JYOTI

SMARTCHEM TECHNOLOGIES LIMITED

IMPORTANCE OF PETIOLE ANALYSIS IN GRAPE AFTER OCTOBER PRUNING

Among all fruit crops, Grape is an important commercial crop of India from income & employment generation perspective. Of late grape cultivation is facing serious problems due to various nutritional disorders which not only result in wasteful expenditure but also affect the productivity and quality of produce. Petiole analysis as an effective tool can provide a clear picture of what is happening in the vineyard as well as it will show whether or not nutrient absorption by the roots is satisfactory.

The following Q&As will provide required details to help growers to take care of this aspect:

What is petiole testing?

Petiole testing, also referred to as plant tissue analysis, is essentially a laboratory analysis to determine / estimate content of nutrients in the plant part/s.

What are the benefits of Petiole analysis?

- It helps in determining whether nutrient uptake is adequate/sufficient at a given crop growth stage.
- This helps in diagnosing hidden deficiency status.
- It indicates bio availability of nutrients from the soil/ medium.
- It guides in taking up immediate corrective measures to address the deficiency status.

What is the recommended procedure to take petiole sample in Grape crop after October pruning?

Given below is the recommendation for time of sampling and the petiole to be sampled in Grape crop after October pruning?

1) Petiole opposite to bloom (35-45 days after Oct. pruning) at 50% flowering stage
2) Petiole opposite to bunch (75-85 days after Oct. pruning) at veraison stage

Does petiole testing help in fertilizer recommendations?

Petiole analysis generally provides more current plant-based information and is therefore more suited for correcting nutrient deficiencies in standing grape crops for better nutrient recommendations for,

a) Proper berry setting & berry development
b) More bunch weight & good lustre

What are the parameters recommended for analysis?

The samples should be analysed for total contents of N, P, K, Ca, Mg, S, Zn, Mn, Fe, Cu, B and Mo. In addition, if any other parameters are recommended by the advisor/s, they will have to be analysed.

How petioles should be packed and sent to laboratory for analysis?

- The sample must be packed in clean unused paper bags to avoid contamination, appropriately labelled and accompanied by the contract agreement form duly filled.
- Samples should be sent to the lab such that they reach the laboratory at the earliest, preferably within 3 days of sampling.