

## Golden Harvest™ 5-18-2

Golden Harvest™ is a unique suspension liquid foliar fertilizer with high levels of micronutrients designed to supplement soil-applied fertilizer.



Due to its unique patented chemistry, Golden Harvest™ rapidly enters the plant. Since all nutrients are kept "high" in the plant leaves (factories), leaves will produce higher amounts of food for the plant. Golden Harvest™ is the only foliar fertilizer that makes this practice feasible.

Golden Harvest™ contains N-P-K-S along with an impressive quantity of non-mobile nutrients. Other foliar fertilizers usually contain high levels of N-P-K but very low levels of secondary and micronutrients. It is the other nutrients that are usually short in the crops. Golden Harvest™ is the key to maintaining the balance that is so important to any crop nutrient plan.

### Responsiveness of Selected Crops to Micronutrients

Micronutrients are key players in many of the processes important for plant growth. Some crops benefit more from certain nutrients, this chart is an example. Soil testing and tissue analysis are also excellent tools to determine micronutrient needs.

	B	Cu	Mn	Zn	Ca	Mg	Fe
Alfalfa	High	High	Low	High	Med	High	Med
Barley	Low	High	High	High	Med	Med	High
Canola	High	Med	Low	Med	High	High	Low
Corn	High	Med	Low	High	Med	High	Med
Flax	Low	Low	Low	High	Med	Med	Low
Forage	Med	Med	Low	Med	Med	Med	High
Lentil	High	Med	High	Med	High	High	Low
Oat	Low	High	High	Med	Med	Med	Med
Pea	High	Med	High	Med	Med	High	Med
Potato	High	High	High	High	High	High	Low
Soybean	Med	Med	High	Med	High	High	Med
Sunflower	High	Med	High	High	Med	Med	Low
Wheat	Low	High	High	Med	Med	Med	Med

Stoller Enterprises, Inc. is unique in the agricultural industry. It is the world leader in development and sales of crop health products. The company focuses on developing products and methods that enhance healthy plant growth and yield potential. Stoller products encourage crop plants to express their greatest genetic potential by bolstering natural plant tolerance to adverse weather, herbicide and other stresses. They supplement natural plant compounds to help develop healthy plants without risk of chemical damage or the need for genetic alteration.

Stoller Enterprises is dedicated to conducting and funding research in the area of crop health products and technologies. The company works with universities to find ways crop health products can assist growers increase productivity. The company also has researchers on staff, conducting proprietary research and developing products.

Stoller Enterprises was formed more than 30 years ago. In addition to crop health products, the company carries a complete line of conventional fertilizers and micronutrients.



Stoller corporate headquarters in Houston, Texas



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**STOLLER®**

## Micro-Plus Technology Product Line

*"The most important product we supply is knowledge. With this knowledge, we empower you to become more profitable."*



## Stoller® Micro-Plus Technology

### Harness The Power Of Mother Nature

*Stoller's patented MICRO-PLUS technology is more than just micronutrients. Stoller technology is a proprietary blend of Plant Health components that maximize the potential of your crop by improving its condition.*

*The organic acids used in MICRO-PLUS liquids are found in all living cells. MICRO PLUS liquids can naturally migrate through the waxy cuticle layer of the plant surface and the cell membranes themselves, resulting in the most efficient means of getting plant nutrients where they need to be.*



MICRO-PLUS technology also consists of natural, plant-based ingredients. These ingredients support hormone functions by stabilizing cell structures to:

- Protect DNA/RNA
- Reduce ethylene
- Facilitate protein synthesis
- Enhance root formation and elongation
- Increase auxin availability
- Improve disease resistance
- Promote pollination and flower initiation
- Maintain bio-availability of micronutrients

Most importantly, MICRO-PLUS liquids provide excellent crop safety and will NOT burn plant leaves.

MICRO-PLUS micronutrients are non-corrosive to equipment, are easy to mix with fertilizers and pesticides, and can be foliar applied, banded or seed placed.

