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## Curriculum Vitae

### Rafael A. Martinez-Feria

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#### Education

**Ph.D.** in Crop Production and Physiology **2015-2018**  
*Iowa State University, Ames, Iowa* **(exp.)**

Research Topic: "Modeling management effects on productivity, resource-use efficiency, and environmental performance in Midwestern cropping systems"

**M.S.** in Crop Production and Physiology, Sustainable Agriculture, **2012-2015**  
Graduate Certificate in Geographic Information Systems  
*Iowa State University, Ames, Iowa*

Thesis: "Suitability of winter canola for enhancing summer annual crop rotations"

**Ing. Agrónomo** (B.S. Agronomy Engineering) **2007-2012**  
Instituto Tecnológico y de Estudios Superiores de Monterrey (ITESM),  
Querétaro, México

#### Refereed Publications (2)

**Martinez-Feria, R.A.**, Dietzel, R., Liebman, M., Helmers, M.J. and Archontoulis, S.V., 2016. Rye cover crop effects on maize: a system-level analysis. *Field Crops Research*, 196, pp.145-159.

**Martinez-Feria, R.A.**, Kaspar, T.C. and Wiedenhoeft, M.H., 2016. Seeding Date Affects Fall Growth of Winter Canola (*Brassica napus* L. 'Baldur') and its Performance as a Winter Cover Crop in Central Iowa. *Crop, Forage & Turfgrass Management*, 2(1).

#### Other Publications (2)

**Martinez-Feria, R.A.**, K. Jacobs and M.H. Wiedenhoeft. 2016. Estimated costs of production for winter canola in Iowa (A1-24). Ag Decision Maker. Iowa State University Extension, Ames, Iowa. Available at:  
<https://www.extension.iastate.edu/agdm/crops/html/a1-24.html>

**Martinez-Feria, R.A.**, M.H. Wiedenhoeft and S.R. Gailans. 2015. Winter canola used as a cover crop in Iowa. Practical Farmers of Iowa Cooperators' Program. Ames, Iowa. Available at: <http://practicalfarmers.org/farmer-knowledge/research-reports/2015/winter-canola-used-as-a-cover-crop-in-iowa/>

#### **Awards and Honors (4)**

<b>Third place - Oral Presentation Student Competition</b> Session: Cover crop management, American Society of Agronomy International Meetings, Phoenix, Arizona	<b>Nov. 2016</b>
<b>Research Excellence Award</b> For outstanding research accomplishments during M.S. student career, awarded by the Graduate College to the top 10% of graduating cohort.	<b>Aug. 2015</b>
<b>Vernon C. Miller Scholarship in Agronomy</b> For outstanding student research in conservation agriculture. Iowa State University, Department of Agronomy.	<b>Sep. 2013</b>
<b>Best Poster Presentation Award</b> 8th Annual Graduate Minority Assistantship Program Research Symposium.	<b>May 2013</b>
<b>Honorable mention</b> 9th Annual Graduate Program in Sustainable Agriculture Research Symposium Poster Competition.	<b>Apr. 2013</b>

#### **Grants Awarded (2)**

Suitability of winter canola (*Brassica napus*) for enhancing summer annual crop rotations in Iowa. PI: **Rafael A. Martinez-Feria**. Adviser: Mary H. Wiedenhoeft. NCR SARE, St. Paul, Minn. (\$10,000). Two years (2013-2015).

Grant Reports: [https://mysare.sare.org/sare\\_project/gnc13-176/](https://mysare.sare.org/sare_project/gnc13-176/)

Suitability of winter canola (*Brassica napus*) for enhancing summer annual crop rotations in Iowa. PIs: **Rafael A. Martinez-Feria** and Mary H. Wiedenhoeft. Leopold Center for Sustainable Agriculture, Ames, Iowa (\$32,000). Two years (2012-2013).

Grant Reports: [http://lib.dr.iastate.edu/leopold\\_grantreports/500/](http://lib.dr.iastate.edu/leopold_grantreports/500/)

#### **Selected Scholarly Presentations**

Martinez-Feria R.A., R.N.Dietzel, M. Liebman, M.J. Helmers and S.V. Archontoulis. Rye cover crop effects on maize: A system-level analysis. (Oral Presentation). American Society of Agronomy, Crop Science Society of America, Soil Science Society of America International Meetings. Phoenix, Ariz. 7 Nov. 2016. Available at:

<https://scisoc.confex.com/crops/2016am/webprogram/Paper100270.html>

**Martinez-Feria, R.A.** Suitability of winter canola for enhancing summer annual crop rotations in Iowa (Thesis defense seminar). 26 May 2015. Available at:

