

HEATHER M. DARBY

PRESENT ADDRESS
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Alburgh, VT 05440
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PROFESSIONAL OBJECTIVE

To pursue a career in applied crop and soil research and education that will assist the farming community in crop production while protecting their profits and improving the environment.

EDUCATION

DOCTOR OF PHILOSOPHY, HORTICULTURE, APRIL 2003
Oregon State University-Corvallis

MASTER OF SCIENCE, AGRONOMY, MAY 2000
University of Wisconsin-Madison

BACHELOR OF SCIENCE, HORTICULTURE AND AGRONOMY, MAY 1997
University of New Hampshire-Durham

EXPERIENCE

PROFESSOR
*University of Vermont-Burlington
Extension*

JULY 2016 TO PRESENT

ASSOCIATE PROFESSOR
*University of Vermont-Burlington
Extension*

JULY 2009 TO JUNE 2016

ASSISTANT PROFESSOR
*University of Vermont-Burlington
Extension*

MARCH 2003 TO JUNE 2009

Investigate and implement a variety of local and regionally based research projects that improve and/or introduce production practices that improve crop or soil production while protecting profits and the environment. Research includes replicated field trials in the areas of cover cropping strategies, organic grain and forage production, alternative weed control tools, and alternative cropping systems. Alone and as a team member have risen over \$15,000,000 of grant funds for research and educational programs. Educate a wide range of farmer types on a variety of agronomic subjects with a goal towards improving farm production and environmental quality. Educational programs for farmers include programs in the target areas of nutrient management, soil health, cover cropping, organic crops and cropping systems. Plan and implement a variety of educational techniques including on-farm field days, workshops, conferences, courses, news media, web resources, and written materials. Lead team member for development of eOrganic.edu and organic dairy content for the website.

PROFESSIONAL ORGANIZATIONS

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|---------------------------------------|--------------|
| American Society of Agronomy (ASA) | 1997-present |
| Crop Science Society of America (CSA) | 1997-present |

Soil Science Society of America (SSSA)
Certified Crop Adviser (CCA)

1997-present
2009 - present

SOFTWARE PUBLICATIONS

goCrop™. 2013. University of Vermont Extension (Version 1.1) [Mobile application software]. Retrieved from <http://itunes.apple.com>

goGraze™. 2017. University of Vermont Extension (Version 1.0) [Mobile application software]. *In publication.*

PEER REVIEWED BOOK CHAPTERS

Heleba, D., H. Darby, V. Grubinger. 2015. On the Ground: Putting Agroecology to Work through Applied Research and Extension in Vermont. *In: Méndez, V.E., C.M. Bacon, R. Cohen and S.R. Gliessman (eds) Agroecology: a transdisciplinary, participatory and action-oriented approach. Invited book for the Advances in Agroecology Series. CRC Press/Taylor & Francis. In press.*

Darby, H. and C. Callahan. 2015. On-Farm Oil Based Biofuel Production. *In: A. Dahiya (ed). Bioenergy: Biomass to Biofuels. Elsevier, Inc. Boston, MA.*

Schattman, R., E., Mendez, K. Westdijk, M. Caswell, D Conner, C. Koliba, A. Zia, S. Hurley, C. Adair, L. Berlin, H. Darby. 2015. Vermont Agricultural Resilience in a Changing Climate: A Transdisciplinary and Participatory Action Research (PAR) Process. *In: N. Benkeblia (ed.) Agroecology, Ecosystems, and Sustainability. CRC Press, Boca Raton, FL.*

Stone, A.G., S. J. Scheuerell, and H. M. Darby. 2004. Suppression of soil-borne plant diseases in field agricultural systems: organic matter management, cover cropping, and cultural practices. *In: F. Magdoff, and R. Weil (ed.) Soil Organic Matter in Sustainable Agriculture. CRC Press, Boca Raton, FL.*

