



# INTERVIEW

## RUSSELL L. GROVES,

Professor and Department Chair, University of Wisconsin (UW)-Madison Department of Entomology

By Joe Kertzman, managing editor, *Badger Common'Tater*

**NAME:** Russell L. Groves

**POSITION:** Professor and Department Chair

**UNIVERSITY & DEPARTMENT:**

UW-Madison Department of Entomology

**LOCATION:** Madison, WI

**HOMETOWN:** Oskaloosa, IA

**YEARS IN PRESENT POSITION:** Nineteen

**PREVIOUS EMPLOYMENT:** Post-Doctoral Research Associate, Cornell University, Ithaca, New York, and U.S. Department of Agriculture (USDA) Agricultural Research Service Research Entomologist in Parlier, California

**SCHOOLING:** Bachelor of Science in Silviculture and Forestry, Iowa State University; Master of Science in Entomology from the University of Arkansas; Ph.D. in Entomology from North Carolina State University; and Post-Doctoral Research Associate at Cornell University in the Department of Plant Pathology

**ACTIVITIES/ORGANIZATIONS:** Wisconsin Potato & Vegetable Growers Association (WPVGA) base-funded researcher, chairman of the Grower Education Planning Committee, WPVGA Water Task Force, Entomological Society of America, and American Phytopathological Society

**AWARDS/HONORS:** Co-State Liaison, IR-4, "Pest Management Solutions for Specialty Crops and Specialty Uses," and Research Advisory Board, Co-chair, "Citrus Research Development Foundation"

**FAMILY:** Wife, Dr. Carol Groves, daughter, Emily (24), and son, Nick (21)

**HOBBIES:** Family activities, outdoor activities/enthusiast, hunting, and fishing

*When Dr. Jeffrey Wyman retired*, in 2002, after many dedicated years of service in the UW-Madison Department of Entomology, Russell L. Groves filled the vacancy as an Assistant Professor and vegetable entomology Extension Specialist.

His responsibilities involved insect pest management in commercial and fresh market vegetables, including potatoes, and his prior research training focused on insects as vectors of plant diseases in fruit and nut crops.

Today, as Professor and Chairperson of the UW Department of Entomology, Dr. Groves is an invaluable WPVGA base-funded researcher and chairman of the Grower Education Planning Committee.

Respected and well-known by Wisconsin potato and vegetable growers, Groves has proven himself an invaluable and driven researcher dedicated to helping farmers control pests and diseases and reach their goals of achieving high yields and solid returns on investment.

"I've been a base-funded researcher since my appointment as a vegetable entomologist, now going into my 19th year [September 2006] in that position," Groves says. "I assumed the role of statewide Extension leader for insect management in



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vegetables, which transfers over nicely to my base-funded research for the WPVGA."

**How would you describe your position?** I would say it's to provide leadership and solutions to producers. As far as managing insect pests in vegetables, that is an integral part of the job.

There is no assignment in terms of conventional versus organic, so my work takes me across all scales and agricultural philosophies. I'm to be agnostic in my understanding of growers' needs and in terms of the solutions offered.

A portion of my job is to identify

**Above:** Dr. Russell L. Groves, who's shown at the 2021 Antigo Field Day, is a Professor and Chairperson of the University of Wisconsin Department of Entomology, an invaluable WPVGA base-funded researcher and chairman of the Grower Education Planning Committee.



issues limiting production and to devise experimentation that solves problems for producers and then extend these recommendations. Another way to put it is conceiving of appropriate research to solve a problem and devising longer-term as well as more ad hoc solutions.

A grower might say, “Russ, this is what I have going on right now in my field. What can I do?” In response, I ask questions to help make decisions. Some solutions are long term and research enabled, while others are focused on answering a question on that very day.

**Describe your research and objectives for the \$15,000 “Insect Management Systems for Potato Production” competitive grant you received from the WPVGA for 2024-’25.** This is an ongoing project that

we feel generates more immediate answers to pest management issues in potato and vegetable systems.

The objective is to learn the ideal, most sustainable combinations of pest control products for given agriculture systems. Dr. Scott Chapman (Ph.D. 2001) and Mr. Ben Bradford (M.S. 2016) are integral partners in evaluating the performance of these pest control products. Our competitive grant is earmarked to do such evaluations.

