CURRICULUM VITAE
University of Wisconsin – Madison

Name: Yi Wang **Rank of Title:** Assistant Professor **Department:** Horticulture

Office Location: 492 Moore Hall – Plant Sciences, 1575 Linden Drive, Madison, WI, USA

Office Tel: (608) 265-4781 **Email:** wang52@wisc.edu

Education:

Ph.D. (2012), Plant Breeding and Plant Genetics, University of Wisconsin-Madison, Madison, WI
B.S. (2007), Biological Science, Nanjing Agricultural University, Nanjing, Jiangsu, China

Work Experiences:

2017 – present, Assistant Professor (Potato and Vegetable Sustainable Production), University of Wisconsin – Madison, Madison, WI (60% Extension, 30% Research, 10% Teaching)
2015 – 2017, Assistant Professor (Potato Physiology), University of Idaho Kimberly Research and Extension Center, Kimberly, Idaho (85% Research, 15% Extension/Outreach)
2012 – 2015, Research Associate (Potato and Vegetable Crop Production), University of Wisconsin-Madison, Madison, WI

Research Areas:

- Make production recommendations on variety selection, planting population, irrigation, fertilization, and storage management of potatoes and vegetable crops
- Develop cloud-based machine learning tools to predict crop yield, quality, water status, and nitrogen status using in-season remote sensing imagery
- Investigate innovative technologies and practices to improve the resource use sustainability of vegetable cropping systems including potatoes, snap beans, sweet corn, peas, and dry edible beans
- Identify strategic practices to build resilience of potato production systems to a changing climate

Honors and Awards:

2021 Researcher of the Year, Wisconsin Potato and Vegetable Growers Association
2020 Excellence in Extension Awards, Agronomy Society of American
2020 2020 Fruit + Vegetable 40 Under 40 Award, Great American Media Services
2020 University of Wisconsin College of Agricultural and Life Sciences Toepfer Faculty Fellow Award
2017 2017 Spudman Emerging Leader Award
2011 UW-Madison Vilas Conference Presentation Funds
2009 Wisconsin distinguished graduate student fellowship, UW-Madison
2006 Distinguished undergraduate award, Nanjing Agricultural University, China

Peer-Reviewed Publications:

Novy, R.G., J.L. Whitworth, J.C. Stark, R.R. Spear, B.L. Schneider, M.J. Pavek, N.R. Knowles, L.O. Knowles, B.A. Charlton, V. Sathuvalli, S. Yilma, C.R. Brown, T.L. Brandt, **Y. Wang**, M. Thornton, and N. Olsen. 2021. La Belle Russet: an early maturing, dual-purpose variety having a high percentage of marketable yield, long tuber dormancy, and a reduced incidence of sugar ends. Accepted by *American Journal of Potato Research*.

Crosby, T.W., and **Y. Wang.** 2021. Effects of different irrigation management practices on potato (*Solanum tuberosum* L.) production in the Upper Midwest of the U.S. *Sustainability.* 13: 10187.

Smail, R.A., M.A. Nocco, J.B. Colquhoun, and **Y. Wang.** 2021. Remotely-sensed water budgets for agriculture in the Upper Midwestern United States. *Agricultural Water Management*. 258: 107181.

Y. Wang, M.R. Naber, T.W. Crosby, and G. Liang. 2021. Evaluating multiple diagnostic tools for monitoring in-season nitrogen status of chipping potatoes in the U.S. *Potato Research:* https://doi.org/10.1007/s11540-021-09507-y

Crosby, T.W. and **Y. Wang.** 2021. Effects of irrigation management on chipping potato (*Solanum tuberosum* L.) in the Upper Midwest of the U.S. *Agronomy*. 11: 768.

R. R. Spear, R. G. Novy, J. L. Whitworth, J. C. Stark, M. J. Pavek, N. R. Knowles, L. O. Knowles, B. A. Charlton, V. Sathuvalli, S. Yilma, M.K. Thornton, N.L. Olsen, T.L. Brandt, and **Y. Wang.** 2021. Galena Russet: A Long Dormancy, Dual Purpose Potato Cultivar Exhibiting Low Asparagine, Cold-Sweetening Resistance, and Enhanced Protein Content. *American Journal of Potato Research.* 98: 51-63.

