



**Terra  
Trove™  
SP-1 Classic™**

*Prime your plants.  
Combat abiotic stress.*

**SP-1 CLASSIC FOLIAR**



To learn more, visit [www.dphbio.com](http://www.dphbio.com) or call 1.800.648.7626



## LESSENS ABIOTIC STRESS

- HEAT
- DROUGHT
- SALINITY



## FOCUSES PLANT ENERGY ON GROWTH



## IMPROVES WATER USE EFFICIENCY

## The Breakdown

### RegenAphex™

#### Proprietary Plant-Based Humus Extract

A plant based humus, rich in organic carbon delivering a diverse community of microorganisms which are conducive to plant development and growth

### Plant Growth Promoting Rhizobacteria (PGPR)

Free-living bacteria that are known to produce phytohormones such as IBA, Gibberellins, ACC-deaminase and Cytokinins.

### Algae

Living algae which produce phytohormones such as ABA, a central regulator of abiotic stress tolerance.

### Fermented Plant Extract

Diverse blend which impacts microbial diversity and stabilizes overall formulation.



FOLIAR



## PRIME YOUR PLANTS TO COMBAT ABIOTIC STRESS

### Product Description

Liquid biostimulant comprised of a diverse community of microbes, plant-based humus extracts and algae, that work together to lessen abiotic stress, improve water use efficiency and focus the plants overall energy on growth.

### Features

- Easy-to-use, tank-mix friendly liquid formulation seamlessly integrates into broad acre, foliar application practices.
- Produces phytohormones such as Auxins, Gibberellins & Cytokinins, & ACC-deaminase that are known to lessen Abiotic stresses such as Salinity, Heat, and Drought.
- Encourages healthier plant and faster recovery from herbicide applications and ensures optimum nutrient uptake during grain fill.
- Ideal tank mix partner with post herbicide, broadly compatible with adjuvants.
- For best results add SP-1 to tank mix first.

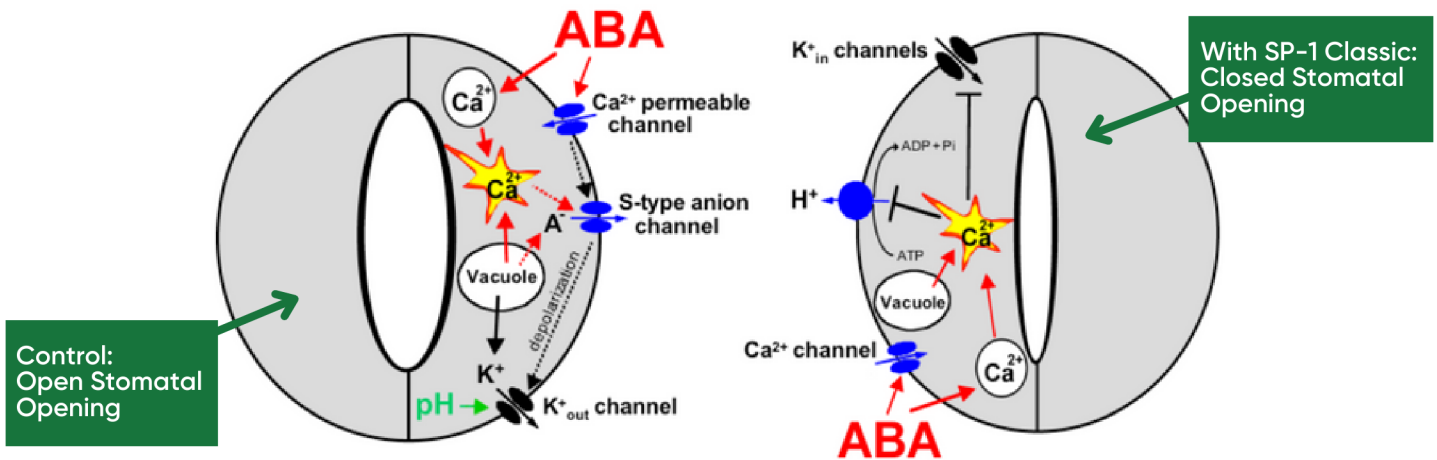


# SP-1 CLASSIC FOLIAR TECHNICAL BRIEF

When plants are under stress, they produce ethylene which speeds up maturity and when left unchecked can result in premature death. SP-1 Classic contains microorganisms that produce phytohormones and enzymes such as ABA and ACC-deaminase known to directly inhibit ethylene production. In addition, ABA inhibits the opening of the stomatal giving the plant the ability to conserve water under stressful conditions.