Like so many researchers on campus, we take WPVGA base funding and leverage it into larger research projects, such as those sponsored by the USDA or other federal sources, where we compete for grants through sponsored research proposals.

**Left:** Dr. Russell L. Groves (third from left) is shown with his research team at the time, in 2016, during carrot harvest.

**Right:** Two doctors, one family—Dr. Russ Groves poses with his wife, Dr. Carol Groves, with whom he’s raised their two children, Emily (24) and Nick (21).

We feel WPVGA’s research investment is valuable in helping us generate preliminary data and begin new investigations that can be leveraged into much larger awards. Almost all the externally funded projects we have been awarded have been enabled by initial WPVGA base funding.

**How does that grant differ from the WPVGA \$25,000 base funding in Insect Management, and what else does the latter entail?** The

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base funding might vary a little bit depending on certain projects. We have sponsored research looking at water quality to better understand the basis for groundwater contaminants, where they originate, and how we can provide solutions.

Another multi-state project recently funded by the USDA is aimed at finding alternatives to neonicotinoids and helping the industry learn how to manage pests in a world where neonics might soon be absent or reduced. The objective is to give outcomes or solutions to producers.

In this way, the funding is contextual and depends on specific projects and needs of the industry.

**As an Extension specialist, how closely and how often do you work directly with growers?**

I value and enjoy the opportunity to work with producers. The interactions with producers, pest managers, and scouts are critical—they help me understand the outcomes of our research and how the results can be integrated or fit into the logistics of agriculture.

To have a connection with growers early on and throughout the process of devising ideas helps my team

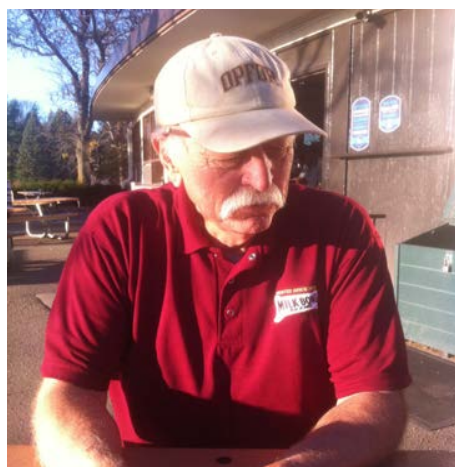


refine those ideas to make the most appropriate interpretations that are implementable and translatable.

I'd say more than half of the research projects that have been funded within our program have some basis that has emerged from grower

**Above:** Russ Groves (front) works on calibrating a sprayer to be used as part of his research, in 2013.

ideas, no question. If there aren't conversations with that community, you can't gauge and understand their priorities.



**When Dr. Jeffrey Wyman (shown in 2015) retired, in 2002, after many dedicated years of service in the UW-Madison Department of Entomology, Russell L. Groves filled the vacancy as an Assistant Professor and vegetable entomology Extension Specialist.**



**Russ Groves poses with graduate students in 2024.**

**You've been doing it for a lot of years—you must enjoy the outreach and direct contact, don't you?** When I got into this work as a graduate student, I was interested in natural history and the complexity of biological systems. For example, part of my program is managing vector-borne diseases of plants, including bacterial and viral diseases.

The complexity of these systems has always been interesting to me, and I have appreciated being able to continue this line of investigation here at UW-Madison. Unfortunately, there is no shortage of insect-transmitted diseases of vegetables here in Wisconsin.

They're complex systems, but I have absolutely enjoyed making that work translatable. I do think there's value in taking what can be complex interactions and making them more transparent to a board or audience of people, to include producers.

Just like the classroom, when an audience of learners understands the overall system well, they are more inclined to be responsive to the information delivered. Conversely, if a set of customers questions the information being presented, or the reliability of the information you offer, they become hard of hearing.

**You are also the Chair of the Entomology Department and a Professor. Are you teaching classes?**

I currently co-teach Entomology 201, our Insects and Human Culture course, with Dr. Sean Schoville, who's a great educator and instructional partner. Sean has taught the course for over a decade, and it has been very easy to transition into this course over the past five years.

