

Working with Growers to Identify, Correct, and Prevent Herbicide Injury

Dr. Peter J. Dittmar



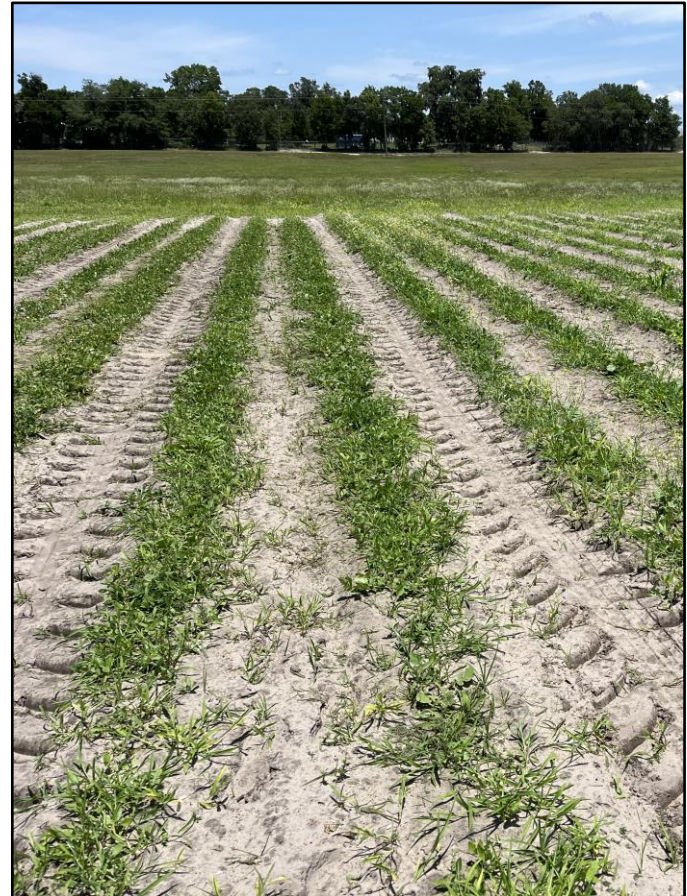
Two most common weed science questions

- Why did the herbicide cause injury?



Valor in sweetpotato

- Why didn't the herbicide control the weeds?



Poast in peanut

Presentation outline

- First, identify the problem.
- Second, offer solutions for the current problem.
- Third, prevent the problem in the future
- Final thoughts

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Glyphosate in blackberry

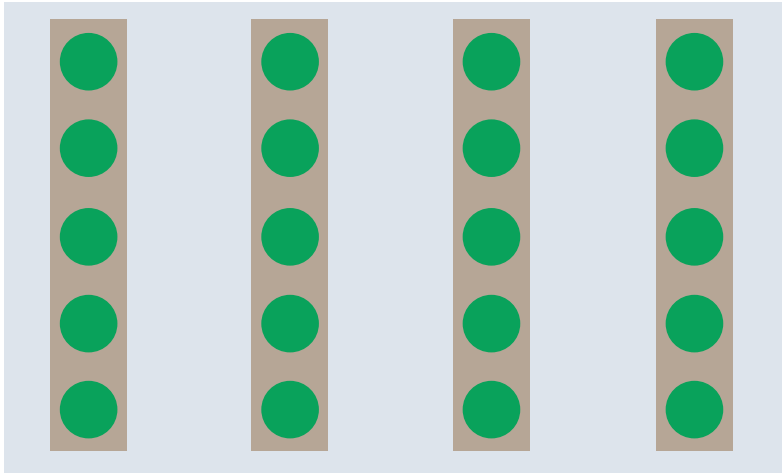
Start asking questions

- Who...
- What...
- When...
- Where...
- Why...

