ingwell, L.L.**, Lacroix, C., and N. A. Bosque-Pérez. 2013. A survey of *Barley/Cereal yellow dwarf* viruses in Palouse Prairie and CRP habitats in the Pacific Northwest. Entomological Society of America Pacific Branch Annual Meeting, Lake Tahoe, NV. April 7-10, 2013.
- Bosque-Pérez, N.A., L.L. Ingwell, D. Rajabaskar, and S.D. Eigenbrode. 2012. Acquisition of plant viruses changes host plant preference of aphid vectors. XXIV International Congress of Entomology. Daegu, Korea. August 19-25, 2012.
- **Ingwell, L.L.**, and N.A. Bosque-Pérez. 2012. The presence of Barley/Cereal yellow dwarf viruses among grass hosts in habitat fragments within an agricultural matrix in the Pacific Northwest. Ecological Society of America Annual Meeting, Portland, Oregon. August 5-10, 2012.
- **Ingwell, L.L.**, M.R. Miller-Pierce, R.T. Trotter III and E.L. Preisser. 2012. Vegetation and invertebrate community response to Eastern hemlock decline in southern New England. Ecological Society of America Annual Meeting, Portland, Oregon. August 5-10, 2012. (Poster presentation)
- **Ingwell, L.L.**, N.A. Bosque-Pérez, L.M. Unger and S.D. Eigenbrode. 2012. Acquisition of Barley yellow dwarf virus alters host plant preference of its aphid vector. Entomological Society of America Pacific Branch Annual Meeting, Portland, Oregon. March 25-28, 2012.
- **Ingwell, L.L.**, N.A. Bosque-Pérez, L.M. Unger and S.D. Eigenbrode. 2011. Viruliferous and nonviruliferous bird-cherry oat aphids exhibit differential responses to Barley yellow dwarf virus-infected plants. Entomological Society of America Annual Meeting, Reno, Nevada. November 13-16, 2011.
- **Ingwell, L.L.** 2011. Viruliferous and nonviruliferous aphid responses to Barley yellow dwarf virus-infected plants. University of Idaho Innovation Showcase. April 28, 2011.
- **Ingwell, L.L.**, N.A. Bosque-Pérez, and S.D. Eigenbrode. 2011. Viruliferous and nonviruliferous aphid responses to *Barley yellow dwarf virus*-infected plants. Entomological Society of America Pacific Branch Annual Meeting, Waikoloa, Hawaii. March 27-30, 2011.
- Roosien, B.K., R. Gomulkiewicz, **L.L., Ingwell**, N.A. Bosque-Pérez, and S.D. Eigenbrode. 2011. Host plant preference, vector infectivity and disease status of plants affect the spread of plant viruses: results from a model. Entomological Society of America Pacific Branch Annual Meeting, Waikoloa, Hawaii. March 27-30, 2011. (Poster presentation)
- **Ingwell, L.L.**, N.A. Bosque-Pérez, and S.D. Eigenbrode 2010. Effects of *Barley yellow dwarf virus* infection in wheat on behavior of viruliferous and nonviruliferous aphids.

- Entomological Society of America Annual Meeting. San Diego, California. December 12-15, 2010. (Poster presentation)
- **Ingwell, L.L.**, N.A. Bosque-Pérez, L.M. Unger, H. Ding, A.V. Karasev, and S.D. Eigenbrode. 2010. Bird cherry-oat aphid behavior in response to barley yellow dwarf virus disease infection of wheat. Joint Meetings Plant Virus Epidemiology Symposium and Plant Virus Ecology Network. Ithaca, New York. June 20-24, 2010. (Poster presentation)
- **Ingwell, L.L.**, N.A. Bosque-Pérez, L.M. Unger, H. Ding, A.V. Karasev, R.S. Zemetra, and S.D. Eigenbrode. 2010. Bird cherry-oat aphid behavior in response to *Barley yellow dwarf virus* disease progression. Entomological Society of America Pacific Branch Annual Meeting, Boise, Idaho. April 11-14, 2010.
- **Ingwell, L.L.**, E.L. Preisser and R. Casagrande. 2009. Integrating the search for resistant/tolerant hosts into an invasive management strategy. Ecological Society of America Annual Meeting, Albuquerque, New Mexico. August 2-7, 2009.
- **Ingwell, L.L.** 2009. Intraspecific variation in *Tsuga canadensis* foliar chemistry. Notheastern Biological Grad. Student Conf., Halifax, Nova Scotia. March 27-29, 2009.
- **Ingwell, L.L.**, J. Brady, M. Fitzpatrick, B. Maynard, R. Casagrande and E.L. Preisser. Intraspecific variation in *Tsuga canadensis* foliar chemistry. 20<sup>th</sup> U.S. Department of Agriculture Interagency Research Forum on Invasive Species. Annapolis, Maryland. January 13-16, 2009.
- **Ingwell, L.L.**, J. Brady, M. Fitzpatrick, R. Casagrande, B. Maynard, and E.L. Preisser. 2008. Intraspecific terpenoid variation in eastern hemlocks and the potential for resistance to the hemlock woolly adelgid. Ecological Society of America Annual Meeting, Milwaukee, Wisconsin. August 3-8, 2008. (Poster presentation)
- **Ingwell, L.L.**, B. Maynard, R. Casagrande, and E.L. Preisser. Naturally occurring adelgid resistance in Eastern hemlocks. 4<sup>th</sup> Symposium on Hemlock Woolly Adelgid in the Eastern United States. Hartford, Connecticut. February 12-14, 2008. (Poster presentation)