We teach a lot of non-entomology majors, or non-biologists, and it's a fun course. Up until just recently, I was teaching our Principles of Economic Entomology, but we have a new faculty member who's handling

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*“We feel WPVGA’s research investment is valuable in helping us generate preliminary data and begin new investigations that can be leveraged into much larger awards.”*

**– Dr. Russell L. Groves**

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my portion of this course at the present time, Dr. Emily Bick.

I teach every semester, spring and fall. I enjoy it, and Insects and Human Culture is a large enrollment course, usually with around 275 students a semester. If we are lucky, there are often four or five students each semester who gain a new and great appreciation for insects, and in turn,

may end up coming to CALS or even Entomology!

It's a good way to intersect with biologically inclined students. I think it's a heavy expectation for all new undergraduate students, or those who have just graduated high school, to know exactly what they want to study upon entering UW-Madison. Plenty of new people entering college

**Above:** Dr. Russ Groves is the statewide Extension leader for insect management (including, of course, Colorado potato beetle, shown) in vegetables, which transfers over nicely to his base-funded research for the Wisconsin Potato & Vegetable Growers Association.

are experiencing many things for the first time.

**What work is being conducted in the Groves Lab?** Yes, 840 Russell Laboratories, the Groves Lab. Right now, there are five students in the laboratory and a new student arriving this fall. I need to again mention the two academic staff members in the laboratory to include Dr. Chapman and Mr. Bradford.

It's really a fun group, and they are all working on a variety of different projects, including questions about environmental quality, pesticide cross-resistance, heritability of insecticide stresses, management of insect-transmitted diseases, and more sustainable solutions for insect management.

As stated previously, many questions that emerge for us come from interactions with stakeholders, producers, and other industry professionals. We learn from these

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conversations, as well as through those with researchers at other universities who have similar or shared research interests.

**What are your biggest challenges in entomology as it relates to commercial and fresh market vegetable production?**

They aren't really challenges, but more often opportunities. Production of food will always hold a fair amount of importance in this country, and Wisconsin has a long history in food production.

So, the opportunity is to be able to provide solutions to maintain efficiencies and remain sustainable and profitable, as well as help growers relay to their customers the value of what they bring to the table. These opportunities span all segments of agriculture, including organic, direct market,



and commercial scale.

Broadly, I'd like to continue to support food production in the Upper Midwest and Great Lakes region, an area that's close to renewable resources. With the emergence of a changing climate, and as we look ahead 20-50 years, this part of the

**Above:** Russ Groves (left) and Dries Amesian are shown at the Hancock Agricultural Research Station, in 2016, holding carrots affected by aster yellows, a systemic plant disease caused by phytoplasma bacteria.

country will likely continue to be a valuable contributor in terms of food production in the United States.

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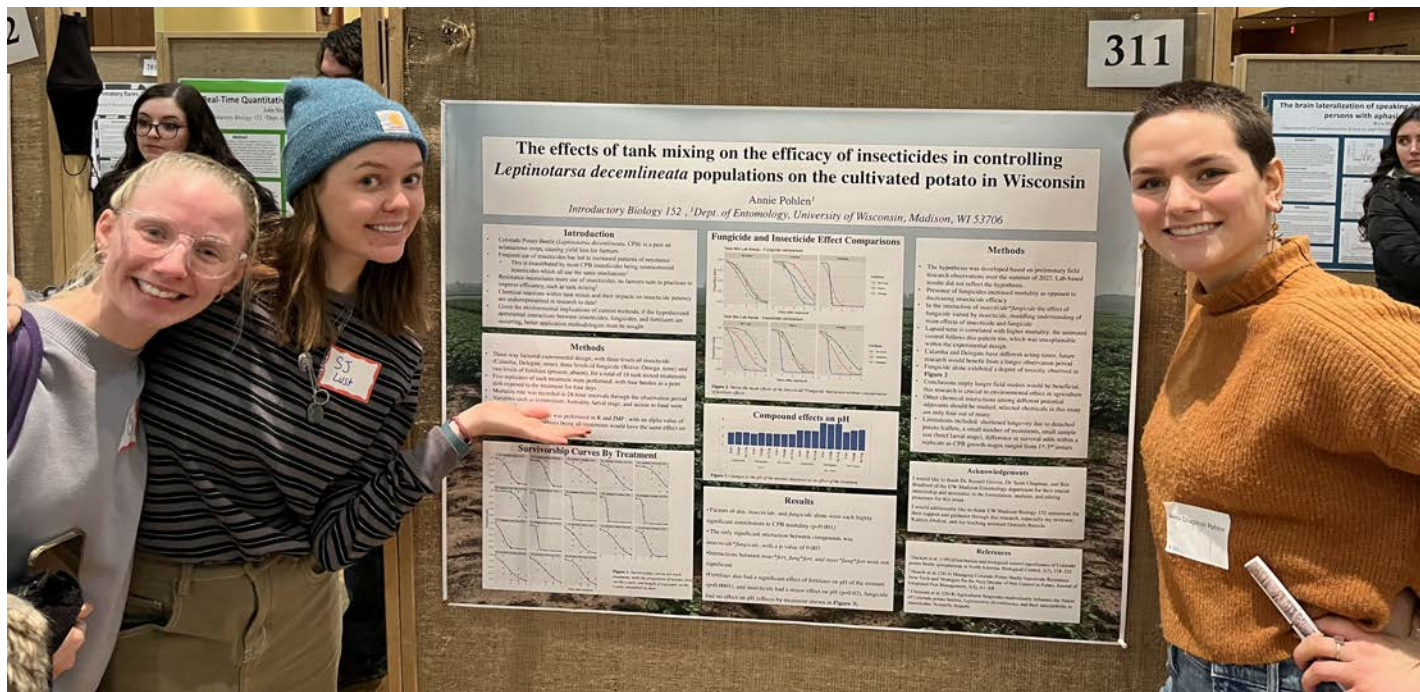


