

# Dissecting lentil crop growth across multi-environment trials using unoccupied aerial vehicles

unpublished

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Derek Wright, Sandesh Neupane, Karsten Neilson, Tania Gioia & Kirstin E Bett. **Dissecting lentil crop growth across multi-environment trials using unoccupied aerial vehicles.** unpublished. (2023) 00: 1-10

which is follow-up to:

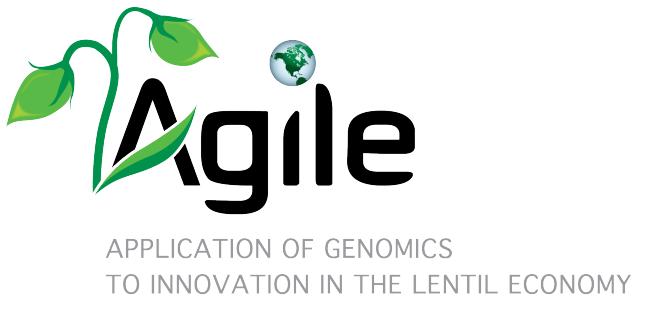
- Sandesh Neupane, Derek Wright, Raul Martinez, Jakob Butler, Jim Weller, Kirstin Bett. **Focusing the GWAS Lens on days to flower using latent variable phenotypes derived from global multi-environment trials.** *The Plant Genome.* (2022) 16(1): e20269.
  - [https://github.com/derekmichaelwright/AGILE\\_LDP\\_GWAS\\_Phenology](https://github.com/derekmichaelwright/AGILE_LDP_GWAS_Phenology)
  
  - Derek M Wright, Sandesh Neupane, Taryn Heidecker, Teketel A Haile, Clarice J Coyne, Rebecca J McGee, Sripada Udupa, Fatima Henkrar, Eleonora Barilli, Diego Rubiales, Tania Gioia, Giuseppina Logozzo, Stefania Marzario, Reena Mehra, Ashutosh Sarker, Rajeev Dhakal, Babul Anwar, Debashish Sarker, Albert Vandenberg, and Kirstin E. Bett. **Understanding photothermal interactions can help expand production range and increase genetic diversity of lentil (*Lens culinaris* Medik.).** *Plants, People, Planet.* (2021) 3(2): 171-181.
  - [https://github.com/derekmichaelwright/AGILE\\_LDP\\_Phenology](https://github.com/derekmichaelwright/AGILE_LDP_Phenology)
- 

- [https://github.com/derekmichaelwright/AGILE\\_LDP\\_GWAS\\_Phenology](https://github.com/derekmichaelwright/AGILE_LDP_GWAS_Phenology)
- View as pdf
- View as HTML
- Source Code Vignette (Growth\_Rates\_Vignette.html)

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## AGILE & P<sup>2</sup>IRC Projects

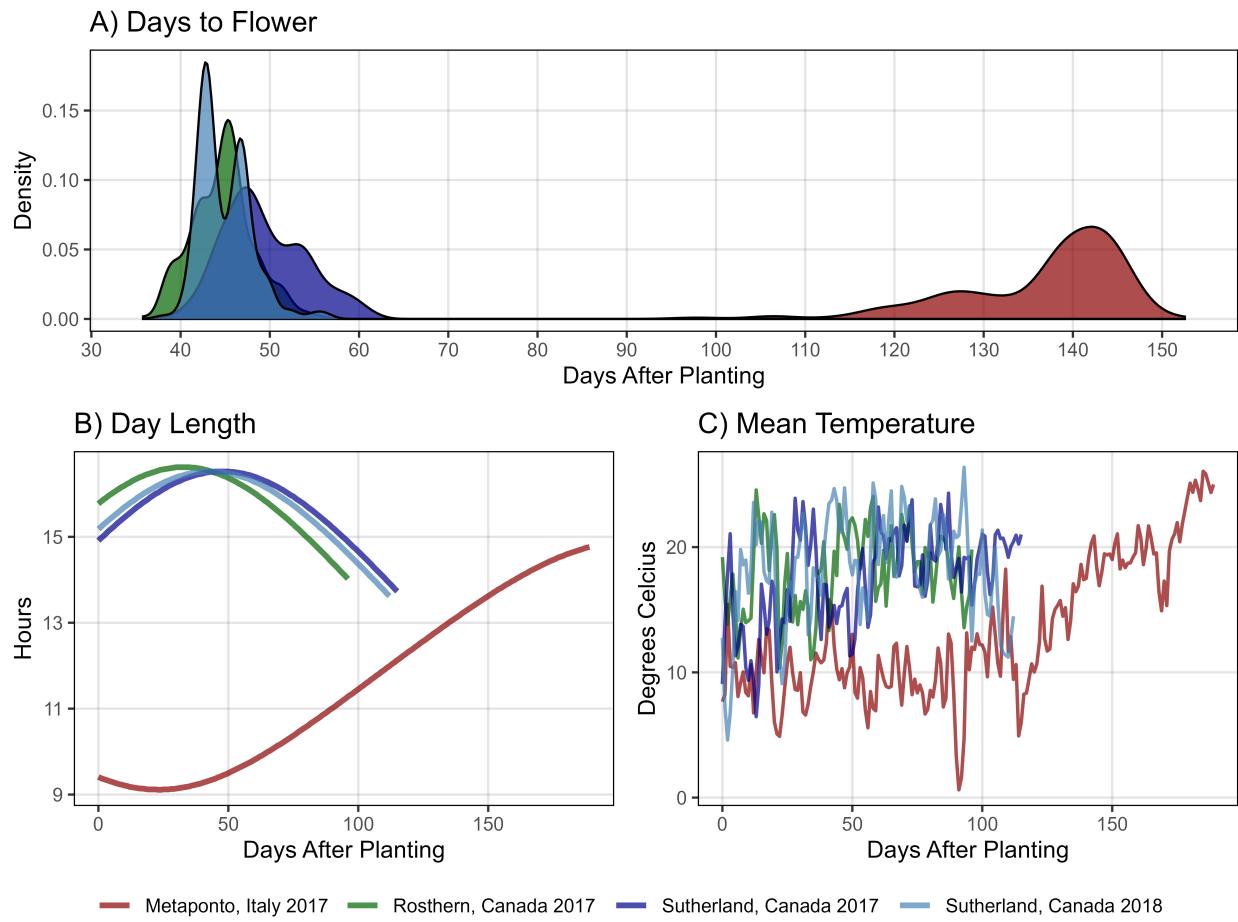


## Collaborators

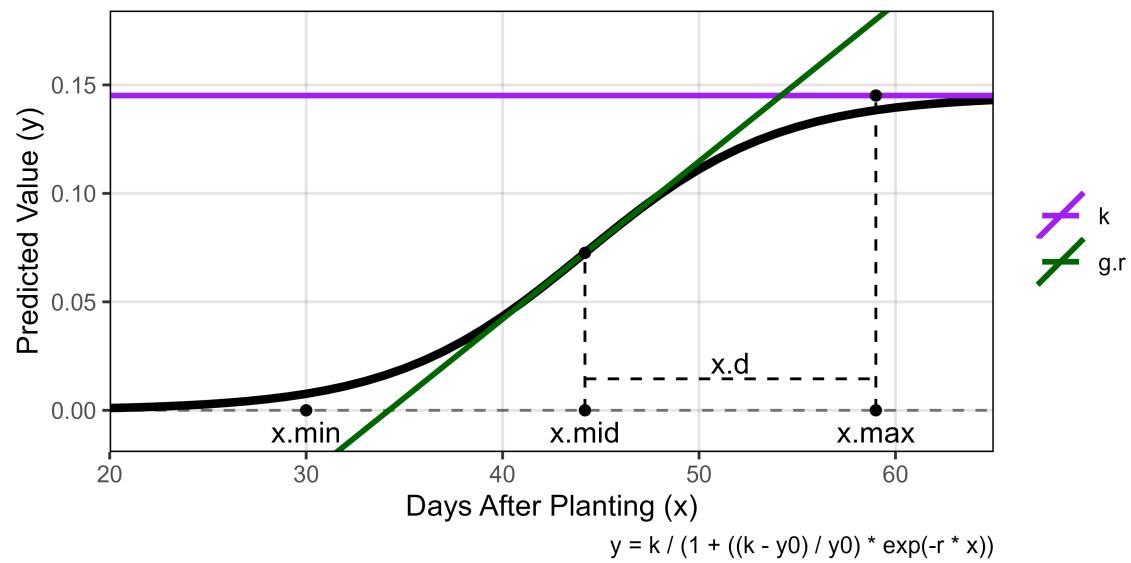
- Department of Plant Sciences and Crop Development Centre, University of Saskatchewan, Saskatoon, Saskatchewan, Canada
  - School of Agriculture, Forestry, Food and Environmental Sciences, University of Basilicata, Potenza, Italy
-

## Figures

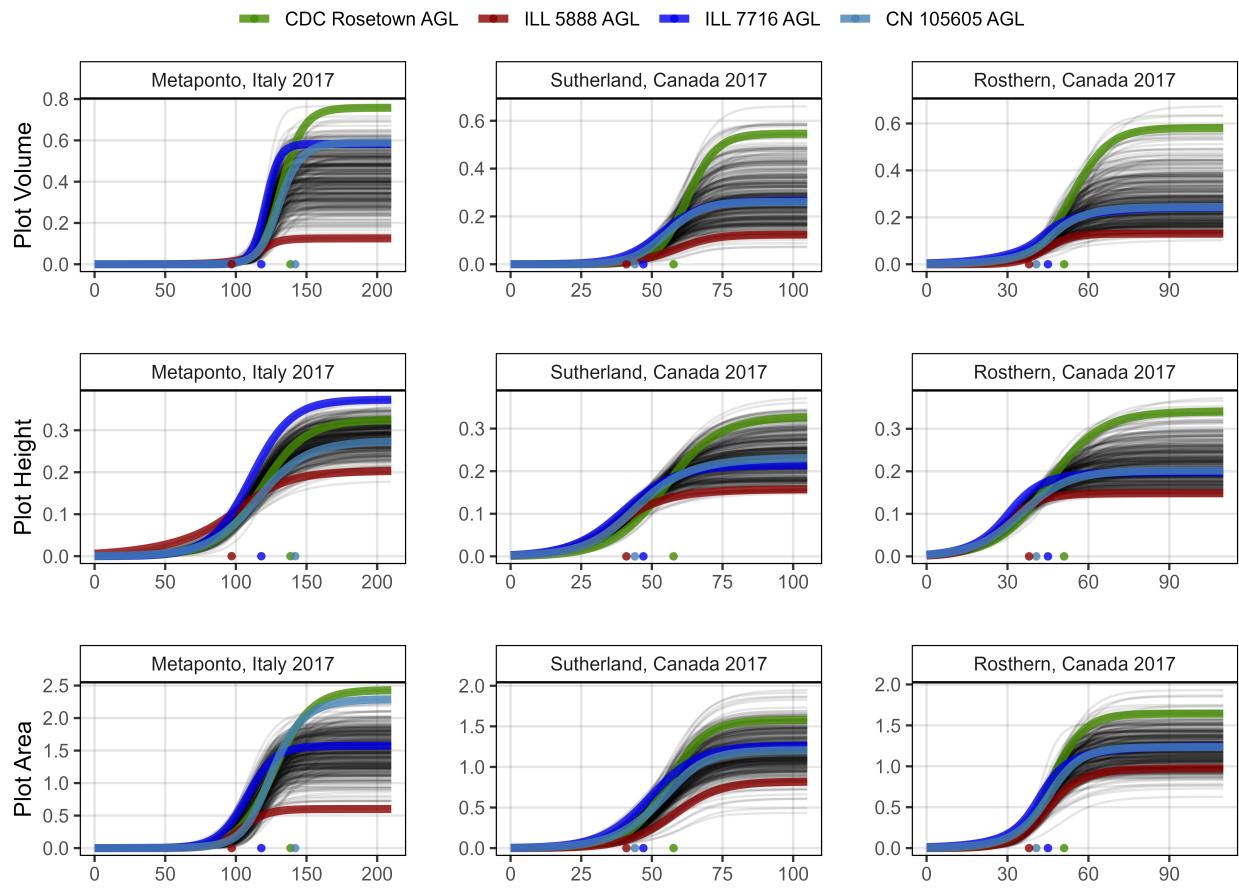
Figure 1



**Figure 2**



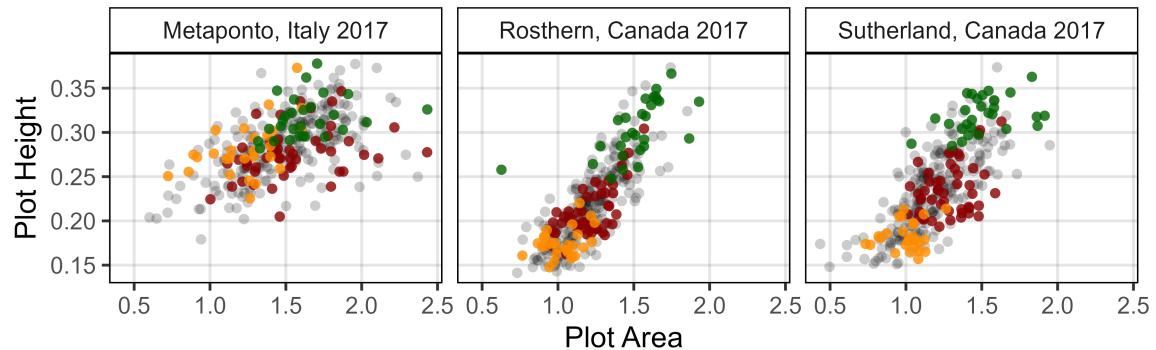
**Figure 3**



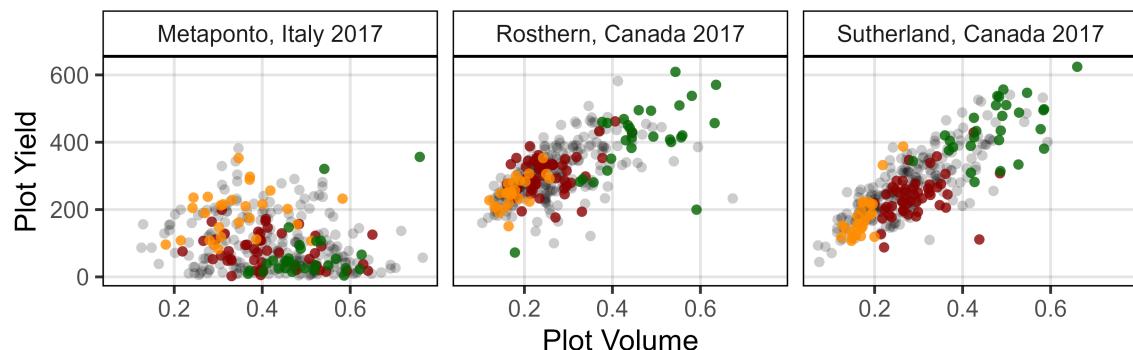
**Figure 4**

- Additional/Figure\_04\_A.html
- Additional/Figure\_04\_B.html
- Additional/Figure\_04\_C.html

