

# **Herbicide Comparison for Row-Spraying in Kentucky Bluegrass**

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## **Abstract**

This project evaluated glyphosate (Honcho) and paraquat (Firestorm) for weed control and crop injury on Kentucky bluegrass grown for seed when applied as a directed spray between rows. Both herbicides were effective as a directly spray; neither appeared to have a negative effect on seed yield.

## **Introduction**

Applying non-selective herbicides as a directed spray between the crop rows is an effective method for controlling weeds in Kentucky bluegrass grown for seed. However, there is a risk for crop injury if drift occurs during application. The objective of this research was to compare glyphosate (Honcho) and paraquat (Firestorm) applied as a directed spray between rows for efficacy and crop safety in Kentucky bluegrass grown for seed.

## **Methods and Materials**

A field trial was conducted in an established commercial field of Kentucky bluegrass grown for seed near Culver, Oregon. Herbicides glyphosate (Honcho) and paraquat (Firestorm) were applied with a commercial tractor mounted shielded sprayer on March 8, 2011 to plots 15 ft x 25 ft replicated four times. Sprayer output was 20 gal/acre in a 10 inch band with 80 degree nozzles at 15 psi traveling at 5 mph. Two rows per bed were spaced 14 inches apart, with 16 inches between rows on adjacent beds. Winds during application ranged from 3 to 10 mph.

Visual observations of crop injury and grass weed control were made April 20. Plots were swathed using a forage harvester, bagged, and hung to dry for threshing on July 15. When plots were dry, swathed material was removed from bags and processed through a Wintersteiger plot combine. Seed samples were transported to the Hyslop Farm near Corvallis where they were debarbed, run through a small scale Clipper cleaner, and clean seed weight was determined.

## **Results and Discussion**

Seed yields following herbicide treatments were similar to the untreated check (Table 1). Both treatments resulted in some crop injury, consisting of occasional burned leaves on the side of the furrowed row. No plant death affecting stand was observed, and injury symptoms dissipated by early-May, when the crop canopy closed. Plant heights were recorded, but no differences were observed (Table 1). Paraquat (Firestorm) is not currently registered for use in grass seed production.

**Table 1.** Result of herbicides applied in banded rows to Kentucky bluegrass grown for seed near Madras, Oregon.

Treatment <sup>1</sup>	Product	Rate per acre	Kentucky bluegrass <sup>2</sup> % injury	Weed Control <sup>2</sup> %	Seed Yield (lbs/ac)	Plant Height (inches)	Plant systemic	Soil residual	Currently Registered
Check	None	-	0	0	1315	72	-	-	-
Glyphosate	Honcho	40 fl oz	1.3	88	1277	73	Yes	No	Yes
Paraquat	Firestorm	43 fl oz	5.6	98	1251	72	No	No	No

<sup>1</sup> Applied March 8, 2011.

<sup>2</sup> Visual readings April 20, 2011.