PEER REVIEWED JOURNAL PUBLICATIONS

Aimee N. Hafla, Kathy J. Soder, André F. Brito, Richard Kersbergen, Fay Benson, Heather Darby, Melissa D. Rubano, S. Leanne Dillard, Jana Kraft, and Simone F. Reis. 2017. Winter supplementation of ground whole flaxseed impacts milk fatty acid composition on organic dairy farms in the northeastern United States. *Professional Animal Scientist. In review.*

Calderwood, L. and H. Darby. 2017. Effect of drive row cover crops on hop (*Humulus lupulus* L.) yard arthropod pests and their natural enemies in Vermont, USA. *Journal of Environmental Entomology. In review.*

Calderwood, L. and H. Darby 2017. Impact of adult potato leafhopper feeding on first year hop gas exchange. *Journal of Economic Entomology. In progress.*

Roche, E., Mallory, E., & Darby, H. 2017. Evaluating Split Nitrogen Applications and In-Season Tests for Organic Winter Bread Wheat. *Organic Farming*, 3(1), 3-15. doi:10.12924/of2017.03010003.

A. N. Hafla, K. J. Soder, André F. Brito, Richard Kersbergen, Fay Benson, Heather Darby, Melissa Rubano, and Simone F. Reis. 2016. Case Study: Feeding strategy and pasture quality relative to nutrient requirements of dairy cows in the northeastern United States. *The Professional Animal Scientist* 32 (2016):523–530; <http://dx.doi.org/10.15232/pas.2015-01500>.

Calderwood, L., S. Lewins, and H. Darby. 2015. Survey of Northeastern hop arthropod pests and their natural enemies. *Journal of Integrated Pest Management*. <http://dx.doi.org/10.1093/jipm/pmv017>.

Bradshaw T., Berkett, L., Parsons, R., Darby, H., Moran, R., Garcia, E., Kingsley-Richards, S., Griffith, M., Bosworth, S. and Gorres, J. 2015a. Disease and arthropod pest incidence in two organic apple orchard systems in Vermont, USA, 2008-2013. *Acta Hort. In review*.

Bradshaw T., Berkett, L., Parsons, R., Darby, H., Moran, R., Garcia, E., Kingsley-Richards, S., Griffith, M., Bosworth, S. and Gorres, J. 2015b. Tree growth and crop yield of five cultivars in two organic apple orchard systems in Vermont, USA, 2006-2013. *Acta Hort. In review*.

Bradshaw T., Parsons, R., Berkett, L., Darby, H., Moran, R., Garcia, E., Kingsley-Richards, S., Griffith, M., Bosworth, S. and Gorres, J. 2015b. Long-term economic evaluation of five cultivars in two organic apple orchard systems in Vermont, USA, 2006-2013. *Acta Hort. In review*.

Darby, H, P. Halteman, and H. Heleba, 2015. The Effectiveness of Nutrient Management Plans on Vermont Dairy Farms. *Journal of Extension*. 53(2).

LeBlanc, J, D. Conner, G. McRae, H. Darby. 2013. Building Resilience in Nonprofit Food Hubs. *Journal of Agriculture, Food Systems and Community Development*. Advanced online publication. <http://dx.doi.org/10.5304/jafscd.2014.043.005>.

Mallory, E.B., and H.M. Darby. 2013. In-season nitrogen effects on organic hard red winter wheat yield and quality. *Agron. J.* 105:1167–1175.

PEER REVIEWED EXTENSION PUBLICATIONS

Darby, H., C. Burke, L. Calderwood, H. Harwood, D. Heleba, and J. Sanders. 2015. Under cover: integrating cover crops into silage corn systems. University of Vermont Extension Northwest Crops and Soils Program, St. Albans, VT. <http://go.uvm.edu/undercover> (accessed 23 Mar 2015).

Harwood, H., S. Lewins, H. Darby. 2014. Sunflower Insect Scouting and Identification. University of Vermont Extension Northwest Crops and Soils Program, St. Albans, VT. Available online at: <http://www.uvm.edu/extension/cropsoil/wp-content/uploads/SunflowerInsects1.pdf> (accessed 23 Mar. 2015).

