

4 County CWMA

Herbicide Roundtable 2014

Wed, March 12 2014 (8:30 AM – 12:30 PM)

Montgomery Park Building, 2701 NW Vaughn St, (Room 460), Portland, OR 97210

Agenda

8:30-9:15 am (Effective Treatments)

Knotweed

Mitch Bixby: Low dose, Triclopyr, early treatment (May/June) to prevent root from replenishing over the course of the summer. I haven't tried it yet, but it is an interesting theory.

Sam Leninger: The sap is all up early in the season, so any spring treatment is really more of a chemical mow. The ideal is to wait until fall. In spring, not as much surface area b/c leaves are small. Wait until Aug-Oct when leaves are large, lots of surface area and the plant will draw the herbicide down to the roots.

Katy Weil: We've done research in upstate NY, glyphosate treatments, fall, pre-senescent, with success and not treat in the spring so we avoid the strange growth in the plant in response to treatment. Has a research study she can share with folks who might be interested.

Lucas Nipp: We've tried everything.

Glyphosate the first year, Imazapyr (1%, then 1.5%) the second year.

Imazapyr the first year, glyphosate the second year.

Response is always the same. Good kill the first year, and then a trickle of regrowth the second year.

Multiple years of treatments just seems to be necessary.

Mitch Bixby: I've got some sites where I haven't seen any regrowth in five years. I have another site that was treated in 2007, and in 2013 I went back and for the first time am seeing new sprouts.

Rob Emanuel: In WA county we are moving to an every other year treatment. a) to save money, b) Following The Nature Conservancy's lead in the Sandy River Basin. Research I did a few years ago said that when the plant gets epistatic growth it has shut down, so don't spray it. The epistatic growth is a hormonal defense mechanism and the plant tends to sequester most of the herbicide in above ground growth. Treatment at this point doesn't result in long term results.

We use Milestone. We had used Imazapyr in the past. The half-life of these two is similar, so I'm somewhat concerned about long term soil health and native collateral damage. I think the aminopyralid is working effectively. Imazapyr worked well too but we got epistasis immediately (contractor might have been using a mixture that was too concentrated). With aminopyralid we are not seeing this epistatic response.

Katy Weil: We've been studying this in NY for years and can send the information to the group when it is completed.

Mitch Bixby: A clarification for folks.

Capstone is a 2% concentration of aminopyralid with 16% triclopyr.

Rob Emanuel:

Epistatic growth, color change, light green or red, twisted leaves, broccoli formation, plants don't look normal, lumpiness.

-We don't apply herbicides when the plants are in this state; I would come in with physical cutting.

Chris Runyard:

Bees love the flowers.

Jon Wagner:

Is there an herbicide to use to prevent bee impacts?

John R:

No issue with these herbicides on bees. Although they can bring back herbicide to the hive through pollen and nectar.

-We should have a collaborative discussion on this with Xerces.

Elaine Stewart:

Remember to follow treatment with native seed mixes.

Lucas Nipp:

Beekeepers not concerned with herbicides.

8:30-9:15 am (Effective Treatments)

- **Garlic Mustard**

Is there anyone seeing it go through annual growth? i.e. seeing late fall germination and bolting in the spring?

Rob Emanuel:

Academia

-life cycles tracking in the field?

-plasticity in plants in response to our treatment?

Sam Leninger:

Hand pulling effective until we see individuals that are going to seed when plant reaches two inches in height and are hidden under taller plants.(and this is a plant that grows to 4 ft)

Mitch Bixby:

When is garlic mustard bolting? (related to temperature or day length? Or both?)

Maybe this is a question academia could help us figure out.

Sam Leninger:

The response is hormonal. If the plant has snapped off stems, we see the plant responding with new growth in the dead of winter.

Mitch:

I've seen plants with flowers and burst seed pods at the same time.

Mary:

We've shared this information with ODA. They recognize these new hurdles that are emerging.

The good news is that we are finally seeing some improvements in reduced density of garlic mustard after subsequent years of treatment.

Jeff Lesh:

What are people using to treat garlic mustard?

Seems like most people are using Glyphosate 2% w surfactant or Triclopyr 2%

-I generally just use Triclopyr b/c I think competition is important. On roadsides there is usually grass as well.

Mitch B and Rob E: Glyphosate early, triclopyr late, hand pull at the end.

Jeff L: Why glyphosate early?

Mitch B: A couple of reasons.

- a) Glyphosate is an "easier sell" with the Portland public that is concerned with the use of herbicides.
- b) Trying to keep a handle on herbicide resistance . If I'm going to use both, I start w glyphosate because it takes so long to be effective. I don't want to follow up with glyphosate b/c it takes two weeks to work. With Triclopyr, the next day, seed production has stopped.

