

## 0-6733: Evaluation of Generic and Branded Herbicides

### Background

As with other products in the marketplace, generic herbicides often have a lower initial product cost than their brand-name counterparts. Herbicide formulations are patented for 17 years with proprietary rights for name, formula, and production. Once the patent expires, the formula becomes available to anyone that wishes to manufacture or distribute the same formulation as the original. Generic-product manufacturers can typically offer much lower prices because they do not have to pay for the initial development, testing, and patent fees that make up the majority of costs associated with agricultural chemicals today.

While the purchase price of herbicides is important to the Texas Department of Transportation (TxDOT), it is essential to look at more than just initial costs to determine whether generic or branded products are the best practice. One should consider safety, effectiveness, and application rates/procedures as well as product availability and equipment requirements. This project focused on three herbicides (Roundup® PROMAX, Escort® XP, and Transline®) currently used by TxDOT.

To evaluate the effectiveness of generic and branded herbicides, the research team conducted an online survey of herbicide practitioners (personnel involved with application, approval, purchase, training, etc.) to

determine personal experience. Also, field tests were conducted on roadside sections in two sites—the highway FM 50 (Figure 1) and a local road on the Texas A&M Riverside Campus (Figure 2), both in Bryan, Texas. The test plots were installed to determine the efficacy and rate of kill of various generic and branded herbicides.

### What the Researchers Did

Along with the survey of practice, the research team conducted a literature review and cost/benefit analysis to determine whether generic herbicides meet equivalent performance, toxicology, environmental impact, and safety requirements as branded herbicides with significant cost savings.

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**Figure 1. Test Site on FM 50 in Bryan, Texas.**



**Figure 2. Test Site on Texas A&M Riverside Campus in Bryan, Texas.**

### **What They Found**

The decision to include generic herbicides in the TxDOT vegetation management plan requires many more considerations than simply up-front purchase price. Performance, toxicology, and environmental/worker safety must be considered to ensure a safe, effective program. While performance and toxicology of generic and branded herbicides often proved equal, other factors were identified that should override the initial lower costs of generic herbicides. These factors included product availability, manufacturer support, applicator safety (caused by the unique application rates/procedures of the various generic herbicides), product formulation (wetable powders, pellets, and liquid) and the range of differences in the inert ingredients of generic herbicides.

#### **For More Information**

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