



Crumbly fruit, does the environment play a part?

Luca Maria Scolari



The James
Hutton
Institute

Presentation outline

- Crumbly fruit definition
 - Potential triggers
 - Crumbly fruit @ JHI so far
 - Future perspectives



Crumbly fruit definition



The James
Hutton
Institute





The James
Hutton
Institute

Crumbly fruit: potential triggers

- viruses (RBDV, RLMV and RaLV*)
- extensive tissue culturing
- genetics
- environmental factors (i.e. T and \emptyset at particular time points in development)
- pollination

*so far never found outside the American continent





The James
Hutton
Institute

Crumbly fruit @ JHI so far

The Crumbly fruit condition is assessed as part of the UK Plant Health Certification Scheme

- viruses testing (i.e. RBDV and RLMV)
- monitoring T and \emptyset from glasshouses HG30 and HG31
- testing of different pollinators (blue flies, bumble bees and honey bees)

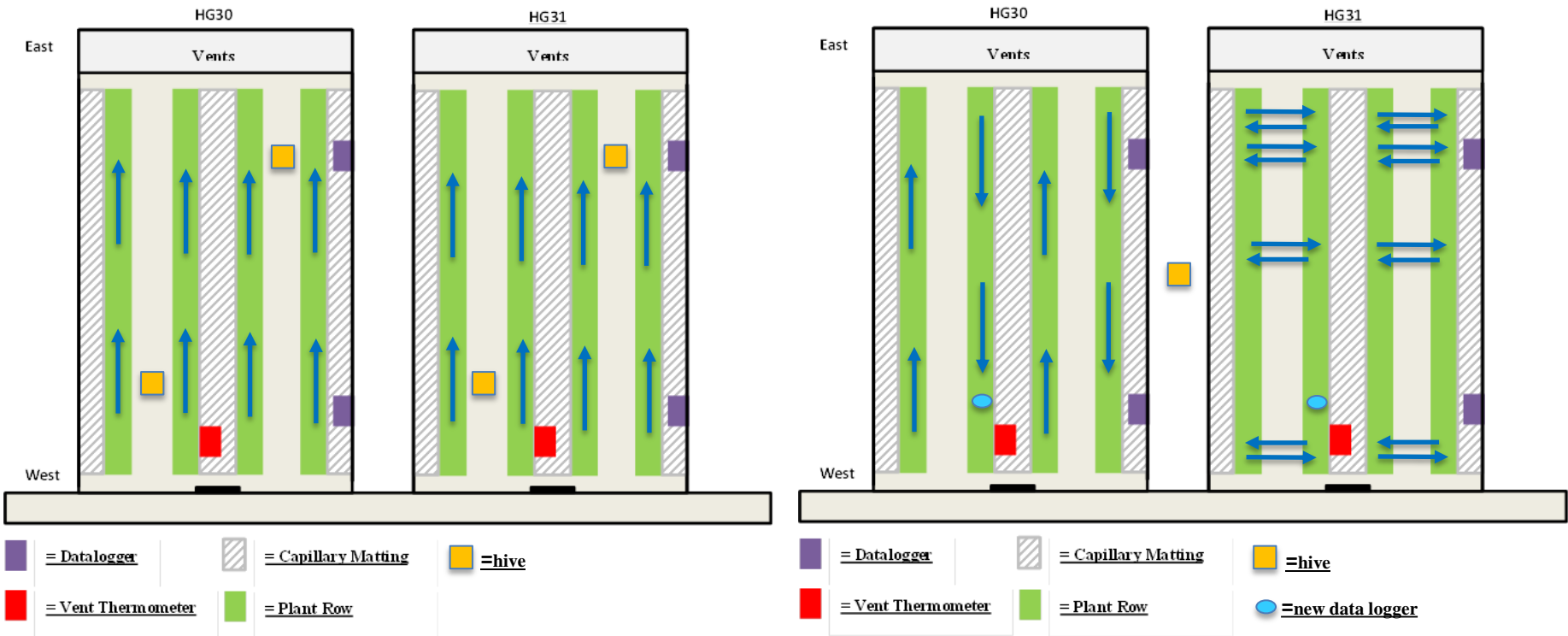


Crumbly fruit @ JHI so far



The James
Hutton
Institute

Glasshouses for Crumbly condition assessment: 2015-2016 layout (left) 2017 layout (right)

