Horticultural Development Company

New Project

SF 116

Preventing red berry disease by monitoring and control of blackberry mite.

Project Number:	SF 116
Title:	Preventing red berry disease by monitoring and control of blackberry mite.
Start and end dates:	Start: 01/04/10 End: 31/03/12
Project Leader:	Jerry Cross, EMR
Project Co-ordinator:	Richard Harnden, KG Growers, Tonbridge, Kent
Location:	Initially East Malling Research and Salmans Farm, Penshurst. Other suitable ones will be chosen during the project.

Background and project objectives: Red berry disease is causing serious damage and losses in commercial blackberry plantations in the UK, especially in high value crops grown in tunnels. A proportion of drupelets, often those at the base of the fruits round the calyx, remain greenish or reddish and hard whilst the remaining drupelets ripen normally attaining their normal black colouration at maturity. Red berry disease is normally caused by the blackberry mite, *Acalitus essigi*, which feeds on the flowers (and foliage) injecting toxic saliva into the developing drupelets. Mites overwinter beneath bud scales and invade the new growth, living and increasing on the flower buds, petioles and leaves. At blossom time they enter the flowers and feed on the developing drupelets, especially those sheltered by the calyx. As fruits mature they become less suitable for mite feeding and at harvest it is often difficult to find mites in the damaged fruits. For this reason it is often difficult to diagnose blackberry mite as the cause of the problem, as uneven ripening may also be caused by poor pollination. The extent of blackberry mite infestation in UK blackberry crops needs to be determined and effective means of monitoring and controlling this pest need to be developed.

Effective control and timing of blackberry mite is difficult to achieve as the mite is often protected from plant protection products by inhabiting the underside of the scales in the buds of the blackberry plant. A better understanding of the timing of mite migration from the buds would help growers to target sprays more effectively, hence, reducing the loss of yield to red berry disease. Growers would benefit from understanding the relationship between blackberry mite population and the amount of damaged caused to the fruit and also the correlation between pesticide management and the incidence of red berry disease.

This project will study the relationship between the numbers of blackberry mite and the level of red berry disease. It will also monitor the migration of the mite through the season. The spray trials will identify effective spray treatments and when to best time the applications. This will provide vital information to growers on how best to monitor, time and target sprays for blackberry mite in order to reduce the incidence of red berry disease in blackberry.

Further information

Email the HDC office (hdc@hdc.org.uk), quoting your HDC number, alternatively contact the HDC at the address below.

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