

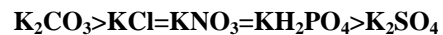


**A&L Canada Laboratories Small Fruit News
Letter Vol. 9 May 30, 2000**

At this time applying Potassium is not difficult and I would advise an application of foliar Potassium. There are a number of sources on the market but the best source of K comes from Potassium Carbonate.

Potassium uptake foliar is not the same with all sources, some sources of Potassium such as Potassium Carbonate have good uptake foliar and low phyto and others are less than 7% and have much greater phyto.

The following is the rating of different Potassium sources and the availability to plants as a foliar application.



Potassium Nutrition

As I have already mentioned part of our problem this season started with low potassium nutrition due to cool wet soils. Potassium is involved in numerous metabolic pathways within the plant and is usually the first nutrient that becomes limiting to the plant with any stress condition that we may experience in the growing season.

Over 60 enzyme systems are activated by Potassium (K). It is difficult to imagine a growth or reproduction process in plants that is not directly or indirectly impacted in a very significant way by Potassium. Potassium plays the following roles:

Photosynthesis

- Coloration of leafy vegetables
(healthy green color)**
- Uniformity of ripening**
- Growth rate**

Synthesis of amino acids and proteins

- Food quality**

**Potassium Deficiency and
Botrytis a Concern this Season**

This season as with every season the weather creates conditions that will effect some nutreint availability. Last season because of the dry conditions it was Mg. When this occurs this element seems to be a problem all the way through the season as was Mg last season.

This season we are noticing in tissue test that we have received on various crops that the element is Potassium. Cool wet soil conditions and water soaked soil conditions will always reduce the availability of Potassium. The uptake of Potassium by the root is very dependent on the root temperature, it is very low at 4 degrees C, increases rapidly up to 20 degrees C, and then more slowly between 20 and 30 degrees C.

In the case of a Strawberry crop that is trying to produce fruit in the early part of the year it can be very detrimental to the yeild and quality of the crop. Potassium deficiency that is left untreated in a strawberry crop will also have a pronounced effect on the logevity of the crop and regrowth after renovation.

Low Potassium levels in the crown weaken the crown and make it prone to disease and winter injury.

Carbohydrate synthesis and translocation

- Bud development**
- Sugar content**
- Enhanced flavour**

Lignin and cellulose development

- Firm stems and stalks**
- Resistance to bruising and physical breakdown**
- Longer shelf life**

Disease and insect resistance

- Thicker epidermal layer**
- Fewer blemishes**
- Higher market grade**
- Less culls and waste**
- Better insect tolerance**
- Better frost resistance**

Root Growth

- More effective utilization of soil moisture**
- Improved nutrient uptake**
- Greater Vigor**



Crown exhibiting Low K

Botrytis

The other problem that is becoming an issue this season is the occurrence of Botrytis with the rains that we have had.

Blossoms are very susceptible to infection from Botrytis. One or several blossoms may show browning and dying and this may extend to the flower stem just behind the flower, this is an indication of Botrytis in your crop.

Follow a spray program to protect the crop from Botrytis and increase your applications if you are doing a lot of frost protecting or have had a lot of rain. An inexpensive pro-active addition to your fungicide program is an application of CaCl just after a large rain or just as you are shutting down your irrigation system after frost protecting.

The addition of an extra Boron foliar spray at this time (1/4 pound ai.) will also increase the pollination reducing the length of time that an open pistil may be an infection site. Boron also influences the plants ability to fight disease.

Anyone who has used the Calcium treatment should increase the frequency of calcium application throughout blossoming and harvest. Remember that this material will not build up and cause problems and it does readily wash off. An aggressive Calcium application is a good addition to your standard fungicide program in weather conditions such as we have experienced this spring.

An aggressive fungicide and calcium program at this time of year will reduce the amount of fruit that will be infected at harvest.