



Maricopa County Cooperative Extension

IMPROVING LIVES, COMMUNITIES,
AND THE ECONOMY

January/February 2023

Issue # 46



Integrated Pesticide Management - Don't Let the Bad Bugs Bite

Jenny Weber, IPM

Dr. Dawn H. Gouge, Medical Entomology Professor & Public Health IPM Specialist, University of Arizona, will present a 1-hour webinar this Thursday called, "Don't Let the Bad Bugs Bite: Preventing Pests that Impact Human Health."

Did the webinar's title catch your eye? For more details, please see the attached [flyer](#) and information I've included below.

Webinar Description: Diseases from ticks, fleas, and mosquitos are on the rise in many urban areas. The Covid-19 pandemic has focused attention away from this public health issue. In this webinar, we explore the need to prioritize pest prevention in urban planning, housing, and landscape design.

Date: Thursday, February 2, 2023.

Time: 12:00–1:00pm Arizona/Mountain Standard Time and 11:00am-12:00pm Pacific Standard Time.

CEU: 1 hour of continuing education is available for Arizona certified applicators with structural (PMD) certifications. Agricultural CEU have not been approved for this webinar.

Pre-Registration: To register, complete the form on the webpage:

https://unr.zoom.us/webinar/register/WN_8CSNDD91RASU8PclviAuxQ

If you have any questions about the webinar, please contact Dr. Dawn Gouge by [email](#).

The Benefits of Walking

Mary Ahern, MS,RDN

A typical new year's resolution is to increase physical activity. But often, people need help figuring out where to start. Enter walking! Walking is a great way to start moving your body, get outside, and start a new routine for the new year. Walking is a great physical activity to start incorporating into your routine because it is something

almost anyone can do anywhere. And the benefits of walking are endless!

According to the [Mayo Clinic](#), *regular* walking (and the key word here is regular) has a multitude of benefits, including; maintaining a healthy weight, helping to prevent or manage chronic diseases, strengthening bones, building cardiovascular fitness, improving balance, as well as reducing stress and boosting your mood. Taking a walk in the middle of the day can be more helpful at reenergizing you than a 2nd (or 3rd) cup of coffee! To improve the benefits of walking, the Mayo Clinic suggests walking "faster, farther, and more frequently."



So, now you've read this far and decided you want to walk more. Great! As an Active Living Coordinator at Maricopa County, people always ask me for tips on how to get out walking more. Here are my favorite tips to share:

- Walk with a friend.
- Start with small, incremental goals.
- It doesn't need to be long! You can always take a walk on your lunch break.
- Make it part of your routine.

Join a walking group. Here in the Maricopa SNAP-Ed program, we have started walking groups all over the Valley.

Joining a group helps with accountability, making it a habit, and making it fun! You can walk and chat, meet new people in your community, and invite friends and families.

Happy walking!

Arizona Center for Rural Leadership

Scott Koenig, Executive Director Project CENTRL



**ARIZONA
CENTER
FOR RURAL
LEADERSHIP**

Do you know why the "A" is missing in CENTRL? It's because CENTRL was created as an acronym for CENter for Rural Leadership in 1983! Our center is now known as the Arizona Center for Rural Leadership and Project CENTRL remains the flagship leadership development program. While the mission and purpose has remained the same over the last 40 years; the nuts and bolts of the program have adapted to fit today's modern Arizona. Regardless of the times, the function has been and will always be centered around "NEW." New Skills. New Knowledge. New People. We don't know who needs what at this particular time in their lives; but we do know that everyone needs all three!

We build that in to every Seminar experience. For example in Yuma last week, the current Class 31 learned about a day in the life of an immigrant farm worker. Walking with them across the San Luis Port of Entry and then going to the fields to harvest 90% of the nation's winter leafy greens. Then they will learn a new skill for facilitating difficult conversations through the Arizona Town Hall process. The new people they meet will be beyond the presenters on Colorado River water rights on the river and tour guides of US Border Patrol agents; but build genuine connection with over 20 alumni from the Yuma area. They are doing all of this so they can go back to their communities to make a difference in a way needed by their community matched with their passions.



Additional Opportunities

If building new skills, gaining new knowledge and meeting new people to benefit rural Arizona sounds interesting to you, consider **applying for Class 32** by March 15, 2023. All the details and application materials are found at www.centrl.org/apply.

We'll be celebrating 40 Years of Making a Difference for Rural Arizona all of 2023 culminating with the **CENTRL Celebration 6/2/23** at Wild Horse Pass! Save the Date and Plan to join us!