Liu, N., P.A. Townsend**,** M.R. Naber, P.B. Bethke, W.B. Hills, and **Y. Wang.** 2020. Hyperspectral imagery to monitor crop nutrient status within and across growing seasons. *Remote Sensing of Environment.* 255: 112303.

Sun, C., L. Feng, Z. Zhang, Y. Ma, T.W. Crosby, M.R. Naber, and **Y. Wang.** 2020. Prediction of end-of-season tuber yield and tuber set in potatoes using in-season UAV-based hyperspectral imagery and machine learning. *Sensors*. 20: 5293.

Wang, Y., M.R. Naber, and T.W. Crosby. 2020. Effects of wound healing management on potato post-harvest storability. *Agronomy*. 10: 512.

Sun, N., **Y. Wang,** S. Gupta, and C.J. Rosen. 2020. Potato tuber chemical properties in storage as affected by cultivar and nitrogen rate: implications for acrylamide formation. *Foods.* 9: 352.

Sun, N., **Y. Wang,** S. Gupta, and C.J. Rosen. 2018. Nitrogen fertility and cultivar effects on potato agronomic properties and acrylamide-forming potential. *Agronomy Journal*. 111: 408-418.

Wang, Y., L.B. Snodgrass, P.C. Bethke, A.J. Bussan, D.G. Holm, R.G. Novy, M.J. Pavek, G.A. Porter, C.J. Rosen, V. Sathuvalli, A.L. Thompson, M.T. Thornton, and J.B. Endelman. 2017. Reliability of measurement and genotype x environment interaction for potato specific gravity. *Crop Science*. 57: 1966-1972.

Wang, Y., T.L. Brandt, and N.L. Olsen. 2016. A historical look at Russet Burbank potato (*Solanum tuberosum* L.) quality under different storage regimes. *American Journal of Potato Research*. 93: 474-484.

Wang, Y., P.C. Bethke, A.J. Bussan, M.T. Glynn, D.G. Holm, F.M. Navarro, R.G. Novy, J.P. Palta, M.J. Pavek, G.A. Porter, V.R. Sathuvalli, A.L. Thompson, P.J. Voglewede, J.L. Whitworth, D.I. Parish, and J.B. Endelman. 2015. Acrylamide-forming potential and agronomic properties of elite U.S. potato germplasm from the National Fry Processing Trial. *Crop Science*. 56: 1-10.

Wang, Y., M.D. Ruark, A.J. Gevens, D.T. Caine, A.L. Raster, N.J. Goeser, and A.J. Bussan. 2015. Processing Snap Bean Variety Responses to Applied Nitrogen and Irrigation in the North Central United States. *Agronomy Journal*. 107: 1401-1410.

Wang, Y., P.C. Bethke, M.J. Drilias, W.G. Schmitt, and A.J. Bussan. 2015. A multi-year survey of stem-end chip defect in chipping potatoes (*Solanum tuberosum* L.). *American Journal of Potato Research*. 92: 79-90.

Wang, Y., and P.C. Bethke. 2013. Effects of *Verticillium dahliae* infection on stem-end chip defect development in potatoes (*Solanum tuberosum* L.). *Crop Science.* 53: 595–601.

Wang, Y., A.J. Bussan, and P.C. Bethke. 2012. Stem-end defect in chipping potatoes (*Solanum tuberosum* L.) as influenced by mild environmental stresses. *American Journal of Potato Research.* 89: 392-399.

Current Funding Sources (~$1,800,000 total, only federal grants are listed):

USDA-SCRI, Wisconsin Specialty Crop Block Grant – "Using hyperspectral remote sensing to monitor nitrogen status of three processing vegetable crops in Central Wisconsin" – 2021-2024, (**Wang, Y.**), $69,489;

USDA-SCRI, Wisconsin Specialty Crop Block Grant **–** "In-season prediction of potato yield using satellite remote sensing and machine learning forsustainable irrigation management" – 2021-2024, (Z. Zhang, **Wang, Y.**), $99,745

USDA-AFRI Foundational and Applied Science Program – "Using hyperspectral remote sensing to develop decision support models for potato nitrogen management" – 2020-2023 (**Wang, Y.,** P.A. Townsend, P.D. Mitchell), $475,000;

USDA-SCRI, Wisconsin Specialty Crop Block Grant – "Exploring the use of thermal imaging for potato post-harvest storage" – 2020-2022, (**Wang, Y.**), $63,819;

