

Genetic control of juvenility in *Brassica oleracea*

Graham Teakle

Defra project: Developing tools for growers and breeders to enable the predictable initiation of flowering (HH3728SX)



defra
Department for Environment
Food and Rural Affairs

THE UNIVERSITY OF
WARWICK



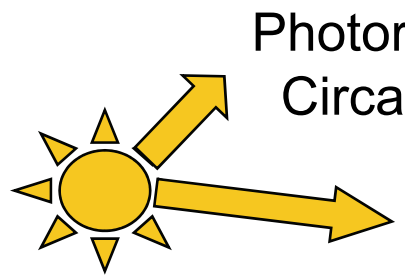
Warwick
HRI

Photoperiodic pathway

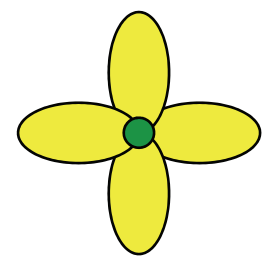
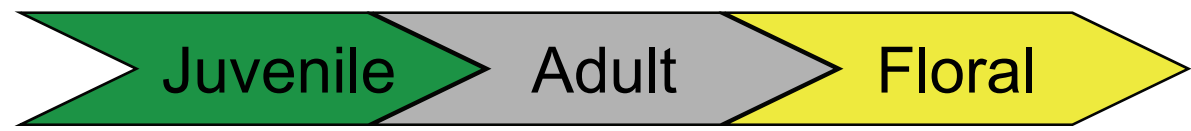
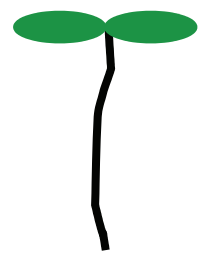
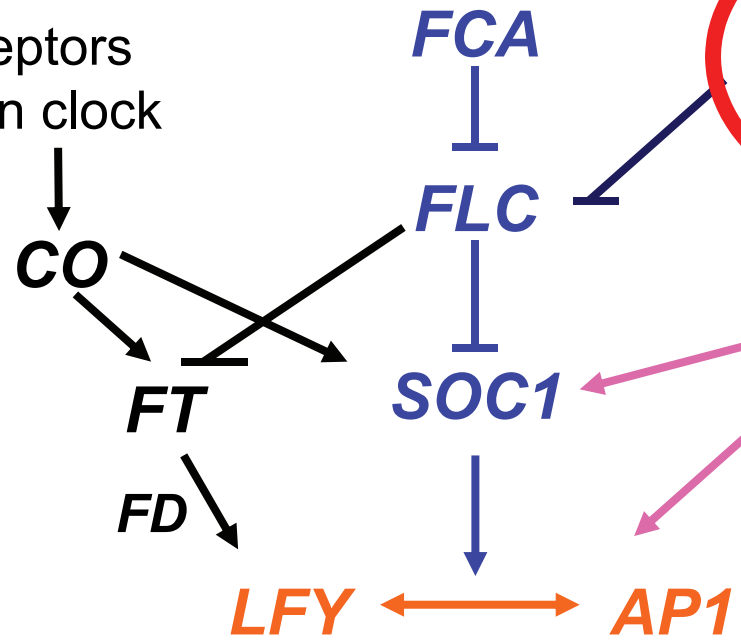
Autonomous pathway

Vernalisation pathway

GA pathway



Photoreceptors
Circadian clock



Experimental strategy

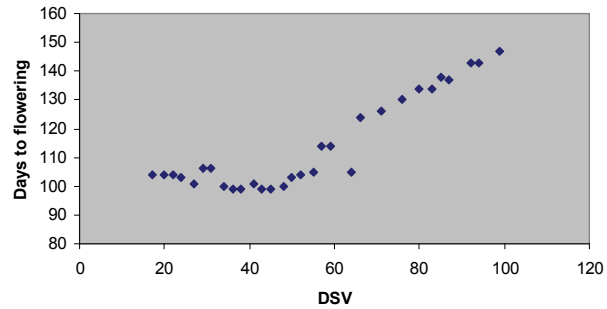
- o Define vernalisation parameters
- o Establish assay for juvenility



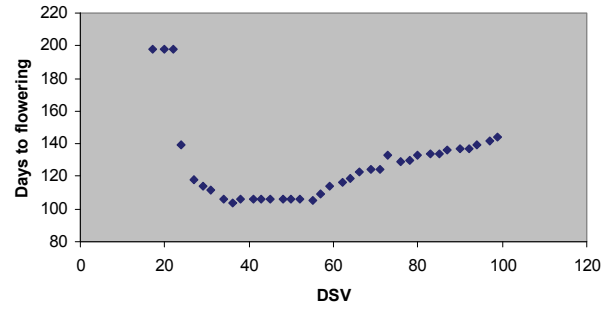
- o Perform selected juvenility assay on NGDH mapping population
- o Expression analysis of candidate genes

Range of responses for different NGDH lines...