<http://www.agron.iastate.edu/news/podcasts/media/20150526.mux.mp4>

**Martinez-Feria, R.A.**, T.C. Kaspar and M.H. Wiedenhoeft. An empirical approach to estimating seeding dates for winter canola in Iowa (Poster presentation). Session 109: Canola research poster session. U.S. Canola Association Research Conference. Long Beach,

Calif. 4 Nov. 2014. Available at:

<https://scisoc.confex.com/scisoc/2014am/webprogram/Paper85707.html>

**Martinez-Feria, R.A.** M.H. Wiedenhoef and T.C. Kaspar. Suitability of winter canola for enhancing summer annual crop rotations in Iowa (Poster presentation). Session 301: Water, Nutrients, and Conservation Systems. American Society of Agronomy, Crop Science Society of America, Soil Science Society of America International Meetings. Tampa, Fla. 5 Nov. 2013. Available at:

<https://scisoc.confex.com/crops/2013am/webprogram/Paper79749.html>

## **Research Experience**

### **Graduate Research Assistant**

*Department of Agronomy, Iowa State University.*

Cropping systems model analysis: lead field and laboratory experiments, data analysis and modeling advised by Dr. Archontoulis.

**2015 - present**

**(20 mo.)**

### **Graduate Research Assistant**

*Department of Agronomy, Iowa State University.*

Growing winter canola in Iowa: led field and laboratory experiments under the advice of Dr. Wiedenhoef and Dr. Kaspar.

**2012 – 2015**

**(36 mo.)**

### **Undergraduate Independent Study**

*Escuela de Agronomía, Alimentos y Biotecnología, ITESM*

John's disease test: collected data for the validation of a molecular test to detect *Mycobacterium avium* subsp. *paratuberculosis* in dairy herds in central México under the guidance of Dr. Vázquez Flores.

**2012**

**(4 mo.)**

### **Undergraduate Research Assistant**

*Department of Agronomy, Iowa State University.*

Winter rye cover crops effect on soil nitrogen cycling: assisted with collection and processing samples in field and laboratory supervised by doctoral student José Pantoja and Dr. John Sawyer.

**2010**

**(4 mo.)**

## **Teaching and Outreach Experience**

### **Undergraduate Student Research Mentor**

*Science with Practice, College of Agriculture and Life Science, ISU*

Mentored two undergraduate students during experiential learning and work program. Guided them through field and lab experimentation, data analysis and scientific writing.

**2016**

### **Guest Presenter**

*World Food Prize Iowa Youth Institute*

Led field and room discussions on agriculture and the environment focused on motivating high-achieving high school students to pursue careers in agriculture and life sciences.

**2013-2017**

### **Outreach Coordinator**

**2011**

Center for Rural Affairs, Lyons, Nebraska	(4 mo.)
Promoted USDA assistance for socially disadvantaged farmers and ranchers in Nebraska. Interviewed English- and Spanish-speaking landowners and farm operators about the challenges to start, develop and sustain their operations, and organized community meetings to connect them to available resources in their area.	

### **Trainings and Professional Development**

Hyperspectral Techniques and Applications (two-day workshop) <i>Iowa Experimental Program to Stimulate Competitive Research (EPSCoR), Ames, Iowa</i> Overview and application of hyperspectral data analysis techniques for research in crop physiology and ecology	<b>April 2016</b>
Precision Ag Data Management Workshop <i>University of Nebraska-Lincoln Extension, Auburn, Nebraska</i> Developed skills in Ag Leader's SMS software for creating field management zones, VRT prescription maps, and evaluating the performance of management plans and on-farm research trials	<b>March 2015</b>
Technical Skills for Greenhouse Management (one-week course) <i>Koppert-Rapel Research and Training Center (CEICKOR), Querétaro, Mexico</i> In-depth course focused on management of high- and medium-technology hydroponic greenhouses for production of tomato, peppers and cucumbers in the Mexican high plains.	<b>April 2012</b>

### **Leadership and Organizations**

Served in the <b>the Organizing Committee</b> for the <b>9<sup>th</sup> Graduate Minority Assistantship Program Research Symposium</b> at Iowa State University	<b>2014</b>
Served as <b>Treasurer of the Agronomy Graduate Student Club</b> , and was responsible for managing the club's financial assets and filing reports to the university on a regular basis.	<b>2013-2014</b>
Held various leadership positions in the <b>International Association of Students in Agricultural and Related Sciences</b> from 2009 to 2013. Served as Social Action Coordinator (2009-2010), and as Vice President (2011-2012) at the Mexico level and on the Control Committee (2012-2013) at the international level. Participated in events in California (2009) and Canada (2012); and helped organize the World Congress and Seminar in Mexico (2009) and in Iowa (2014). (Visit: <a href="http://www.iaasworld.org/">http://www.iaasworld.org/</a> )	<b>2009-2014</b>