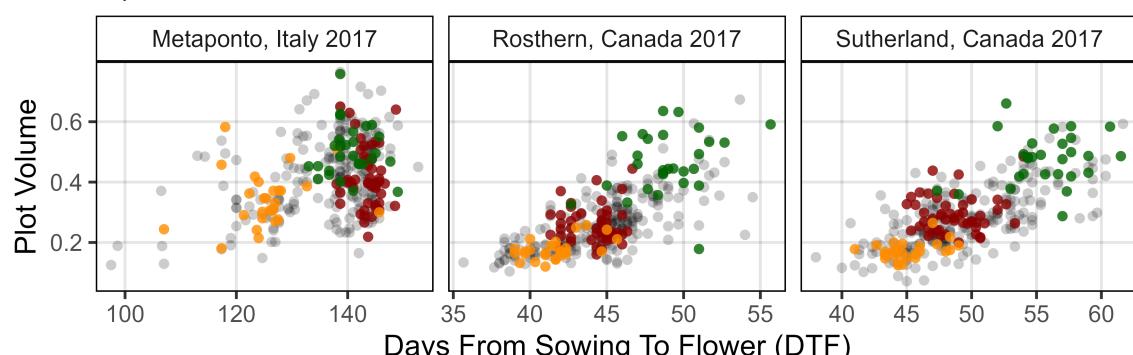
**A) Height x Area**



**B) Yield x Volume**

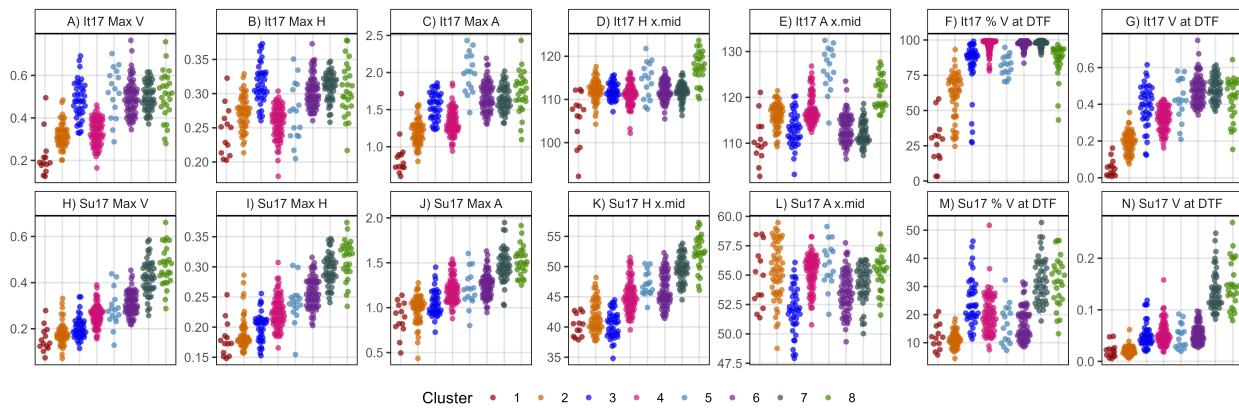


**C) Volume x DTF**

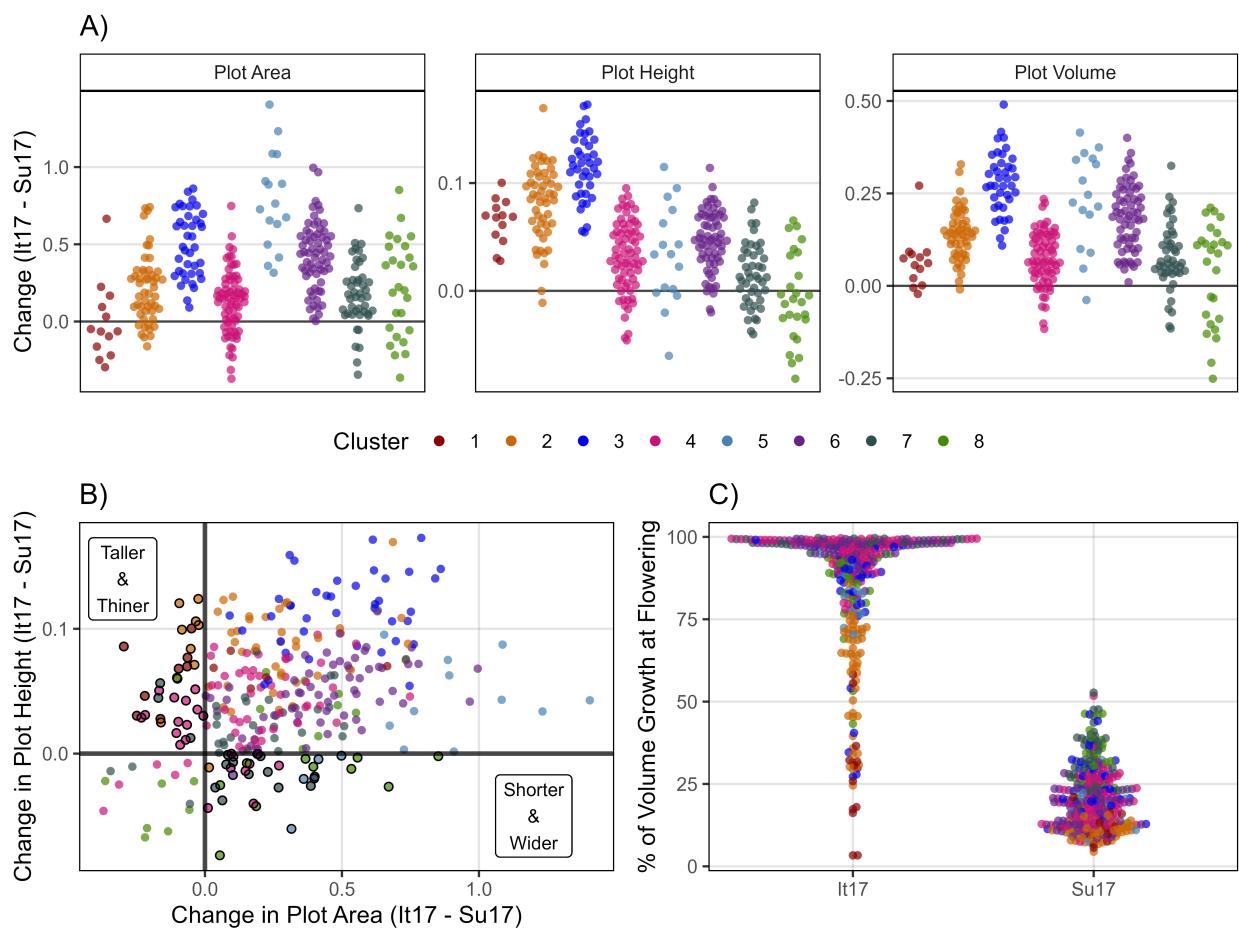


Accession Origin    ● Canada    ● India    ● Iran    ● Other

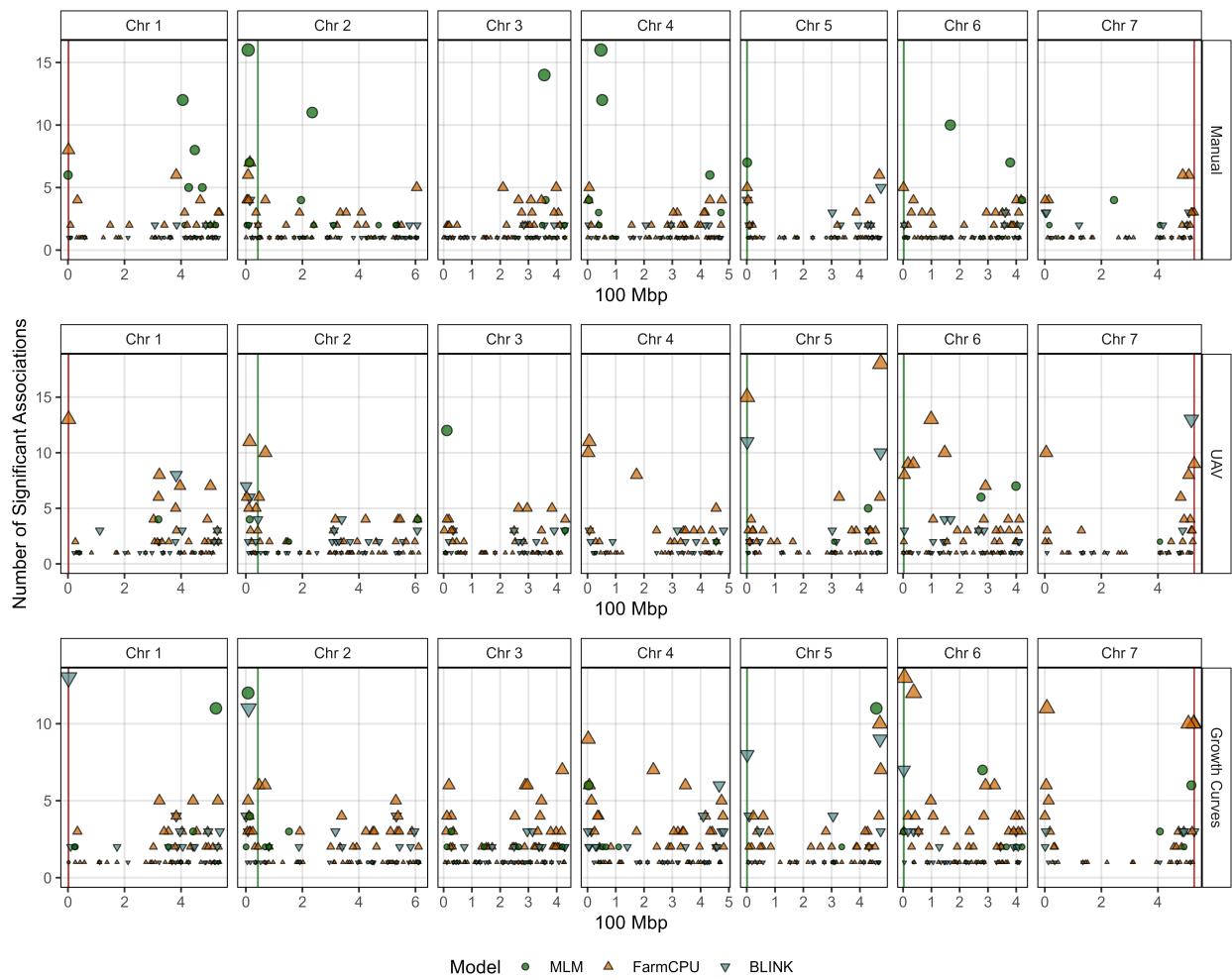
**Figure 5**



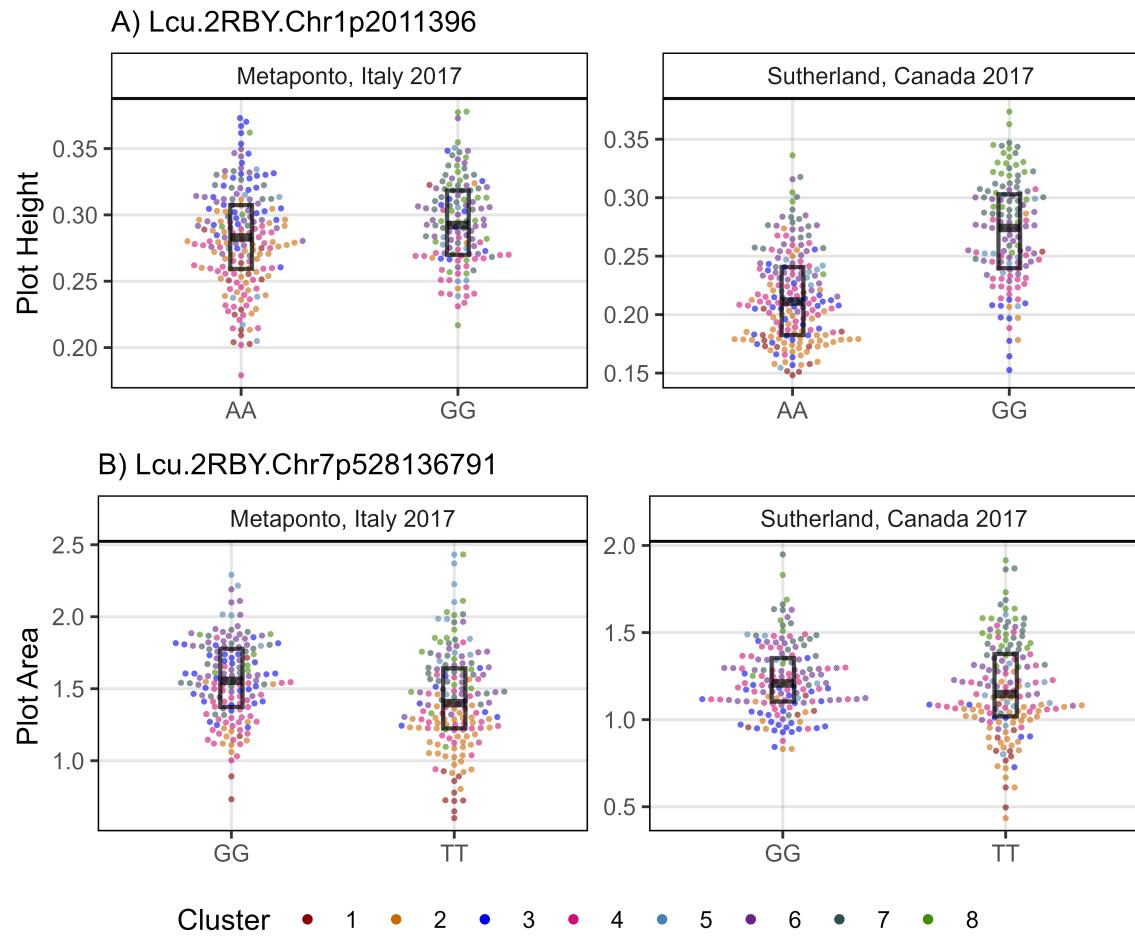
**Figure 6**



**Figure 7**



**Figure 8**



## Supplemental Tables

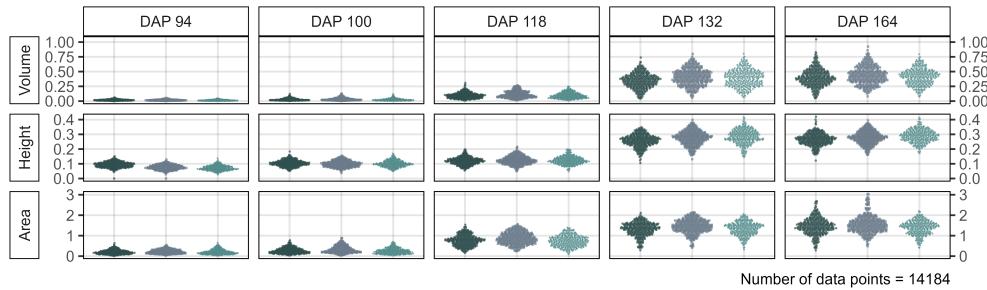
### Supplemental Table 1

Supplemental\_Table\_01.csv

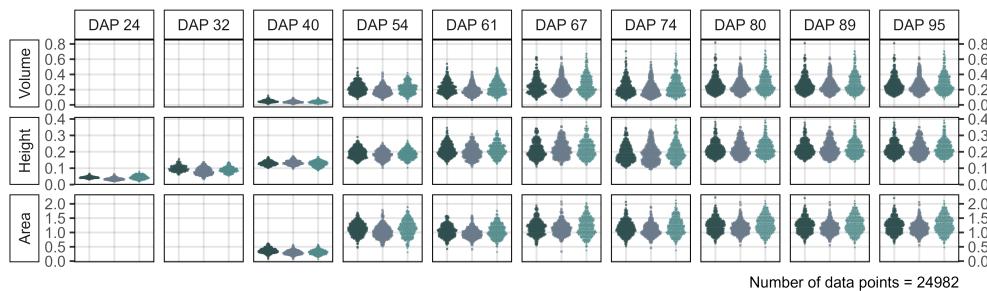
## Supplemental Figures

Supplemental Figure 1

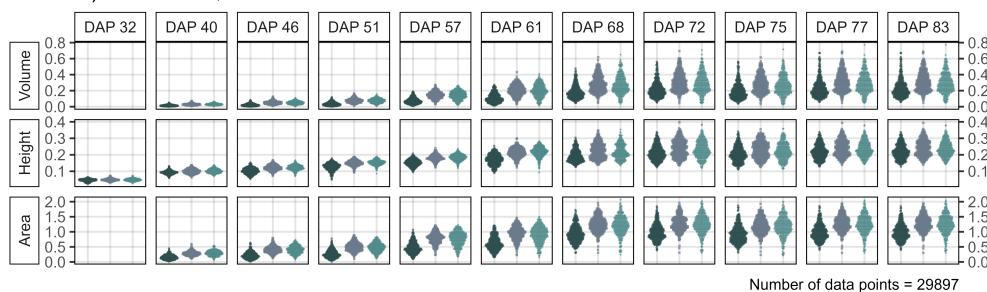