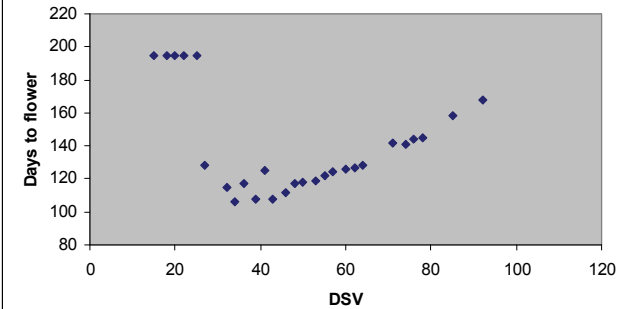
Line 58: Days to start of vernalisation vs days to flowering



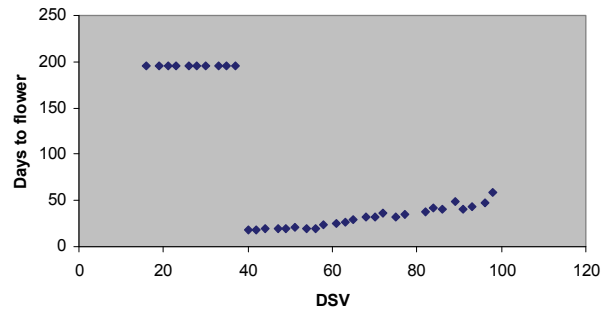
Line 64: Days to start of vernalisation vs days to flowering



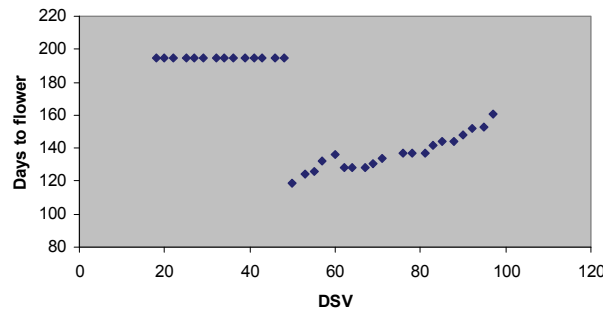
Line 47: Days to start of vernalisation vs days to flower



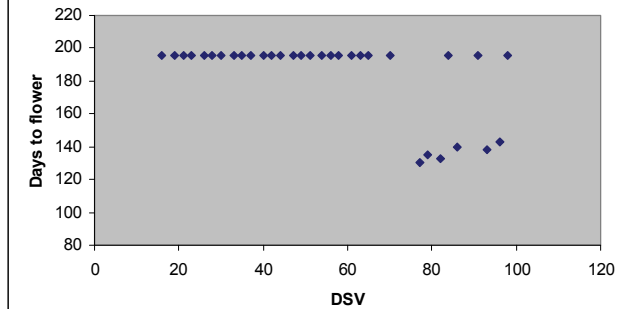
Line 11: Days to start of vernalisation vs days to flower



Line 44: Days to start of vernalisation vs days to flower

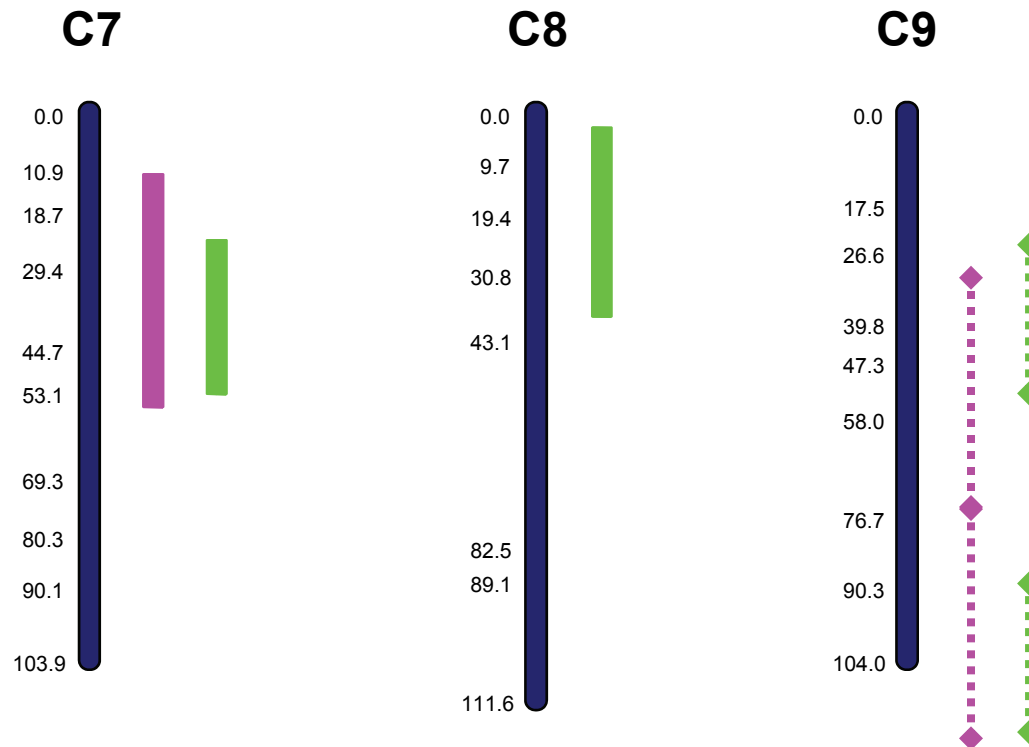


Line 21: Days to start of vernalisation vs days to flower



QTLs detected for:

- Estimated end of juvenility
- Time of first vernalisation treatment leading to flowering



Acknowledgements

Brian Thomas - Project leader

Graham Teakle

Andrea Massiah

Steve Adams

James Lynn

Steve Jackson

Alison Jackson

Karl Morris

Angela Hambidge

Jayne Akehurst

Veronica Valdes

Linda Brown

Funded by

