

PACE

Pesticide dose Aadjustment to the Crop Environment

Pace

- Based on adjusting the 'ground' dose for different orchard canopy sizes (height, spacing, density).
- It is important to understand the difference between dose expression and dose adjustment .
- Dose expression e.g. grams a.s./ha or concentration per unit area.
- Dose adjustment is guidance on how to use the product effectively taking into account things such as canopy density, tree height, spacing etc.

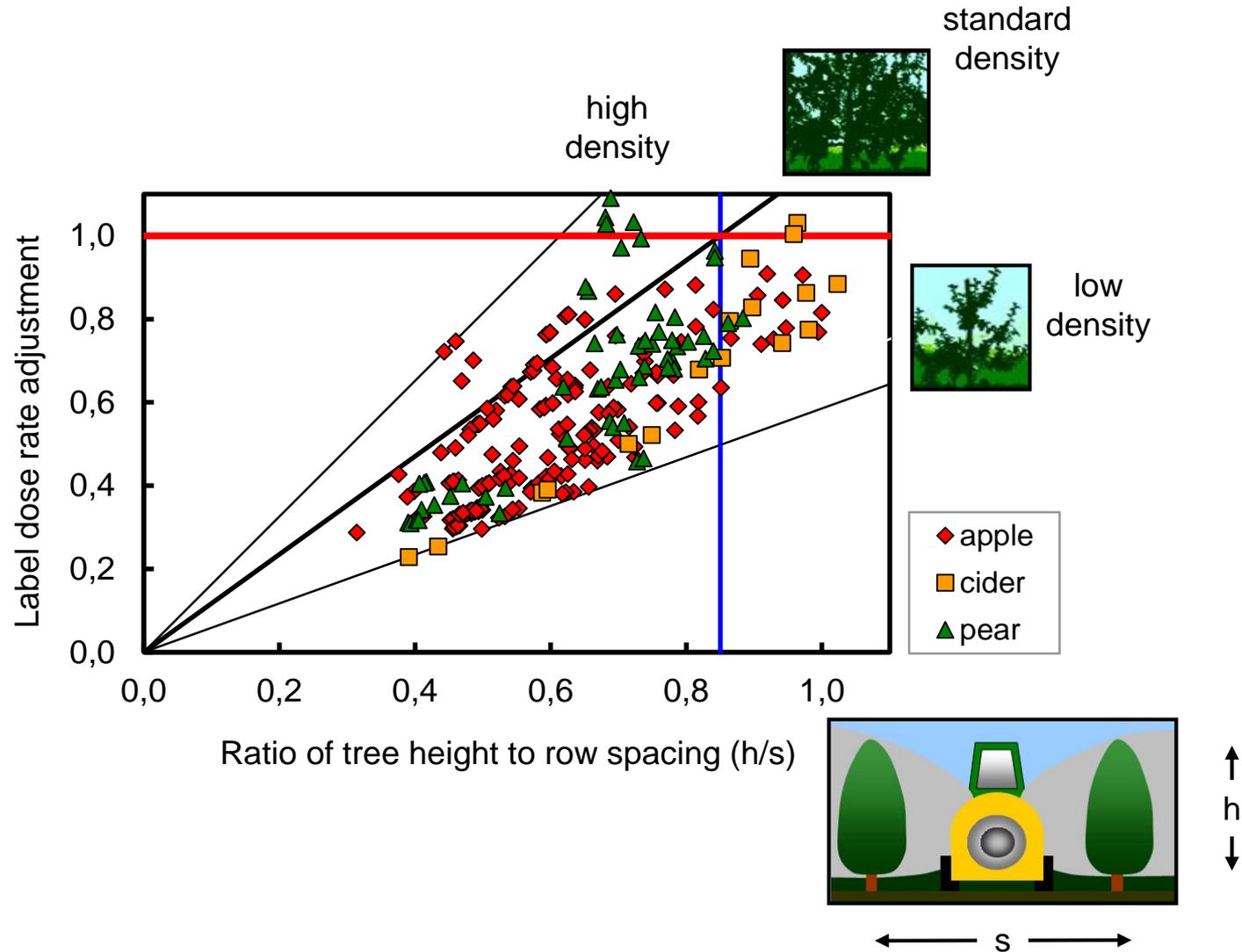
Initial work under pinning PACE

- Real UK orchard data were collected by the use of LiDAR (light detection and range).
- The optical measurements obtained were interpreted to inform the likely spray capture by the target i.e. the tree canopy.
- Work was also undertaken looking at spray deposition on leaves in relation to LiDAR measurements for a range of orchards to enable further development of the PACE scheme.

