



Crown_{fx}TM *For use on small grains*

What is Crownfx and what makes it unique?

Crownfx is a carefully chosen combination of microbials that have been tested and selected to elicit a positive crop response. Crownfx enhances the plant's ability to metabolize nutrients and efficiently support growth. Some benefits include: phosphate solubilization through microbial activity, increased leaf area and tillering, reduced ethylene production (associated with aging and senescence), pH regulation, reduced reactive oxygen species, general stress mitigation, stronger stems and increased seeds per head as well as total number of heads per plant.

Mechanisms of actions:

- Plant pH regulation through the ability to exchange electrons in chemical pathways
 - o Most photosynthesis down regulates during the heat of the day
 - o pH regulation overcomes "slowdowns" during the heat of the day
- A unique microbe group activates more functional tillers that develop heads
- The symbiotic and hormonal relationship facilitate larger leaves – particularly the flag leaf.
- Bacteria interaction supports protein production during plant growth
- Facultative anaerobic bacteria regionalize in the root system to elicit a more robust root system that helps improve nutrient uptake and reduce lodging.
- Plants better tolerate short term droughts through mitigating or buffering Reactive Oxygen Species

What to watch for:

Improved seedling vigor with larger plants as they mature. Faster canopy closure to serve in weed control and productivity. Crown_{fx} has been shown to stimulate shoot growth with added tillering and leaf size increase. It helps reduce heat stress and associated wilting to continue biosynthesis at a better rate in such conditions. The robust plants have increased number of heads and kernel counts.

Morphological response:

- Larger leaves supporting grain production
- Bigger seed heads with more kernels
- More consistent seed size at harvest when supported by fertility
- Increased early vegetative growth; beneficial in fall/winter grazing areas
- Additional tillers that form seed head
- More robust roots and root system

How to apply:

Seed: 1 fl. oz. per 50 lbs. seed via seed treater.

Crownfx is intended for application to the seed. If considering a foliar application, use Ionfx.

Cautions:

Should not use hormone-based plant growth regulators (PGR) with this product because the combination may result in stunted growth. Do a jar test to verify compatibility with other products.



Spray tip selection

TEEJET™ XR, XRC OR TEEJET TURBO		
	Line Pressure	Application Speed
Red Tip	20 psi	8 mph
Red Tip	30 psi	10 mph
Red Tip	Max 40 psi	12 mph
Brown Tip	20 psi	8 mph
Brown Tip	30 psi	10 mph
Brown Tip	Max 40 psi	12 mph

Application standards:

Follow good sprayer (and line and nozzles) cleanout before using these biologicals. Don't mix concentrated microbials with concentrated pesticides or fertilizers.

For foliar applications use a minimum of 10 gpa total solution.

Aerial application is acceptable, but thoroughly clean the system and use Crownfx and water only.

Screen size recommendation: Not smaller than 50 mesh. No tip screen required.

Residence time on the plant before rain (rainfast): 3 hrs.

Application temperature range: 40° to 85° F (4° to 29° C)

Improving yield:

For best results apply proper nutrients and rates so they don't become the yield limiting factor. Without sufficient nutrition to support yield, the benefits of Crownfx may be lost. BioPryme can also be used to support seed development and maximize yield. Best timing to apply BioPryme would be after pollination, as seeds start to develop and fill. BioPryme contains plant nutrients and enzymes that enhance yield and facilitate the flow of plant synthates to the seed.

Storage and use:

Store between 50° and 90° F in a place out of the sun. Use contents within 72 hrs. of opening the seal on the container.

Shake container well before using. Keep jugs upright and don't "burp." This is a combination of living organisms in the jug so be mindful that it may swell or contract. The jug has a pressure sensitive seal and will self-regulate as designed.

Guaranteed analysis:

Soluble Potash (K₂O) 1.00% From potassium carbonate

Nonplant food:

Bacillus megaterium 1.0 x 10⁵ CFU/ml

Bacillus licheniformis 1.0 x 10² CFU/ml

Microorganisms exempt from CFR requirements – 40 CFR 725.

Packaging: 2 x 2.5g jugs, bulk