A) Metaponto, Italy 2017



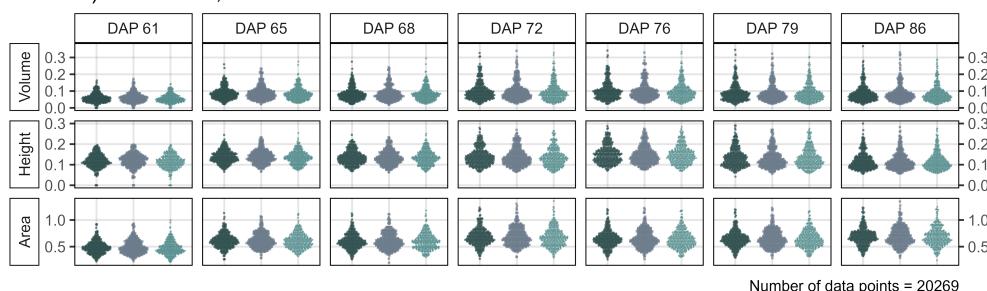
B) Rosthern, Canada



C) Sutherland, Canada



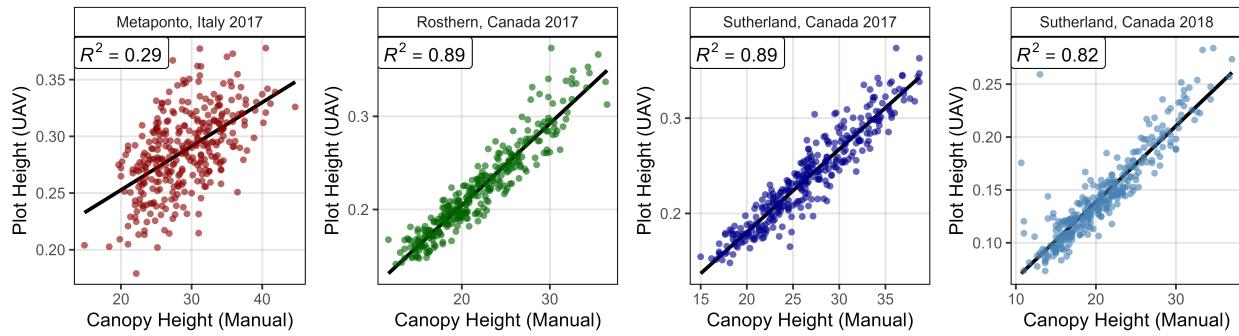
D) Sutherland, Canada 2018



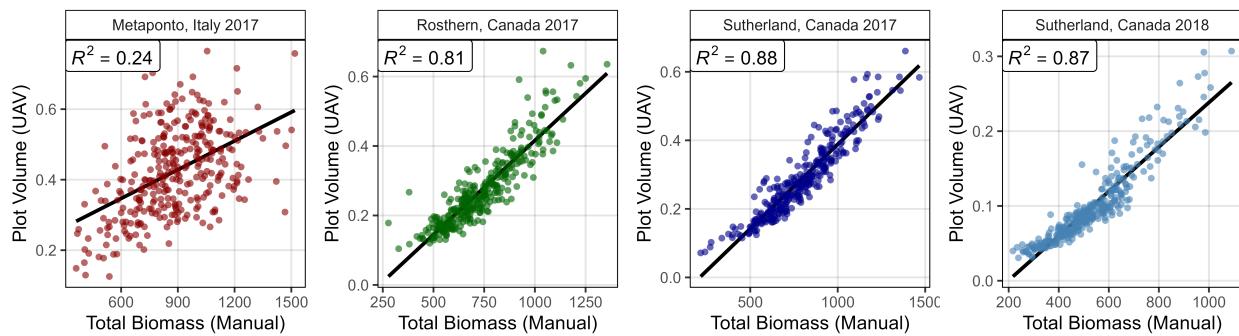
● Rep 1 ■ Rep 2 ◆ Rep 3

## Supplemental Figure 2

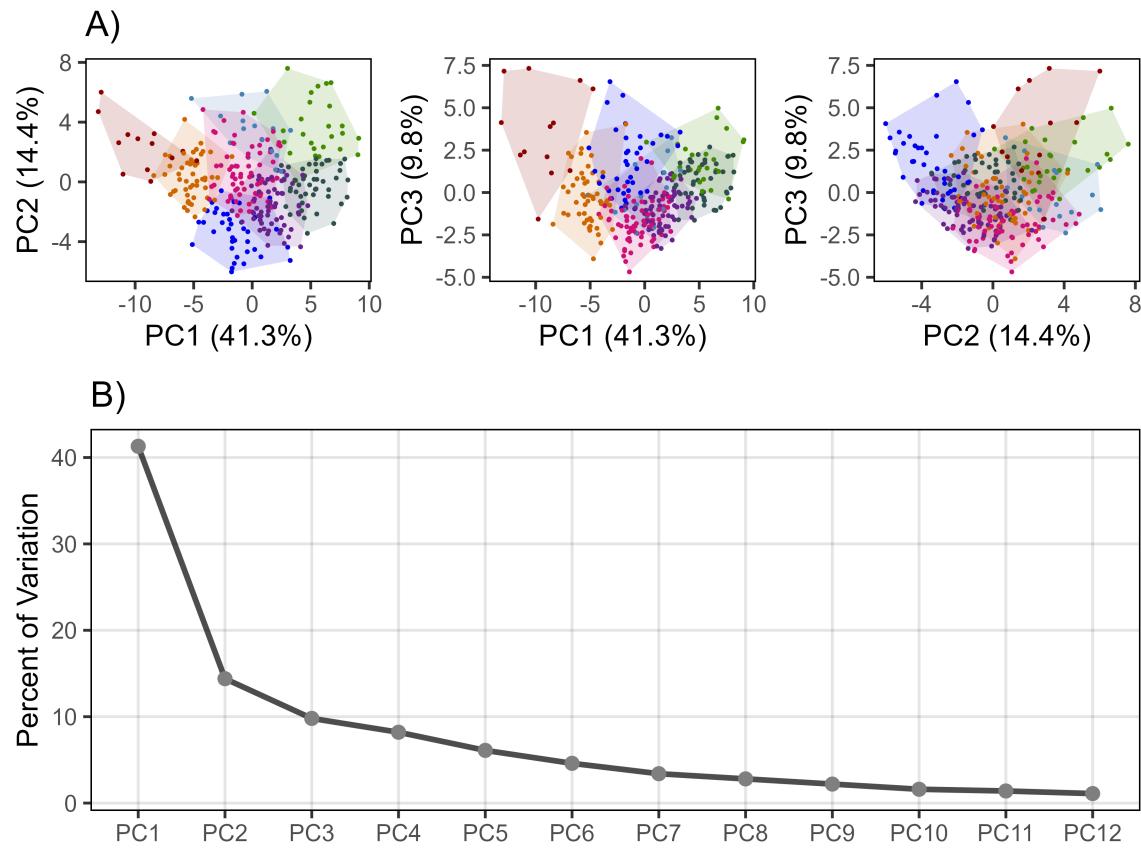
A) Plot Height (UAV) x Canopy Height (Manual)



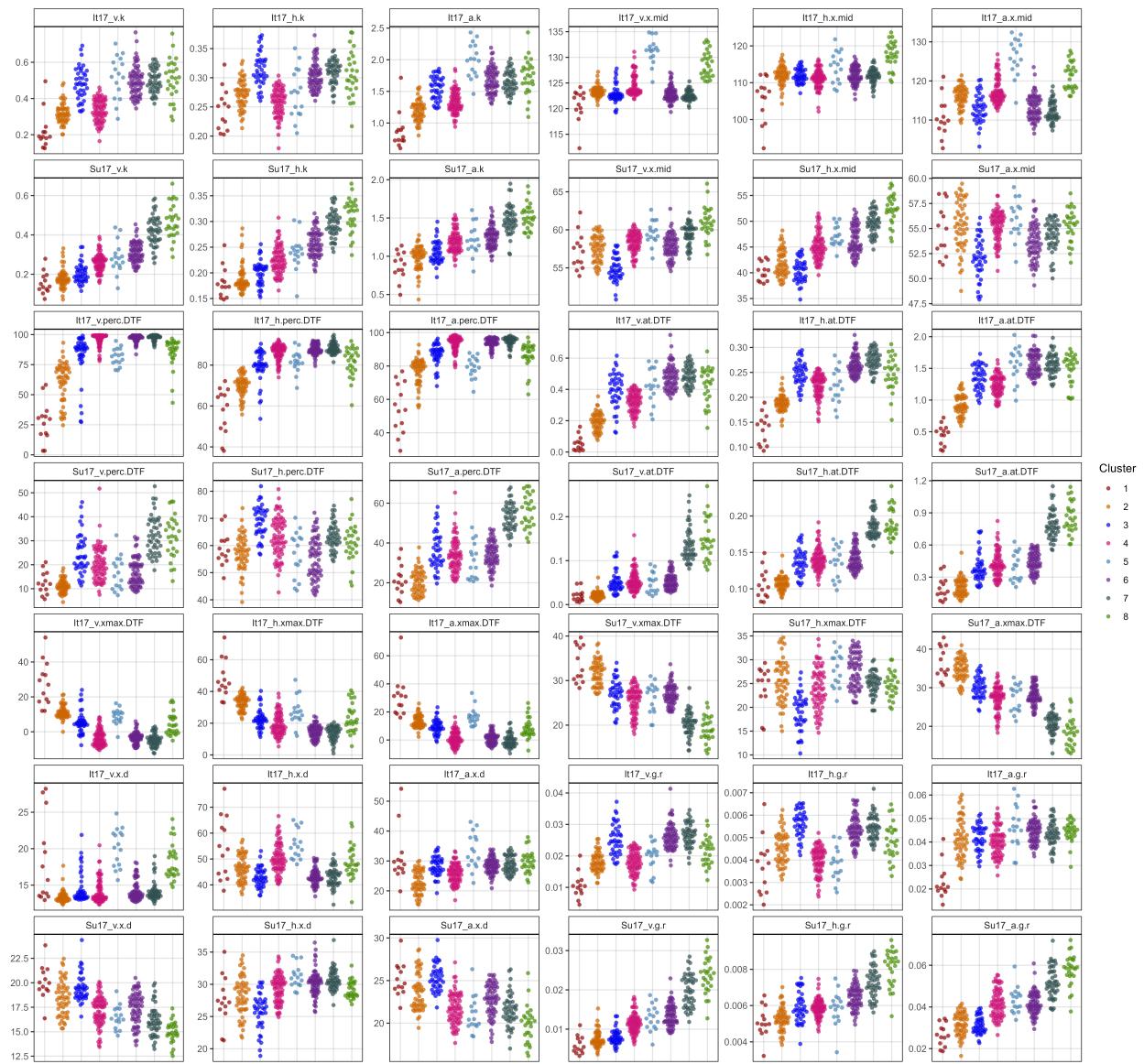
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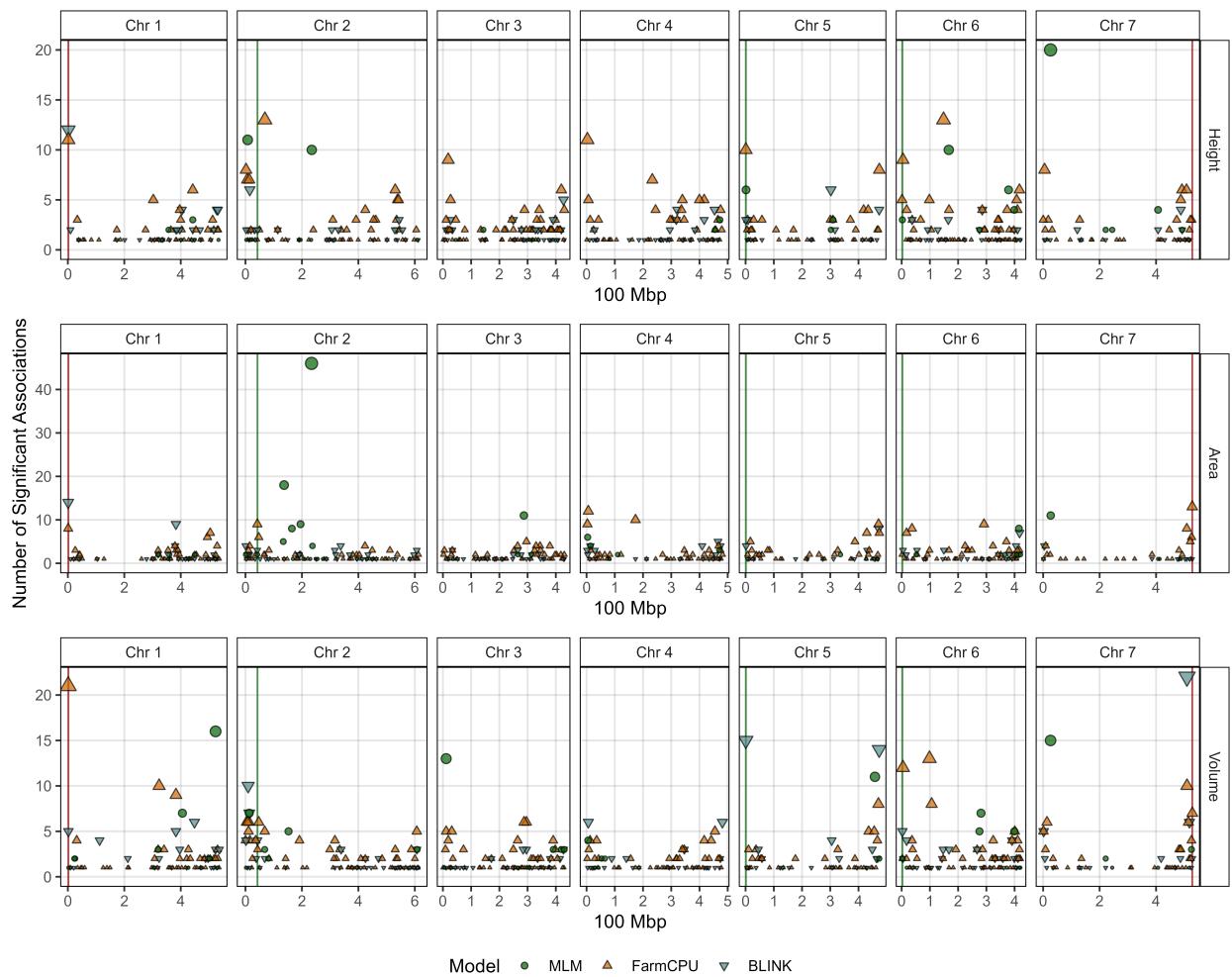
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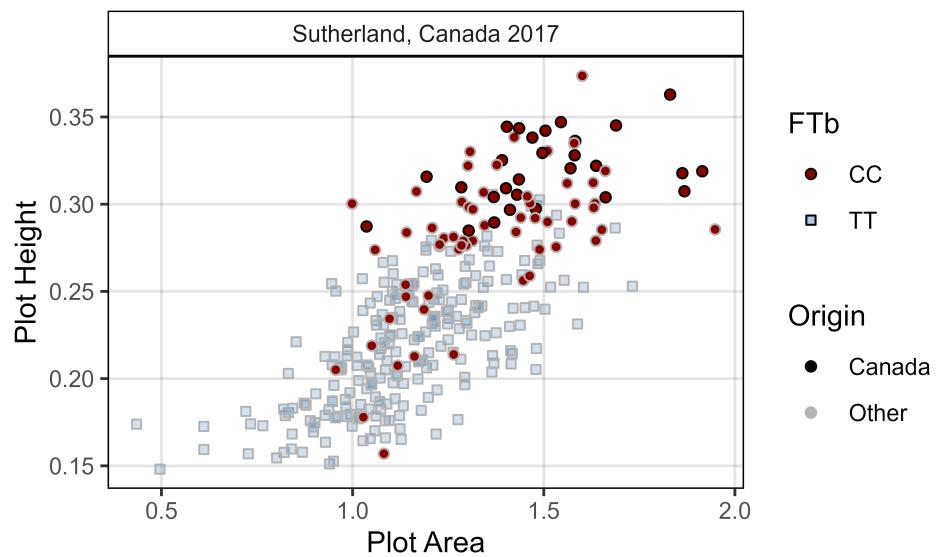
**Supplemental Figure 4**