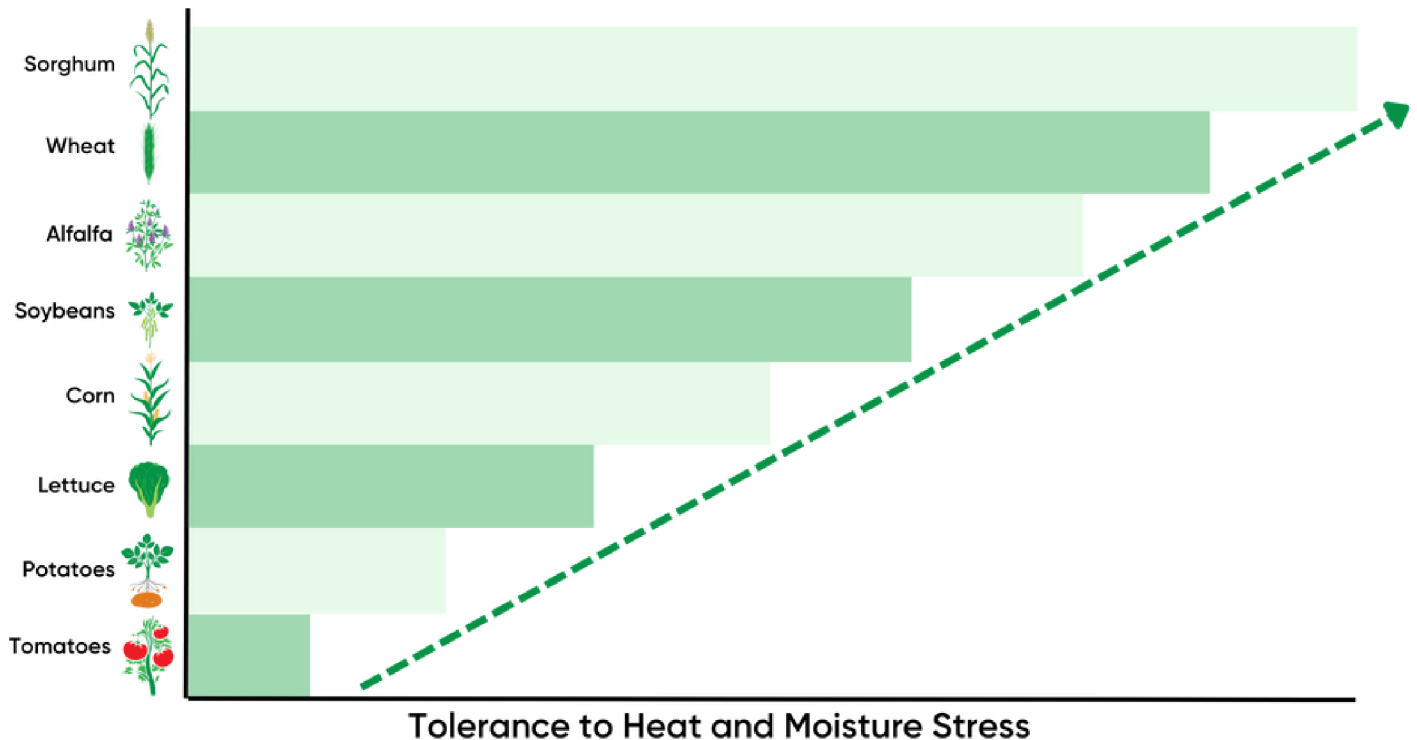
**ABA mediates stomatal closing**

**ABA inhibits stomatal opening**



Masera, P., Leonhardt, N., Schroeder, J. (2008). The Clickable Guard Cell: Electronically linked Model of Guard Cell Signal Transduction Pathways. University of California, San Diego

The microorganisms in SP-1 Classic also hit several pathways that increase Osmolytes which enhance the plants potential to preserve water without hampering the normal metabolism under drought, heat and salinity stress. In addition, osmolytes protect the plant from oxidative damage by inhibiting the production of Reactive Oxygen Species (ROS) while conserving the cellular functions of the plant under abiotic stress. SP-1 Classic primes the plant so when the stress occurs the plants have the tools to fight it off.



