FACT SHEET

# Highbush Blueberry Tissue Testing in Nova Scotia

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Leaf analysis is a valuable tool in highbush blueberry nutrient management. The complexities of macro- and micronutrient interactions in the soil are not completely understood; however, well established sufficiency and deficiency ranges are known for highbush blueberry tissue and can directly tell you the nutrient status of the plant (Table 1). Also, it is important to note that plants can have nutrient deficiencies without showing any visible symptoms. In detecting these deficiencies early by use of tissue analysis, growers can identify and correct potential nutrient shortages before growth and yield are affected.

## Procedure

Tissue testing should be conducted every 2-4 years and one sample should not represent more than 10 acres, come from more than one variety, or from plants growing on different soil types.

Each sample should consist of 50 to 100 leaves, randomly collected from bushes throughout the sampling area. They should be collected from the middle of the current season shoots just before or during harvest. Leaves should be washed and air-dried before sending to the lab as wet or moist leaves will rot during shipment.

Avoid sampling weak, unhealthy plants unless the purpose is to diagnose a suspected nutrient problem. In this case two samples should be collected, one from the affected bushes, and one from nearby healthy bushes.

Table 1:Nutrient sufficiency ranges for highbush blueberry leaf analysis in Nova Scotia.

| Element | Possible Deficiency Below | Standard Range | | Possible Excess Above |
|---|---|---|---|---|
| Macronutrients | % | Min % | Max % | % |
| Nitrogen | 1.20 | 1.50 | 2.50 | 3.00 |
| Phosphorus | 0.10 | 0.10 | 0.40 | 0.50 |
| Potassium | 0.25 | 0.30 | 0.80 | 0.95 |
| Calcium | 0.15 | 0.20 | 0.70 | 1.00 |
| Magnesium | 0.10 | 0.10 | 0.25 | 0.45 |
| Micronutrients | ppm | ppm | ppm | ppm |
| Boron | 10-15 | 20 | 70 | 100 |
| Iron | 20-30 | 40 | 150 | 300 |
| Manganese | 25 | 50 | 350 | 600 |
| Copper | 5 | 5 | 20 | 100 |
| Zinc | 10 | 10 | 50 | 80 |

Sources: W.E. Ballinger, et. al. (1958) and R. Blatt (1996)

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