### Teaching Experience

# **Course Development:**

**Purdue University** 

ENTM 595: Co-developed and co-taught a scientific writing course for graduate/undergraduate students –2015, 2016, 2017

### **Guest Lectures:**

Loyola University
UCSF 137: The Scientific Basis of Environmental Issues – 2015
Purdue University

HORT 603: Grants and Grantsmanship – 2018

ENTM 510: Insect Pest Management – 2016

ENTM 600: Graduate Student Orientation – 2016, 2014

BIOL591: Disease Ecology – 2016, 2017, 2018

ENTM 506: Advanced Insect Taxonomy – 2015

ENTM 311: Insect Ecology – 2015

University of Idaho

ENTM J441/J541: Insect Ecology – 2013

Washington State University

PL P 511: Viruses and Virus Diseases of Plants – 2013

# **Teaching Assistantships:**

University of Rhode Island

BIO 323: Field Botany – 2008

BIO 262: Introductory Ecology – 2008

BIO 101: Introductory Biology Laboratory – 2007

University of Wisconsin-Milwaukee

BIO 102: Elements of Biology Laboratory – 2006

# Extension Experience – Field Days (16 total)

Small Farm Education Field Day – 2020

Indiana Horticulture Society Annual Field Day – 2020

Southeast Purdue Ag Center Field Day – 2019

Pinney-Purdue Vegetable and High Tunnel Field Day – 2019

Organized and Hosted Meigs Horticulture Farm High Tunnel Field Day – 2019

Southwest Purdue Ag Center Field Day – 2019

Illinois Pumpkin Field Day at Ewing Demonstration Center – 2018

Southwest Purdue Ag Center High Tunnel Field Day – 2018

Pinney-Purdue Vegetable and High Tunnel Field Day – 2017

Organized and Hosted High Tunnel Field Day at Meigs Horticulture Farm – 2017

Meigs Horticulture Farm Tour for 4-H Academy – 2017

Meigs Horticulture Farm Tour for Introduction to Entomology Class – 2016, 2017

Meigs Horticulture Farm Tour for Integrated Pest Management Class – 2016

Meigs Horticulture Farm Tour for Visiting Scholars from Columbia – 2015

Meigs Horticulture Farm Tour for small group of local growers – 2015

Participation in the Specialty Crop Field Day at Meigs Horticulture Farm – 2014

Meigs Horticulture Farm Tour for Visiting Scholars from Afghanistan – 2014

Meigs Horticulture Farm Tour for Molecular Agriculture Summer Inst. (Purdue) – 2014

### Mentoring Experience

#### **Graduate Student Committees**

Colleen Couch (M.S., Entomology, August 2018-present)

Major Advisor: Laramy Enders, Purdue University, Dept. of Entomology

Wadih Ghanem (Ph.D., Entomology, June 2017-present)

Major Advisor: Ian Kaplan, Purdue University, Dept. of Entomology

Jacob Pecenka (Ph.D., Entomology, August 2017-present)

Major Advisor: Ian Kaplan, Purdue University, Dept. of Entomology

John Ternest (M.S., Entomology, January 2017-May 2019)

Major Advisor: Ian Kaplan and Rick Foster, Purdue University, Dept. of Entomology

## **International Visiting Scholars**

Reham Mohamed, Borlaug Fellowship, Purdue University (2018)

Diego Alejandro Avila Ruiz, UREP-C Program, Purdue University (2015)

Xiaohong Li, China Scholarship Council Purdue University (2014)

### **Undergraduate Mentoring**

Tyler Vandermark, Purdue University (2018-2019)

Kristin Sauder, Purdue University (2018-2019)

Drew Loy, McCutcheon High School (2019)

Zachary Webster, senior capstone project, Purdue University (2017-2018)

Maryann Gillen, Purdue University (2018)

