

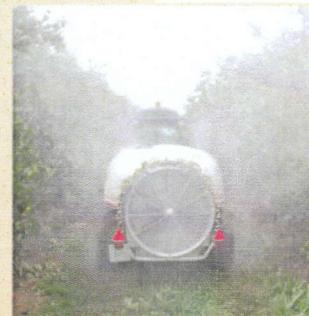


Developing Cider Orchards for Modern Cider Production

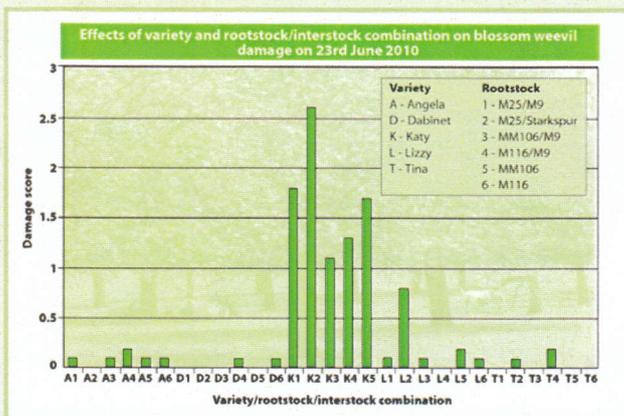
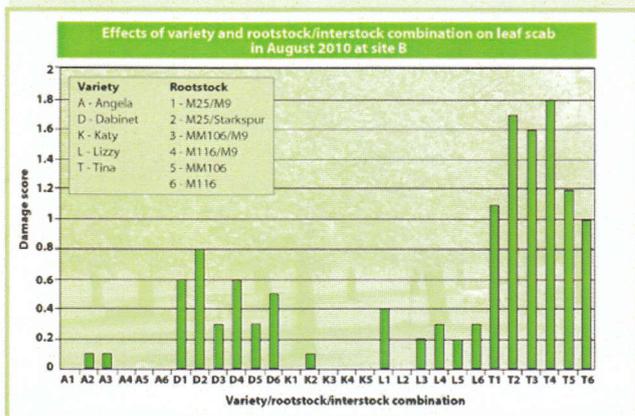


Trees in commercial cider apple orchards are generally more than 5 m in height. Treatments for pest and disease control, when needed, are applied using orchard air-blast sprayers with consequent risk of spray drift. The fruit are machine harvested by shaking the tree and collecting the fruit from the floor, such practices may not be permitted in the future.

The aim of this project is to assess a range of varieties and rootstock/interstock combinations for their suitability for growing in 'hedgerow' systems. These could use shake and capture harvesting techniques and tunnel sprayers to prevent spray drift.



The trees were planted on three sites, one in Herefordshire and two in Somerset, with 30 combinations of variety and rootstocks/interstocks, planted in 5 replicate blocks of 9 trees per plot on each site. Trees were planted in 2008.



- Katy and Dabinet are standard varieties used in cider production. Lizzy, Tina and Angela are new varieties selected for their tannin content, pest and disease resistance and time of harvesting
- Dwarfing rootstocks e.g. M9 reduce the size of the tree but have poor anchorage making them unsuitable for harvesting using shaking techniques
- Conventional cider rootstocks have good anchorage. The use of an interstock can provide the dwarfing features required

Some pests and diseases of cider apple trees

Mildew

Scab

Apple blossom weevil and damaged blossom

Apple sawfly and damaged apple

- Pest and disease assessments showed interesting significant differences between variety/rootstock combinations for scab, mildew, sawfly, apple blossom weevil and susceptibility to waterlogging/phytophthora crown rot
- Yields were significantly affected by pest and disease damage
- Assessments will continue in 2011

Partners:

Jean Fitzgerald and Angela Berrie, East Malling Research; Liz Copas, Consultant; John Worle, Consultant; Gillian Arnold, Statistician; John Thatcher.

Funding was from the National Association of Cider Makers (NACM).

Supported by Thatchers Cider Company Ltd, H P Bulmer Ltd and Gaymer Cider Company Ltd.