**Supplemental Figure 5**

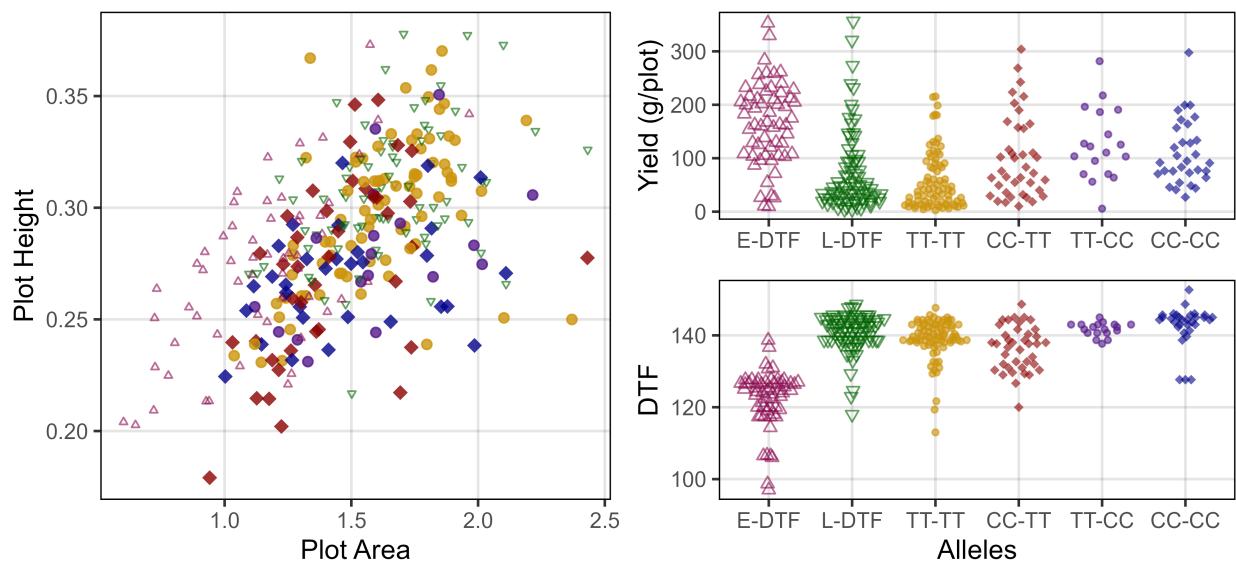


**Supplemental Figure 6**

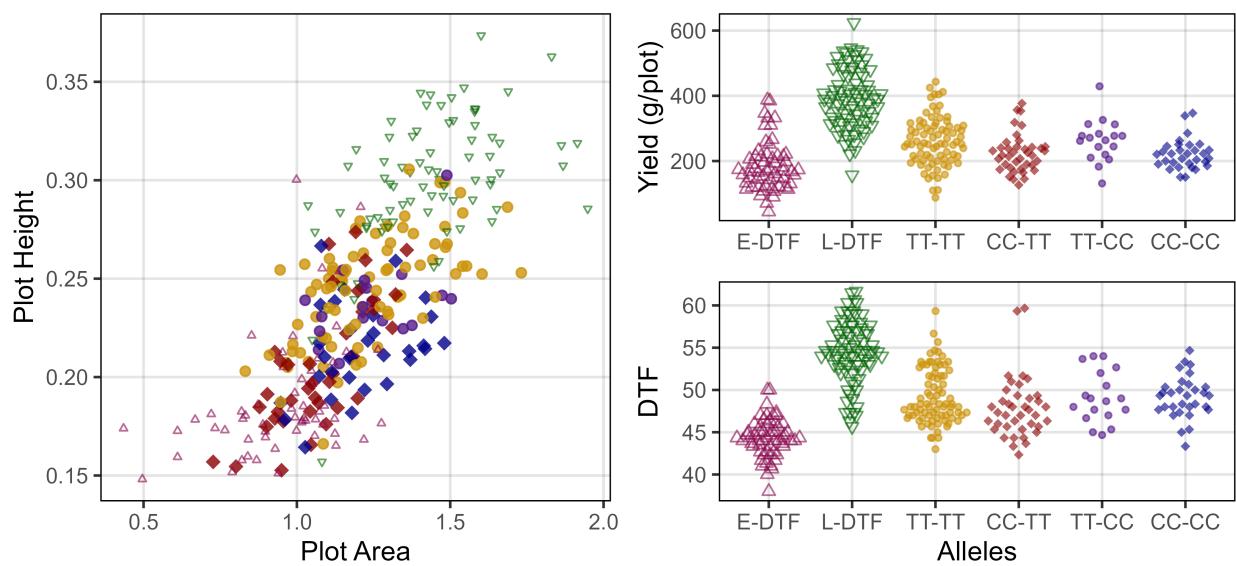


Supplemental Figure 7

A) Metaponto, Italy 2017

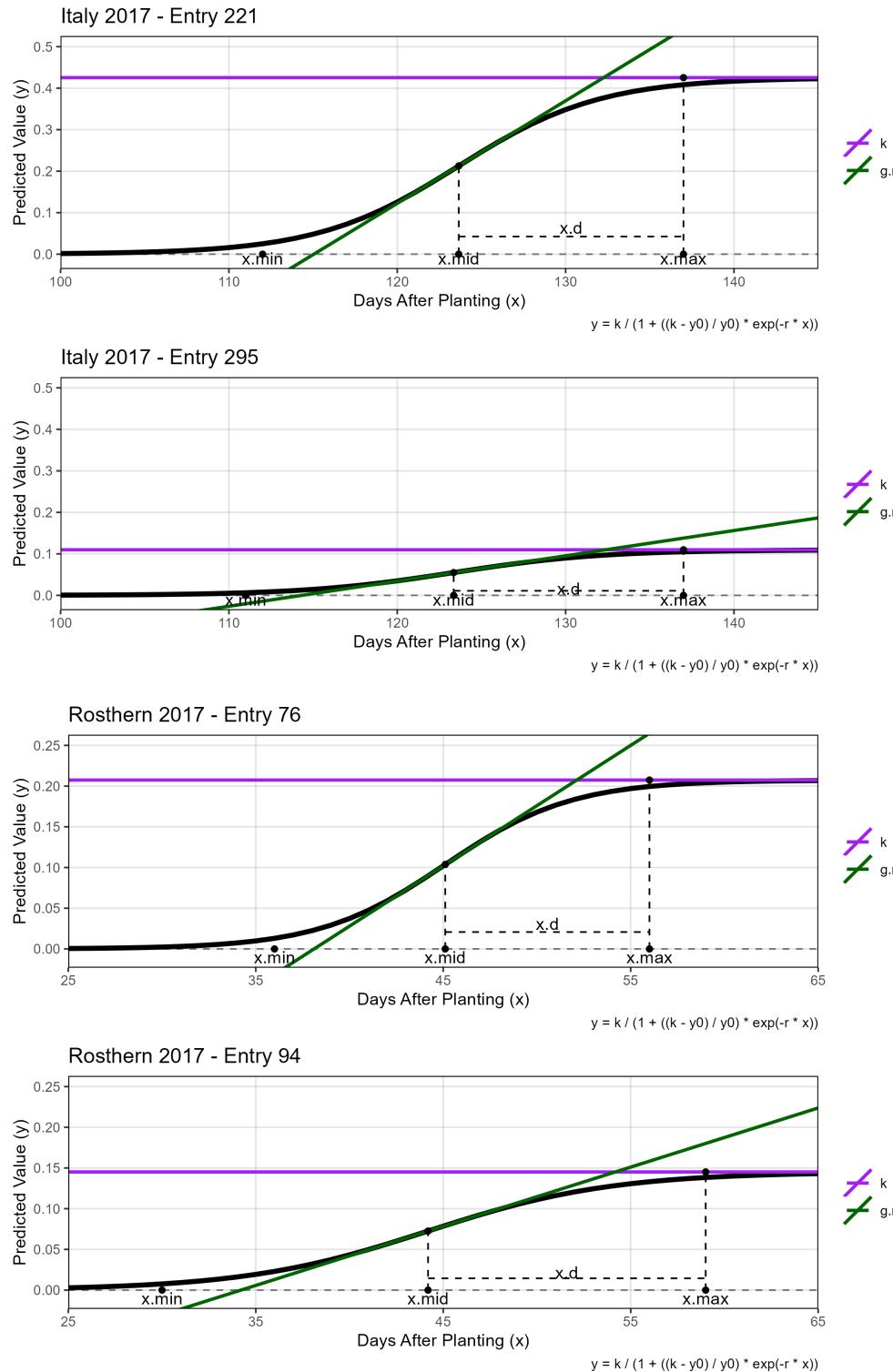


B) Sutherland, Canada 2017

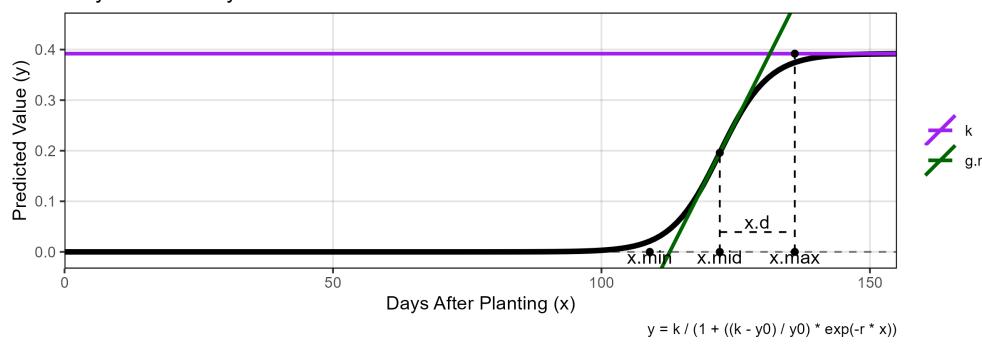


## Additional Figures

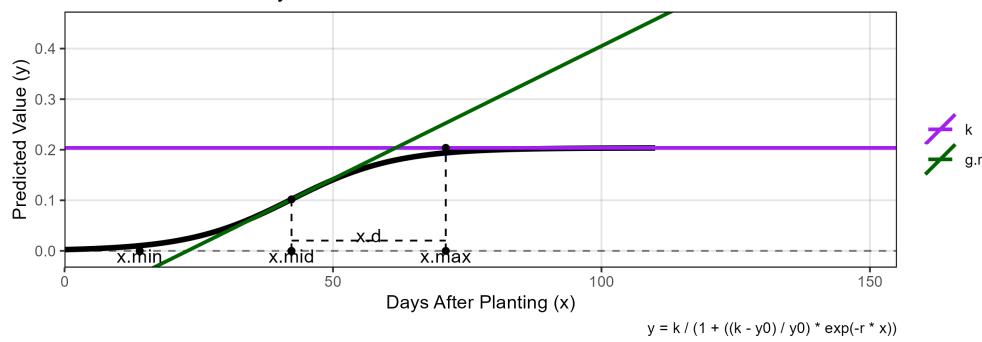
### Additional Figures 1



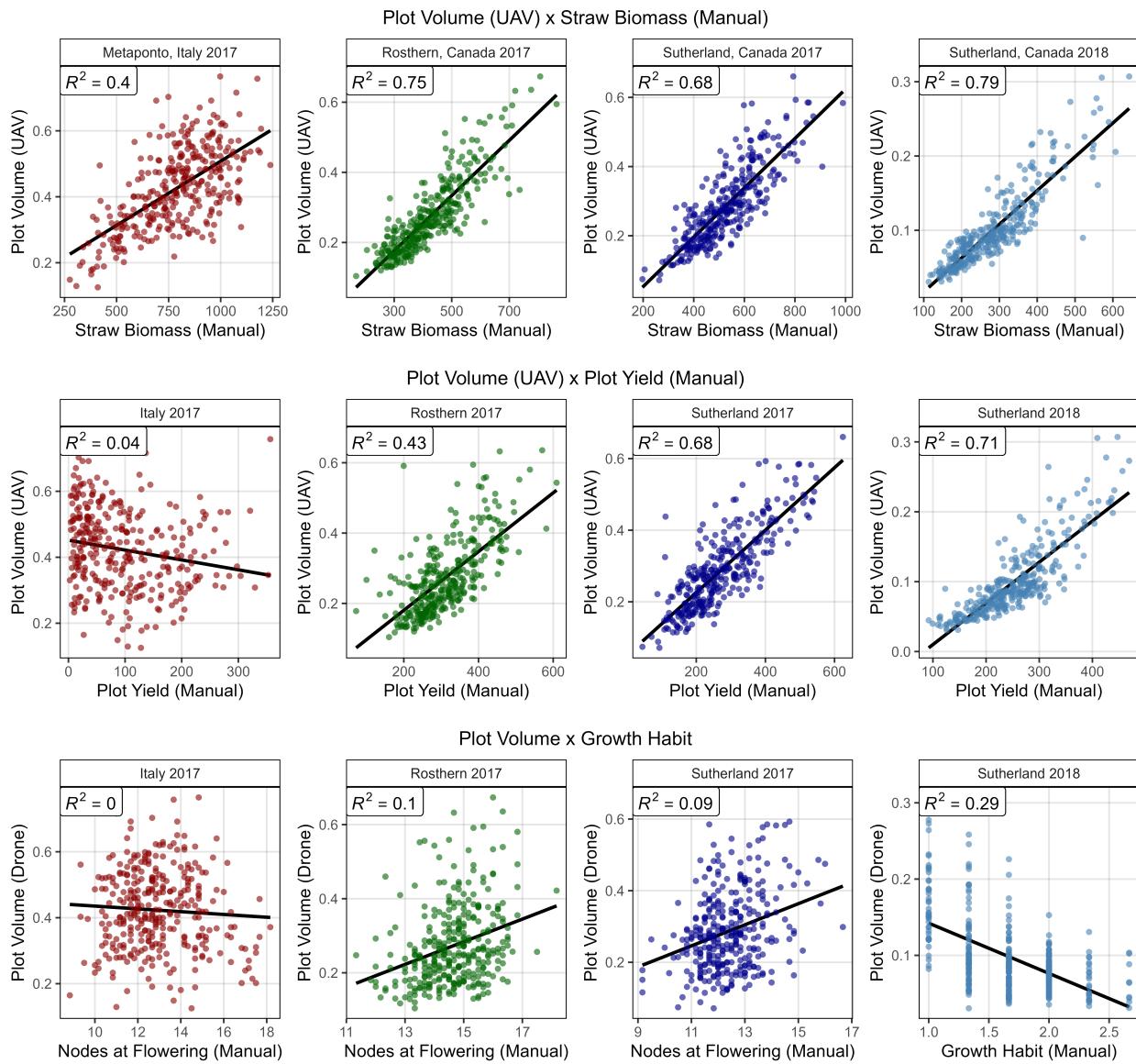
