



Growing Knowledge®

# Agronomic Spotlight



## Performance Update— DEKALB® Brand Genuity™ Roundup Ready 2 Yield™ Soybeans



In summer 2009 there was a lot of excitement with the introduction of Monsanto's newest soybean technology, Genuity™ Roundup Ready 2 Yield™. Four years of U.S. field trials and field trials in Eastern Canada verified the yield benefit of Genuity™ Roundup Ready 2 Yield™ soybeans and provided the backdrop for the launch of this new technology.

### Technology Advancement

Genuity™ Roundup Ready 2 Yield™ technology was developed through the use of extensive gene mapping. This mapping effort identified specific DNA regions in the soybean genome that have a positive impact on yield. Using advanced insertion and selection technologies, the Genuity™ Roundup Ready 2 Yield™ gene is situated in one of those "high-yield" DNA regions, in

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soybean lines that already had high yield potential through traditional selection and breeding. The result of this development effort is soybean technology that delivers higher yield potential than first generation Roundup Ready® soybeans.

### How Yield Potential is Increased

The increase in yield potential is delivered primarily through more beans per pod. In 2008 Monsanto field trials, Genuity™ Roundup Ready 2 Yield™ soybeans produced more three-bean pods per plant and more beans per plant, compared to first-generation technology.<sup>1</sup> In looking at the potential yield benefit of more beans per pod, if each soybean plant delivered as little as three additional beans, this would translate into roughly a 7% yield increase for the average Canadian soybean farmer.

### Eastern Canada Yield Performance

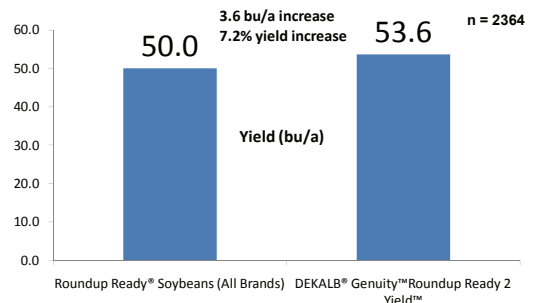
There was high interest in determining how these new soybean lines would perform locally, in the fields of Eastern Canada. One of the first tasks undertaken after the announcement of DEKALB® brand Genuity™ Roundup Ready 2 Yield™ soybeans was to plan in-field comparisons to soybeans with high yield potential already being utilized in the marketplace. For 2008 and



2009, the results were very satisfying. In over 2,300 Eastern Canada head to head Monsanto comparisons, DEKALB® brand Genuity™ Roundup Ready 2 Yield™ soybeans out-yielded leading Roundup Ready® soybean varieties by 3.6 bushels per acre, or an equivalent of a 7.2% yield increase.<sup>2</sup> In addition, DEKALB® brand Genuity™ Roundup Ready 2 Yield™ soybeans won an impressive 77.4% of the head to head Eastern Canada comparisons (Figure 2),<sup>2</sup> with the consistency of performance being

Figure 1. Eastern Canada Yield Performance.

### DEKALB® Brand Genuity™ Roundup Ready 2 Yield™ Soybean Performance



Source: Monsanto Canada TD data, 2008 and 2009. Comparisons made to Roundup Ready Soybeans +/- 100 CHU of GENRR2Y maturity