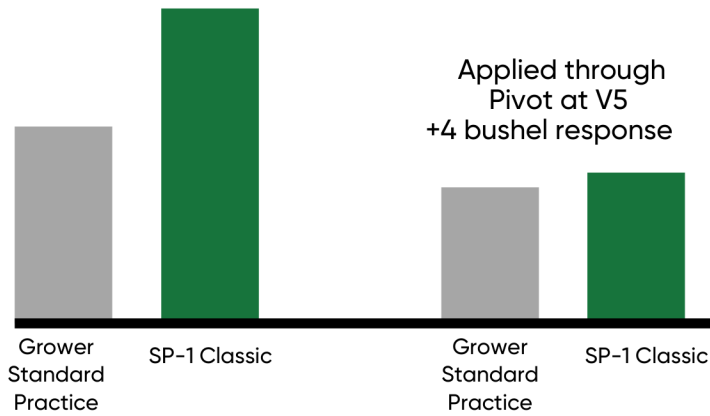
- Osmolytes are naturally found in plants to varying degrees with crops like sorghum having a very high level of osmolytes while tomatoes are on the other end of the spectrum.
- SP-1 Classic helps bridge the gap on crops with lower levels of osmolytes such as Potatoes, Corn and Soybeans.

# CORN RESULTS



## Corn - SP-1 post-emergence foliar application vs. grower standard

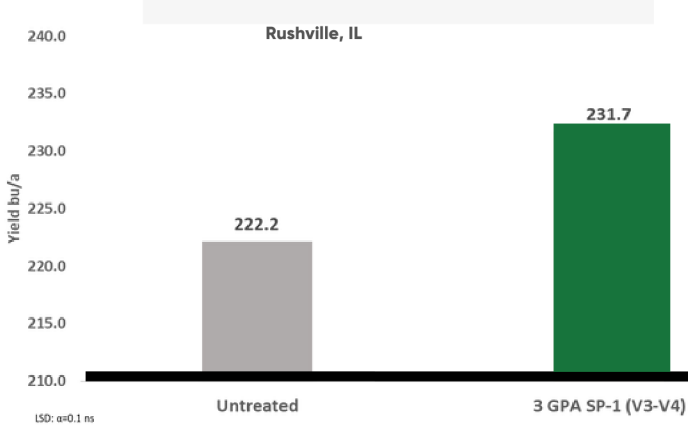
Foliar Application at V5  
with Ground Rig  
+22 bushel response



While SP-1 is not a PGR, the ingredients within SP-1 work together to produce Phytohormones such as Auxins, Gibberellins & Cytokinins that are known to:

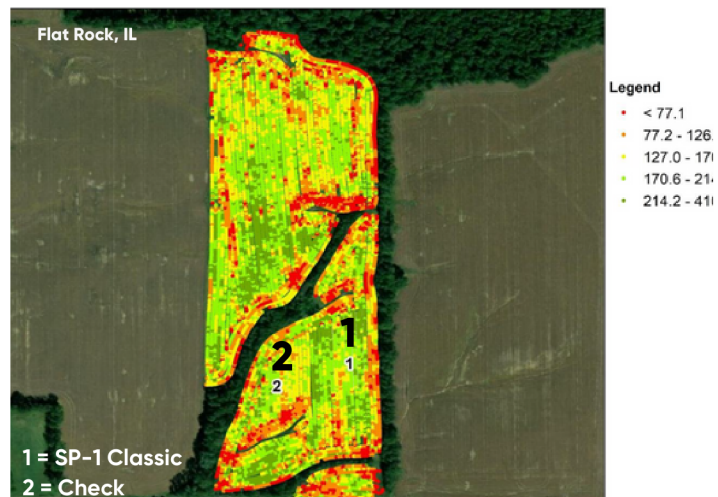
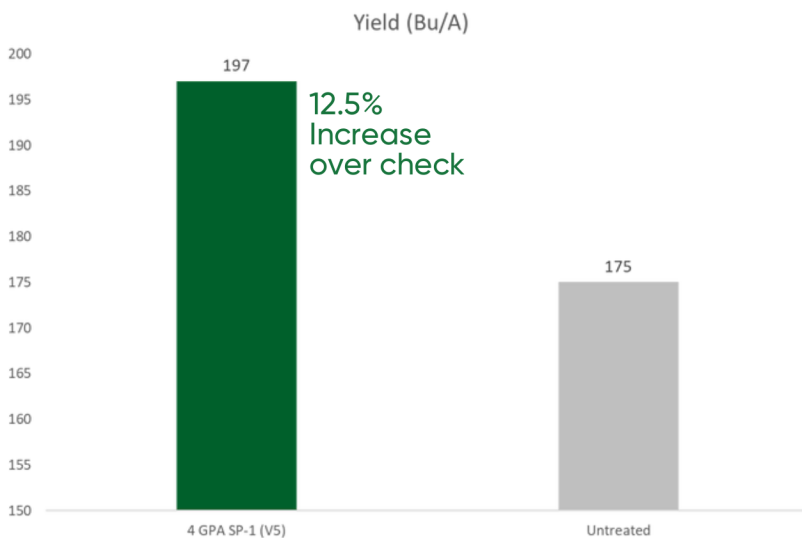
- Increase water use efficiency
- Lessen abiotic stresses
- Focuses plant energy on growth