Urban Horticulture Program

2023 Citrus Clinic

Michael Chamberland

Assistant Agent, ANR/ Urban Horticulture

The Urban Horticulture Program and Master Gardeners staged our popular Citrus Clinic in January. The clinic offered a unique virtual/in-person hybrid format for a second year. 165 people registered for the online evening talk series and 123 people attended the in-person day at Greenfield Nursery.



The online series of evening presentations featured talks by Dr. Ed Martin and James Truman; Dr. Glenn Wright; Dr. Alex Hu; and Dr. Shaku Nair. Each night a new virtual topic was offered, covering in-demand citrus growing advice on irrigation, fertilization, pests, diseases, and an overview of the many citrus varieties suited for growing in our area.

The evening talks were followed by an in-person day at Greenfield Citrus Nursery. The ever-popular display table, prepared by Dr. Glenn Wright, displayed 105 varieties of citrus fruit collected from Arizona and California. A selection of common citrus fruits were available for tasting, and a juicing machine was available to turn fruit into juice on the spot.

Presentations included – Citrus Display and Tasting with Dr. Glenn Wright (Associate Professor/Extension Specialist, UArizona, Yuma Ag Center); Citrus Planting and Pruning with John Babiarez (owner of Greenfield Citrus Nursery), Citrus Fertilizing and Care with James Truman (retired farm manager UArizona Citrus Ag Center), Citrus Irrigation with Jay Subramani (Irrigation Research Specialist UArizona), Citrus Diseases with Dr. Alex Hu (UArizona Plant Pathologist), Citrus Pests with Dr. Shaku Nair (UArizona Entomologist), Deciduous Fruit Tree Selection with Laura Ward (Certified Master Gardener), and Date Palms for the Home Grower with Scott Frische, (Curator of Horticulture at the Phoenix Zoo).

Herbicides: Essential Information for Homeowners

Authored By: Dr Shaku Nair, Michael Chamberland, Ursula Schuch, and Kai Umeda

Herbicides are substances that kill or inhibit the growth of plants. They are used to get rid of unwanted plants (weeds). For example, “RoundUp” is a very popular herbicide. It was first developed as a sprayable product with the active ingredient glyphosate. It is effective against a broad spectrum of weeds (non-selectively kills both grasses and broadleaved plants). There are many glyphosate-based products available for different uses (Fig. 1), and not all of them are of the “RoundUp” brand.

Weeds are not the only plants affected by herbicides. When applied incorrectly, herbicides can damage desirable plants too! For example, glyphosate by itself is low in toxicity to humans and other animals. It targets only plants and poses very little risk while providing economic benefits of ridding weeds.

However, combinations with other active/inert ingredients may have different effects, many of which are unknown.

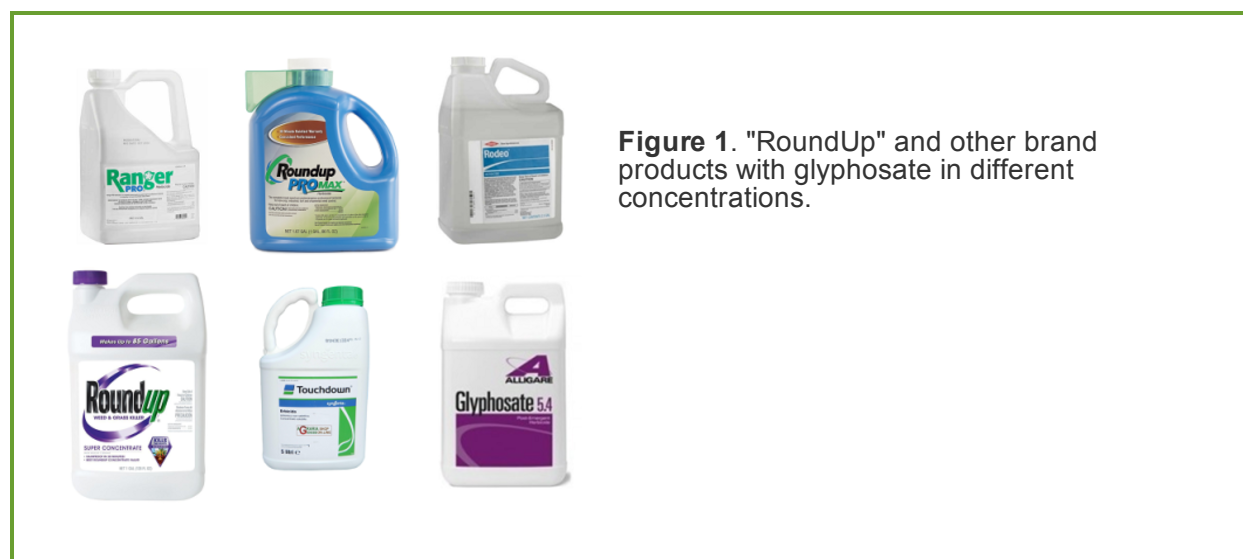


Figure 1. "RoundUp" and other brand products with glyphosate in different concentrations.