Start asking questions

- Who...
- What...
 - Herbicide?
 - Rate?
 - GPA?
 - Nozzle type?
- When...
- Where...
- Why...
- With these answers
 - Make sure the crop is listed in the label
 - Double check the math is correct, especially if calculating for a directed vs broadcast
 - Correct coverage of the plant

Broadcast vs directed application



- Broadcast application

3 acres of blueberries

x 3 oz/A of Chateau

9 oz of Chateau needed

- Directed to the bed tops

3 ft bed top /

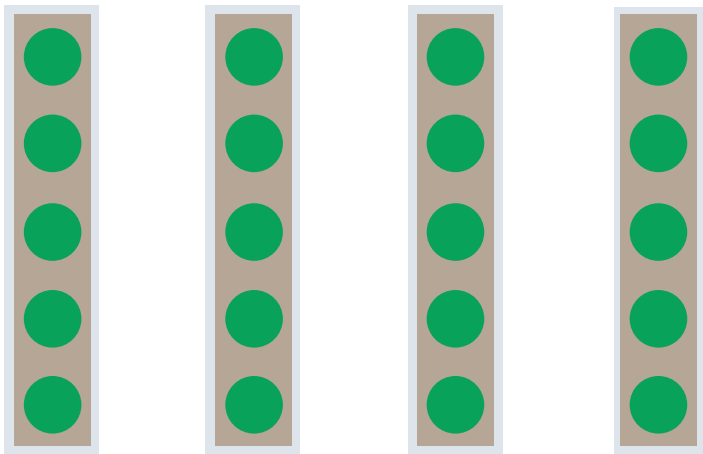
÷ 8 ft row spacing =

37.5% of the field is sprayed or 1.1 acres

1.1 acres

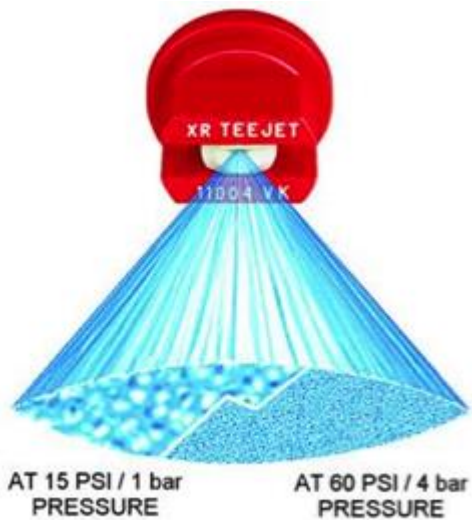
x 3 oz /A

3.3 oz of Chateau needed



Nozzle selection & pressure

Extended Range



Drift Guard

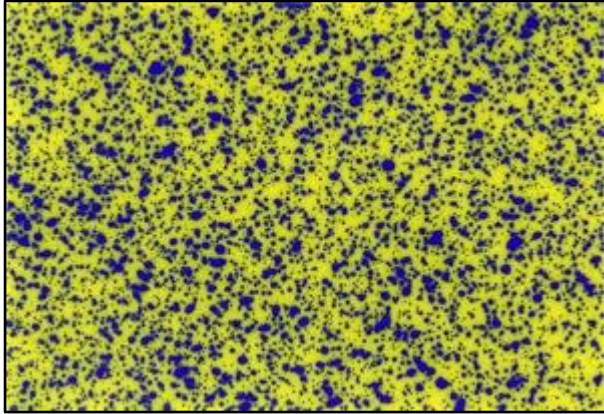


Air Induction

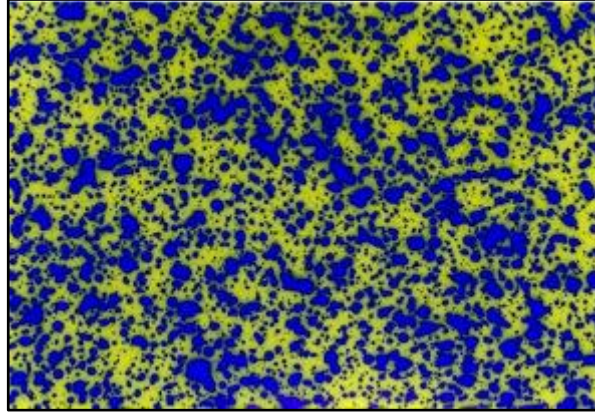


Nozzle selection

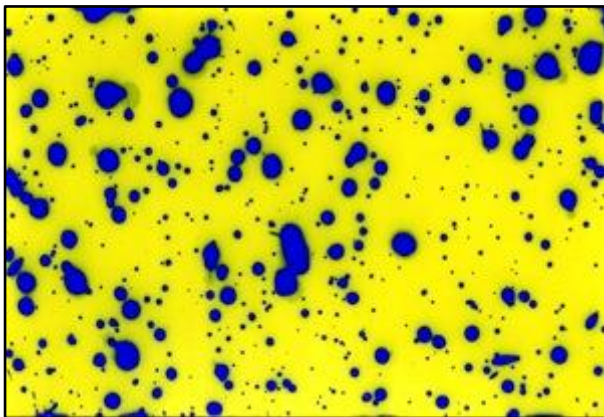
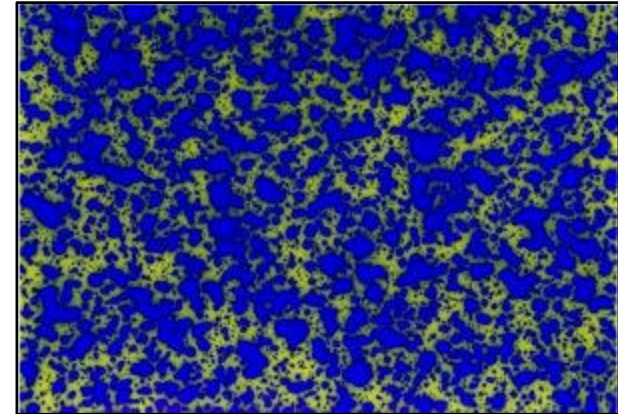
Extended range
10 GPA- 21% coverage