Harwood, H., C. Callahan, H. Darby, D. Schaufler, and R. Elias. 2014. Small Scale Oilseed Presses: An Evaluation of Six Commercially Available Designs. University of Vermont Extension Northwest Crops and Soils Program, St. Albans, VT. http://www.uvm.edu/extension/cropsoil/wp-content/uploads/OilseedPressEval_report.pdf. (accessed 23 Mar. 2015).

Daley, C., S. Flack, H. Darby, D. Heleba, A. Denney, S. Bosworth, and K. Hoffman. 2013. Online course: an introduction to organic dairy production. eXtension Foundation, eOrganic Community of Practice. <http://www.extension.org/pages/69299> (accessed 23 Jan. 2014).

PEER REVIEWED EXTENSION PUBLICATIONS

Darby, H., P. Halteman, and H. Harwood. 2013. Oilseed production in the northeast: A guide for growers of sunflower and canola. University of Vermont Extension Northwest Crops and Soils Program, St. Albans, VT. Available online at: <http://www.uvm.edu/extension/cropsoil/wp-content/uploads/OilseedManualFINAL.pdf> (accessed 21 Jan. 2014).

Darby, H. 2013 (*revised*). Digger Deeper: A Nutrient Management Course for Farmers. University of Vermont Extension Northwest Crops and Soils Program, St. Albans, VT. Available online at: <http://www.uvm.edu/extension/cropsoil/soil-health-and-nutrient-management> (accessed 21 Jan. 2014).

ABSTRACTS AND PROCEEDINGS

Ronan A. V. Santana¹, André F. Brito, Victor E. Cabrera, Fabiano A. Barbosa, A. K. Hoshide, A. F. Benson, A. N. Hafla, H. M. Darby, K. J. Soder, and R. Kersbergen. 2017. Economic and environmental performance of traditional and grass-fed organic dairies using the Integrated Farm System Model. In 2017 ADSA-ASAS-CSAS Joint Annual Meeting. ASAS, Kansas, MO. Pittsburgh, PA. June 25-28, 2017.

Callahan, C. and H. Darby. 2015. On-farm Biodiesel: A Decade of Experience in Vermont. Accepted for presentation at the 2015 National Extension Energy Summit. Seattle, WA. April 4-7, 2015.

Hafla, A.N., K.J. Soder, A.F. Brito, R. Kersbergen, F. Benson, H. Darby, and M.D. T Rubano. 2014. Feeding strategy and pasture quality relative to nutrient requirements of grazing dairy cows in the Northeastern US. In 2014 ADSA-ASAS-CSAS Joint Annual Meeting. ASAS, Kansas, MO.

Darby, H. 2014. Organic Research Opportunities and Challenges for Organic Dairy Production Systems. *In: Proceedings: Fall Research Symposium Organic Production: Food, Health, and Ecosystems*. USDA Agricultural Research Station. Beltsville, Maryland. 13-Nov., 2014.

Mallory, E. and H. Darby. 2014. Evaluating In-Season Tests to Guide Nitrogen Topdressing Rates for Organic Winter Bread Wheat. *In 2014 Agronomy Abstracts*. ASA-CSSA-SSSA ASA, CSSA, and SSSA International Annual Meetings, Long Beach, CA. 21-24 Oct. 2014.

Callahan, C. and H. Darby. 2014. A Mobile Hops Harvester: User-based, Public Domain Design and Shared Infrastructure in an Emerging Agricultural Sector. American Society of Agricultural and Biological Engineers Conference. 8-9 July. Montreal, QC.

Daley, C., H. Darby, S. Flack, A. Denney and D. Heleba. 2013. Development of technical training and support for agricultural service providers and farmers in certified organic dairy production systems through eOrganic. Abstracts American Society of Horticultural Science Annual Conference, Palm Desert, CA. 22-25 Jul. 2013. <http://ashs.confex.com/ashs/2013/webprogram/Paper15797.html> (accessed 23 Jan. 2014).

Schaufler, D., R. Elias, H. Darby, C. Callahan, H. Harwood. 2013. Small Scale Processing of Locally Produced Edible Oils. Northeast Agricultural and Biological Engineering Conference (NABEC). 16-19, June. Altoona, PA.