Jeff L: What do you think about competition?

Mitch B: We get a little bit of side kill, but the crews are pretty good about it.

Unknown speaker A: We use glyphosate in the spring and then go back in the fall with Triclopyr. In most areas it seems like we have a pretty good handle on garlic mustard. Although, we are finding that it is migrating onto the adjacent properties.
Unknown speaker B: What surfactants are people using?

Responses:

- Competitor (1%)
- Agridex
- EP 290 (Rob E). Not happy with it. We'll be moving to Competitor.

Elaine Stewart:

What are people doing with the new short fall growth we are seeing in garlic mustard? People are telling me they are seeing fall germination and early seeding in the spring. Are people spot treating those and if so, what are you using?

Jeff L:

This is the open question. Are they actually germinating in the fall, or germinating in the spring and then seeding quickly.

Mary L:

Johnson Creek was doing some rosette treatment in the spring, but I don't think they are any more due to constraints on time/money. They weren't seeing a dramatic difference from this treatment.

Rob E: We treat pretty early so that makes me wonder if we are treating too early.

Lucas N: We do fall treatment on some sites. I also advocate waiting. If you go too early, you miss it. If it's not flowering, you miss it. I like to wait until it flowers otherwise I feel like I'm wasting my time.

Rob E: I wonder if we are treating too early. I also wonder if we are missing the short garlic mustard plants and they bolt after we've already treated an area because we didn't see them.

Mitch B: I don't normally see the little plants until the second wave, May and June. The stuff that flowers in April/May is all normal height.

Mary L: We'd love to have a conversation in June with folks after the treatment season to see how things went and what people are seeing.

Jeff L: We certainly believe that the small plants we are seeing is in response to treatment. But, we had a site last year that had never been treated and it was predominantly the small garlic mustard plants. It is an undisturbed wooded area.

Lucas N: Could it be a response to deer browse?

Jeff L: Possibly. But it was so small, and deer don't like garlic mustard according to an article I just read.

Mary: We have seen deer browse on garlic mustard.

Sam: Deer browse looks different. The small plants we saw had not been browsed by deer. It has that "broccoli" look.

Lesser Celendine

Michelle D: We have a site on Sauvie Island that we've been treating for the last two years with 2% Glyphosate and 1% Competitor. We've had good success with this. There is now 10% left from the original infestation. The first year we treated later in the flowering period (approx. Apr 12), and then the 2nd yr. I treated when the first flowers appeared. And will be going out today to treat it this 3rd yr.

Mary L: That first year we treated outside what is considered the "acceptable treatment window". All the literature says we should treat 2 weeks prior to flowering. The first year we treated 2 wks. after flowering and when we came back the 2nd year, it had been significantly impacted.

I'd love to have an academic study this for the Pacific NW. Since the two week window touted in the literature is when it is raining hard in the Pacific NW.

Unidentified voice: Go back for a second treatment. The late season sprouts that come back after the initial treatment, need to be treated a second time 2-4 wks. after initial treatment. Stay on top of it to deal with the late germination and late bolting growth. I've seen 95% success with this method. We use 2% glyphosate, 1% Agridex.

Mary L: Can the folks here who have experience with organic treatments or hand pulling, talk to us about that experience? We know the literature says that hand pulling just spreads all the little bulbs around the site. We've actually been recommending that people remove the soil.

Jeff L: I removed a small patch from my yard and threw it in my home compost (a hot compost), and had no issues.

Aaron: Someone brought up last year that lesser celandine was showing up in compost (i.e. making it through the composting process and germinating). Any updates on that?

Mary L: We've had several landowners tell us that, but we don't know they didn't get the infestation en-route from somewhere. It could have been sitting there and gotten infested. We don't know it happened in the composting process. We have no data on what heat it needs. We know Re-cology and other groups compost to 140F. They do "grow out" tests and they haven't found any of the nasty weeds.

Unknown voice: Does anyone spray when it's in flower and notice what bugs are in the flowers?

Rob E: I'm not seeing any pollinators on lesser celandine. One of the ideas out there is that it is competing with native flowers for pollinator. I wonder if it is self-fertile and doing its own thing b/c the pollinators are not out at that time. The center ring on the flower is highly reflective so to me that says it can also attract beetles and flies. I think it's not a significant food source for our pollinators b/c the phenology is not right. This would be a great question for Xerces.

Dave Stone: The "bee guy" at OSU, Ramesh Sagili, is very good, very accessible. I can take any messages to him, or I could connect him to this group.