PACE scheme

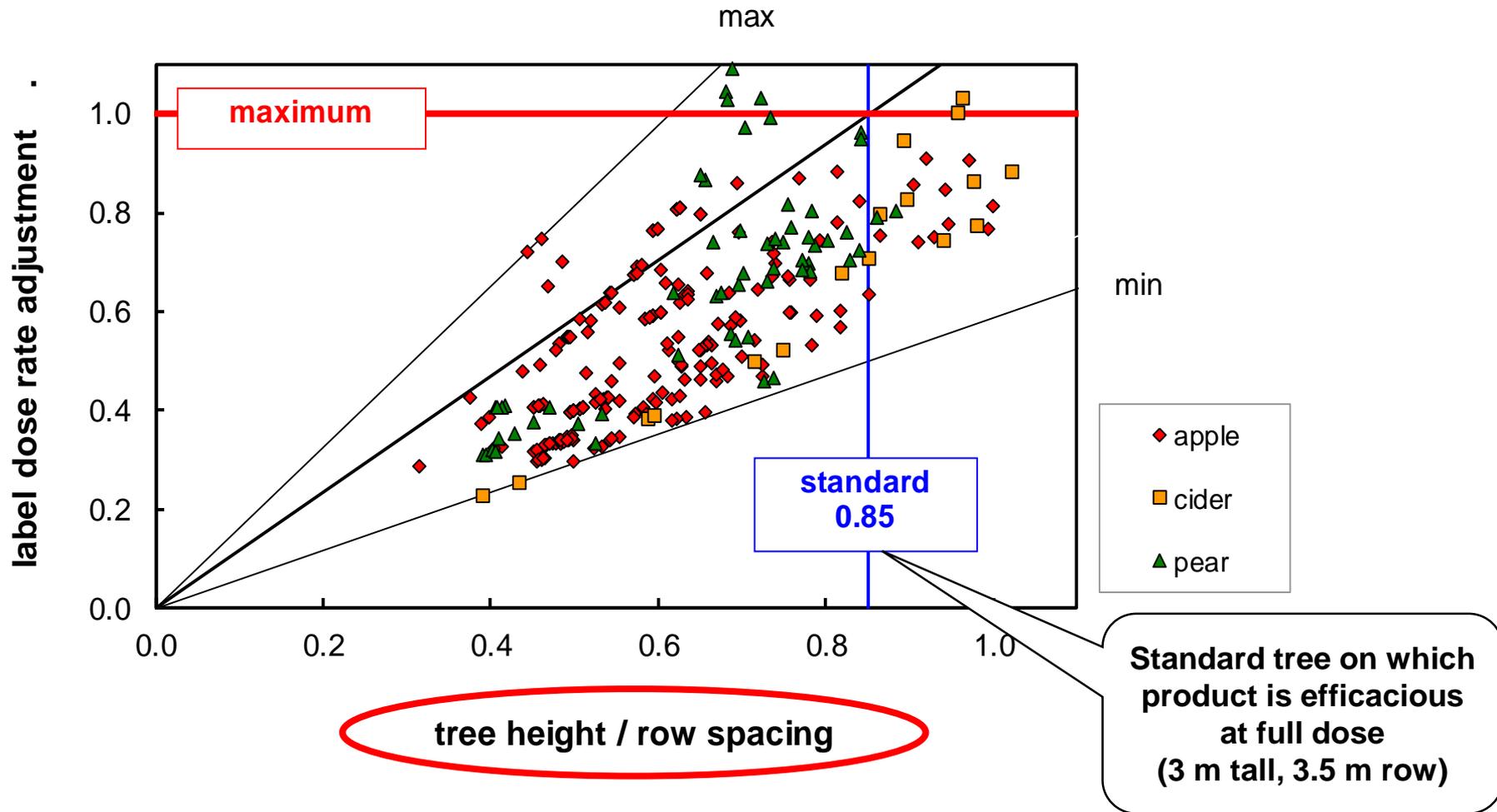
- Enables the grower to adjust the label rate to orchard conditions without compromising efficacy.
- Uses a pictographic key with a simple formula (height and spacing) to calculate the dose.
- This has been further simplified so it is practical and simple for growers to use.
- Data were collected on effectiveness for both pests and diseases showing generally acceptable levels of performance.

