

Foliar Sprays: Potash [NACM 98/1.1]**Objective**

To reduce incipient potassium deficiency and its foliar symptoms using Dabinett as an indicator variety in an orchard prone to the problem.

Treatment

Foliar Potash [Phosmaco] 5 litres/ ha [2 litres/acre] at 26gpa. was applied twice to Dabinett blocks at Bulmer's Lower Newton Farm, Kinnersley, at bud burst [1.5.98] and petal fall [12.6.98]

Records and samples

- 1] Leaf analysis [17.6.98] [30.7.98]
- 2] Visual assessment of leaf condition; number of shoots showing potash deficiency symptoms/20 shoots per tree on 20 trees sprayed and unsprayed [17 June].
- 3] Fruit set/branch unit [July]
- 5] Fruit finish [visual assessment of russet]
- 6] Record of return bloom [spring 1999]

Results

Slightly more leaves on the trees in the untreated block showed symptoms of potash deficiency [19.3% of shoots examined] compared with the potash sprayed trees [15.5%].

There were no differences in the mineral analysis profiles of leaves from sprayed and unsprayed blocks. All samples were slightly lower than the guideline levels for potash indicating a need for this element. In the earlier sample [17 June] all micronutrient levels were low or very low with the exception of magnesium and manganese which were normal. All micronutrient levels including magnesium had dropped further by the later sample [30 July], only P and Mn being in the normal range. Nitrogen levels were very high throughout ranging from 4.9 - 5.1, well above the guideline of 2.5%

There were no visual differences in fruit set, fruit size, russet or time of maturity, so no counts were made.

Conclusion

The generally low levels of foliar nutrients would indicate that there are soil/root problems throughout this block. Trees would benefit from increased fertilizer or foliar spray inputs of potassium, and also from foliar sprays of micronutrients, boron, zinc and iron. The unusually high nitrogen levels shows that too much has been used, possible resulting in more vegetative growth than desired.

Since the levels of foliar nutrients in all trees are at a level where deficiency symptoms are likely to be seen or develop through the season, it was unlikely that the application of just two sprays of Phosmaco would show any more improvement than this.