

## Additional Resources for *Newest Research on the Value of Habitat for Pest Management*

**Webinar Date:** May 25, 2016

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### Research Referenced in Webinar

Bianchi, F. J. J. A., C. J. H. Booij, and T. Tscharntke. 2011. Sustainable pest regulation in agricultural landscapes: a review on landscape composition, biodiversity and natural pest control. *Proc. R. Soc. B* 273: 1715-1727.

Blubaugh, C and Kaplan, I. 2015. Tillage compromises weed seed predator activity across developmental stages. *Biological Control*. 81: 76-82.

Crowder, D. and Harwood, J. 2014. Promoting biological control in a rapidly changing world. *Biological Control*. 75: 1-7.

Douglas, M. R., Rohr, J. R., & Tooker, J. F. 2015. Neonicotinoid insecticide travels through a soil food chain, disrupting biological control of non-target pests and decreasing soya bean yield. *The Journal of Applied Ecology*, 52(1): 250–260.

Douglas, M. R., & Tooker, J. F. 2015. Large-scale deployment of seed treatments has driven rapid increase in use of neonicotinoid insecticides and preemptive pest management in U.S. field crops. *Environmental Science & Technology*, 49(8): 5088–5097.

Kross, S., Kelsey, T., McColl, C., and Townsend, J. 2016. Field-scale habitat complexity enhances avian conservation and avian-mediated pest-control services in an intensive agricultural crop. *Agriculture, Ecosystems and Envnt*. 225: 140-149.

Landis, D. A., Wratten, S. D., & Gurr, G. M. 2000. Habitat management to conserve natural enemies of arthropod pests in agriculture. *Annual Review of Entomology*, 45, 175–201.

Morandin, LA, Long, RF, Kremen, C. 2014. Hedgerows enhance beneficial insects on adjacent tomato fields in an intensive agricultural landscape. *Agriculture, Ecosystems, and Environment*: 189: 164-170.

Naranjo, S., Ellsworth, P., and Frisvold, G. 2015. Economic value of biological control in integrated pest management of managed plant systems. *Annual Review of Entomology*. 60: 621-645.

Park MG, Blitzer EJ, Gibbs J, Losey JE, Danforth BN. 2015 Negative effects of pesticides on wild bee communities can be buffered by landscape context. *Proc. R. Soc. B* 282: 20150299. <http://dx.doi.org/10.1098/rspb.2015.0299>

Roubos, C., Rodriguez-Saona, C., and Isaacs, R. 2014. Mitigating the effects of insecticides on arthropod biological control at field and landscape scales. *Biological Control* 75: 28-38.

Tscharntke T., Steffan-Denwenter, I., Kruess, A., and Thies, C. 2002. Contribution of small habitat fragments to conservation of insect communities of grassland-cropland landscapes. *Ecological Applications* 12(2): 354-363.

Tschumi, M., Albrecht, M., Collatz, J., Dubsy, V. Entling, M., Najar-Rodriguez, A., and Jacot, K. 2016. Tailored flower strips promote natural enemy biodiversity and pest control in potato crops. *Journal of Applied Ecology*. In press.

Tschumi, M., Albrecht, M., Bärtschi, C., Collatz, J., Entling, M., and Jacot, J. 2016. Perennial, species-rich wildflower strips enhance pest control and crop yield. *Agriculture, Ecosystems, and Environment*. 220: 97-103.

### Conservation Biological Control

Related resources on the Xerces Society website: <http://www.xerces.org/conservationbiocontrol/>

## Creating Farm Habitat for Conservation Biological Control

- Farming with Native Beneficial Insects: Ecological Pest Control Solutions (book). 2014. Xerces Society. <http://www.xerces.org/books/>
- Habitat Planning for Beneficial Insects: Guidelines for Conservation Biological Control. 2016. Xerces Society. <http://www.xerces.org/habitat-planning-for-beneficial-insects/>
- Beneficial Insect Habitat Assessment Form and Guide: Farms and Agricultural Landscapes. 2015. Xerces Society. [http://www.xerces.org/wp-content/uploads/2015/07/HAG\\_BeneficialInsects\\_June2015\\_web.pdf](http://www.xerces.org/wp-content/uploads/2015/07/HAG_BeneficialInsects_June2015_web.pdf)
- How to Conserve Biodiversity on the Farm. Wild Farm Alliance. [http://www.wildfarmalliance.org/biodiversity\\_continuum](http://www.wildfarmalliance.org/biodiversity_continuum)

## Identifying Beneficial Insects for Pest Management

- Beneficial Insect Guide. Basic identification information for common crop pollinators and natural enemies for the Midwest (2012) <http://www.sare.org/Learning-Center/SARE-Project-Products/North-Central-SARE-Project-Products/Beneficial-Insect-Guide>

## Reducing Pesticide Risks to Beneficial Insects

- Agronomy Tech Note No. 9: Preventing or Mitigating Potential Negative Impacts of Pesticides on Pollinators Using Integrated Pest Management and Other Conservation Practices. 2014. USDA-NRCS and Xerces Society. <http://directives.sc.egov.usda.gov/OpenNonWebContent.aspx?content=34828.wba>
- Beyond the Birds and the Bees: Effects of Neonicotinoid Insecticides on Agriculturally Important Beneficial Insects. 2013. Xerces Society. <http://www.xerces.org/beyond-the-birds-and-the-bees/>
- Bee precaution pesticide rating. 2015. University of California IPM. <http://www2.ipm.ucanr.edu/beeprecaution/>

## Farm Practices to Support Beneficial Insects

Cover cropping for pollinators and beneficial insects (2015) <http://www.sare.org/Learning-Center/Bulletins/Cover-Cropping-for-Pollinators-and-Beneficial-Insects>

Farming for Beneficial Insects <http://www.conservationwebinars.net/webinars/farming-for-beneficial-insects-pollinators-predators-and-parasitoids/?searchterm=pollinators>