Italy 2017 - Entry 107



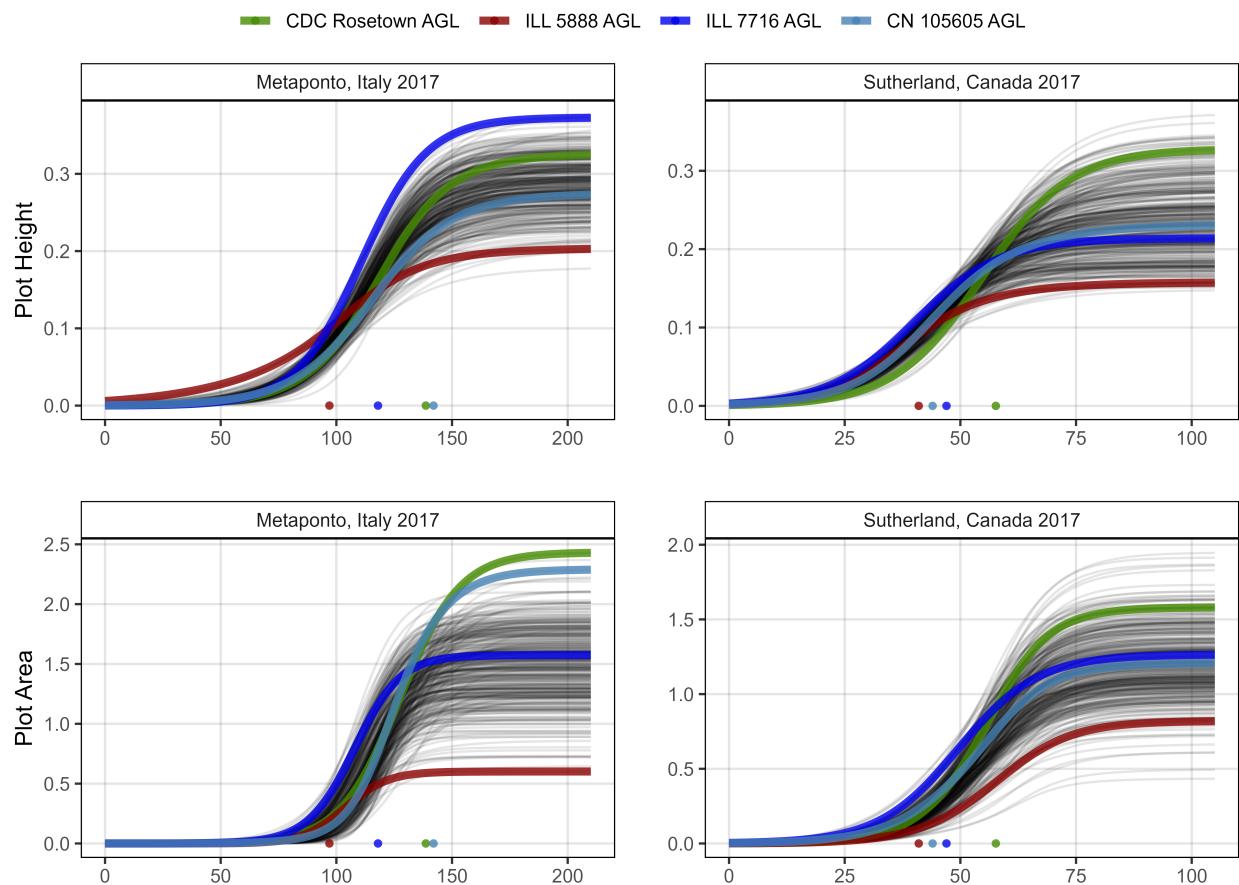
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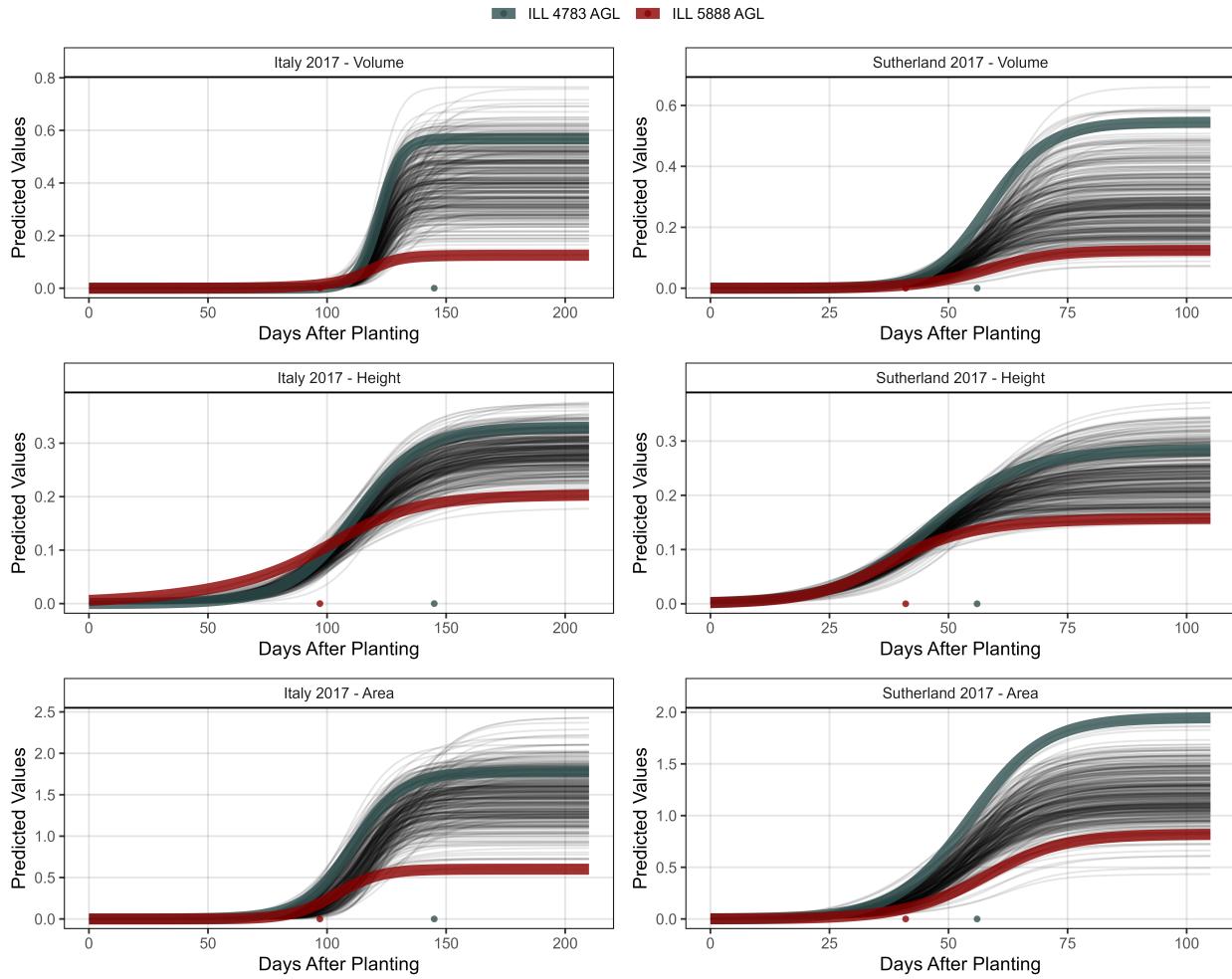


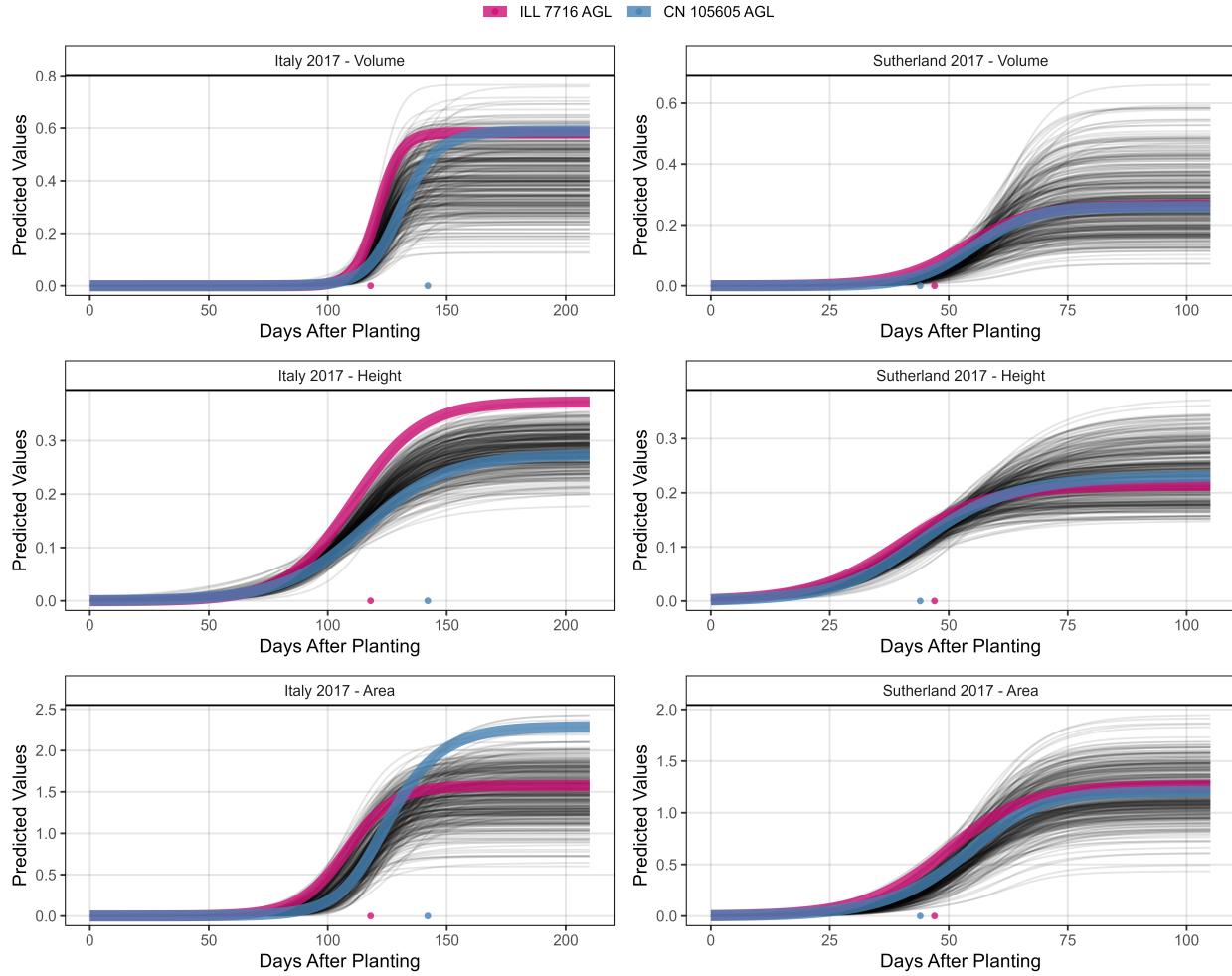
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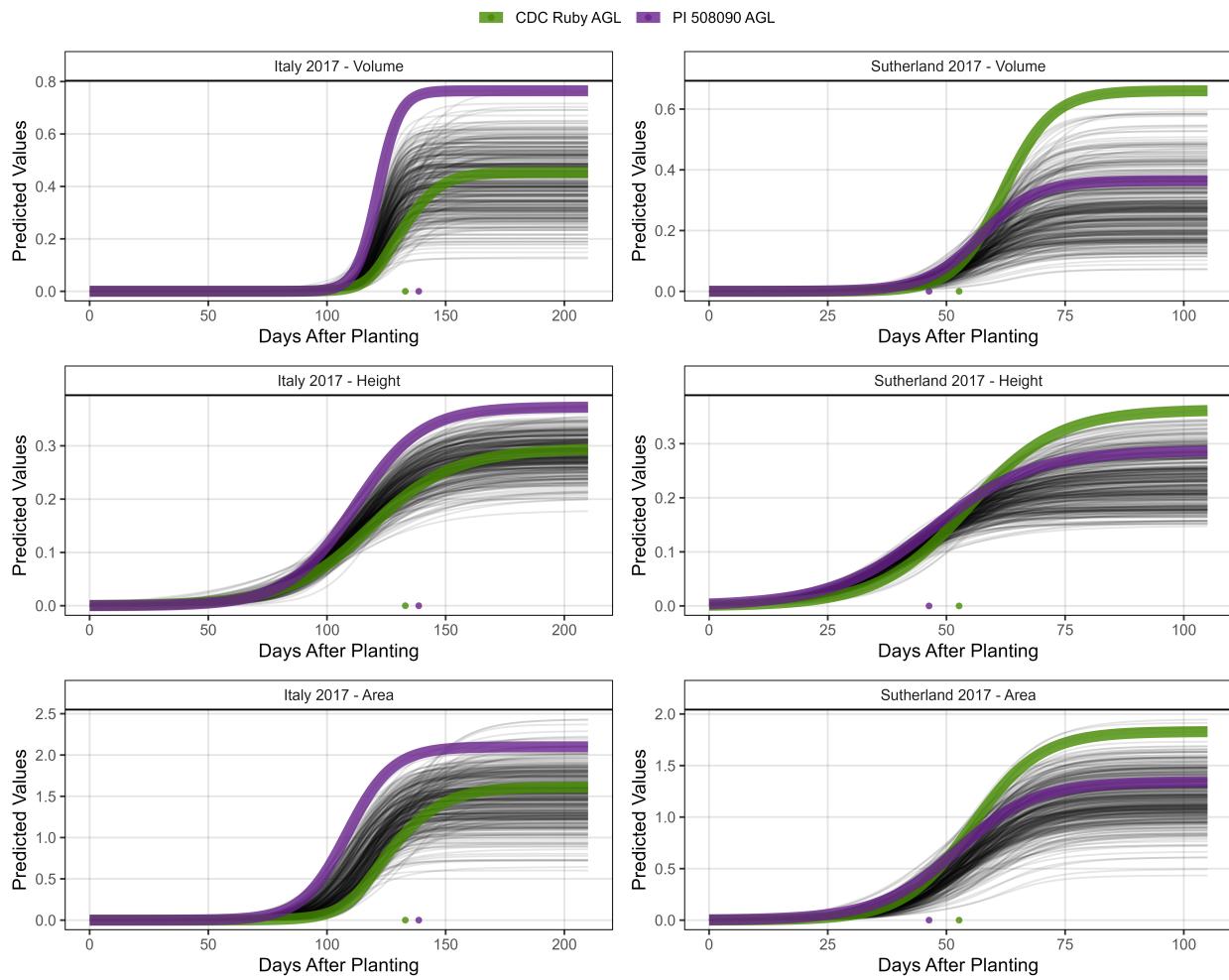


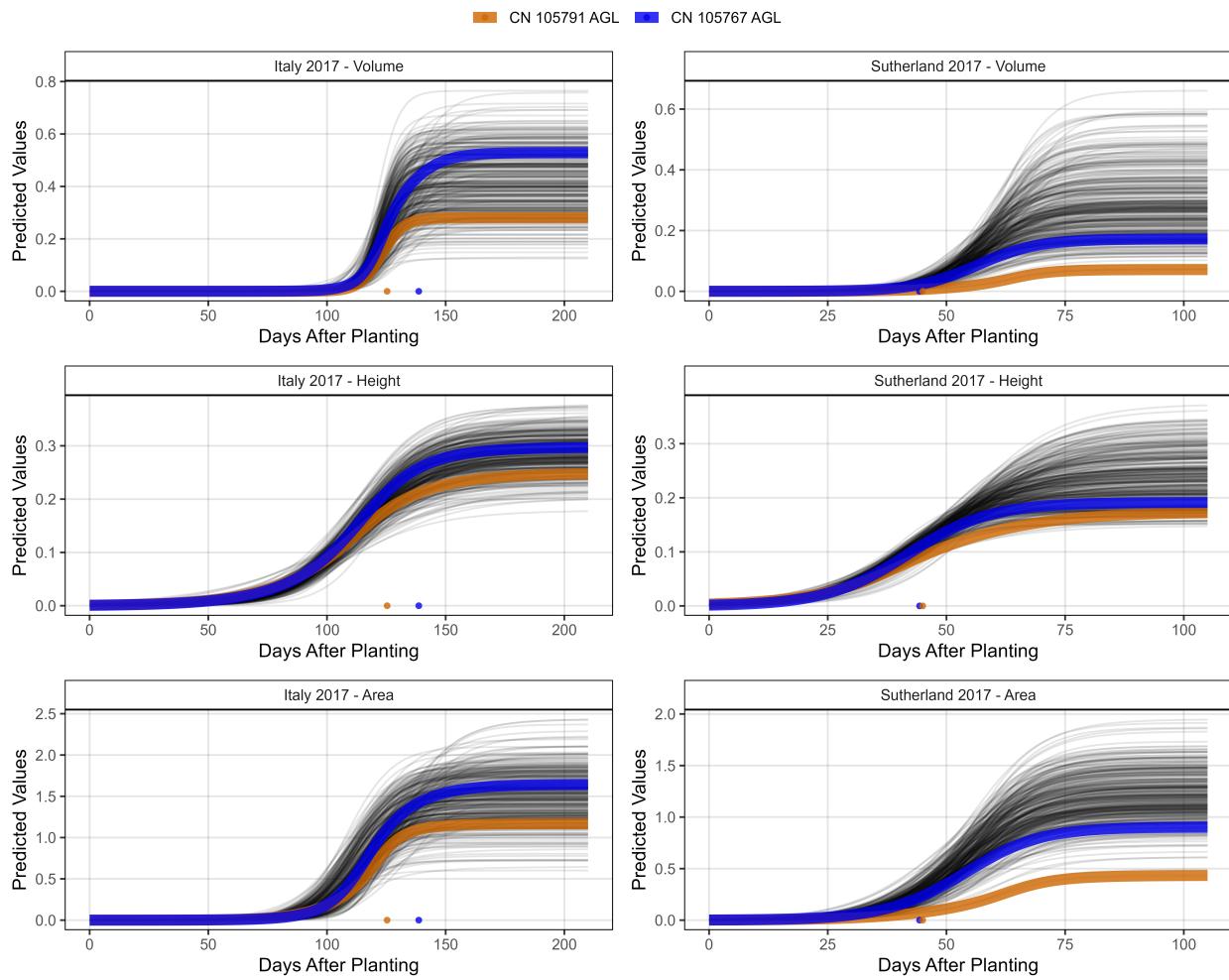
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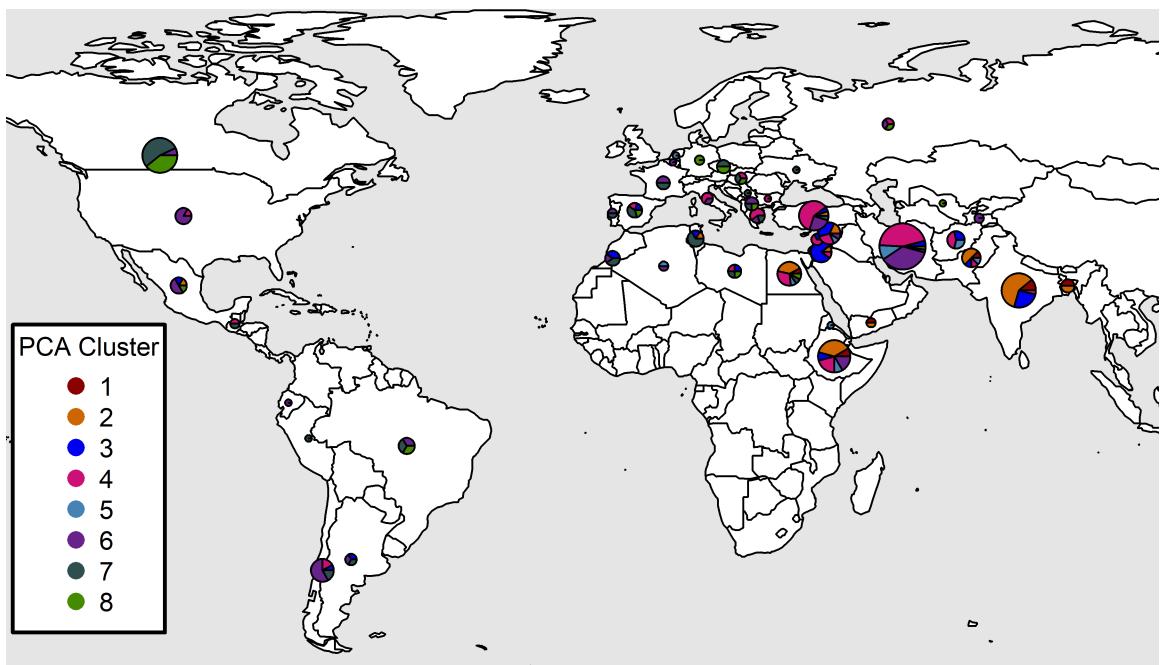