Michelle D: There is a landowner at a Condo restoration project. The site is managed 100% organically, but has all the big EDRR players and invasive plant targets (garlic mustard, knotweed, orange hawkweed, celandine, archangel, drooping sedge, etc Etc). The head gardener has reported an 80% reduction in celandine infestations with manual removal. She has even successfully eradicated whole patches. She's also had fairly promising results with solarizing celandine and knotweed (following initial manual removal).

9:30-10:00 am (Factors affecting the choice of aquatic surfactants)

Kim Patten, PhD, WSU Long Beach Research and Extension Unit - Extension Professor, WSU Pacific County Extension Director

See Power Point Presentation on CWMA website

10-10:30 am Safety & Toxicity Issues Related to Herbicide Use

Dave Stone, PhD, Director, National Pesticide Information Center, Associate Professor, Environmental and Molecular Toxicology, Oregon State University

See Power Point Presentation on CWMA website

Public Messaging about Herbicides (List & Website Tools): Carl Grimm, Metro

Carl Grimm: Oregon IPM Collaborative to put together all the best information out there in a user friendly format (mobile device accessible). Initially, primary target audience is the urban residential users and Master Gardeners to help them with outreach to the public. We plan to expand the info in the future so it will also be useful for a commercial users, professional applicators, etc.

If this project happens (still in the exploratory phase), it will include recommended management and treatment options for invasive plants for a residential audience.

It looks like we have the resources to make this project happen. A handful of agencies have committed \$250,000 over a three year period. OSU leadership and staff are enthusiastic about this project.

If you have ideas, thoughts, needs, suggestions, etc. that you want to share, please contact me or Weston Miller (OSU). Weston is working with OSU staff to put together a feasibility study and proposal to bring to the larger partner consortium that would provide funding and support for the project over the next few years.

As you know, Metro has been doing pesticide reduction and natural gardening information to the public. We know that this messaging can be a little “at odds” with the work you do, but we do think this approach is reasonable at the scale of the average urban lot. Rather than our current sign “Pesticide Free Zone” sign, we’d rather have an “Organic Gardening Practiced Here” or “IPM Practiced Here” sign. But, those are challenging concepts for people to understand. Our current sign is a bit more like a “just say no to drugs” campaign.

The current program focus is designed to help people not use pesticides unnecessarily or illegally. We ask people to make an aspirational pledge in order to get a sign. The goal is to bring the awareness of pesticide hazards and risks to people so they can reduce their use. Since Metro handles the household hazardous waste for the region, those are generally the most toxic chemicals we deal with.

We are working to ensure the messaging we are doing does not “sensationalize” against the important work you and Metro is doing with invasive plants in the landscape.

Audience question: Are you working with WSU Extension in WA?

Carl G: No, but you may be familiar with our Grow Smart, Grow Safe booklet which we worked on with King and Thurston counties in WA. That document is currently out of print and the pesticide rankings in the document are no longer currently supported by the partnership. The newer version is an online document and uses active ingredient only chemical reviews to feed into a product based interface for the public. The public can look up a specific product and look up overall hazard rankings for those products based on just the highest ranked active ingredient.

Elaine S: If I remember correctly, it seemed like the previous document used hazard rankings based on the personal protective equipment one would wear when applying the product rather than the environmental fate. Was that updated for the new one?

Carl G: My understanding of the rankings in the previous or current version is not what you just described. There are four rankings. One for human hazard, one for pets and wildlife, one for aquatic life, and one for water quality. Water quality ranking is based on mobility and persistence. The human health rankings includes a whole host of stuff that is tenuous and OSU and Metro are working to create a tighter ranking system that will be cautionary but more realistic. Some of the current rankings are based on high dosage studies on animals for carcinogenicity and other toxic effects. Those trigger a high or conditional hazard ranking on some chemicals that would never get to that level of exposure during normal use.

We are developing a 2nd generation ranking protocol that will be used in the new Western IPM and Collaborative Resources/OSU IPM project (if it can be moved forward)

The current Grown Smart Grow Safe document (online: growsmartgrowsafe.org) uses the Thurston county rankings. An app version of this will be available soon.

Mary L: Currently members of the CWMA community come in to the Master Gardeners trainings to teach about invasive plants and treatment. So, I think we are getting both messages across to that audience. (e.g. which plants are really nasty, and the ways we reduce toxic impacts, etc.)

Carl G: WA Master Gardeners are using Grow Smart, Grow Safe as a primary education tool. All the chemicals in that resource are registered in the state of WA. That was a requirement for their use of the resource. And that there be no combined and restrictive use chemicals in the document. So, includes only general use chemicals registered in WA.

