# Understanding Glyphosate

## Weed Seed & Soil Summit
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## % Mineral Reduction in Tissue of Roundup Ready® Soybeans Treated with Glyphosate

| Plant tissue | K | Ca | Mg | Fe | Mn | Zn | Cu |
|---|---|---|---|---|---|---|---|
| Young leaves | 16 | 40 | 28 | 7 | 29 | NS | NS |
| Mature leaves | 4 | 30 | 34 | 18 | 48 | 30 | 27 |
| Mature grain | +4 | 26 | 13 | 49 | 45 | +30 | +18 |

**Reduced:**
Yield 26%
Biomass 24%

After Cakmak et al, 2009

## Percent Decrease in Mineral Nutrients in Corn Silage - 2000 to 2010, Cornell University*

| Mineral nutrient | Percent decrease |
|---|---|
| Calcium | 22.0 % lower |
| Phosphorus | 3.8 % lower |
| Magnesium | 11.4 % lower |
| Potassium | 16.1 % lower |
| Iron | 5.2 % lower |
| Copper | 9.6 % lower |

*Based on 1629 samples

## % Reduction in Alfalfa Nutrients by Glyphosate*

| Nutrient | % reduction compared with Non-RR |
|---|---|
| Nitrogen | 13 % |
| Phosphorus | 15 % |
| Potassium | 46 % |
| Calcium | 17 % |
| Magnesium | 26 % |
| Sulfur | 52 % |
| Boron | 18 % |
| Copper | 20 % |
| Iron | 49 % |
| Manganese | 31 % |
| Zinc | 18 % |

*Third year, second cutting analysis; Glyphosate applied one time in the previous year