

#### POTASSIUM NUTRITION FOR ALL CROPS

### Why is potassium so important at multiple stages of plant growth?

Potassium (K) is an essential nutrient, second only to nitrogen in the amount required by plants. As a highly mobile, univalent ion, potassium plays a critical role throughout a plant's life cycle, from establishment to harvest. It is also the most abundant positively charged ion (cation) in plant cells.

# **Key Roles of Potassium in Plant Physiology**

### 1. Water Management and Stress Tolerance

Plants low in potassium are more prone to water stress and wilting. Potassium regulates water movement at the cellular and organ levels through osmotic balance.

What does this mean for your crops?

- Potassium improves cell rigidity and turgor pressure, which translates to improved drought tolerance and disease resistance.
- Proper functioning of stomata, which help maintain photosynthesis efficiency.
- Enhanced chloroplast stability, critical for long-term photosynthetic viability.

## 2. Energy and Sugar Production

Potassium activates enzymes involved in sugar synthesis and energy transfer. Without K, cells struggle to produce energy, leading to visible symptoms like wilted or necrotic leaves.

• Remember, as water stress and K deficiency increase, photosynthesis declines significantly.

### 3. Nutrient Transport and Utilization

Potassium is vital for moving sugars and other photosynthates through the plant's vascular system (especially the phloem).

- Insufficient K can limit the uptake and movement of other key nutrients, compounding deficiencies.
- So why apply only in the fall and forget about in-season K applications?

### 4. Leaf Positioning and Light Capture (Photonasty)

Potassium influences how leaves orient themselves in response to light—maximizing sun exposure and boosting photosynthetic output.

#### 5. Soil Interaction and Availability

In clay soils, potassium can become "fixed," meaning it binds tightly to clay particles and becomes unavailable to plants—even when soil tests show sufficient total K levels.

 This makes foliar and in-season soil applications even more critical for crops grown in such conditions.

Foli-Pop™ K is manufactured by combining Urea, Potassium Sulfate, 72% SRN, and Liquid Boron. Foli-Pop™ K can be applied to most vegetable and field crops, deciduous fruit and nut trees, grapes, olives, and citrus.

#### **Recommended Rates:**

- Foliar Application Rate: 1-3 quarts of Foli-Pop™ K per acre
- Soil Application Rate (Vegetables): 2-4 gallons of Foli-Pop™ K per acre
- Soil Application Rate (Corn, Cotton, Soybeans, and other crops): 3-8 gallons of Foli-Pop™ K
  per acre