Rob E: Kudos Carl for using the Master Gardener platform to get message out to the public about invasives so they understand that there is a categorical group of invasives out there that this group is focused on. It's challenging b/c the public often conflates the two different messages. So, it is really important for the resource information agencies to keep talking about

why pesticide reduction is important because the cumulative and dispersed impact of that widespread use. Versus the focus on prevention and controlled eradication of really harmful invasive species. Those two things are not mutually exclusive in the public's mind, but we need to continue to talk about them about this so each message is understood.

There often has not been a cozy relationship btw. those trying to get pesticide reductions and people using pesticides as tools in other arenas.

Carl: I agree. It is a complicated message.

Audience member: How does "pesticide free zone" relate to rodenticides and rats?

Carl: On the surface, "pesticide free" is intended to mean exactly that (free of any pesticides, organic, non-organic, rodenticide, miteicide, etc.). But, both the pledge and the sign are designed to be aspirational. So, if people have a problem and use chemicals to deal with it, that's ok. And that could be clarified even more in the pledge people sign.

Mary L: It would be great if the wording in your outreach materials could be more explicit about situations where chemical treatment of invasives that are jurisdictional targets would be appropriate.

Carl G: That sounds great, and not just for invasive plants. NCAP website says pesticides have a role in society (environmental health, health, structural, etc.), there are economic reasons to use pesticides.

Kathy S: We are talking about small urban lots here. In most cases people can tackle invasive weeds at that scale manually; except for a few species.

What do you say to the Press and the Public about your herbicide use?

Rob Emanuel, Clean Water Services

Rob: I got a call from KOIN TV. Someone had called them and said someone is spraying herbicides on Rock Creek Trail on Springville Creek. KOIN local 6 was doing a feature story (the first story they were going to run on the news that night). I asked our public affairs guy to respond and be on camera. When I gave him the script to use he said there was no way he could pull off this message. So I quickly had to figure out how to explain herbicides. What had happened was a contractor had sprayed reed canary grass in a restoration site and somebody had left a sign out there. A typical "Caution, herbicides applied, please don't enter". A homeowner was walking by and found it, put the sign by a bench, and instead of calling us (the number was clearly marked on the sign), they called KOIN 6. And this has brought out the dichotomy of our own messaging. Because as part of our MS4 permit, we too have a pesticide

reduction goal in the environment and in stormwater. So, we too are giving out two different messages at the same time.

So, I asked my public affairs people, how do I talk to the TV folks w/o sounding like we're talking out of both sides of our mouth?

So, I came up with some messaging that I'm not totally happy with yet.

1. We are out there treating non-native exotic invasive plants with herbicides (Invasive weeds is a term that gets a lot of traction with the public so that is the term I use most).
2. We are investing dollars in the restoration of the natural environment.
3. Doing this while protecting wildlife, humans, pets and more.

Should we be calling these products non-toxic?

We ask people to stay out of the area to prevent their exposure to the herbicides and also to keep in from being spread outside the targeted spray area.

We put up information on what is being sprayed.

Date herbicide is being applied.

Another possibility would be to include a QR code and people could use their phones to access the IPM section of the Clean Water Services website.

What is the range of questions you receive?

Lucas N: The easiest question to respond to is "Are you using Roundup?" "No". Then they are OK with it.

John R: Some of the questions we get have to do with signage. We don't use the word non-toxic because nothing is non-toxic. We talk about risk. We say "this presents essentially no risk to you or your pets", the way we are using it, where we are using it. It is our job to keep people out of the area and we feel the sign fills that role.

We have also found it very helpful to provide a second sign that has information about the project (Why we are doing the project, what is IPM, what invasives are, pictures of the target weeds), this gives people a context on why we are doing this.

Elaine S: The use of the words "toxic, non-toxic, less toxic" etc. just makes me cringe. The Weed Science Society of America and a few other organizations put out a paper on why applying least toxic methods as a last resort is a really bad strategy to take. For some people it has become ingrained that we are going to use the least toxic method and we are going to try everything else first. And we reinforce this whenever we say we are using least toxic materials in our work. And reinforcing approaches that are ineffective.

Rob E: What could we say instead?

Dave Stone: We can say “The products we are using have an excellent safety record for pets and humans”. And they do. I think people can relate to that terminology as well.

I would also say that on these signs, feel free to put my center’s number if they have questions.

National Pesticide Information Center, 800-858-7378

36:49

Questions for Academia

Garlic Mustard

-life cycles tracking in the field?

-plasticity in plants in response to our treatment?

-Impact of herbicide use on pollinators (Xerces)

When is garlic mustard bolting? (related to temperature or day length? Or both?)

Lesser Celendine

-when is the best time to treat in the Pacific NW

-is lesser celandine out competing native wildflowers for pollinators