



Hydro Bullet™

HYDRO BULLET™ BATTALION™: FOLIAR RESULTS ON CORN AND SOYBEAN

KEY FINDINGS:

HYDRO BULLET BATTALION

IMPROVES CORN GROWTH
UNDER DROUGHT STRESS BY

+33%

AND IMPROVES SOYBEAN YIELD
UNDER HERBICIDE STRESS BY

+12.5%

VS. THE GROWER STANDARD PRACTICE ALONE

DROUGHT STRESS TRIAL RESULTS IN CORN:

METRIC	VALUE
Application Method	Foliar
Timing	V4
Rate	1 pt/ac Battalion
Location	Greenhouse
Treatments	1. Fully-watered control 2. Drought to point of stress 3. Drought + Battalion
Replications	10
Biomass Measurements	1 week after application

OBJECTIVE:

Drought and herbicide stress are two major factors in yield loss. In order to demonstrate the effectiveness of Hydro Bullet Battalion on these stresses, three trials were completed: drought stress in corn, herbicide stress in corn and a competitive field trial in soybeans.

OVERVIEW:

Hydro Bullet Battalion (8-2-1 + trace elements + amino acid package) reduces the negative effects of abiotic stress by activating a plant's natural defense system. Key amino acids combined with a complete micronutrient package stimulate photosynthesis, water flow and crop growth during stress.

RESULTS:

Not only did Battalion increase plant growth against the drought treatment, it also produced more biomass than the fully-watered treatment by 33% (Figure 1). Battalion also increased the chlorophyll content and nutrient uptake of potassium, magnesium, calcium, sulfur, zinc, boron and manganese (results not shown).

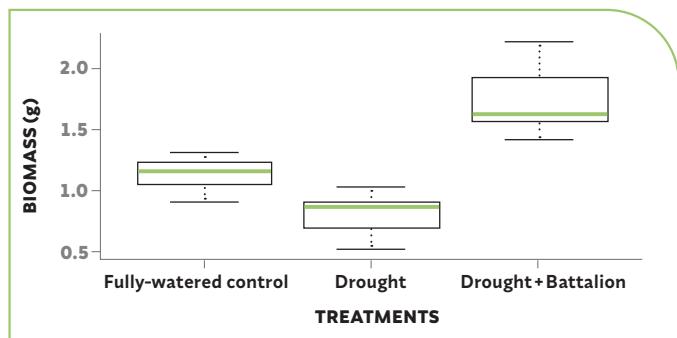


FIGURE 1. Biomass of corn plants one week after application.



HERBICIDE STRESS TRIAL DETAILS IN CORN:

METRIC	VALUE
Application Method	Foliar
Timing	V3
Rate	1 pt/ac Battalion™ + 50x label rate of glyphosate, to induce stress
Location	Greenhouse
Treatments*	1. Control, 2. Glyphosate at 50x label rate, 3. Glyphosate at 50x label rate + Battalion
Replications	5
Biomass Measurements	1 week after application

*All treatments were applied on glyphosate-tolerant corn hybrids.

RESULTS:

The glyphosate treatment alone significantly reduced plant growth, demonstrating the negative effect of herbicide stress. Hydro Bullet™ Battalion eliminated the negative herbicide stress and also improved crop growth compared with the control without the herbicide stress (Figure 2).

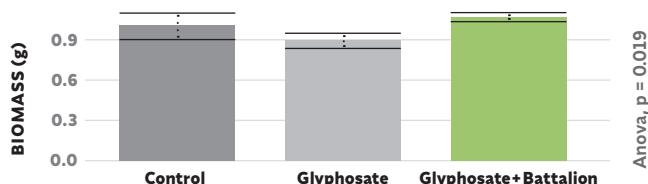


FIGURE 2. Biomass of corn plants one week after application.

SUMMARY:

The results of these proof of concept studies confirm the value of Hydro Bullet Battalion on reducing corn and soybean stress in various conditions, including drought and herbicide stress. The unique mode of action—consisting of L-glutamic acid and a complete micronutrient package—is likely contributing to these reductions in stress and improved crop growth.

Apply Hydro Bullet Battalion foliar at 1-2 pt/ac during vegetative or reproductive states to manage stress and improve growth.

For more information, visit HydroBulletNutrition.com

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COMPETITIVE FIELD TRIAL DETAILS IN SOYBEANS:

METRIC	VALUE
Note	Foliar application of lactofen at 0.42 pt/ac + chlorimuron at 0.6 pt/ac was applied one week before amino acid applications to induce stress
Application Method	Foliar
Timing	V5
Rate	0.85 pt/ac
Location	Goiás, Brazil
Treatments	1. Control, 2. Niphokan, 3. Bioamino, 4. 1 pt/ac Battalion, products all applied at manufacturer's recommended rate
Replications	4
Data Collected	Yield

RESULTS:

Battalion increased yield by 12.5% compared with the grower standard practice (GSP) and had the highest yield among the competitive foliar products (Figure 3).

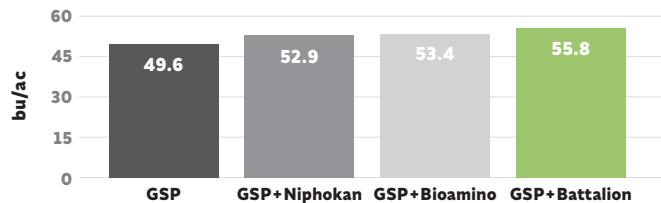


FIGURE 3. Soybean yields among competitive foliar treatments compared with the grower standard practice.