

## Biographical Sketch

### MARK E. UCHANSKI

**Present Position:** Assistant Professor of Horticulture, Specialty Crops  
Colorado State University  
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#### Summary

Fourteen years of experience in horticultural education, vegetable crop research, and outreach. My teaching emphasis is in the area of sustainable and organic vegetable production. My major research focus is aimed at developing a deeper understanding of crop physiology and cropping systems to address the many unique challenges faced by vegetable producers in the western United States. I work with small and large producers, and their place in the Colorado and national food system.

#### Education and Training

<u>Institution</u>	<u>Degree</u>	<u>Date</u>
Univ. of Illinois – Urbana Champaign	Ph.D. in Horticulture-Vegetable Crops	2007
Univ. of Illinois – Urbana Champaign	B.S. in Horticultural Sciences	2002

#### Professional Experience

<u>Year</u>	<u>Institution</u>	<u>Position</u>
2016-present	Colorado State University	Assist. Professor of Specialty Crops
2014-2015	New Mexico State University	Associate Professor w/tenure
2007-2014	New Mexico State University	Assistant Professor of Horticulture
2002-2007	Univ. of Illinois – Urbana Champaign	Graduate Res. & Teaching Assistant

#### Research and grants received

- Improving the Competitiveness of Limited Resource Farmers and Ranchers in Southern New Mexico Through the Adoption of Organic Practices  
USDA Organic Transitions Program, 2014-2017, \$500,000
- Food System Sustainability in the Southwest: Developing a Strategy to Enhance Resilience, Livelihoods, and Food Security Across New Mexico and Arizona  
USDA Local Food Procurement Program, 2014-2016, \$31,000
- Engaging New Mexico Youth in Digital Media Promotion of Specialty Crops and Farming  
NM Department of Agriculture Specialty Crops Block Grant, 2013-2014 \$20,000
- Greening the Curriculum at NMSU  
FY2014 President's Performance Funding, 2013-2016, \$15,000
- Integration of Mustard Seed Meal and Mustard Cover Crops to Control Verticillium Wilt and Phytophthora Blight in Chile  
New Mexico Chile Association and Agricultural Experiment Station, 2013-2015, \$20,000
- Understanding the Physiological Basis and Metabolic Profile of Pepper Stip  
New Mexico Chile Association and Agricultural Experiment Station, 2013-2016, \$40,000
- Enhanced Economic Sustainability of Organic Peanut Farming in the Southwest

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- USDA Organic Research and Extension Initiative (OREI), 2011-2013, \$35,000
- Biofumigation for New Mexico Chile Growers  
New Mexico Chile Association, 2011-2013, \$60,000
- Onion Thrips and *Iris yellow spot virus* (IYSV) Monitoring in New Mexico Onion Fields  
USDA Specialty Crops Research Initiative, 2011-2013, \$86,000
- Winter Production of Leafy Greens in the Southwestern USA Using High Tunnels  
USDA, WSARE, 2009-2013, \$193,879
- Development of Improved Chile Cultivars and Production Practices for New Mexico  
New Mexico Chile Commission, 2009-2013, \$26,750
- Risk Management Assessment of Diversified Vegetable Production in Southern NM  
USDA, RMA, 2008-2011, \$326,999

### Teaching Experience and Activity, NMSU and CSU

Course	Term (since 2008)	No. Students	Description
HORT/AGRO 100	Fall	100	Introductory Plant Science
HORT/AGRO 315	Fall even years	15	Crop Physiology
HORT 485	Fall odd years	10	Vegetable Crop Mgt.
HORT 300	Spring, Su, & Fall	5-10	Applied Vegetable Crop Mgt.

### Awards

New Mexico Dept. of Agriculture Organic Program Educator of the Year Award, 2013  
National Assoc. of Colleges and Teachers of Agriculture Teaching Award of Merit 2012

### Synergistic Activities

American Society for Horticultural Sciences, Recruitment Committee Chair (2013-14)  
National Association of Colleges and Teachers of Agriculture, member 2004-present  
Sigma Xi Scientific Research Society, NMSU Chapter, member 2011-present, VP 2014  
Gamma Sigma Delta Honor Society of Agriculture, member 2009-present  
NMSU Teaching Academy, member 2008-present  
W2008 National Allium Research Group Chair (2015), Member 2012-2016

### Publications

#### Peer-reviewed Publications

1. Uchanski, M.E., K. Grover, D. VanLeeuwen, and R. Goss. 2015. Integrating hoop house construction and environmental data interpretation into an undergraduate general education plant science course. *HortTechnology* 25(2):1-6.
2. Rudolph, R.E., C. Sams, R. Steiner, S.H. Thomas, S. Walker, and M.E. Uchanski. 2015. Biofumigation performance of four Brassica crops in a green chile pepper (*Capsicum annuum*) rotation system in southern New Mexico. *HortScience* 50(2)1-7.
3. Schwartz, H. F., Alston, D., Alwang, J., Bartolo, M., Blunt, T., Boateng, C. O., Bunn, B., Cramer, C.S., Cranshaw, W., Davidson, J., Derie, M., Doran, J., Douce, K., Drost, D., du Toit, L. J., Gour, T., Gugino, B., Hammon, B., Hardin, J., Hausbeck, M., Jibilian, G., Lafferty, L., LaForest, J., McMillan, M. S., Mohan, S. K., Morrice, J., Nault, B., Nischwitz, C., Norton, G., Otto, K., Pappu, H. R., Petersen, M., Sampangi, R., Schroeder, B., Secor, W., Szostek, S., Tisserat, N., Uchanski, M.E., VanKirk, J., Waters, T., Wiriyajitsomboon, P., and