USDA-Hatch Formula Funds – "In-season prediction of potato production using UAV-based hyperspectral imagery and multi-task machine learning for sustainable irrigation management" – 2020-2022, (Zhang, Z., **Wang, Y.**), $100,000;

USDA-SCRI, Wisconsin Specialty Crop Block Grant – **"**Aerial imaging for nitrogen management of potatoes" – 2019-2022, (P.A. Townsend, **Wang, Y.**), $71,771;

USDA-SCRI, Wisconsin Specialty Crop Block Grant – "Comparison between Variable Rate Irrigation and conventional center pivot for sustainable vegetable production in Wisconsin" – 2019-2021, (**Wang, Y.**), $80,000;

USDA-Hatch Formula Funds – "Evaluating reduced later-season irrigation & use a model to identify the best irrigation regime for potato productivity under the Wisconsin climate" – 2018-2020, (**Wang, Y.**), $100,000;

North Central Sustainable Agriculture Research & Education (NCR-SARE) Professional Development Program – "Water conservation practices for sustainable food production systems: developing an on-line, participatory training vehicle for ag-professional to enhance interaction with farmers" – 2018-2020, (**Wang, Y.**), $74,959

Current Postdoc and Students:

Alfadhl Alkhaled, 2021 – present, Postdoctoral Scholar
Taqdeer Gill, 2022-2026, Ph.D. Horticulture
Ophelia Tsai, 2022-2024, M.S. Horticulture
Guolong Liang, 2020 – 2022, M.S. Horticulture
Trevor W. Crosby, 2018 – 2023, Ph.D. Horticulture

Extension Bulletins and Articles (for the year of 2021):

Colquhoun, J.B., S.A. Chapman, A.J. Gevens, R.L. Groves, D.J. Heider, B.M. Jensen, G.R.W. Nice, M.D. Ruark, and **Y. Wang.** 2021. Commercial Vegetable Production in Wisconsin 2021. University of Wisconsin – Madison Extension Publication A3422. Online (https://learningstore.extension.wisc.edu/products/commercial-vegetable-production-in-wisconsin)

Wang, Y. 2021. Determining critical petiole nitrate levels for Silverton and Lakeview Russet. *The Badger Common'Tater.* Vol73 (6): 52-55

Wang, Y. and G. Liang. 2021. Irrigating and fertilizing dark red kidney beans in the Central Sands. *The Badger Common'Tater.* Vol73 (4): 54-59

Wang, Y. and A. Robison. 2021. Sanitizing potato storages and equipment: effective sanitization requires a thorough cleaning of all surfaces before a disinfectant is applied. *The Badger Common'Tater.* Vol73 (1): 22-25

Wang, Y. 2021. Summary of 2020 growing season. *The Badger Common'Tater.* Vol 73(1): 68

Extension Newsletters (for the year of 2021).

I serve as a coordinator of the UWEX Vegetable Crop Updates for 2021. Total subscribers of the newsletters are higher than 2000.

1. Wang, Y. 2021. Potato production updates. *Wisconsin Crop Manager*, Vegetable Crop Update #22. September 5.

2. Wang, Y. 2021. Nitrates in well water at UW Hancock ARS and potato production updates. *Wisconsin Crop Manager,* Vegetable Crop Update #20. August 22.
3. Wang, Y. 2021. Potato production updates. *Wisconsin Crop Manager,* Vegetable Crop Update #19. August 15.
4. Wang, Y. 2021. Potato production updates. *Wisconsin Crop Manager,* Vegetable Crop Update #18. August 8.
5. Wang, Y. 2021. Potato production updates. *Wisconsin Crop Manager,* Vegetable Crop Update #17. August 1.
6. Wang, Y. 2021. Potato bulking and growth updates. *Wisconsin Crop Manager,* Vegetable Crop Update #16. July 25.
7. Wang, Y. 2021. Potato production updates. *Wisconsin Crop Manager,* Vegetable Crop Update #15. July 17.
8. Wang, Y. 2021. Potato production updates. *Wisconsin Crop Manager,* Vegetable Crop Update #14. July 10.
9. Wang, Y. 2021. Potato and kidney bean production updates. *Wisconsin Crop Manager,* Vegetable Crop Update #13. July 4.
10. Wang, Y. 2021. Drought concerns and potato production updates. *Wisconsin Crop Manager,* Vegetable Crop Update #11. June 20.
11. Wang, Y. 2021. Potato and vegetable production updates. *Wisconsin Crop Manager,* Vegetable Crop Update #9. June 5.
12. Wang, Y. 2021. Potato production updates. *Wisconsin Crop Manager,* Vegetable Crop Update #4. May 2.
13. Wang, Y. 2021. Potato production updates and production sources (commercial and home gardener). *Wisconsin Crop Manager,* Vegetable Crop Update #3. April 18.