Figure 2. RoundUp" products that contain non-glyphosate active ingredients. Some of these do not contain glyphosate.

ALL ROUNDUP PRODUCTS ARE NOT THE SAME!

“RoundUp” is now a marketing brand, that includes products containing glyphosate and/or other active ingredients, that have different names and purposes (Fig. 2).

Don't rely on the trade name or pictures on the container alone.

Some trade names are familiar and self-explanatory, e.g. RoundUp®, GroundClear®, WeedClear®, WeedBGone®, Weed Stop®, etc.

Colorful labels and containers with images of dead weeds and easy application are appealing (Fig. 3), but some ingredients can damage or kill your landscape plants.

Read the fine print!

- The product label on the back of the container lists the active ingredient(s) in the product and their concentrations.

- These are the important component(s) responsible for ultimately killing the weed(s).

- **Chemical name** is the long descriptive chemical name e.g. N-(phosphonomethyl)glycine
- **Common name** is often a shortened or abbreviated version of the chemical name, e.g. glyphosate, diquat, imazapic, penoxsulam, sulfentrazone, 2,4-D, dicamba.
- **Trade name** often describes the activity(e.g., WeedBGone) and is not related to the chemistry.

- The mode of action(chemical)and method of application (e.g., soil-applied or foliar-applied), as well as environmental factors, all influence the effectiveness of a herbicide product on a particular plant.

In the below examples (Fig. 4), **Roundup ProMax®** contains only glyphosate as the active ingredient. However, **Groundclear Vegetation Killer®**, contains glyphosate and imazapyr, a non-selective soil/root-active herbicide which can last about a year in soil, moves with water, and can easily be taken up by roots of nearby plants and trees. As a result, when applied for controlling weeds in driveways, fencelines or mulch circles, **nearby plants can be killed!**

The GroundClear® label (Fig. 5) clearly states where the product can or cannot be used, and that nearby or future plantings may be injured. That’s why it is extremely important to read the label.

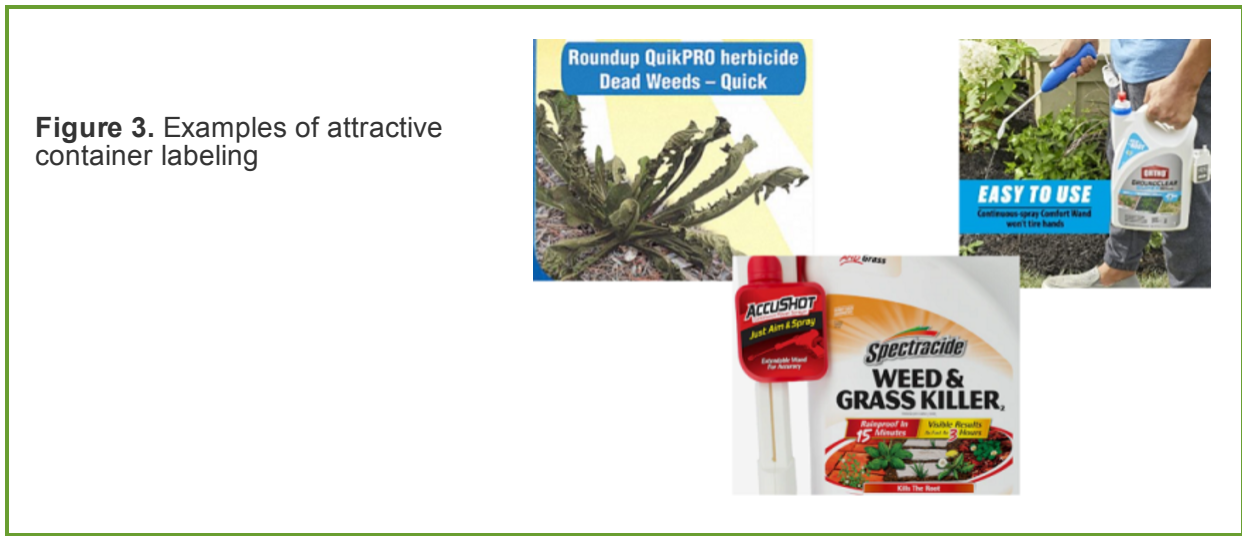
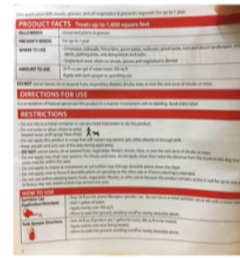


Figure 3. Examples of attractive container labeling



Figure 4. Examples of herbicide labels showing fine print.

