Control of bitter pit on Granny Smith apples

Department of Agriculture, Western Australia
CONTROL OF BITTER PIT ON GRANNY SMITH APPLES

BITTER PIT is a serious threat to Western Australia’s apple export markets and effective control is essential.

The following programme of calcium nitrate sprays, starting in mid-December, will prevent development of the disorder.

**Thorough spraying**

Thoroughly spray all fruit on trees with calcium nitrate. Each fruit should be well wetted. This is the only available protection against bitter pit.

**More sprays**

Four and possibly five evenly spaced sprays are needed.

**Strength**

Use 8 lb. calcium nitrate per 100 gal. water. 
Add a wetting agent unless it has previously caused leaf scorch. 
Don’t spray in late afternoon or under slow drying conditions. 
Don’t mix calcium nitrate with other sprays, particularly emulsifiable concentrates or spraying oils, or salty water.

**Timing**

First spray before mid-December. Use at least three evenly spaced sprays before the end of January.

**Susceptible varieties**

Granny Smiths as well as Cleopatras, Golden Delicious and Delicious need treatment.

**Post harvest dip**

An additional spray before picking, or a dip for picked fruit, of 15 lb. calcium nitrate in 100 gal. water may further reduce bitter pit. Calcium nitrate can be used with Diphenylamine and Ethoxyquin post harvest dips to control both pit and superficial scald but such fruit must only be sold on markets where treatment with these chemicals is permitted.

**Pit-prone fruit**

Fruit from sections of an orchard consistently affected with bitter pit should not be offered for export but sold only on the local market. This fruit should not be cold stored.