

UF | IEAS

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Synergy of herbicides for enhanced weed control

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OBJECTIVE

- Enhance weed control efficacy and extend the weed suppression window in citrus by combining pre- and post-emergent herbicides
- Compare the effectiveness of glufosinate-ammonium as a substitute to glyphosate in pre-emergent tank-mix programs

Why?

- Weeds compete with trees for essential resources and reduce yield
- Using a combination of herbicides can control a broad spectrum of weeds, reduce selection pressure, and thus help manage herbicide resistance
- Growers are looking for alternatives to glyphosate

Synergy of herbicides for enhanced weed control

**Flumioxazin +
Glyphosate**

- OR -

**Flumioxazin +
Glufosinate-amm.**

**Indaziflam +
Glyphosate**

- OR -

**Indaziflam +
Glufosinate-amm.**

**Diuron+
Glyphosate**

- OR -

**Diuron+
Glufosinate-amm.**

**Flumioxazin +
Indaziflam +
Glyphosate**

- OR -

**Flumioxazin +
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**Flumioxazin +
Diuron +
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- OR -

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Diuron +
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Treatments

- In addition to combination treatments, glyphosate, glufosinate-ammonium, and untreated control were evaluated
- Treatments applied at 30 GPA and 20 psi.
- All treatments received water conditioner (Quest) at 0.25% v/v and non-ionic surfactant (Induce) at 0.5% v/v
- Weed control monitored for up to 4 months post application

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Results

- Most tank mix combinations provided $\geq 50\%$ weed control up to 4 months after application
- Use of two pre-emergent herbicides (Indaziflam + Flumioxazin) with post-emergent herbicides controlled a broad range of weeds and provided a more prolonged weed suppression
- Post-emergent herbicides alone were not effective in long term weed suppression
- Glufosinate-amm. was equally effective as glyphosate in weed control



Clustered pellitory in citrus tree rows