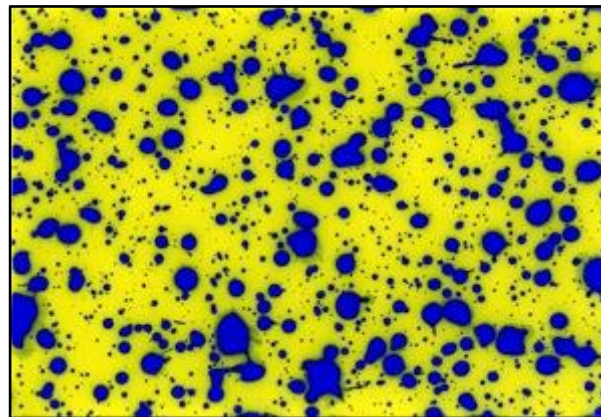
Extended range
20 GPA- 47%



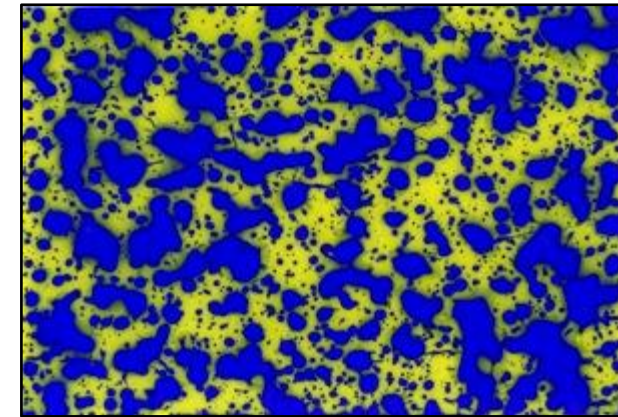
Extended range
30 GPA- 69%



Air induction
10 GPA- 11%

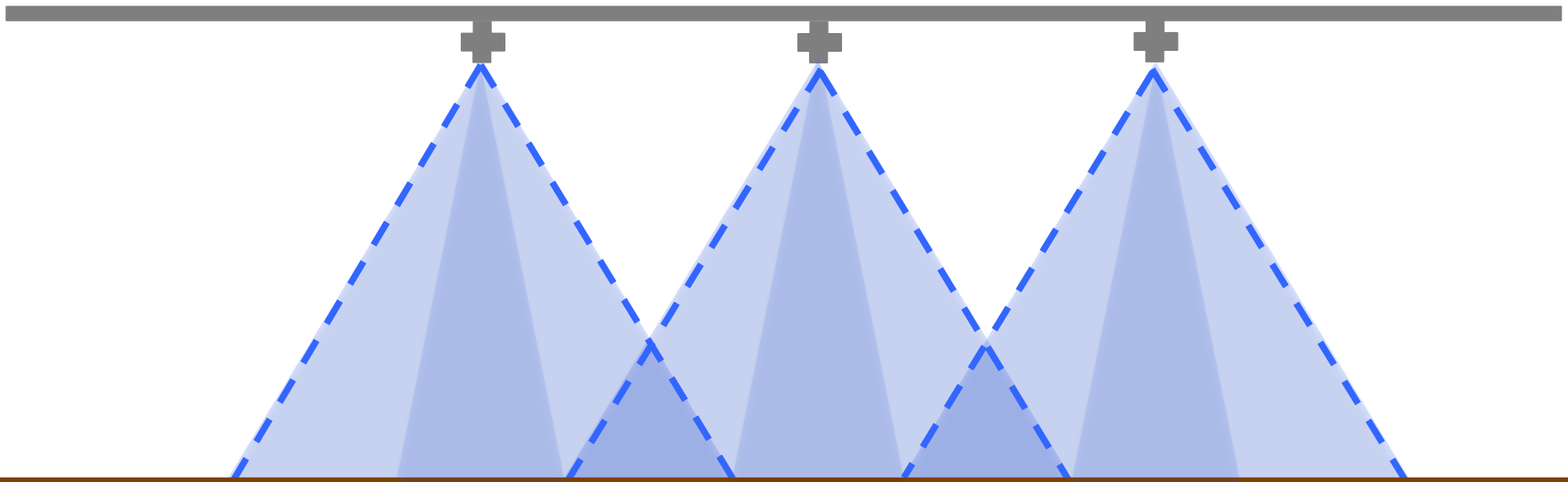


Air induction
20 GPA- 28%

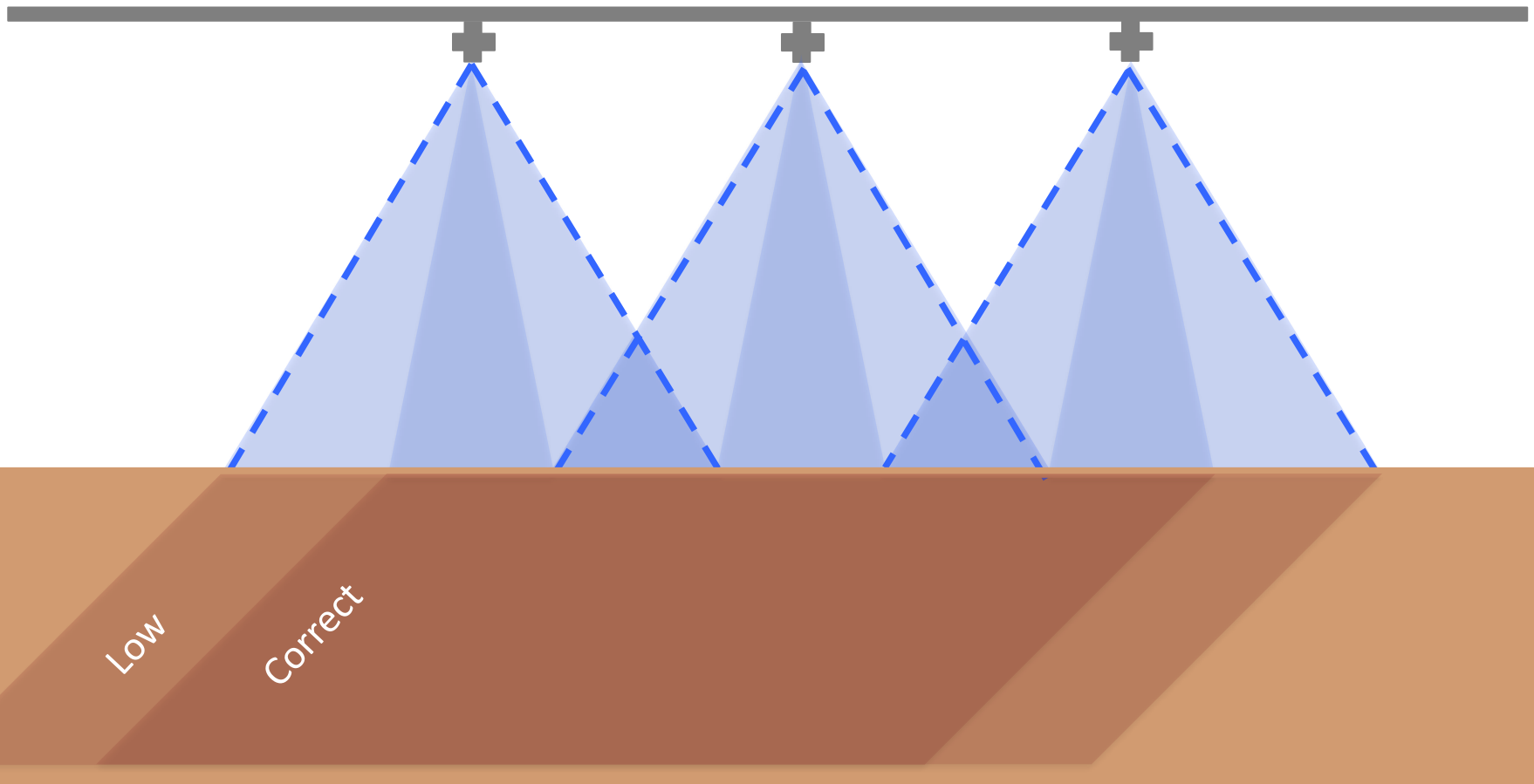


Air induction
30 GPA- 55%

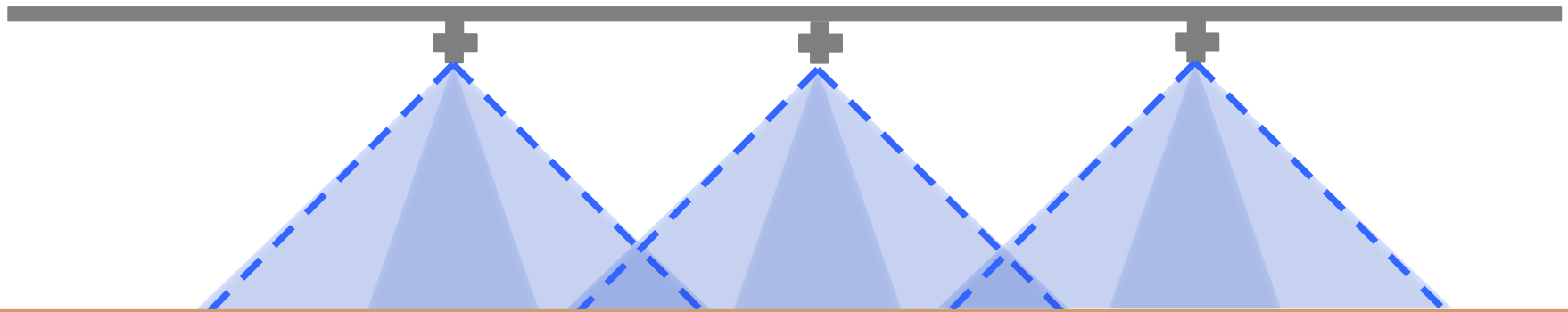
Boom correct height



Proper coverage



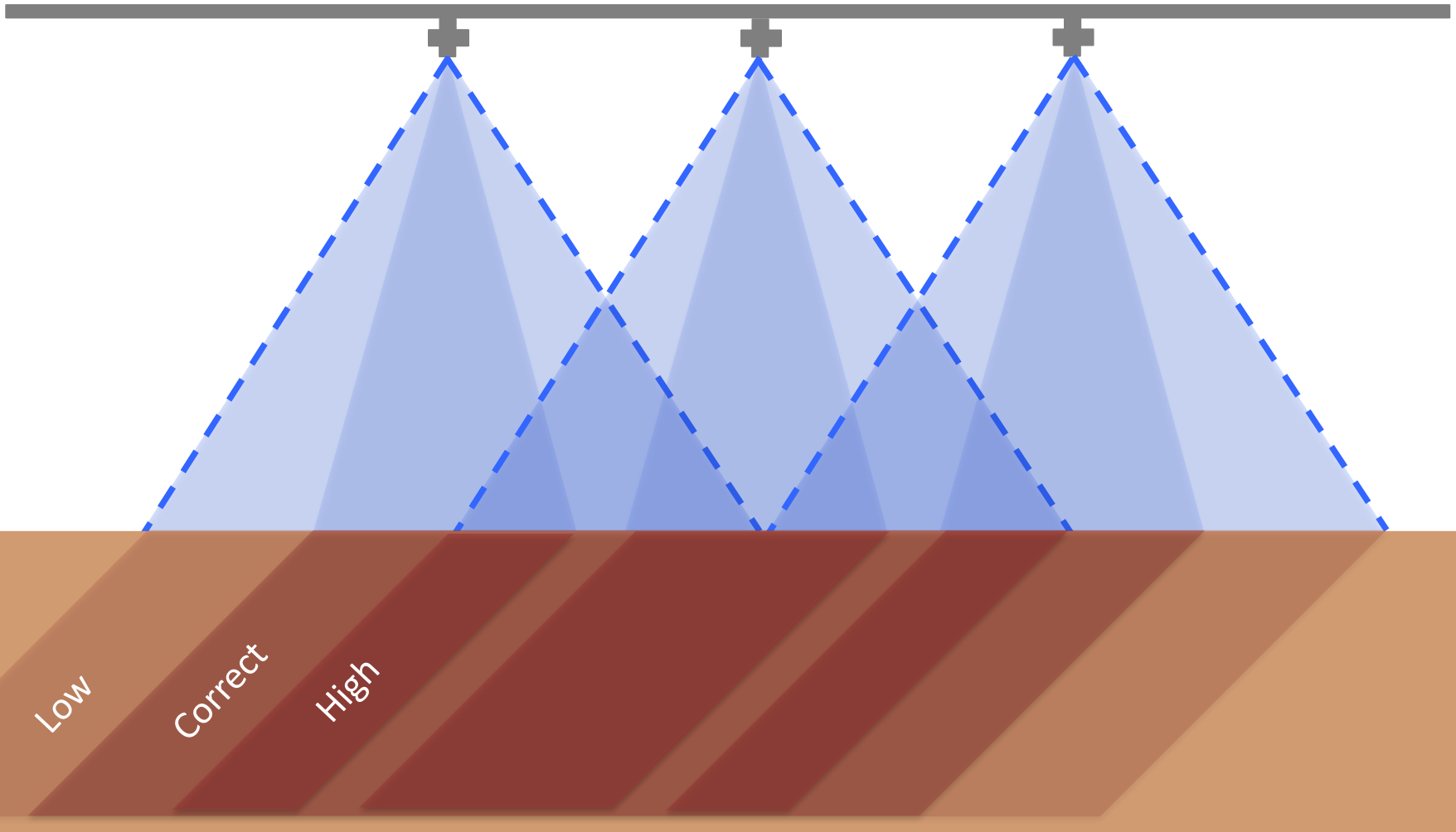
Boom too low



Low

Correct

Boom too high



Start asking questions

- Who...
- What...
 - Herbicide?
 - Rate?
 - Equipment?