### Action™ Five Percent Calcium

Action™ is a formulation of highly soluble calcium which triggers growth-supporting co-factors to enhance germination and seedling vigor.

Below 21° C auxin production is limited and cell division may become abnormal. Most seed is planted in cold soil. Application of Action™ on the seed encourages development even in the harshest conditions.

Action™ moves up the plant and forces auxin from the new leaves down to the roots to promote more cell division for vigorous root growth. By stimulating cell division, nutrient uptake and utilization are enhanced, resulting in optimum plant growth.

Action™ can show you the benefits of Stoller's Crop Health Therapy program. When applied as a seed treatment, the results must be seen to believe. Foliar application on cereals is much the same. Hormone co-factors have the ability to alleviate the pressure of tillers on the plant, resulting in increased yield and quality.



### MP™ Nine Percent Boron

Boron influences increased set of flower and fruit as well as yield and quality. Boron is necessary for protein synthesis and the formation of plant hormones. It also increases cellular activity which promotes maturity and water relations in the plant.

Boron is immobile in the plant, so adequate supplies are necessary throughout the growing season. Once utilized in the active growing tissue of the plant, boron cannot be translocated and used again. For optimal results, repeated applications of boron are necessary throughout the growing season. Availability of boron decreases as soil pH increases. In these conditions, boron availability is limited for plant growth. Foliar application of boron throughout the growing season allows for optimum utilization and efficiency.



### MP™ Five Percent Copper

Copper functions in plant growth cannot be replaced by any other element. Copper is an enzyme activator and becomes a component of enzymes that function in respiration and photosynthesis as well as chlorophyll.

Copper contributes to disease resistance and helps reduce seed abortion in cereal grains. Maturity and seed quality are directly related to copper use in cereals as well.

Soils with high levels of organic matter, sandy soils prone to leaching, high pH soils and high levels of phosphate, aluminum, zinc, iron, and manganese can all induce a copper deficiency.



### MP™ Ten Percent Zinc

Zinc plays a vital role in seed and grain formation. Zinc is also essential in the formation of chlorophyll.

Zinc functions like antifreeze in a plant. The plant can withstand lower temperatures if zinc is present in sufficient quantities in the leaves. Zinc is important in the transformation of carbohydrates and regulation of the consumption of sugar in the plant.

Zinc deficiencies are common where calcareous soils, acid-leached soils, coarse sands, over-limed soils and both high and low-organic matter soils are found. Soil compaction and cold, wet springs can also adversely affect zinc uptake.



### MP™ Three Percent Magnesium

The key element in chlorophyll is magnesium. Utilization and mobility of phosphorus and iron is aided by magnesium.

Magnesium is very mobile in plants and plays a vital role in photosynthesis. It is an activator and component of many plant enzymes, and influences the timing and uniformity of maturity.

Factors contributing to magnesium deficiencies can include high calcium, sodium or potassium levels in the soil, cool weather, and rapid uptake of nitrogen.

Row crops utilize most of the magnesium during the first forty days of growth. Small grains need magnesium most during the very earliest growth stage.



### MP™ Five Percent Manganese

Manganese is an enzyme catalyst and plays a role in the assimilation of carbon dioxide. Manganese is also important to the development of chloroplast, where sunlight energy is converted to chemical energy.

Manganese activates the reduction of nitrate and hydroxylamine to ammonia and is the predominant metal ion in the metabolism of organic acids. Manganese is also important to disease resistance. Manganese is not readily available above a soil pH of 6.5. Manganese deficiencies are more likely in low-organic matter soils.



### MP™ Super Starter

1% Copper, 2% Manganese, 3% Zinc, 0.5% Iron Super Starter assists in the effectiveness of nutrient uptake. When Super Starter is applied to wheat, it indicates a very large increase in uptake of manganese, copper and especially zinc.

Super Starter also proves more effective in increasing nutrient uptake when compared to plants which have been treated with a single liquid micronutrient. Zinc, copper and manganese are much more effective in combination than if they are applied alone.

As a seed treatment or early foliar application, Super Starter is one of the first and most important steps to maximizing the genetic potential of your crop.