Extension Course:
https://uwveggies.wiscweb.wisc.edu/extension-articles/

I led a group of water experts from UW, Wisconsin state agencies, and non-profit organizations to develop a six-module, self-guided online course with videos about sustainable water management in agriculture. This online extension course was awarded the 2020 Agronomy Society of America Excellence in Extension Materials Awards.

This extension course has been featured by the Michigan Potato Industry Commission weekly news feed, the North Dakota State University / University of Minnesota Weekly Newsletter Spud Scoop, and Wisconsin Potato and Vegetable Growers Association Tater Talk weekly Newsletters. Total subscribers of those extension outlets are higher than 6000.

Extension YouTube Channel:
Proud to be a SpudBadger!
https://www.youtube.com/channel/UCxPSaKNwmbod_-47N1pyNYg
subscribers: 38; total views: 3000 (through November 21st, 2021)

Extension Website:
uwveggies.wiscweb.wisc.edu

This site serves as the primary extension portal of my program for stakeholders and potential industry collaborators who are looking for information produced by my program or interested in collaborating with my program. The site has links to all of our extension publications, research weekly updates, previous extension presentations, previous extension conference proceedings, and other extension products. Google Analytics showed that the website received on average 55 unique page views per month.

Extension Presentations (for the year of 2021):

Date	Role	Presentation title, event, and location	Attendance
2021			
November 30	Speaker/Educator	Future remote and precision technologies to optimize processing crop production, Midwest Food Products Association 2021 Processing Crops Conference. Wisconsin Dells, WI	60
August 5	Speaker/Educator	Nitrogen management and irrigation study updates. University of Wisconsin and Chippewa Valley Bean Plot Day. Hancock, WI.	50
July 21	Speaker/Educator	Potato production research updates. Hancock Agricultural Research Station Field Day. Hancock, WI.	90
May 10	Speaker/Educator	On-farm nitrogen trial updates. Wisconsin Potato and Vegetable Growers Association Water Task Force Meeting. Virtual.	22
March 17	Speaker/Educator	Irrigation and fertility management of dark red kidney beans. Central Wisconsin Processing Crops Meeting. Virtual.	54
February 20	Speaker/Educator	Growing potatoes in your home gardens. PBS Wisconsin's Garden and Landscape Expo. Virtual.	986
February 3	Speaker/Educator	Improving sustainability of Wisconsin potato production. University of Wisconsin Extension & Wisconsin Potato and Vegetable Growers Association Grower Education Conference. Virtual.	137
January 12	Speaker/Educator	Irrigation and nitrogen management of Dark Red Kidney beans grown in Central Wisconsin. Wisconsin AgriBusiness Classic. Virtual	175
January 5	Speaker/Educator	Using hyperspectral	300

		remote sensing and machine learning for potato nitrogen management. Potato Expo. Virtual	

Extension Collaborations:
University of Wisconsin Extension, Fresh Market & Commercial Vegetable Production Team
Healthy Grown Potato (WWF, WPVGA, & UW), Research Advisory Committee Member (2017-Present)

Extension Planning and Development:
Wisconsin Fresh Market Vegetable Growers Association, Faculty Liaison (2017-present)
Wisconsin Potato and Vegetable Growers Association, Water Task Force Committee Member (2017-Present)
Wisconsin Potato and Vegetable Growers Association, Planning Committee Member (2017-Present)
Wisconsin Muck Farmers Association Research Board, Planning Committee Member (2017-Present)

Extension Gift Support Source (for the year of 2021):

2021	
Compeer Financial Fund for Rural America Board of Trustees	$49,998
WI Fresh Fruit & Vegetable Growers Association	$1,200
WI Potato and Vegetable Growers Association	$15,125