 - GPA?
 - Nozzle type?
- When...
- Where...
- Why...
- With these answers
 - Make sure the crop is listed in the label
 - Double check the math is correct, especially if calculating for a directed vs broadcast
 - Correct coverage of the plant

Start asking questions

- Who...
- What...
- When...
 - Preplant?
 - Before emergence?
 - Fully grown?
 - Fruit present?
- Where...
- Why...
- With these answers
 - Check the label to make sure that stage of growth is correct
 - Problems with burndown herbicides after planting before emergence
 - Drift onto the fruit

Start asking questions

- Who...
 - What...
 - When...
 - Where...
 - In the field?
 - On the plant?
 - Why...
- With these answers
 - Look at weeds on the field's edge. Susceptible weeds will also have injury.
 - A pattern if injury occurs on certain rows or sections
 - Clogged nozzle or new tank of spray
 - If a contact herbicide was applied to the base of the plant, but injury occurs in the tips.

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Diquat drift in watermelon

Fixing the current problem

- Many times the answer is to keep the plants happy and patience
- Replanting the crop is always the last option.
 - Based on the amount of injury; waiting vs replanting?

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Fomesafen carryover in corn

Fixing the problem in the future

- Offer alternative herbicide options
- Include non-chemical methods of weed control
- New methods for calculating and communicating mixing instructions

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Fomesafen carryover in corn

Thank you

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