



Tank mixing Boron DDP with Glyphosate

It is a common practice for growers to apply tank mixes to achieve better results or to save money on application costs. There are many combinations of DDP Micronutrients with crop protection chemicals that are convenient and useful. This bulletin examines one particular mix – Boron DDP in combination with glyphosate.

Workers at the University of Georgia and at Clemson (South Carolina) looked at boron combinations with glyphosate to understand how the mix would affect weed control. Over the course of three station-years in both states, the researchers saw temporary crop injury at 10 days with glyphosate alone, and with glyphosate applied in combination with boron, but it was not present by 21 days after treatment. There was no concern regarding crop safety with respect to yields with either the glyphosate alone or with glyphosate plus boron. In this study, rates of boron were 0.28 and 0.56 kg/ha active.

Other scientists (USDA workers at Stoneville, Mississippi)¹ found that tank mixes of glyphosate and boron do not inhibit boron uptake and translocation to leaves and seeds. They also found that foliar boron application may compensate for the negative effect of glyphosate on nitrogen metabolism. They conclude that "...under boron deficiency conditions, caused by high heat or drought, glyphosate and boron can be applied together for a cost effective means of alleviating boron deficiency while controlling weeds."

Wolf Trax contracted an independent research trial to determine the tank mix characteristics of glyphosate and Boron DDP. Trials were conducted using a field scale sprayer on a silty clay loam. Treatments included glyphosate alone, glyphosate with 4 ounces of Boron DDP, and glyphosate with 8 ounces of Boron DDP.

¹ For scientific paper references, contact infomaster@wolftrax.com.

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Conclusions:

- Glyphosate and Boron DDP mix well and do not require a compatibility agent.
- Weed control and crop tolerance were excellent with the Boron DDP mix in combination with glyphosate.
- Adequate uptake of boron, and equivalent weed control occurs with the 4 ounce rate of Boron DDP with glyphosate, and this is the rate that we recommend.

Table 1 Control of red root pigweed, Canada thistle, lambs quarters, buckwheat, smartweed

Broadleaf weed control (% of control)	8 DAA*	14 DAA	28 DAA
Untreated	0	0	0
Glyphosate	66	90	100
Glyphosate +Boron DDP at 4 ounce rate	60	85	100
Glyphosate + Boron DDP at 8 ounce rate	60	76	100

*Days after application

Table 2 Control of wild oats, Setaria and volunteer cereals

Grass weed control (% of control)	8 DAA	14 DAA	28 DAA
Untreated	0	0	0
Glyphosate	90	100	100
Glyphosate +Boron DDP at 4 ounce rate	90	100	100
Glyphosate + Boron DDP at 8 ounce rate	90	100	100

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