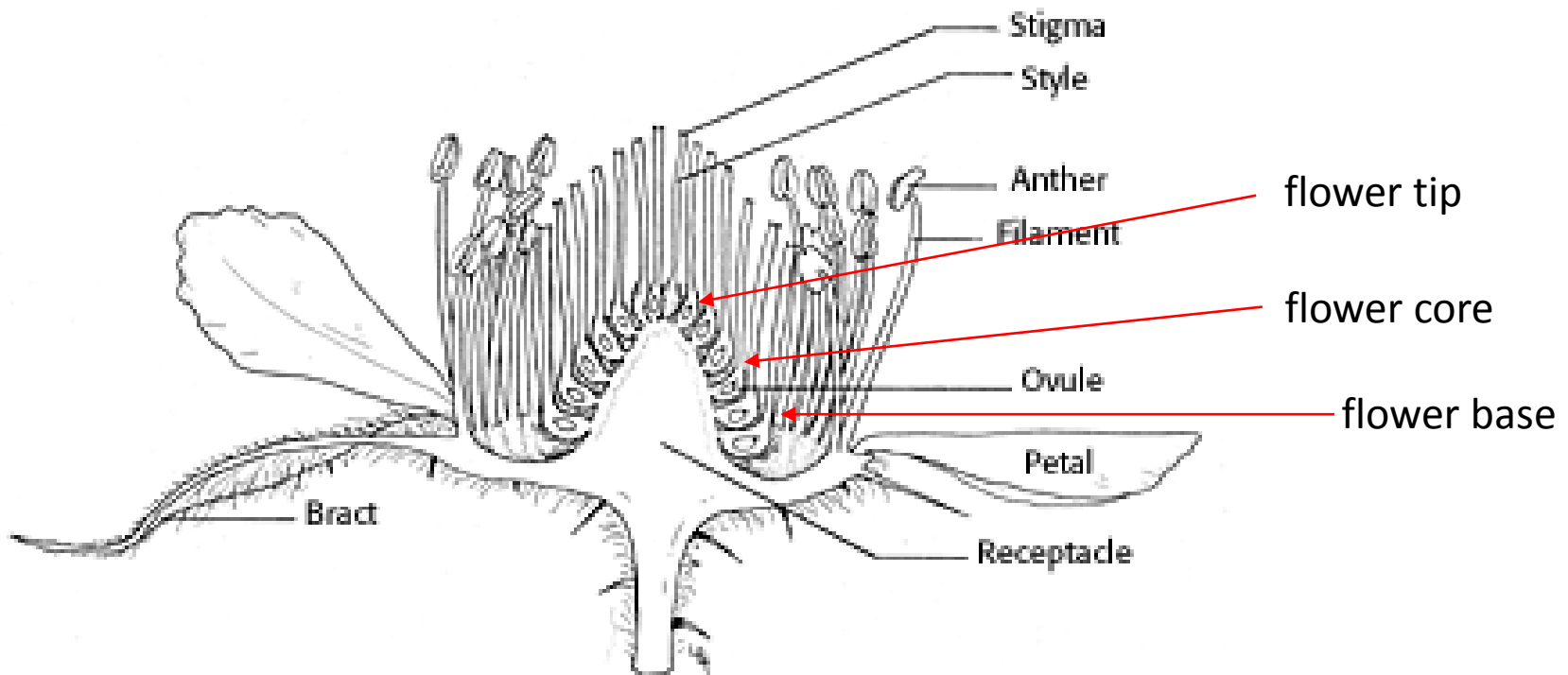


Crumbly Fruit: future perspectives



The James
Hutton
Institute

Inducing Crumbly condition: 6 different treatments designed



- Longitudinal section of 'Willamett' raspberry flower, x10.



Crumbly Fruit: future perspectives

- hormones profiling
 - gene expression
 - census of worldwide spreading of crumbly condition





The James
Hutton
Institute

Many thanks for your attention

The Mylnefield Trust



Scottish Government
Riaghaltas na h-Alba
gov.scot