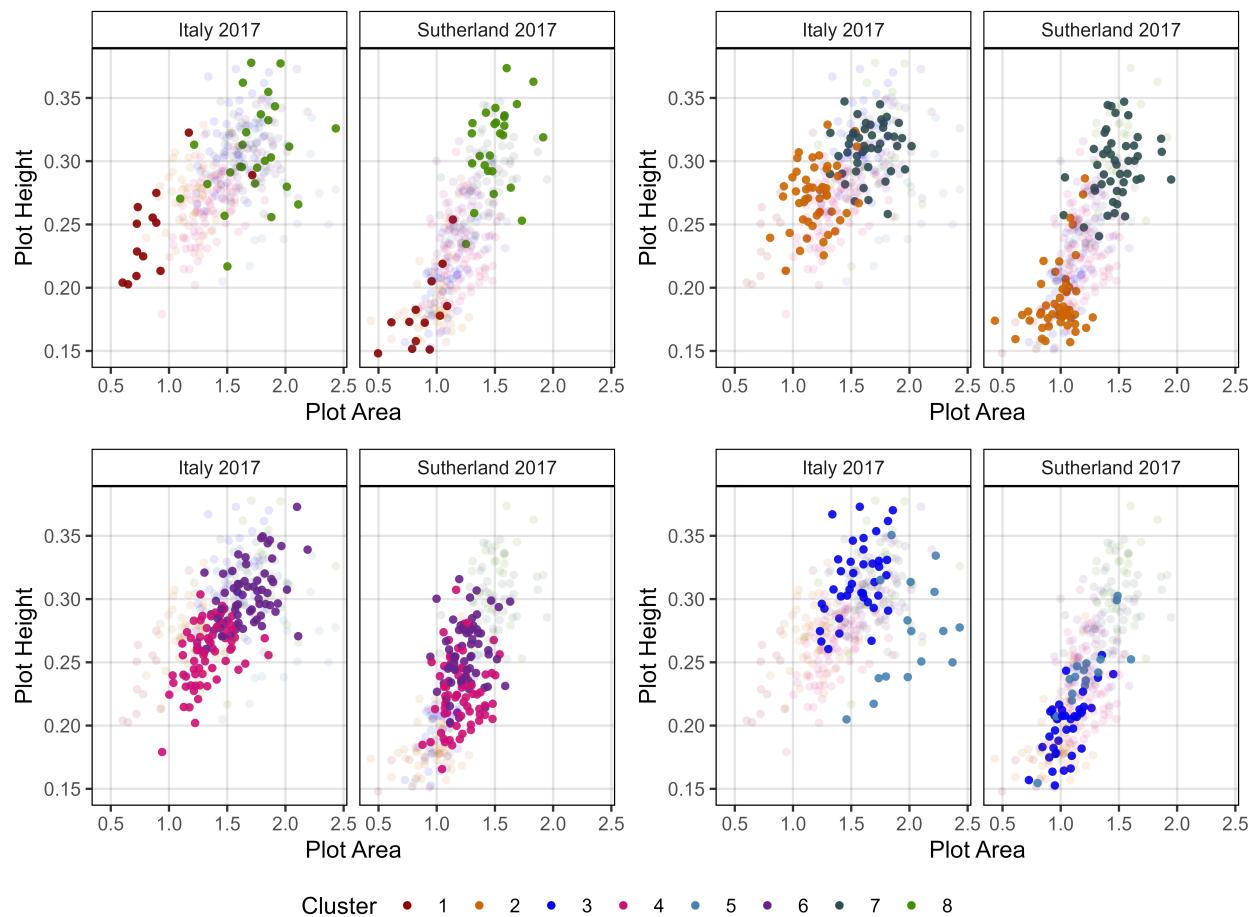




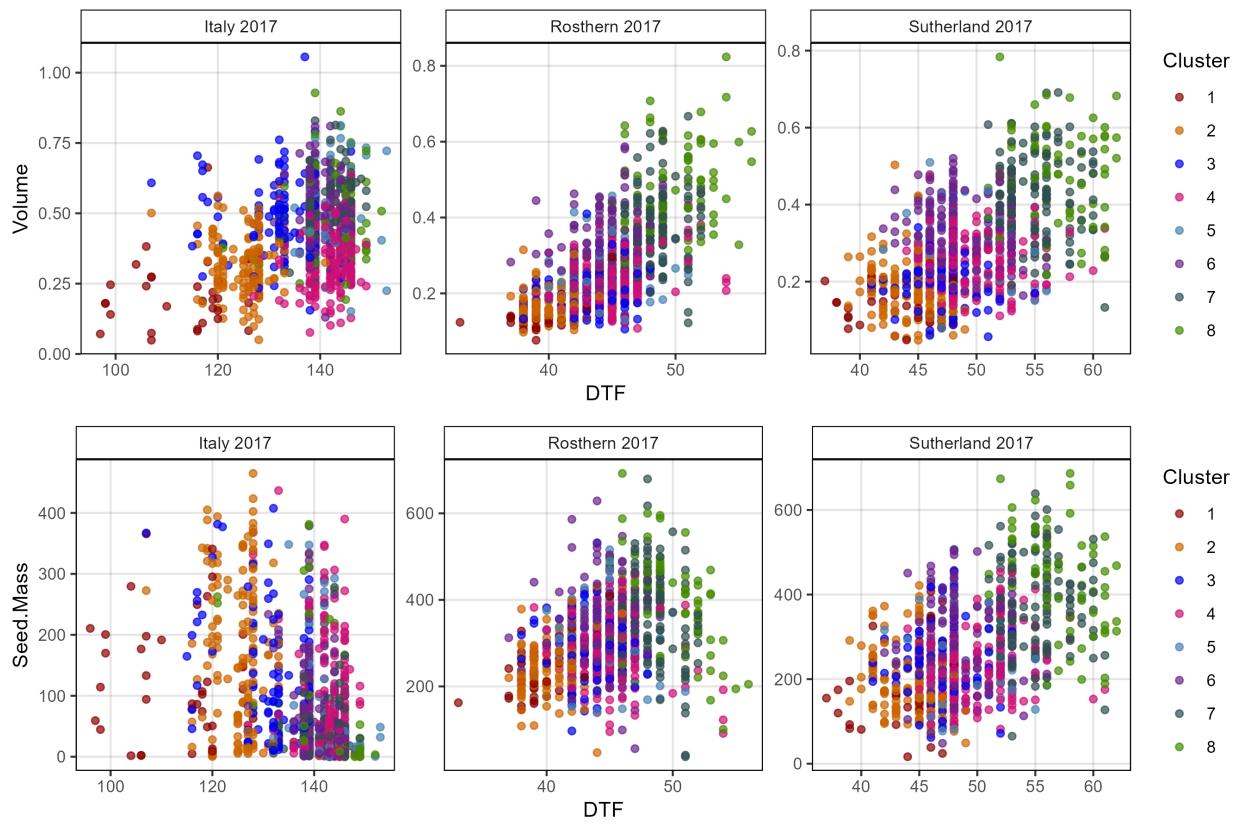
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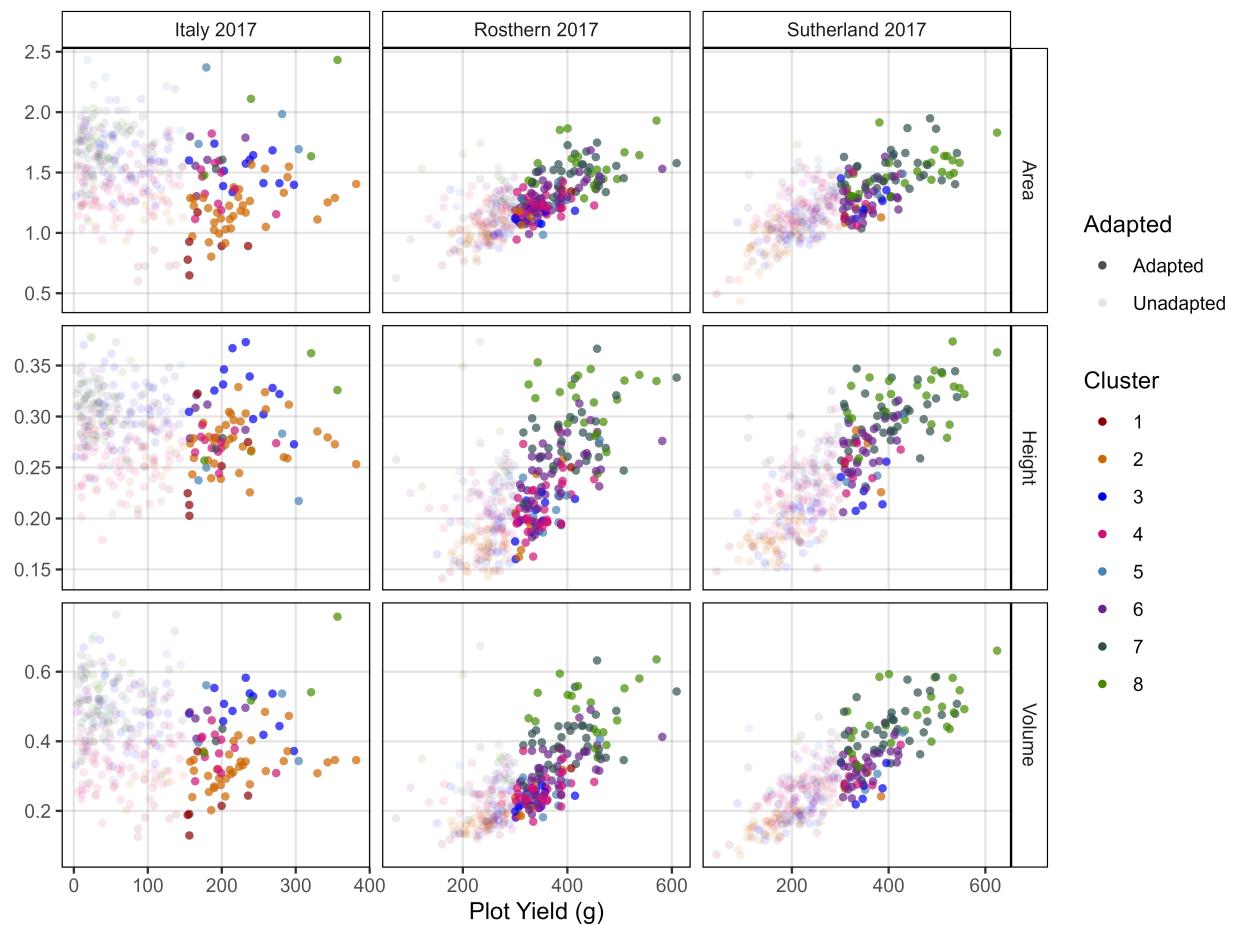
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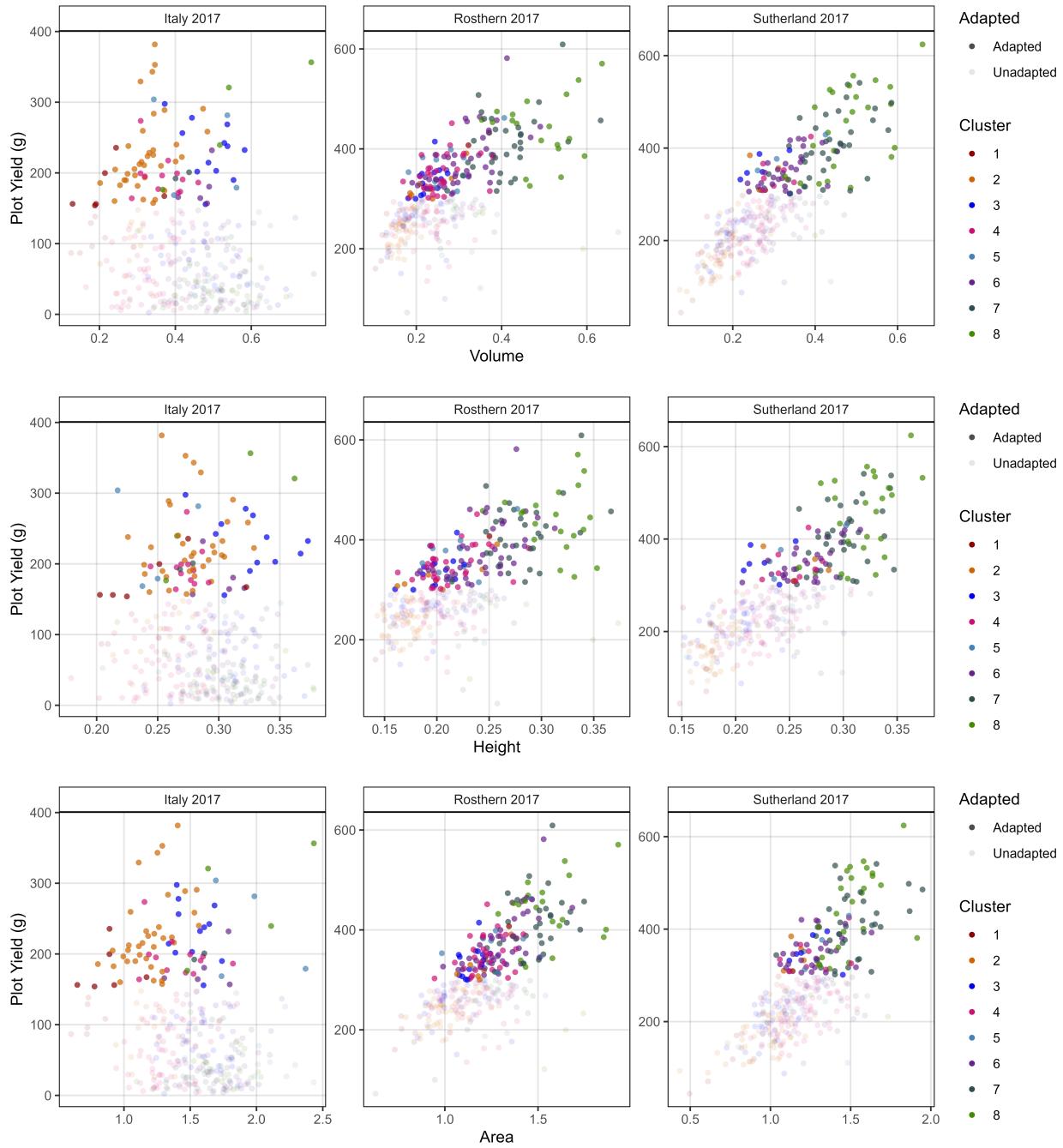


