



## **An Agrico Crop Talk newsletter regarding Winter Wheat.**

Early development of wheat in the fall will have a big impact on yield and quality of grain at harvest. Starter fertilizers deliver nutrients, when needed, to boost growth, yield and returns.

Winter wheat, when managed for full yield potential, is a very profitable crop. The diverse nature of this province allows a good fit for winter wheat as an excellent rotation crop. Although variety selection, planting date, field drainage and the forthcoming winter will be major contributors to wheat stands next spring, a well balanced fertility program plays just as big a role.

**Nitrogen:** The Nitrogen requirement for wheat in the fall is minimal due to the relatively small amount of vegetative growth that takes place before dormancy. Approximately 20 –30 lbs of Nitrogen is sufficient.

### **Available Phosphorous in the root zone aids in uptake and early development**

**Phosphorous:** Adequate Phosphorous is essential to profitable grain production. Phosphorous affects wheat throughout the season in several ways. Early in the season, the young plant has limited root surface for absorbing Phosphorous. Sufficient P enhances root proliferation and results in increased tiller production, which in turn increases grain yield potential. Adequate P is also associated with reduced winter kill, maximum nutrient and water use efficiency, hastened maturity and lower grain moisture at harvest. A wheat plant will take up 65% of the total P requirements by the time it reaches the boot stage. Building Phosphorous levels and maintaining them is a long process but a very good way to supply the crop requirements in every season.

**Potassium:** Potassium plays many roles in the plant such as photosynthesis, lignin and cellulose development as well as disease and insect resistance and improved root growth. Wheat absorbs approximately 90% of its potash requirements by the boot stage.

### **Potassium requirements need to be addressed in the fall to ensure adequate availability next spring.**

The greatest daily uptake of K<sub>2</sub>O is about 2.5 lbs/acre and occurs during the time from tillering through to the boot stage. KCl is a product that is considered a soil feeder and relies on breakdown of potash over time which is then gradually taken up or fixed depending on the soil type, weather conditions and CEC balance within the soil. KMag on the other hand is denoted a plant feeder because it provides Potassium in the sulphate form so it is readily available for plant uptake.

### **14 % base saturation of Mg in the soil will provide optimum Mg**

**Magnesium:** Magnesium is the main element required in the production of Chlorophyll. Good levels of Magnesium in the soil help with plant uptake of phosphorous. Kmag is a product that provides an immediate source of Magnesium as well as Potassium and Sulphate to young wheat seedlings.

### **33 ppm of Mn is the target level on soil analysis results**

**Manganese:** Wheat is highly responsive to Manganese and economic yield responses are often realized when Manganese is included in the planter mixes. Benefits of Manganese include accelerated seed germination, promotion of lateral root growth and increased availability of nutrients such as Magnesium, Calcium and Phosphorous.