



# Maximizing Plant Genetic Expression

## Harness the Power of Mother Nature

The Plant Performance Program consists of treatments to maintain the appropriate hormone balance throughout the growing season to make plants more resistant to stress, thereby facilitating the expression of their full genetic potential in terms of enhanced yield and quality. Biotechnology and breeding provide the genetic potential, the Plant Performance Program helps to realize it.

Any imbalance in these hormone cycles at any time can irreversibly reduce genetic expression.

## What is Plant Performance Technology?

Stoller's Plant Performance Technology is based on supporting optimum growth when weather or other stress conditions cause hormone imbalance. Treatments consist of compounds that work together to ensure optimum hormone balance and activity.

- Treatments are designed to provide specific hormone balance at key development stages for different crop types.
- It supports the plant's ability to withstand the stresses limiting optimum growth.

The external factors that affect plant hormones balance are unpredictable and variable.

- weather
- crop cultivars
- soil type, conditions and fertility
- tillage and agronomic practices
- pests

*Root tips serve as the "brains" of the plant, the growth control center, regulating all the plant growth process.*

## What is Genetic Potential and Genetic Expression?

**Genetic Potential** is determined by a plant's internal DNA structure from breeding and/or biotechnology.

**Genetic Expression** is the physiological manifestation of a plant's genetic potential and is determined by external factors from the time a seed germinates, a bulb or tuber sprouts, or when a perennial plant breaks dormancy all the way through to harvest.

## There Are Five Key Hormones:

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|-----------------|---|
| Growth Hormones | <ul style="list-style-type: none"> <li>• Cytokinin: The Dispatcher</li> <li>• Auxin: The Activator</li> <li>• Gibberellic Acid (GA): The Sizer</li> </ul> |
| Stress Hormones | <ul style="list-style-type: none"> <li>• Ethylene: The Regulator</li> <li>• Abscisic Acid (ABA): The Terminator</li> </ul>                                |

Stoller products are manufactured from high-quality, technical grade ingredients for effective and consistent performance. Plant Performance Products up-regulate hundreds of genes, however Stoller focuses only on those that have a qualitative and quantitative impact on plant development. Each product is thoroughly evaluated and understood by Stoller's own research and development team in the lab and in the field.

## Plant Hormone Cycles