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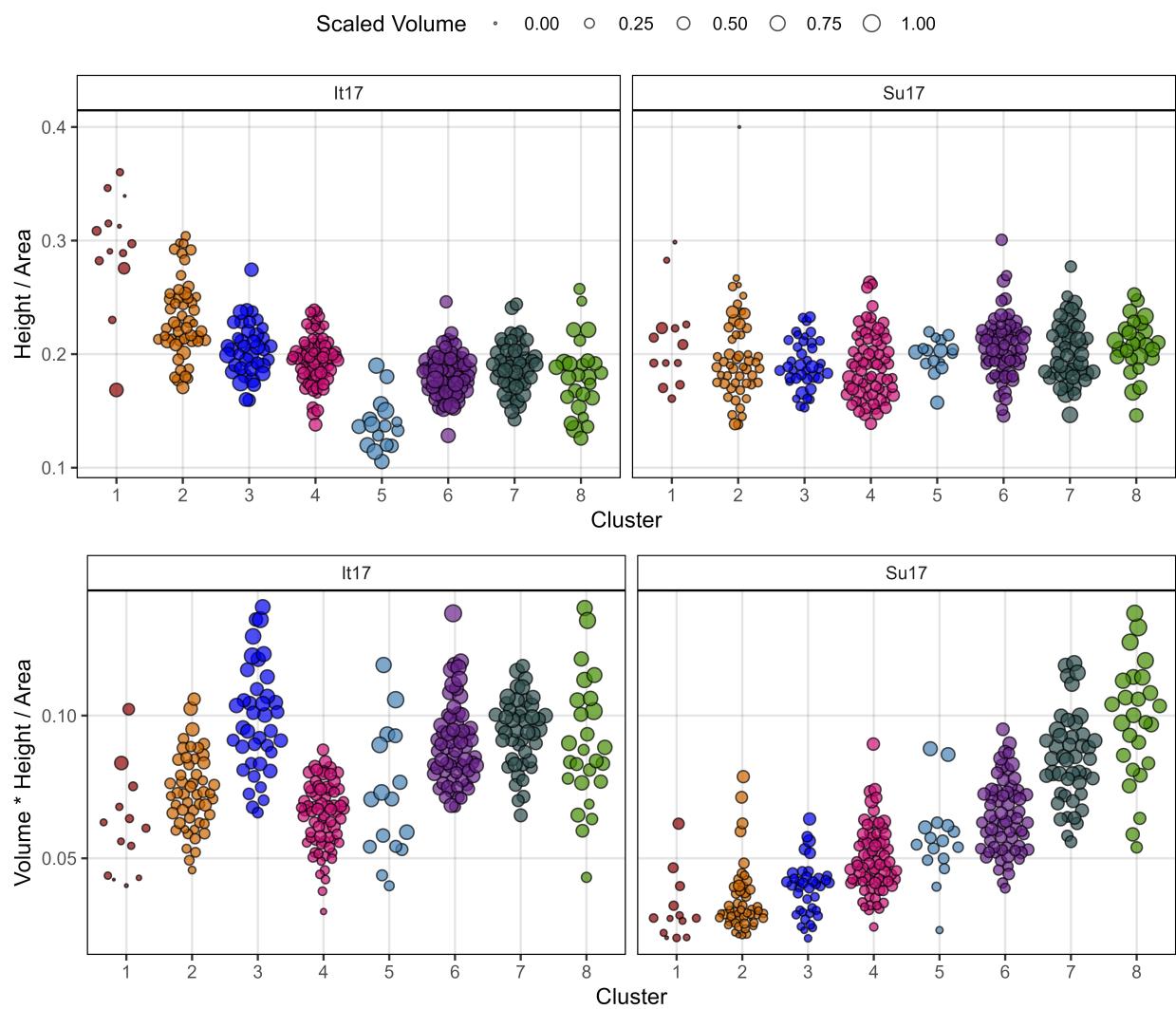


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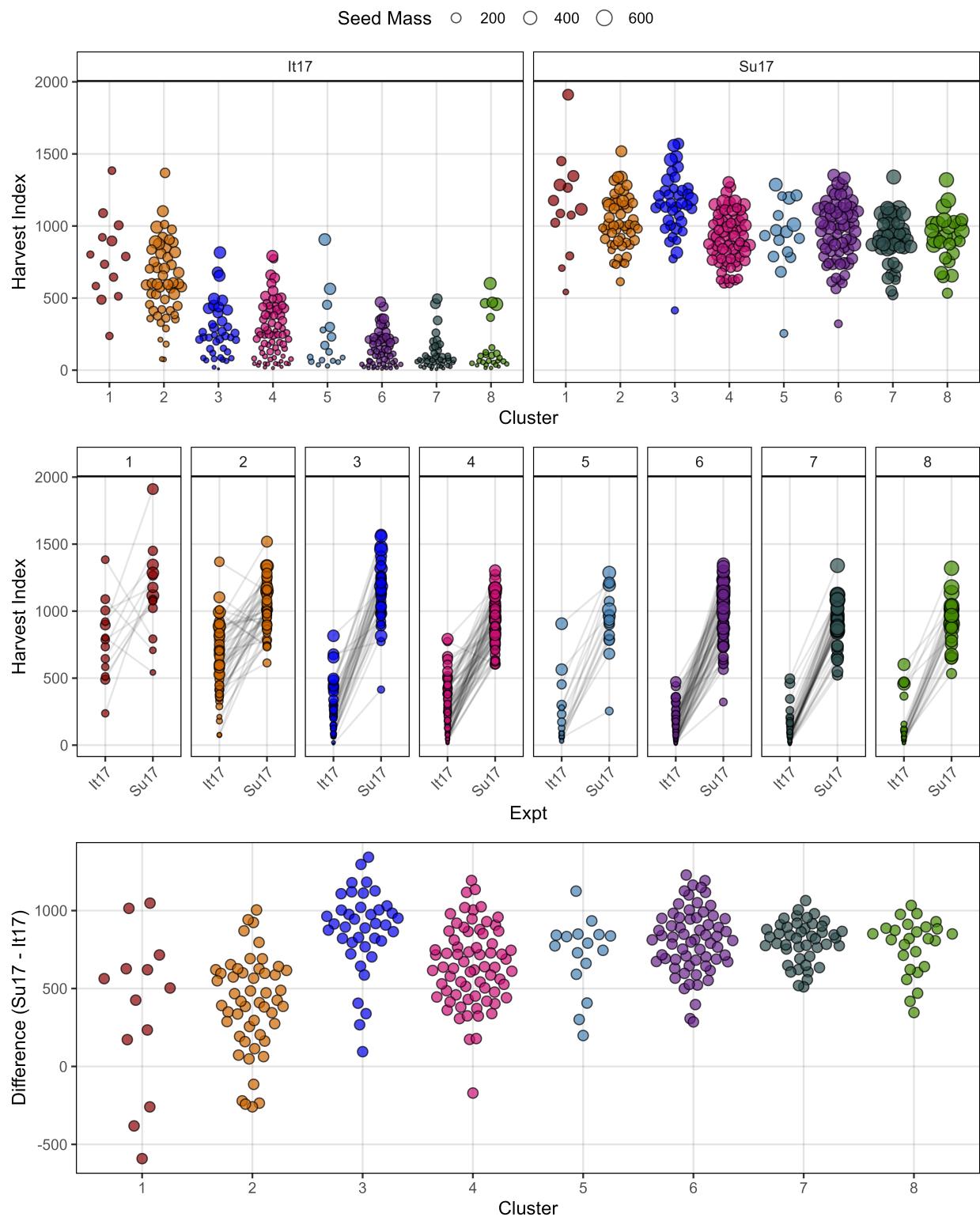




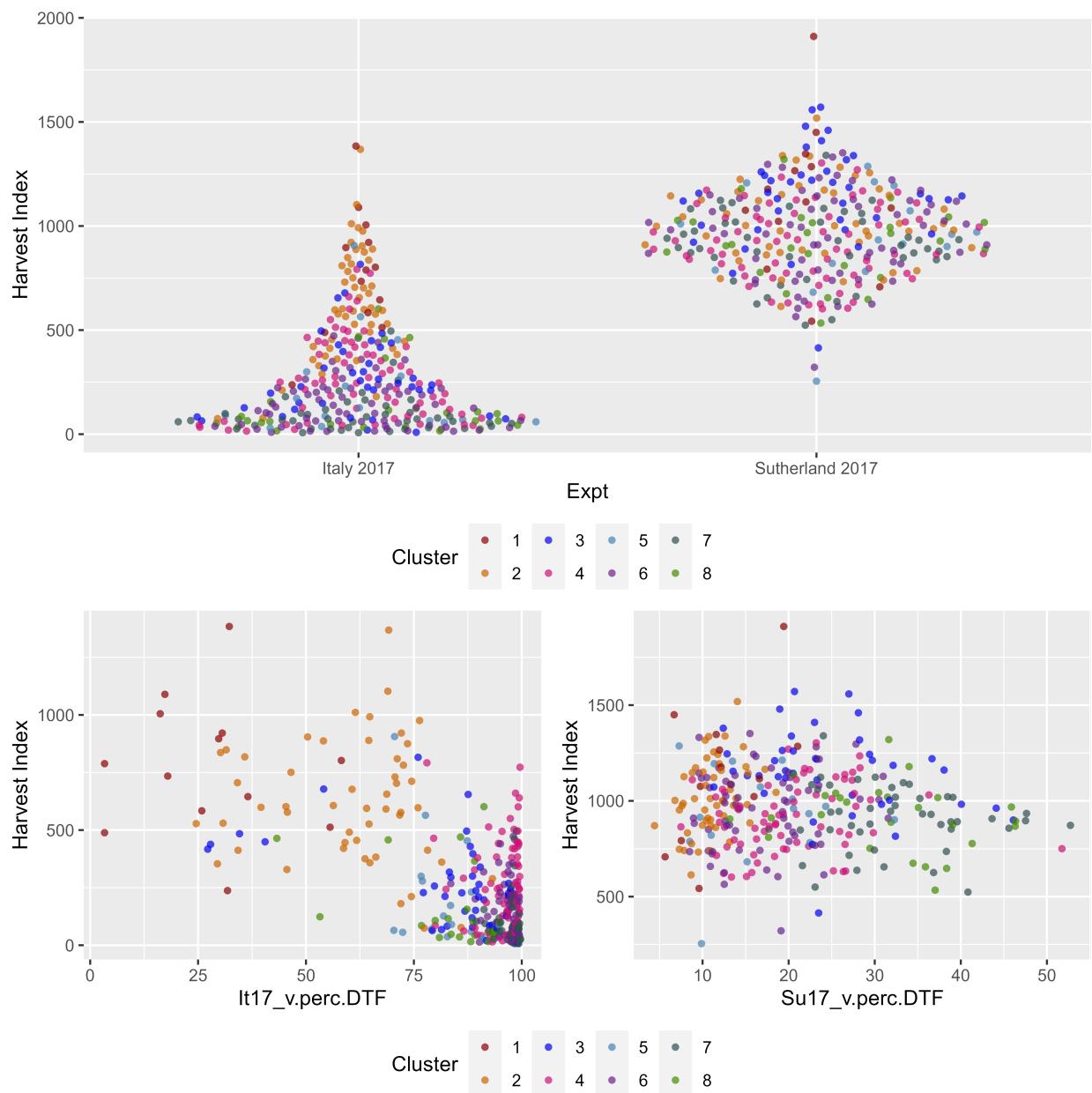
## Additional Figures 8



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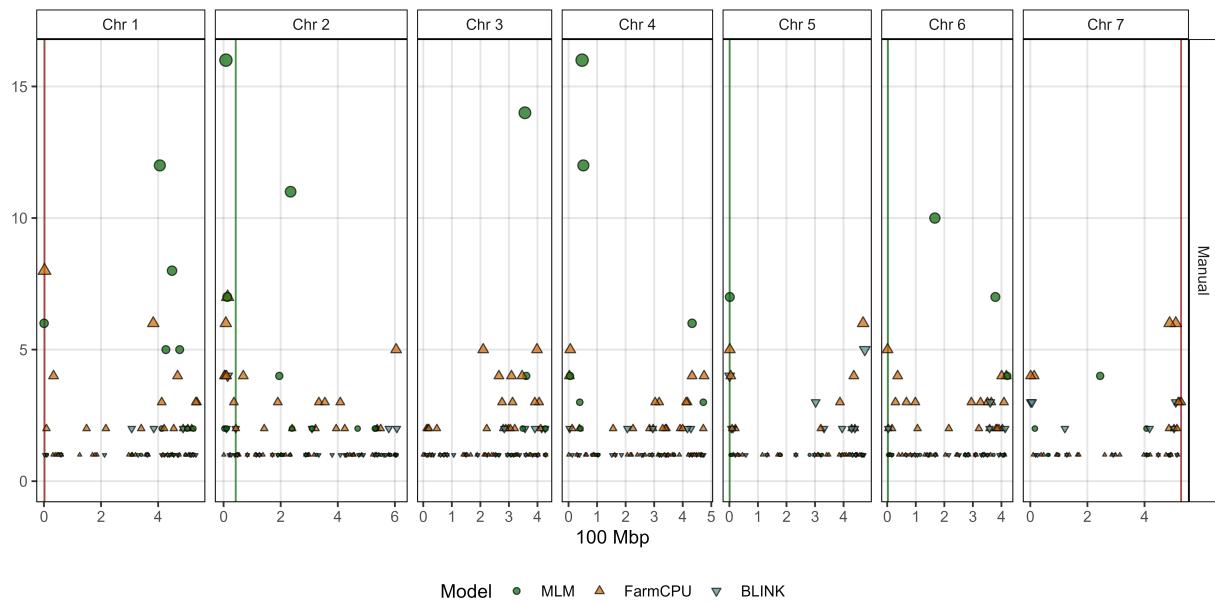


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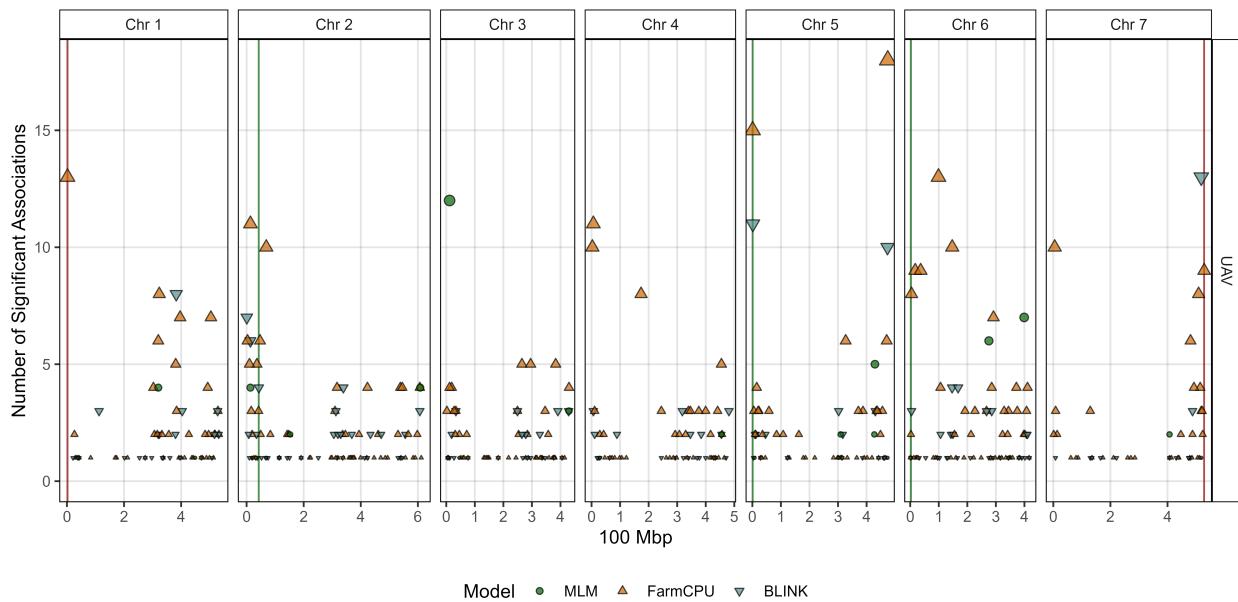


