

**Foliar sprays to increase fruit firmness:  
Seniphos and Wuxal calcium [NACM 98/1.3]**

**Objective**

To increase fruit firmness for mechanical harvesting and enhance juice quality.

**Treatments**

Sprays were applied to Browns Apple trees once the fruit had begun to colour, using a small pump and spray lance. [Bulmers Field Farm Block F4]

1] Seniphos 10L/ha: 200ml Seniphos in 10L water on 12<sup>th</sup> and 25<sup>th</sup> August 1998

2] Wuxal Ca 6L/ha: 120ml Wuxal in 10L water on 12<sup>th</sup> August

3] Seniphos + Wuxal applied together as above on 12<sup>th</sup> and 25<sup>th</sup> August

**Records and samples**

Fruit weight [50 sample] at harvest on 30<sup>th</sup> September

Fruit firmness; bruising on shaking manually; bruises developing later

Rots at harvest and after 1 month's dry storage

Juice sugar and % nitrate on harvesting and after storage

**Results**

The effects of the sprays on the fruit of young Browns Apple trees are summarised in the table below.

The sprays had no apparent effect on the number of fruit developing brown rot on the tree or on the ground before harvesting.

There were no real differences in the sugar [as % sucrose] or nitrate [rapid stick test results not shown] levels of treated and untreated fruit.

Although the condition of most fruits was good after 1 months storage, all sound fruit remained firm, there were a few brown rots which developed in the Seniphos treatment and in fruit from the control trees. No rots developed in the Wuxal treated samples at all.

Spray treatment	Fruit rots/tree	% Sucrose 9 <sup>th</sup> Sept	% Sucrose 30 <sup>th</sup> Sept	% Sucrose 30 <sup>th</sup> Oct	% sound fruit at 4 weeks
Seniphos x 2	6.6	13.5	13.8	13.6	94
Wuxal	4.2	12.7	13.7	14.0	100
Both sprays	7.2	13.0	13.8	13.5	100
Unsprayed	-	-	13.7	13.8	93

**Conclusion**

There is little evidence that either sprays at these rates improved fruit quality greatly but the Wuxal calcium spray may have increased fruit firmness slightly leading to better storage. Greater differences may have been achieved by repeated sprays throughout the latter part of the summer but this is probably not practical or economical for cider fruit.