



Any Crop. Any Stage. Any Weather.

Bio-Forge® works by up-regulating genes from the plant's own major antioxidative pathways as well as genes responsible for ethylene production and root growth.

### GENE UP-REGULATION

Key genes with a measurable impact on plant activity, up-regulated by Bio-Forge® are:

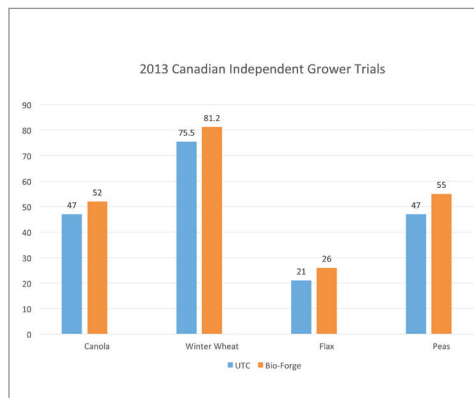
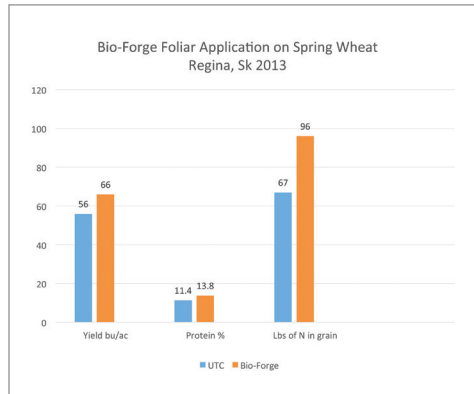
- DREB1A, drought-tolerance  
Bio-Forge® suppresses excessive ethylene at the genetic level by up-regulating the Dreb1A gene. By inducing the regulatory master gene Dreb1A, a cascade effect in turn up-regulates other genes involved in resistance to drought and other environmental stresses.
- Dehydrin, low temperature and water stress
- RAB18, low temperature, water stress or exogenous ABA
- RD29A, cold temperature tolerance
- RLS4, associated with root development and nutrient uptake

### ENZYME UP-REGULATION

Bio-Forge® is shown to up-regulate the four enzymes that protect plants from damaging free radicals which can occur in response to: drought stress, injury from herbicides, other pesticides, nutrient deficiencies and extreme temperatures.

#### The four enzymes are:

- Mn superoxide dismutase
- Catalase (CAT3)
- Dehydroascorbate reductase (DHR)
- Thioredoxin reductase (THR)



### IMPROVED ROOT GROWTH ENSURES OPTIMAL HORMONE BALANCE & EFFICIENT NUTRIENT UPTAKE

Plant Hormones must be constantly synthesized and regulated in the meristematic tissue (root tip cells) of the plant. Maintaining and prolonging healthy root tip growth is critical to the optimal hormone balance needed for maximum genetic growth.

STOLLER® brand Bio-Forge® is a patented formulation of N,N' -diformyl urea, classified as an antioxidant, and shown to significantly improve growth in a variety of agricultural crops by working on the genetic level.

### BIO-FORGE® Guaranteed Analysis 2-0-3

<b>Total Nitrogen (N)</b> (minimum)	2.000%
<b>Soluble Potash (K2O)</b> (minimum)	3.000%
<b>Cobalt (Co)</b> (actual)	0.2%
<b>Molybdenum (Mo)</b> (actual)	0.3%



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