Six Simple Rules for Discussing Herbicide Efficacy

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Weed control successes and failures often originate not with the treatment, but well before in the form of poor communication regarding potential treatments.
Define “Success”

“...techniques used alone or in combination that result in a timely, consistent, and substantial reduction of a target plant population to levels that alleviate an existing or potential impairment to the uses or functions of the system.”

http://plants.ifas.ufl.edu/manage/developing-management-plans/a-managers-definition-of-aquatic-plant-control
Define “Failure”

When a treatment that is expected to provide a certain level of control falls short of that “timely, consistent, and substantial reduction of a target plant population...”

We are not talking about a failure to achieve “silver bullet success”
“A conversation about herbicide efficacy should be stepwise and science-based, but instead it often comes across like folks at the water cooler telling war stories”
Expectation: Applicators intensely listening to IFAS Specialist talk on herbicide efficacy
Expectation: Applicators intensely studying IFAS fact sheets on weed control
Reality: The way many applicators learn about herbicide efficacy
Why is this important?

• Not everyone has your herbicide training
• Not everyone has your applicator experience
• Not everyone can read your mind
• Not everyone has made the mistakes you’ve already made
Six simple rules for discussing herbicide efficacy
Let’s meet those folks at the water cooler and follow the conversation

Lyn

Howdy!

Hi!

Jay
Rule #1. Provide the herbicide product name.

“'You know, we have been having a lot of success with triclopyr lately. That stuff really works!'
This is Triclopyr...
...and so is this.
Bottom line on names

• The product name links you back to the label, which is legally binding
• The label provides the active ingredient, formulation, safety requirements, recommended rates, and much more
• Without the product name and label, you cannot be confident in what was actually applied
Rule #2. Specify the herbicide rate or concentration applied.

“Yep. We doused a patch of peppertree with triclopyr and it was toast!”

Lyn

Jay
How Rate and Concentration are Expressed

- Product/Acre
- Active ingredient/Acre
- Acid equivalent/Acre
- % product (%v/v or %vol/vol)
- ppm (parts per million)
- ppb (parts per billion)
Rule #3. Disclose any adjuvants added.

And you know, it works even better if you throw some surfactant in the tank too. That stuff really heats it up!

Lyn

Jay
Why is this important?

• There are hundreds of adjuvants available
• Adjuvants fulfill many roles in improving the action of the herbicide
  – Surfactants, wetting agents, stickers, spreaders, buffering agents, anti-foaming agents and more
• Not all adjuvants are labeled for use on all sites
• There may be compatibility issues for certain adjuvant/herbicide combinations
Rule #4. State the method of application.

We loaded up the bird and rained the herbicide down like fire across that patch. We had some ground crews getting after it too!

Lyn

Jay
Application methods can strongly impact efficacy
Rule #5. Explain the target’s growth stage and abundance.

We let it get up and going before we did the work. That stuff was totally out of control!

Lyn

Jay
Growth stage and abundance can influence efficacy

Control now

Fail later
Growth stage can influence efficacy

Too early (bad)

Full leaf out (good)
Bleeder trees in the early Spring
Heavy dense growth may reduce spray coverage and subsequent efficacy, requiring followup.
Dense smothering growth of old world climbing fern
Rule #6. Provide the criteria for evaluation after treatment.

I checked it last week and it was deader than a doornail! Nuked. Crispy.
Crispy cogongrass shoots may not mean much if...
...if you dig and find live, healthy rhizomes
How this conversation ends...

Well, I gotta get back to work!

Sigh. I have no idea what he actually did.
RECAP: Six Simple Rules for Discussing Herbicide Efficacy

1. Provide the herbicide product name
2. Specify the rate or concentration applied
3. Disclose any adjuvants added
4. State the method of application
5. Explain the target growth stage and abundance
6. Provide the criteria for evaluation after treatment
Questions?

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