

# SAMPLING AND ANALYSIS

### SOIL | PLANT TISSUE | WATER | PATHOGEN | MEDIA | SAP

# Optimize nutrient management. Improve yields and profitability.

# Why sample?

- Monitor potential changes in the environment, like water quality.
- Detect deficiencies and diseases early.
- Monitor nutrient uptake—are right fertilizers being applied and utilized efficiently by the plant?
- Identify what nutrients are missing or deficient.
- Make in-season corrective applications if required.

A key aspect to analysis is to ensure that the sample is done correctly. The sample must be representative of the field, plant, or management zone. In some instances, conducting two different sampling techniques (e.g., soil and plant tissue) will give better overall perspective and enable a more comprehensive fertility management plan.

## Measure. Understand. Profit.



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#### SOIL SAMPLING BENEFITS

- · Identifies soil nutrients (deficiency or surplus).
- Determines soil pH
- (potential need for lime).
- · With targeted sampling, problem areas can be identified and corrected.
- A decision tool for nutrient management planning. Help determine the appropriate fertilizer(s) and optimal application rates.

#### **POTENTIAL OUTCOME**

- · Increased production.
- · Improved crop quality.
- · More efficient fertilizer use.



- Monitor nutrient
- efficiency and uptake.
- Indicate nutrient
- deficiency/toxicity prior to symptoms showing.
- · Diagnose/confirm visual symptoms of nutrient deficiency/toxicity.
- · Sap analysis shows current plant nutrient uptake and can ID fertility issues before they manifest as problems in vour crop.

- management.
- Improve yield and

- WATER SAMPLING **TYPES**
- Raw water (source).
- Nutrient solution
- (feed, drain/leachate).

#### **BENEFITS**

- · Monitor water quality.
- Monitor nutrient availability.
- Irrigation water quality is a critical factor for production greenhouse crops.



### **TYPES**

- Water
- Soil
- Plant

#### **BENEFITS**

· Determines the identity of pathogens impacting the guality of a crop.

 Use the results to develop a targeted management.

#### **POTENTIAL OUTCOME**

· Early detection of the presence of pathogens in the crop and/or its environment.

• With early detection, you can reduce the likelihood of early crop failure.



### **MEDIA** SAMPLING

#### **TYPFS**

- · Potted plants
- · Bedding plants
- Ground beds or
- benches
- Transplanting soil or compost

#### **BENEFITS**

 Identifies nutrients available, pH and EC. • A decision tool to help determine the appropriate fertilizer(s) and the rates to apply.

#### **POTENTIAL OUTCOME**

- · Increased production.
- · Improved crop quality.
- · More efficient use of fertilizer (nutrient management).



### Royal Brinkman Canada Specialists are trained on proper testing protocols. We offer the following services:

 Establish which tests are of benefit to your crop.

 Set up a testing protocol and schedule.

 Collect and submit samples to the proper laboratories for analysis.

 Review and interpret lab result and determine next steps, if needed, to ensure optimal yields and quality of your crop.

· Review, monitor and improve fertility management.



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### **POTENTIAL OUTCOME**

- Improved fertility
- quality of the plants.