Connor Hack, Purdue University (2018)

Tyler Vandermark, Purdue University (2018)

Audrey Hall, Purdue University (2018)

Kristin Sauder, Purdue University (2018)

Danielle Ryan, Purdue University (2017-2018, 2019)

Natalie Eason, Purdue University (2017)

Alex Truitt, Purdue University (2017)

Elizabeth Nortman, Purdue University (2016)

Isha Mehta, Purdue University (2016)

Ivy Widick, Purdue University (2015)

Ashley Kirtman, Purdue University (2015)

Erin Fegley, Purdue University (2014)

Stephanie Russell, Purdue University (2014)

Nick Kaleis, Purdue University (2014)

Anna Petroff, Purdue University (2014)

Natalie Euler, Purdue University (2014)

Cassandra Sago, University of Idaho (2012-2014)

Jenna Turner, University of Rhode Island (2008-2009)

Peter Lewis, University of Rhode Island (2009)

Jackie Vansant, University of Rhode Island (2008)

#### Invited Reviewer

#### Journal Reviewer

Biological Control, European Journal of Horticultural Science, Pest Management Science, Journal of Economic Entomology, Biocontrol Science and Technology, Insect Science, New Phytologist, African Journal of Agricultural Research, Current Opinion in Virology, Plant Pathology, Entomologia Experimentalis et Applicata, Integrative and Comparative Biology, Plant Disease, Forest Ecology and Management, Ecosphere, Current Opinion in Insect Science, Canadian Journal of Plant Pathology

#### **Ad Hoc Grant Reviewer**

USDA-NIFA Foundational Program – 2016 NSF-DEB – 2015

### Professional Service

#### **Committees**

Diversity Action Team in Agriculture – 2019-present
Purdue Student Farm Advisory Board – 2019-present
Small Farm Conference Planning Committee – 2018-present
Indiana USDA SARE Professional Development Program Grant Committee – 2018present

Purdue Entomology Department Greenhouse Committee – 2018

# **Student Competition Judge**

Purdue Undergraduate Research Conference: poster competition – 2017, 2018 Ohio Valley Entomological Association Annual Forum: oral competition – 2016 Entomological Society of America Annual Meeting: student competition – 2014-present

# **Invited Workshop or Discussion Panelist**

Work-Life Balance Forum, Graduate Women in College of Agriculture Workshop, Purdue University -2016

"Exploring the Post Doc Experience" session,  $6^{th}$  Annual Conference for Pre-Tenure Women, Purdue University -2015

#### Student Leadership

University of Idaho, Aldrich Entomology Club President – 2011-2012 University of Idaho, Aldrich Entomology Club Secretary – 2010-2011 University of Idaho, Linnaean Games Team Leader – 2010-2012 University of Rhode Island, Graduate Student Association: Secretary – 2008-2009 University of Rhode Island, Biology Department Representative – 2007-2008

#### Professional Development

#### Workshops

Global Diversity and Inclusion Workshop, Purdue Graduate School –2018 Project Management 101 Workshop, Purdue Graduate School –2018 Building an Effective Extension Program, Purdue University –2016 Working with Print and Television Media, Purdue University –2016

#### Conferences

MOSES Organic Farming Conference, LaCrosse, WI – 2020 Women in Sustainable Agriculture, St. Paul, MN – 2019 Protecting Pollinators in Urban Landscapes, Cinncinati, OH – 2019 BioControls USA East Conference, Rochester, NY – 2018 USDA-SARE Our Farms Our Future Conference, St. Louis, MO -2018 Indiana Food Summit, Indianapolis, IN -2017 8<sup>th</sup> Annual Conference for Pre-Tenure Women, West Lafayette, IN -2017 Local Food Summit, Indianapolis, IN -2016

### **Training and Certifications**

Safe Zone Training, Purdue LGBTQ Center –2018 Good Agricultural Practices Cert., Produce Safety Alliance, Indianapolis, IN –2018 Trans Inclusion Training, Purdue LGBTQ Center –2018

#### Courses

Preparing Future Faculty, Purdue University –2017 High-Impact Principles and Practices for STEM Ed., University of Michigan –2015

# Outreach Experience

"Wednesdays in the Wild" Pollinator Research Field Display, hosted by Lily Nature Center, held at Meigs Horticulture Farm, Lafayette, IN –2018
Bug Bowl, Purdue University, West Lafayette, IN –2018
Insect Pollinator Program, Lily Nature Center, West Lafayette, IN –2018
Insect Expo at the International Congress of Entomology, Orlando, FL –2016
Insectaganza, Purdue University, West Lafayette, IN –2015
Francis Bellamy Pre-School Center, Indianapolis, IN –2014