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- Wohleb, C. 2014. Onion ipmPIPE: A coordinated effort to improve the management of onion thrips and *Iris yellow spot virus* for onion growers and their industry. *APS Plant Health Progress* 15:172-183.
4. Hecher, E.A.D.S., C.L. Falk, J. Enfield, S.J. Guldan, and M.E. Uchanski. 2014. The economics of low cost high tunnels for winter vegetable production in the southwestern United States. *HortTechnology* 24(1).
  5. Uchanski, M.E. 2013. Can we feed ourselves? An exploration of New Mexico agricultural production. *Food Studies: An Interdisciplinary Journal*, 3.
  6. Uchanski, M.E. and A. Blalock. 2013. Ethephon improved pigmentation but had no effect on cayenne pepper fruit yield in southern New Mexico. *HortScience* 48(6):738-741.
  7. Lillywhite, J.M., J.E. Simonsen, and M.E. Uchanski. 2013. Spicy pepper consumption and preferences in the United States. *HortTechnology* 23(6):868-876.
  8. Uchanski, M.E. and A. Rios. 2012. Killed cover crop residue impacts on soil moisture in an irrigated agricultural system. *New Mexico Journal of Science* 46:149-168.
  9. Berba, K.J. and M.E. Uchanski. 2012. Post-harvest physiology of microgreens. *Journal of Young Investigators* 24(1):1-5.
  10. Uchanski, M.E., S.H. Thomas, and S.J. Walker. 2010. Evaluation of chloropicrin soil fumigants for management of soil-borne pathogens in Chile, 2009. *Plant Disease Management Reports*. Report 4:V148. The American Phytopathological Society, St. Paul, MN.
  11. Uchanski, M.E. 2009. Evaluation of fungicides for management of *Phytophthora* blight in Chile, 2008. *Plant Disease Management Reports*. Report 3:V159. DOI:10.1094 /PDMR03. The American Phytopathological Society, St. Paul, MN.
  12. Coyner, M.R., Skirvin, R.M., Norton, M.A., and M.E. Uchanski. 2008. Assessment of genetic variation among thornless blackberries (*Rubus* spp.) using random amplified polymorphic DNA. *Journal of Horticultural Science & Biotechnology* 83 (5) 543-548.
  13. Díaz-Barrita, A.J., M. Norton, R.A. Martínez-Peniche, M. Uchanski, R. Mulwa, R.M. Skirvin. 2007. The Use of Thermo-therapy and *in vitro* Meristem Culture to Produce Virus-Free 'Chancellor' Grapevines. *International Journal of Fruit Science* 7(3): 15-25.
  14. Ozgur, M., A.M. Shehata, R.M. Skirvin, M.A. Norton, R.M.S. Mulwa, M. Uchanski, A.M. Hamblin, and M. Babadoost. 2004. An *In Vitro* Method to Rescue Embryos of Horseradish, a Reputedly Sterile Plant. *Journal of Vegetable Crop Production* 10(2): 99-105.

### Extension Publications

15. Schwartz, H. and M. Uchanski. 2015. Alternative Bean Production Systems: in *Common Bean Health Management & Production*, 3<sup>rd</sup> Edition. Schwartz, H.F. and M.A. Brick (eds).
16. Schwartz, H.F. and M.E. Uchanski. Alternative Onion Production Systems in Schwartz, H.F. (ed). 2013. *Onion Health Management and Production Bulletin*. Onion ipmPIPE and Diagnostic Project. Colorado State University.
17. Walker, S., Uchanski, M.E., and D.D. Jimenez. 2012. Hoop house vegetable production. Guide H-252. [aces.nmsu.edu/pubs/\\_h/H-252.pdf](http://aces.nmsu.edu/pubs/_h/H-252.pdf).
18. Walker, S., S. Thomas, and M.E. Uchanski. 2012. Evaluations of chloropicrin fumigants for

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management of soil-borne pathogens in chile (*Capsicum annuum* L.). New Mexico Chile Association Report-33. [aces.nmsu.edu/pubs/taskforce/](http://aces.nmsu.edu/pubs/taskforce/).

### Full Manuscripts in Conference Proceedings (not refereed)

19. Uchanski, M.E. and A. Rios. 2012. Killed cover crop residues for onion moisture management in the desert southwest. Proceedings of the National Allium Research Conference, December 12-14, 2012: Las Cruces, NM.
20. Deb, S.K., Shukla, M.K., Uchanski, M.E., Bosland, P. 2012. Evaluation of compensated root water uptake pattern of greenhouse drip irrigated chile. Proceedings of the ASABE Conference November 2-6, 2012: Orlando, FL.
21. Uchanski, M.E. 2011. Brassica Biofumigation in Arid Agricultural Systems: An Overview. XXXVI Congreso Nacional de la Ciencia del Suelo: Agricultura Organica, Cuarta Parte. Capitulo XVIII, pp. 402-409.
22. Uchanski, M., Skirvin, R.M. and Norton, M.A. 2004. The Use of In Vitro Thermotherapy to Obtain Turnip Mosaic Virus-Free Horseradish Plants. Acta Hort. (ISHS) 631:175-179.