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An important outlook will be anticipating or thinking ahead to what the emerging challenges and issues in insect management will be and guide this industry in the right direction(s).

**Talk about integrated pest management (IPM) and looking at a farm as an ecosystem to manage pests that way.** Some of the data science approaches are trying to work on how to anticipate where or in what locations an insect pest might become more, or less, abundant in the future by looking at scouting data.

An important call out here includes our scouting partners in Wisconsin and the Upper Midwest who have offered and shared important scouting resources. We hope to leverage better pest predictions and where certain pests will be in greater abundance through these relationships. We think that's certainly part of proactive IPM.

In terms of IPM, we do need to be mindful of our collective impacts as agricultural managers. We are witnessing changes or impacts

on non-target organisms in our agricultural environments.

Scientists have revealed that there are changes in overall biodiversity, insect abundance, and with one special group that needs our attention, pollinators.

Make no mistake, we very much try to work with and through the lens of our growers and what their needs are to always manage and maintain a healthy ecosystem. The Healthy Grown potatoes program is a good example of that.

**Is insecticide resistance your biggest challenge today?** It's ever present and ongoing. I wouldn't say it's the biggest challenge, at least not in Wisconsin.

The way technology has influenced agriculture in the last 30 years has been amazing, not only regarding implements and equipment, but also in such areas as seed and genetics.

We use technology to gain agricultural efficiencies, and unfortunately, a lot of these efficiencies have come through "better living through chemistry."

**Above:** University of Wisconsin-Madison student hourlies pose, in 2021, next to a presentation they gave on "The effects of tank mixing on the efficacy of insecticides in controlling *Leptinotarsa decemlineata* populations on the cultivated potato in Wisconsin." The presentation was part of their Introduction to Biology 152 course in the UW-Madison Department of Entomology.

We appreciate the value these tools bring, and we should always be looking toward sustainable and regenerative solutions. Because of this, we're always managing resistance, as well we should be.

We have these tools, but we need to always be better stewards and learn exactly when to apply the technologies, how much, and when to back away. We should also try to learn and understand the tenants of IPM, and how to implement and exploit other non-chemical approaches whenever possible.

One emerging challenge might have to do with the question of how we can move into a world or era of using new pesticide management solutions. Some of them are already in our hands, but we don't use them in

specialty crop agriculture.

Genetically modified crops became commonplace in row crop agriculture in the mid-1990s. The public initially had questions and concerns, but those technologies have been integrated into row crop agricultural systems for nearly 30 years.

The same cannot be said for specialty crop agriculture, where new solutions are effectively avoided due to perceptions of consumer acceptance.

One of our current challenges is science literacy. Does the consuming public fully understand all the risks (and potential gains) posed by new genetic solutions? Are there still too many unknowns associated with these solutions in specialty crops?