## Corn: SP-1 post-emergence foliar application vs. untreated



The Foliar treatment of SP-1 @ 3GPA showed a statistically significant increase of 8.5 bu/a in yield over the check.

## Corn - SP-1 post-emergence foliar application vs. grower standard



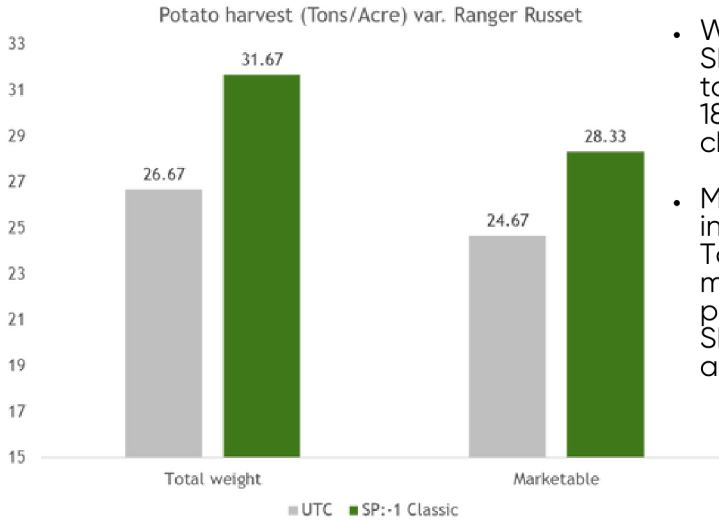
SP-1 is well known for its work in the soil, but it is widely used as a foliar application. This versatile solution integrates seamlessly into your current operations whether it be in-furrow, drip, broadcast, foliar or fertigation.



# Potato, Wheat, and Soybean Results



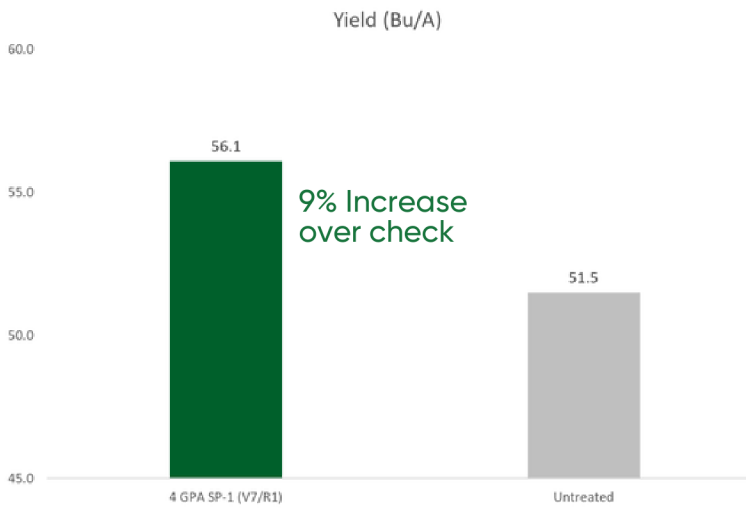
## Potatoes: SP-1 Post-emergence foliar application vs. untreated check



- When used as a foliar, SP-1 increased total tonnage by 5 tons or an 18.7% Increase over the check.
- Marketable potatoes increased by 3.7 Tons/Acre or 14.8% more marketable potatoes by integrating SP-1 Classic as a foliar application.



