

## Dual Magnum Over-the-top Evaluation on Peppers

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**Background:** Foliar burn symptoms have been observed on pepper plants that have been treated with over-the-top applications of Dual Magnum at layby. Since Dual Magnum was registered under a 24(c) in 2002, Dual Magnum has been generally been safe when applied as an over-the-top post transplant application. However, at transplanting, irrigation water is started with in an hour or two, thereby quickly washing the material off of the plants. In layby applications the material may remain on the plants for a period of days before being washed off and may have the potential for burning the plant tissue. Foliar burn was observed in a pepper field in Greenfield in which Dual Magnum was applied over-the-top of the peppers (Figure 1) and this research project was initiated to see if Dual Magnum was responsible for the problem.

**Methods:** Two batches of Dual Magnum were applied over-the-top to established pepper transplants on June 7, 2007. The peppers had just been sprinkler irrigated and the materials were applied following the irrigation and were not washed off with a subsequent irrigation until after June 12. The two batches of Dual Magnum differed in their age: batch no. 1 was from 2005 and batch no. 2 was from 2007. Both batches were applied at 1.0 and 1.67 pints/A as an over-the-top application to transplants that were 10 days old. The plants were evaluated for foliar burn on June 11. 20 plants from each plot were evaluated by examining the youngest emerging leaves for burn and cupping symptoms. The numbers of leaves with burn symptoms were recorded.

**Results:** There were no obvious foliar burn symptoms on the older leaves of the pepper transplants; however there was burning of the youngest leaves (Figure 2). There were no differences in the age of the Dual Magnum or the rate, as both materials and rates causes burning of the youngest leaves over the untreated control (Table 1). These results indicate that Dual Magnum can cause slight to moderate foliar burn of tender leaf tissue of peppers when applied as an over-the-top application and not washed off immediately with sprinkler irrigation. As such, applications of Dual Magnum to established pepper plants should be applied as a spray directed to the base of the plant and should be followed as quickly as possible with sprinkler irrigation to minimized potential issues with foliar burn.

Table 1. Number of plants with foliar burn on June 11

Material	Rate/A	Foliar Burn
Dual Magnum 2005	1.0 pint	9.0 a
Dual Magnum 2005	1.67 pint	8.0 a
Dual Magnum 2007	1.0 pint	6.8 a
Dual Magnum 2007	1.67 pint	9.5 a
Untreated	----	1.8 b
LSD (0.05)		4.1



Figure 1. Foliar burn observed in a commercial field following over-the-top application of Dual Magnum at layby.



Figure 2. Foliar burn observed in the test plot on youngest pepper leaves.