New solutions could minimize the use of pesticides on a scale not seen, and that could be one of the biggest advances in sustainability. How do



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**An agricultural research plot is set up by UW-Madison Department of Entomology students.**



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## **Interview . . .**

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we change public perception, or change science literacy, to influence consumers and retailers on these technologies and the sustainability they could achieve?

**What other practices would you like to see more potato and vegetable growers adopt?** I wish there were ways we could organize ourselves on larger landscape scales to coordinate the sequence of compounds we're using and to try to mitigate resistance on broader scales.

More specifically, it would be great if we could coordinate rotations of potato crops in ways that could really affect pests like the Colorado potato beetle.

I'm referring here to more coordinated efforts, like multi-farm participation. Some collaborative arrangements are happening in other states, and a few potato companies are starting to coordinate plantings.

These are important and interesting approaches we hope to encourage into the future, for not only insects, but also diseases.

**What do you wish you had more time to do in helping area potato and vegetable growers?** I just want to be more present, have a receptive ear, and better understand what the emerging issues are for that group. That's been an important element of my professional development as a scientist and educator.

**You are chairman of the WPVGA Grower Ed Planning Committee.**

**Why is that important to you?** I'm the chairperson for the WPVGA and Division of Extension Grower Education Planning Committee, but I work closely with other colleagues and base-funded researchers, all of whom are important to that meeting.

I wish to specifically recognize Dr. Amanda Gevens, a partner in planning and coordination of the meeting, and organizer of our



written and online proceedings and poster sessions. I might be the current chairperson, but I'm only one member of a group that makes the meeting happen.

The Grower Education Conference is a great way and venue for us to share information annually. I commend our predecessors and organizers of the meeting well before me.

It's one of the meetings where we focus on science and research-based information, and with that comes a degree of objectivity in terms of research outcomes.

We receive a lot of positive feedback on this meeting. We are also incredibly lucky to have an active and strong WPVGA Associate Division that supports the meeting and our Grower Education portion. We value that relationship and try to make sure there is interaction between our groups. That's what was planned before me, and it's still a great model.

**You also sit on our Water Task Force.**

**Above:** Dr. Russell L. Groves (right) is shown after a successful pheasant hunt with Dr. Tom German, in 2014. Dr. German, who passed away in August 2023, was a UW-Madison Professor and Director of the Wisconsin Seed Potato Certification Program.

**Why is it essential for you to also be focused on water as it relates to your other work?** I've always appreciated that the industry is forward thinking and forward looking. I think the Water Task Force (WTF) has been around for over a decade, so I appreciate that the industry wants to be proactive. One of its goals is to be supportive of our shared resource that underlies Central Wisconsin where we all live and work.

**What are your goals for the coming years as far as entomology, outreach, and field work?** One of the goals for me is to maintain good relationships between the campus, CALS (College of Agricultural and Life Sciences), and the stakeholder community. The Grower Education Conference

is a good example of how we accomplish this.

Research funding is one more example of those relationships, shared responsibility and investment, and the many funded activities that take place at Agricultural Research Stations are another way of encouraging and fostering those kinds of important relationships.

UW Madison generally, and CALS specifically, intends to enhance relationships with the citizenship and agricultural communities in the State of Wisconsin. The Wisconsin Idea is still a strong goal and helps to guide what we want to accomplish, and

managing those relationships is key.

We've witnessed a lot of regionalization in our agricultural systems, and I think it's going to continue to happen. Investment by the CALS and the Division of Extension in terms of applied agricultural solutions encourages this growth.

It's a part of the reason why food and specifically potato production continues to be so successful in the state, and I hope that isn't viewed as an overstatement.

The investment our industry makes in its research partners and with CALS

is very valuable and one we look forward to continuing long into the future.

**Is there anything I've missed that you'd like to add, Russ?** We all very much appreciate the WPVGA and producers in the State of Wisconsin. These are and have been very successful relationships that don't happen everywhere in the country. We hope to maintain and grow these valuable relationships that buoy our success and impact.

It's a great place to be and work, and a good set of relationships and people with whom to work. **BCT**



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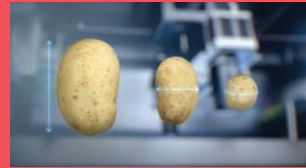


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