

WSSA NIFA Fellow Annual Progress Report

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February 20, 2025

Major Activities in 2024/ 2025

Recruitment of Volunteers to Serve on NIFA Panels. NIFA maintains a database for scientists willing to serve on competitive grant panels. We need more weed scientists in this database. Two approaches have been implemented to recruit more weed scientists to volunteer.

- 1) I appreciate the WSSA BOD suggesting weed scientists to be asked to volunteer. I sent personal invitations to 41 weed scientists encouraging them to volunteer. I received 16 responses, of which 12 indicated that they had submitted their information to the NIFA reviewer volunteer system. Others indicated that they had already volunteered. I am very pleased with this response.
- 2) With the exceptional assistance of the WSSA Science Policy Fellows, a poster was created entitled “*Advancing Weed Science Research, Extension, and Education: NIFA Grants and Panel Reviewer Opportunities*”. The poster included a QR code for an electronic version with links to each of the key NIFA competitive grant programs related to weed science. Authors are Annu Kumari, Cynthia Sias, James Kells, Vijay Nandula and Lee VanWychen. The poster has been presented at NCWSS, NEWSS, WSSA/SWSS and WSWS. I plan to present a digital version of this poster in the NIFA symposium at the 2025 WSSA/CWSS Annual Meeting.

Vijay Nandula has indicated that this effort is having a significant, positive impact. The number of weed scientists serving on NIFA competitive grant panels has increased with the addition of the new volunteers, especially early-career scientists. Furthermore, these reviewers have been valuable members of the review panels.

Monthly Meetings. I met by Zoom monthly with Vijay Nandula (NIFA), Steve Young (ARS), Cameron Douglas (USDA-OPMP), Bill Chism (EPA-retired), Lee VanWychen, and Mark VanGessel. These discussions are highly informative and enlightening. Many creative ideas have emerged from these monthly meetings.

2025 Annual Meeting Symposium: Vijay Nandula and I submitted a successful proposal for a symposium at the 2025 WSSA/CWSS Annual Meeting in Vancouver. The symposium title is “Experiences and Insights from Recently Funded Weed Scientists in NIFA’s Competitive Grant Program”. This is a component of a broader initiative to increase weed scientist success with

NIFA competitive grants. The symposium will include presentations from weed scientists who have been successful in securing NIFA grants from selected NIFA grant programs, along with a recent Panel Manager, and will include advice on how to compete successfully for NIFA funding. The symposium is scheduled for Thursday morning, February 27. Vijay Nandula will not be able to attend the meeting or present in the symposium. Therefore, the start time will be delayed to 8:15am. Thank you to the WSSA Board of Directors for approving this symposium.

Future Plans

It has been an honor to serve as the WSSA NIFA Fellow for the past six years. I look forward to working with Todd Baughman, the new WSSA NIFA Fellow, in an advisory role, over the next year.

I will continue to advocate for weed science research funding, guided by the results of the 2022 WSSA Research Priorities Survey. The three general research areas (and sub-categories) that were scored as high priorities by the most survey respondents are:

- Cultural and Preventative Weed Management
 - combining multiple tactics
 - crop rotation and diversification strategies
 - cover cropping
- Precision Weed Management and Robotics
 - artificial intelligence for plant ID
 - vision systems
 - precise actuators
- Herbicides
 - herbicide development and discovery
 - evaluating efficacy

Areas where research priority exceeded current expertise (areas where research capacity needs to be expanded) are:

- Cultural and Preventative Weed Management
- Precision Weed Management and Robotics
- Weed Genomics
- Social and Economic Issues