Figure 5. GroundClear® label showing restrictions to use.



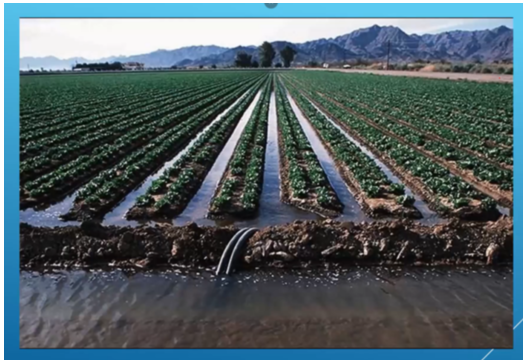
Further information:

Clear Up the Confusion: [Know How to Select the Appropriate Herbicide to Control Weeds](#)
[Weed control choices for turf and landscapes](#)

Smart Choices: [How to Pick the Right Herbicide to Kill Weeds](#)

[New Herbicides Can Damage Landscapes](#)

[Diagnosing Herbicide Injury on Garden Landscape Plants](#)



Urban Ag/Beginner and Small-Scale Farmer Programs

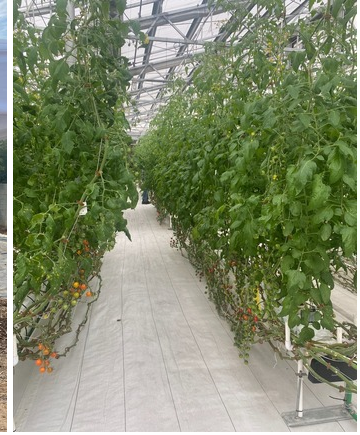
Colleen Hanley, Assistant in Extension, Urban Agriculture

The Urban Agriculture Production, Small-Scale, and Beginning Farmer Program has been busy with preparation on the People's Demonstration Farm at MCCE's Phoenix office. We are integrating 12 more

raised beds, expanding irrigation lines, building another greenhouse, installing an outdoor classroom, establishing a pollinator garden, and developing plans for ADA accessible walkways in preparation for a grand opening - TBD (depending on construction timelines)! We are eager to have our site public-ready so we can open our gates and implement a variety of applied research projects and events onsite.

The Program has also jumped into a monthly series of virtual events in partnership with NRCS titled "The Urban Ag Hour". At our inaugural event on January 25th we saw great participation from urban, small-scale, and beginning farmers as well as service providers from across the state. This month's event featured a talk by Dr. Ed Martin on irrigation for urban farms, followed with a talk by NRCS State Outreach Coordinator Paul Cattelino on NRCS's financial and technical assistance programs including NRCS's Urban Agriculture and Conservation Innovation Grant programs. Our next Urban Ag Hour will be hosted on February 22nd, and will feature a soil health presentation by Dr. Debankur Sanyal and an overview of FSA programs and services.

Our Urban Ag newsletter is also growing - we have attended Farm Days at local farms, community events, and farmers markets to do outreach with stakeholders. We now have 660 stakeholders subscribed from across the state who we share relevant educational resources and events with each month. Plans are underway to further expand reach to clientele with an Instagram account which is coming soon!



4-H Programs - Our 4-H Journey

Erica Odello, Glendale 4-H Adult Volunteer

In 2017 my oldest daughter was at a crossroads. She was getting picked on at school and every sport and activity we'd enrolled her in had been a disaster. She was miserable. And then I was scrolling through my Facebook feed and saw that one of my oldest friends had a daughter... showing a chicken! I thought it was one of the funniest things I'd ever seen and when I asked her about it, she said that it's a 4-H thing. I had read an article about the "Tour de Coups" a few years back about the Phoenix, AZ urbanites who keep chickens in city limits and often spend more on their poultry than on their more traditional pets. I thought it was cool but didn't have much time to figure out a way to make it happen for us.



Everything changed that spring when I quit my corporate job and found myself freelancing from home. Without a long commute and desperate to find something, anything, my kids would enjoy I stole my friend's idea and signed my kids up for 4-H.

That first year they showed chickens and had a really, really good time. They made friends they still have nearly six years later. That second year they started a business selling paracord bracelets and saved enough money to buy their own cavy's (guinea pigs for anyone outside of this unique world). The herd has fluctuated over the years with as many as 12 at one point and both kids have seen both heartbreak and huge success showing small stock all over our state.