PACE adjustment of the maximum dose per ha for constant deposit at full-leaf in different orchards



PACE dosage model

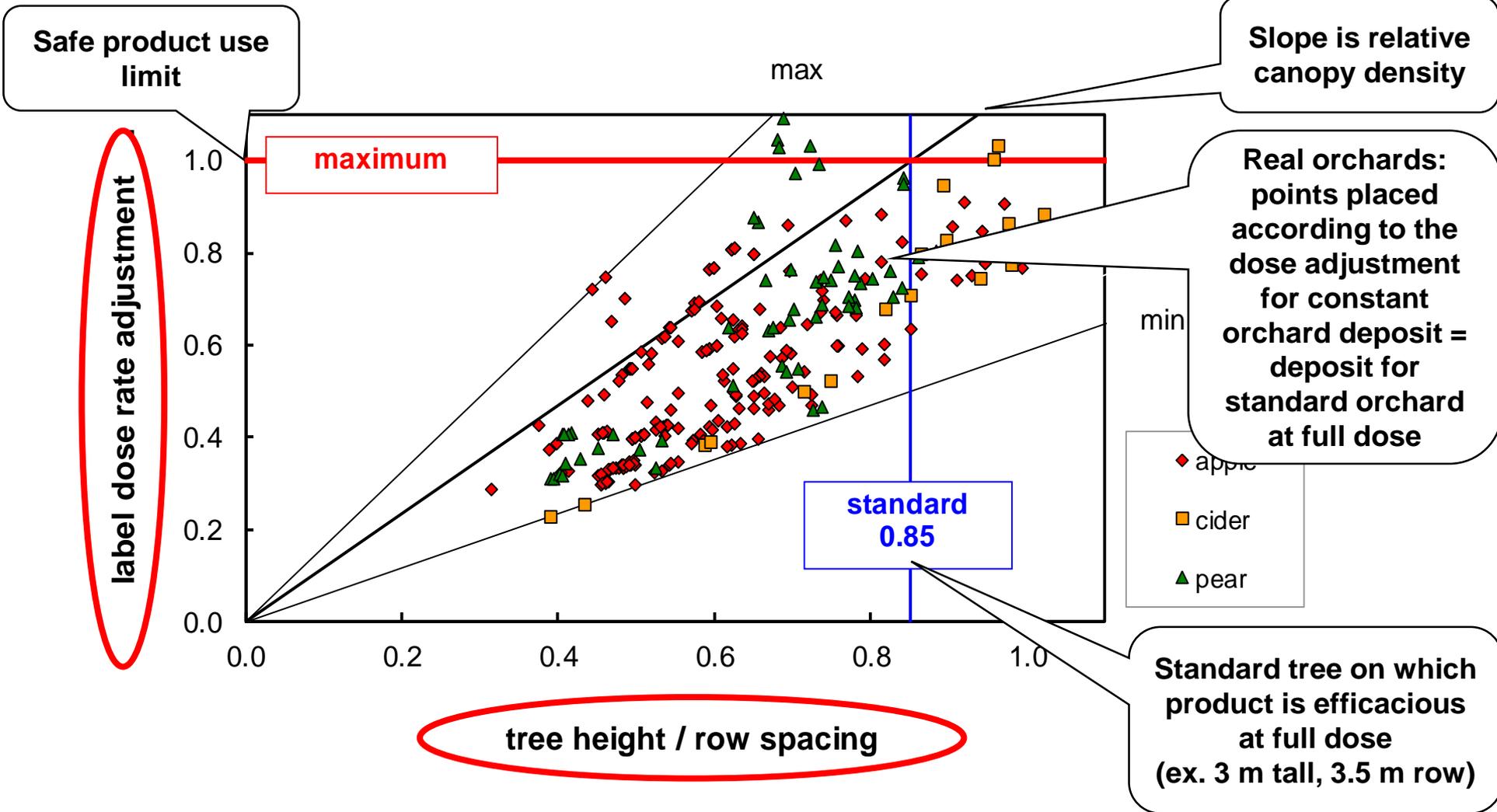
Adjustment of the maximum dose per ha



(From Walklate & Cross, 2012)

PACE dosage model

Adjustment of the maximum dose per ha



(From Walklate & Cross, 2012)

PACE into Practice

- **Labels being amended**

Where tree height and/or canopy density is reduced, the dose (and water volume) should be adjusted in accordance with an appropriate dose adjustment scheme **and label advice for water volumes**. Consult your specialist advisor for further information.

Further information on the PACE scheme is available from HDC, or see the HDC leaflet (Orchard Spraying: Opportunities to reduce rates) available on the CRD website at <http://www.pesticides.gov.uk/HDC.pdf>.

Making PACE dose calculations

- **Dose adjustment calculator web site (F.O.C)**

www.pace.pjwrc.co.uk/Default.htm

- **Select V4**
- **Use Google Chrome browser or Microsoft Edge**
- **HDC best practice guide pears, stone fruit, cider (Best Practice Guide)**

Thanks for listening

Many thanks to the UK specialists Jerry Cross and Peter Walklate who provided the majority of slides and support for this talk.

**My lurcher pups to cheer us
on our way!**