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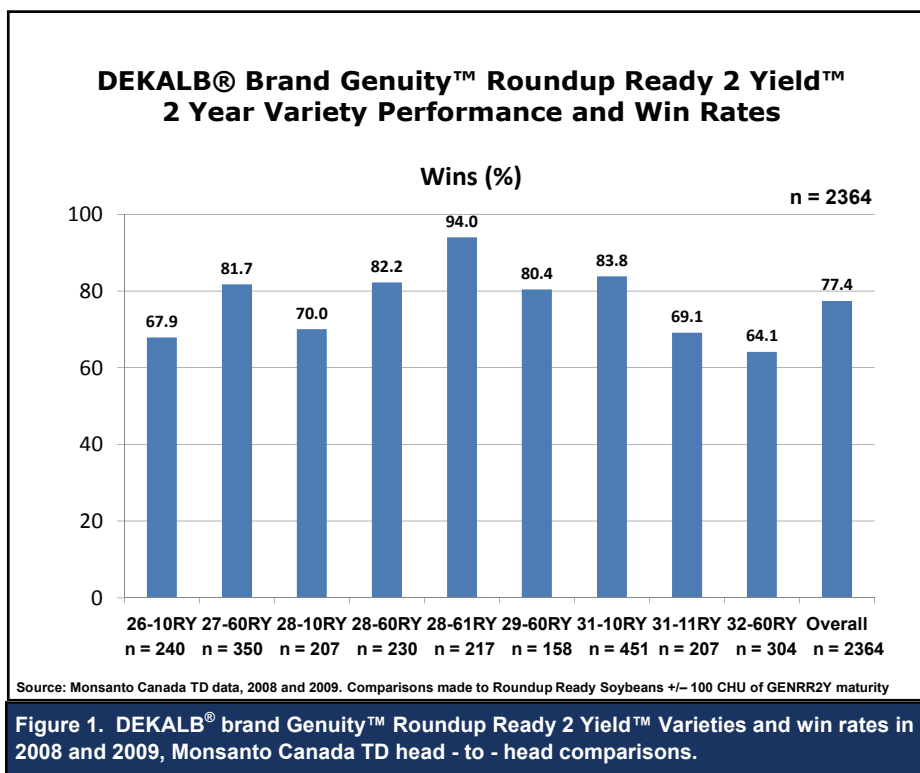
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very high. Historically, field experience has shown that a new corn or soybean product entering the market that had a 60 to 65% comparison win rate would be considered exceptionally good.

### Summary

DEKALB® brand Genuity™ Roundup Ready 2 Yield™ soybeans consistently out-yielded the leading first generation Roundup Ready® soybeans in Eastern Canada field trials. The potential yield advantages and high percentage win rates seen across the entire lineup in a wide range of maturities and varieties of DEKALB® brand Genuity™ Roundup Ready 2 Yield™ soybeans is a positive commentary to both DEKALB® brand genetics and the technological advancement of the Genuity™ Roundup Ready 2 Yield™ soybean trait.

For more discussion of DEKALB® brand Genuity™ Roundup Ready 2 Yield™ soybeans, and for the variety that would work best on your farm,



please contact your DEKALB® brand seed agronomist or retailer.

Sources:  
Genuity™ Roundup Ready 2 Yield™ soybeans,  
[http://www.genuitytraits.ca/\\_pdfs/rr2y\\_brochure.pdf](http://www.genuitytraits.ca/_pdfs/rr2y_brochure.pdf)

<sup>1</sup>19 Monsanto U.S. Field Trials in 2008, with seed counted from 4,728 plants from 340 plots  
<sup>2</sup>Monsanto Canada TD Data, 2008 and 2009. Comparisons made to Roundup Ready® Soybeans, +/- 100 Crop Heat Units of Genuity™ Roundup Ready 2 Yield™ maturity  
[http://www.monsanto.com/pdf/investors/.../yield\\_data\\_presentation\\_12\\_08\\_09.pdf](http://www.monsanto.com/pdf/investors/.../yield_data_presentation_12_08_09.pdf)

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**Roundup Ready®** crops contain genes that confer tolerance to glyphosate, the active ingredient in Roundup® agricultural herbicides.

Roundup® agricultural herbicides will kill crops that are not tolerant to glyphosate. DEKALB®, DEKALB and Design®, Genuity™, Genuity and Design™, Genuity Icons, Growing Knowledge®, Growing Knowledge and Design®, Monsanto imagine® and Vine Design®, Roundup®, Roundup Ready®, and Roundup Ready 2 Yield™ are trademarks of Monsanto Technology LLC, Monsanto Canada, Inc. licensee. ©2010 Monsanto Canada Inc. LEW 011310

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