

## New Agronomy and Weed Science Advisor



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My name is **Lynn Sosnoskie** and I recently joined the University of California Cooperative Extension Team as an Agronomy and Weed Science Advisor for Merced and Madera Counties based out of the Merced office.

### About me.

I grew up in a small coal mining town in central Pennsylvania. While working on my undergraduate degree, I became intrigued by plants and plant biology following a Botany class field trip to Longwood Gardens in Kennett Square, PA. Two years later I was lucky enough to secure an internship at that same garden. I worked in the horticulture industry for three years before beginning my master's degree in the field of plant pathology at the University of Delaware. I changed my area of study to weed science while earning my PhD at Ohio State. After graduation, I was a post-doc at the University of Wisconsin – Madison (1 year), a research scientist at the University of Georgia – Tifton (5 years), a project scientist at the University of California, Davis (5 years), and research faculty at the Washington State University Tree Fruit Research and Extension Center – Wenatchee (1 year).



*Picture by Todd Fitchette*

### My previous research experiences.

My research experiences have been varied. While doing my PhD, I studied how crop rotations and tillage systems impacted weed community composition in the soil seedbank. At Georgia, I evaluated the efficacy of methyl bromide alternatives for use in fresh market vegetable production systems. I also



spent a significant amount of my time studying the biology, ecology, and management of glyphosate-resistant Palmer amaranth (*Amaranthus palmeri*) in cotton including: pollen movement, seed longevity in the soil, plant regrowth and seed production following failed hand-weeding, and the use of rolled rye cover crops to suppress seedling emergence. While in California, I worked with Brad Hanson to describe the growth and development of glyphosate-resistant junglerice (*Echinochloa colona*) and hairy fleabane (*Conyza bonariensis*), research the management of field bindweed (*Convolvulus arvensis*) in processing tomatoes, and explore the use of pre-emergence herbicides for use in melon production. I only spent a year in Washington, but that time was heavily focused on increasing the presence of the WSU weed science team in the Columbia Basin through extension outreach.

#### **Working with UC Cooperative Extension:**

I'm trained as a weed scientist and, as such, will be actively engaged with weed control issues in agronomic crops. Some topics of interest to me include: the spread of herbicide resistant weeds, the preservation of effective chemical control strategies through the judicious use of herbicides and the adoption of non-chemical control practices, automated weeders, the effects of drought on the composition of weed communities, perennial weed management, and improving our understanding of weed biology and ecology to maximize control. With respect to the commodities themselves, I hope to participate in this year's variety trials and am particularly interested in evaluating crop responses to temperature, as well as drought and water quality. I do have training in plant pathology and am interested in the epidemiology and management of diseases, such as *Fusarium* Race 4 in cotton, that are significant threats to California's agronomic commodities. I also hope to be engaged in collaborative efforts to address a variety of crop issues such as soil salinity and fertility management.

#### **Helping me to help you.**

Extension works best when we are working on the problems that directly impact the industry. Please help me help you by sharing what you think are the most significant problems facing agronomic field crops in the San Joaquin Valley. For example, when I was in Georgia, many of our growers had Palmer amaranth seedbanks that reached densities of 50,000 seeds per m<sup>2</sup>. With numbers this high, even our best management programs were bound to result in control failures that needed to be addressed later in the season (usually at great expense via hand-weeding). Consequently, we were exploring deep tillage to bury the bulk of the seeds far below their germination zone. The growers were worried about the viability of those buried seeds and if they could be brought back up to the soil surface (i.e. during a subsequent peanut harvest) and cause problems in future crops. We found that Palmer amaranth seeds do not persist very long in the soil, although the more deeply buried the seeds are more sheltered and some may remain viable for at least three years. This is a real example of growers driving applied research and it is illustration of what I hope to achieve here.

Feel free to call me at the Merced County office (209) 385-7403 or email me at [lmsosnoskie@ucanr.edu](mailto:lmsosnoskie@ucanr.edu) or [lmsosnoskie@ucdavis.edu](mailto:lmsosnoskie@ucdavis.edu). We'll schedule a time to meet at your farm to talk about issues that directly impact your production program and your thoughts about field crops research in the future.

#### **Social media.**

I love extension and outreach. And I love photography. And I love to combine the two to disseminate information. You can follow me on Twitter (@SJVAgronWeedSci) and Instagram (agronomyweedsience). I will also be contributing, regularly, to various UC ANR blogs including the Weed Science blog (<http://ucanr.edu/blogs/ucdweedsience/>).