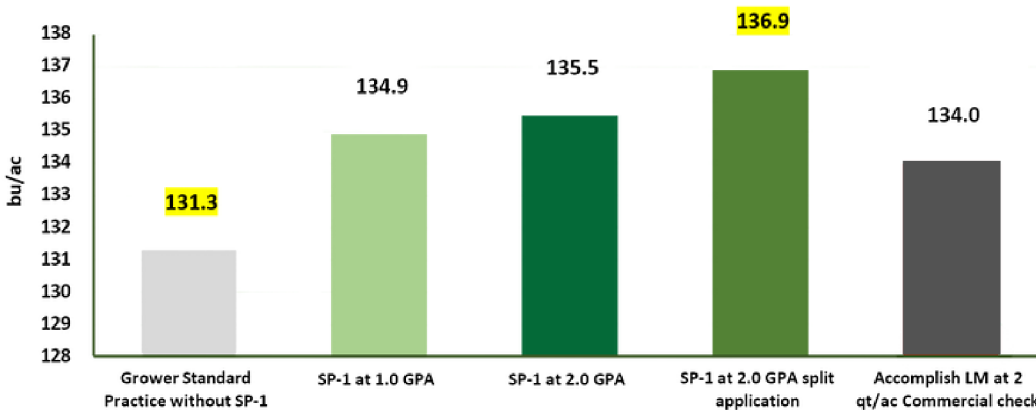
## Soybeans: SP-1 Post-emergence foliar application vs. untreated



**Legend**

- < 41.7
- 41.7 - 53.5
- 53.6 - 67.7
- 67.8 - 130.7
- 130.8 - 279.0

## Wheat Green-up: SP-1 Post-emergence foliar application vs. grower standard and Accomplish LM



Effect of SP-1 treatments on the grain yield of winter wheat compared with the GSP and the commercial standard at Rosalia, WA trial site - 2022

## Wheat Green-up: SP-1 Post Emergence

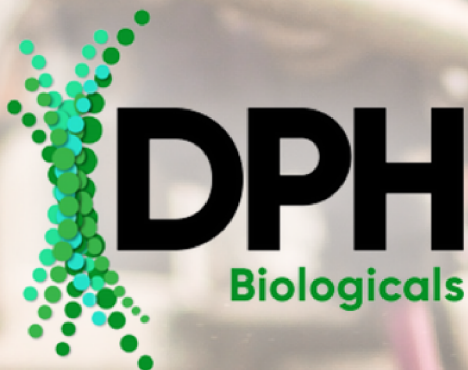
Under extreme drought conditions, wheat treated with SP-1 Classic thrived while control suffered.

SP-1 Foliar Application



Control - No SP-1





## Use Instructions

<i>Crop</i>	<i>Crop Stage</i>	<i>Application</i>	<i>Rate</i>	<i>Details</i>
<b>Corn</b>	Vegetative (V2 - V6)	Foliar (Ground or Aerial)	1.5 GPA	Pair with Herbicide program
	Vegetative (V2 - V6)	Fertigation	3.0 GPA	
	Reproductive (R1 - R2)	Foliar (Ground or Aerial)	1.5 GPA	Pair with Fungicide program
	Reproductive (R1 - R2)	Fertigation	3.0 GPA	
<b>Soybeans</b>	Vegetative (V3 - V5)	Foliar (Ground or Aerial)	1.5 GPA	Pair with Herbicide program
	Vegetative (V3 - V5)	Fertigation	3.0 GPA	
	Reproductive (R1 - R2)	Foliar (Ground or Aerial)	1.5 GPA	Pair with Fungicide program
	Reproductive (R1 - R2)	Fertigation	3.0 GPA	
<b>Wheat</b>	Green up	Foliar (Ground or Aerial)	1.0 GPA	Pair with Herbicide program
	Green up	Fertigation	2.0 GPA	
	Flag leaf	Foliar (Ground or Aerial)	1.0 GPA	Pair with Fungicide program
	Flag leaf	Fertigation	2.0 GPA	
<b>Potatoes</b>	Hooking	Foliar (Ground or Aerial)	2.0 GPA	Pair with Herbicide program
	Hooking	Fertigation	3.0 GPA	
	Row Closure	Foliar (Ground or Aerial)	2.0 GPA	Pair with Fungicide program
	Row Closure	Fertigation	3.0 GPA	



Consult your sales representative for a \$1 grower rebate for every acre applied!





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