Our club, Glendale 4-H, is a general projects club which means we offer more than the traditional animal-based projects that 4-H is known for. A lot of 4-H is used as supplemental curriculum for homeschoolers. When we have a kid say, 'I want to learn woodworking,' then we find another parent who has the tools and skills to lead the project. I've lead everything from baking to photography and my kids have won not only ribbons but rosettes at the county fair for their art, sewing, baking, cooking and photography entries.

My youngest learned that she has Celiac's Disease last year and has been on a mission to learn how to make familiar foods gluten free and delicious! My oldest is headed to Denver in January for the Western National Roundup public speaking competition and she just got back from Atlanta, GA as one of 8 Arizona delegates to the 101st 4-H National Convention.

My youngest says 4-H has helped her learn how to be a leader both in the club but also at school and amongst her friends. She complains at the time but relishes the public speaking opportunities and the chance to speak in front of a captive audience. She intends to follow in her sister's footsteps and earn a trip to Atlanta and Western National Roundup when she's older.

4-H helps kids learn STEAM and also basic life skills that have fallen out of school over the decades. The various projects teach kids where their food comes from and a lot of 4-H graduates head to universities that offer Ag programs and their participation in the program

gives them a leg up in the admissions process. These kids are our future ranchers, farmers and Ag educators. They are the next generation that will be providing food to the nation!



Left Photo: Mya and Kalise helped our club collect nearly 800 pounds of clothing and small household goods as a fundraiser and community service project.

Mya earned top marks for her 2022 record book and along with that a spot with the Arizona delegation to this year's 4-H National Convention in Atlanta, GA.

Top Right Photo: Kalise baked a gluten free chicken pot pie from scratch as her cooking entry into the 2022 county fair. She won a blue ribbon for her efforts.

Field Crops IPM

Dr. Ayman Mostafa, Associate Regional Agent

The Field Crops IPM team recently held its annual Field Crops "Clinic" in Buckeye that was well attended.

This event emphasized on timely information and deliverable from current research on areas of interest to our clientele, such as management options for alfalfa winter pests, natural enemies, updates on newly identified caterpillar pests, effective irrigation practices in the low desert, EPA's endangered species workplan, market outlooks and policy issues, updates on the AZMET weather station systems, pest thresholds, and much more subjects relevant to field crops throughout Arizona. This was just the first of many workshops and events the team has planned for the year.



The field crops team is currently monitoring pest populations in alfalfa to gear up for a multitude of trials. These trials include pesticide efficacies on pest populations as well as the effect of these pesticides on the natural enemy populations. Some of these are annual trials and some are a part of a recently funded USDA-NIFA project in order to better understand the relationship between pest populations, their natural enemy predators, and the decision-making practices of growers on which selective and soft pesticides offer the most pest protection while also maintaining the natural enemy populations. The Program hired a new Post Doctor, Dr. Avik Mukherjee, to help with this project.



Associate Director's Cut

Dr. Ayman Mostafa

Happy 2023!

Just before the winter break, our MCCE team gathered for a winter celebration and potluck. We celebrated our community's diversity and different ways of celebrating different holidays around the world. These activities,

decoration and great food and desserts showed how diverse and wonderful our MCCE community are, showing that we are representatives of almost the whole world.

With the new year, our programs at MCCE are going full speed with educational, research and outreach activities around the office, the county and the state, with even regional and national collaborations. The programs are gearing up for a wide array of webinars, workshops, trainings, recruiting and research that build on previous activities and create new opportunities for our ever-changing and diverse communities in Maricopa County. We are in the plan to enhance the Palo Verde auditorium audio-visual system to improve our future deliveries for education programs. We are in the process of hiring new personnel that will work on improving our visibility and programming efforts. A marketing/media employee will be hired to assist all programs to promote their events and market to the proper communities. We are in the process of hiring a One-Health faculty to help bring synergism among programs, explore various new sources of funding, and build on the University-wide's One-Health initiative to ensure MCCE has a place at the table of this initiative. We are currently converting a copier/work room into office space to meet growing demand, as more employees are returning to the office from remote work situations and due to increased hiring with more program activity. We are remodeling the lobby area in our building to achieve more functional use of available open space. This requires paid consultation, design, and materials. To ensure a secure working environment we are installing video and intercom at our building entrance. The outdoor educational and research area is getting into shape with the funding from USDA-NRCS and other sources to the Urban Ag, Small-Scale and Beginning Farmer Program.

Please stop by and see what's new at the office. As always, thanks to everyone for their continued support of Maricopa County Cooperative Extension!



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