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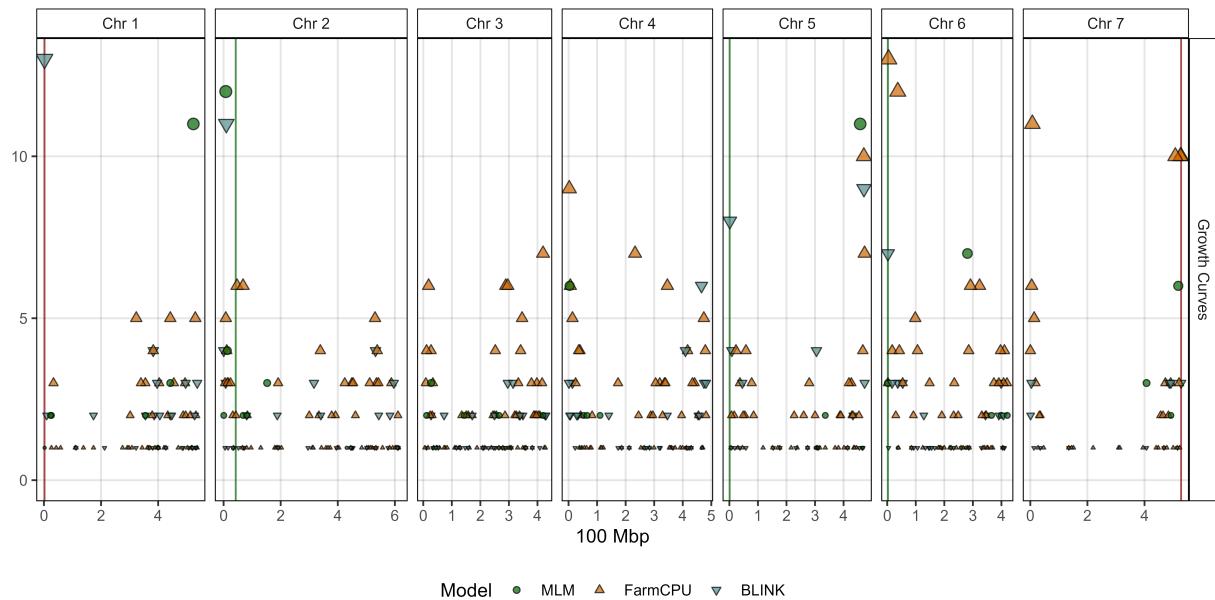
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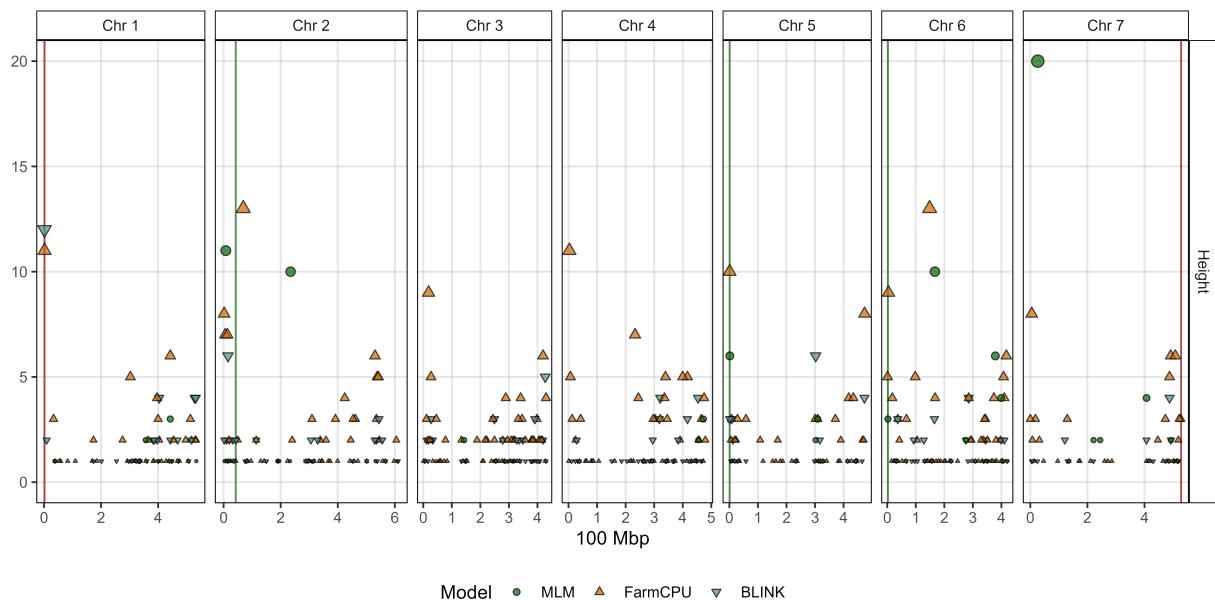
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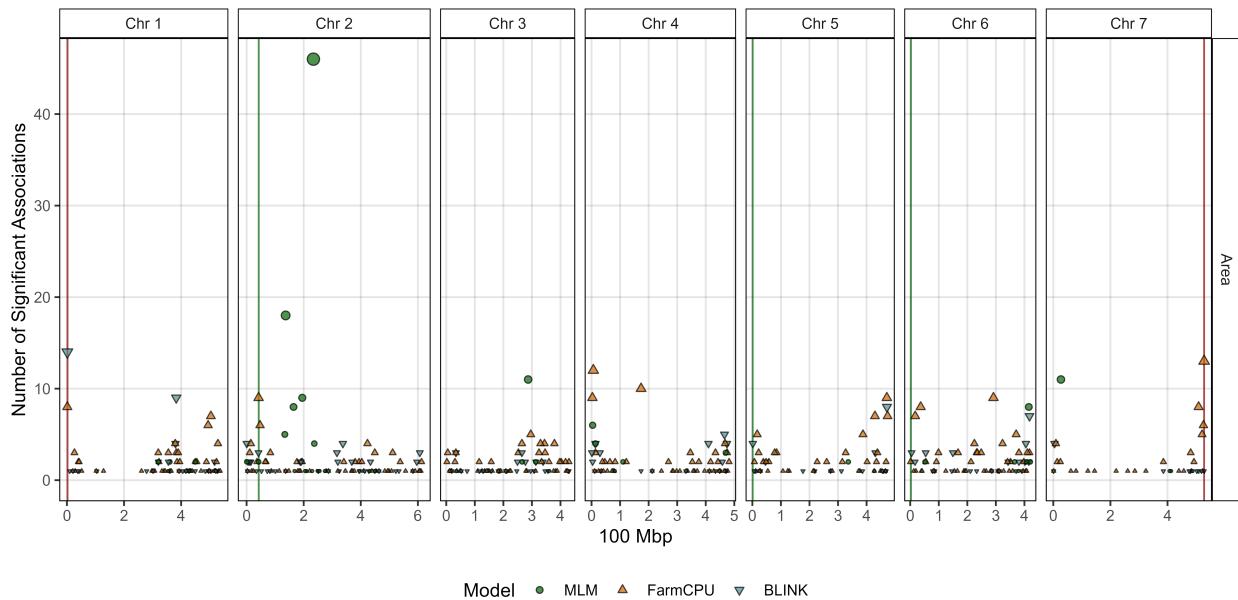
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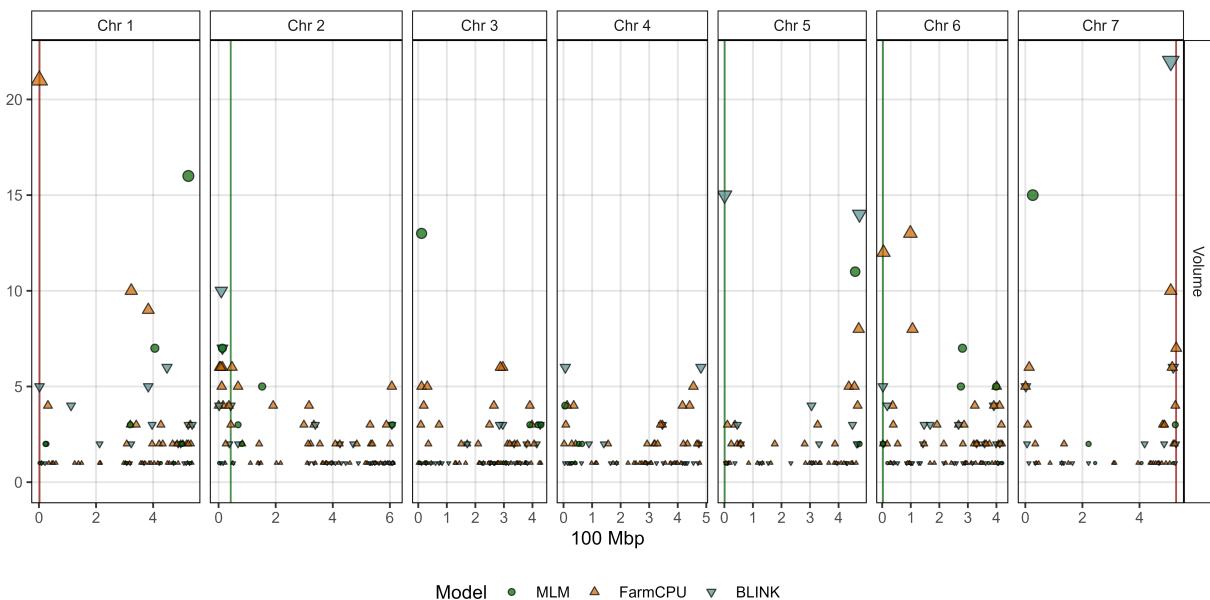
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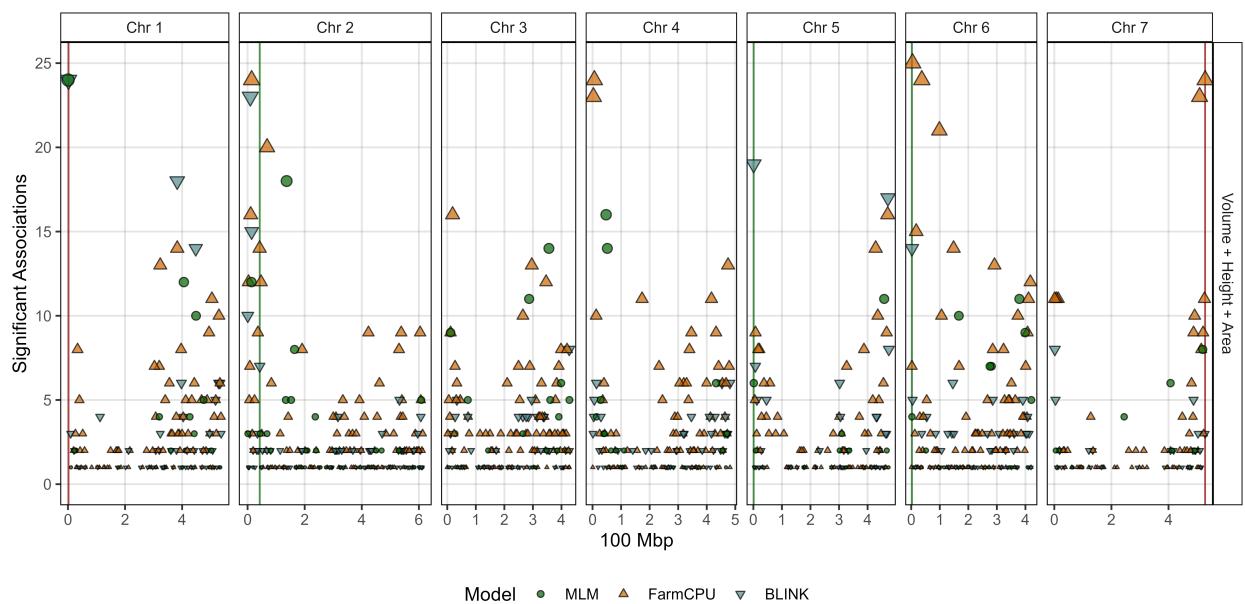
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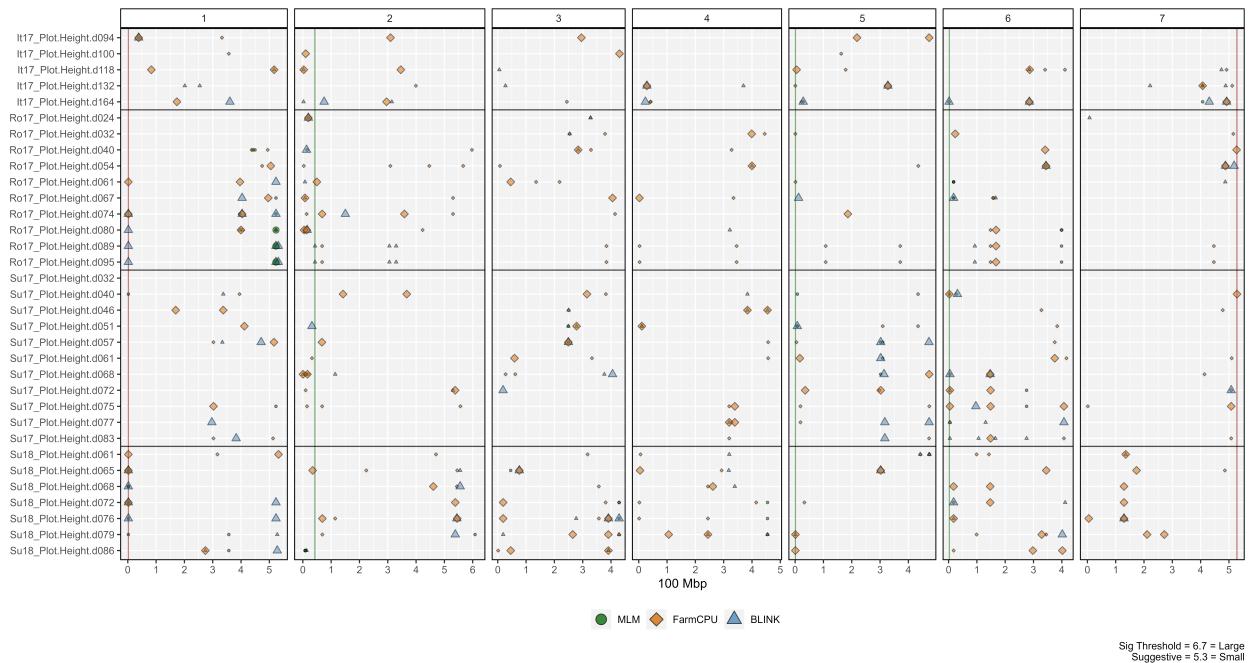


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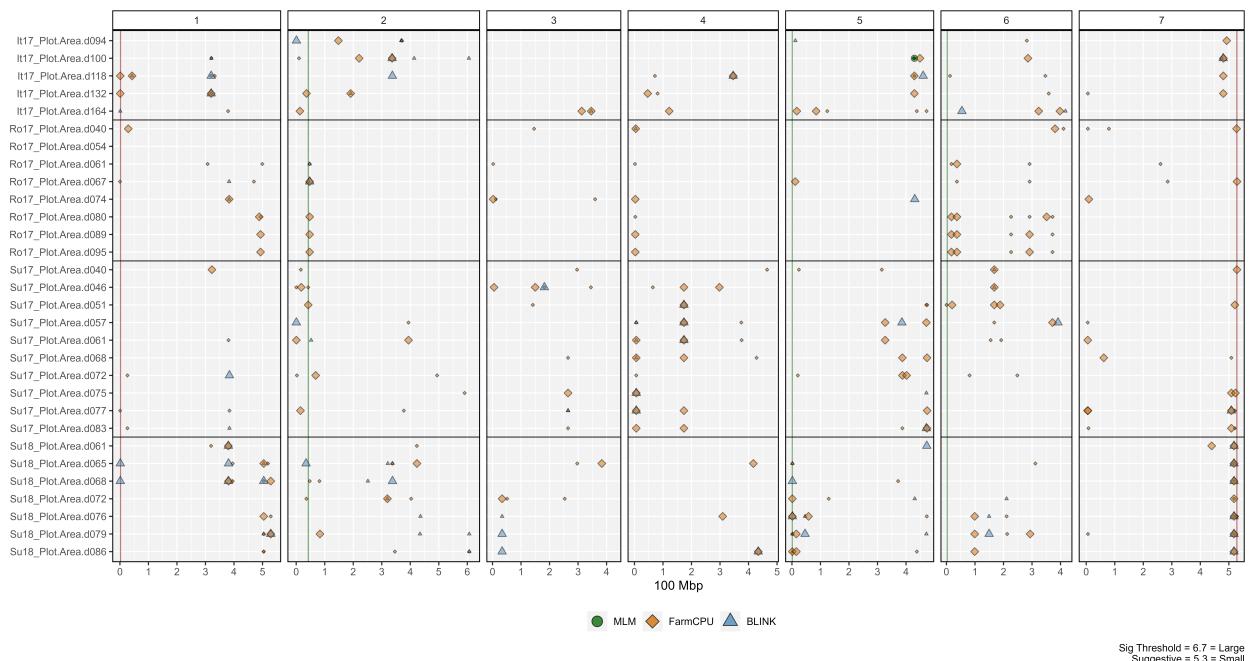


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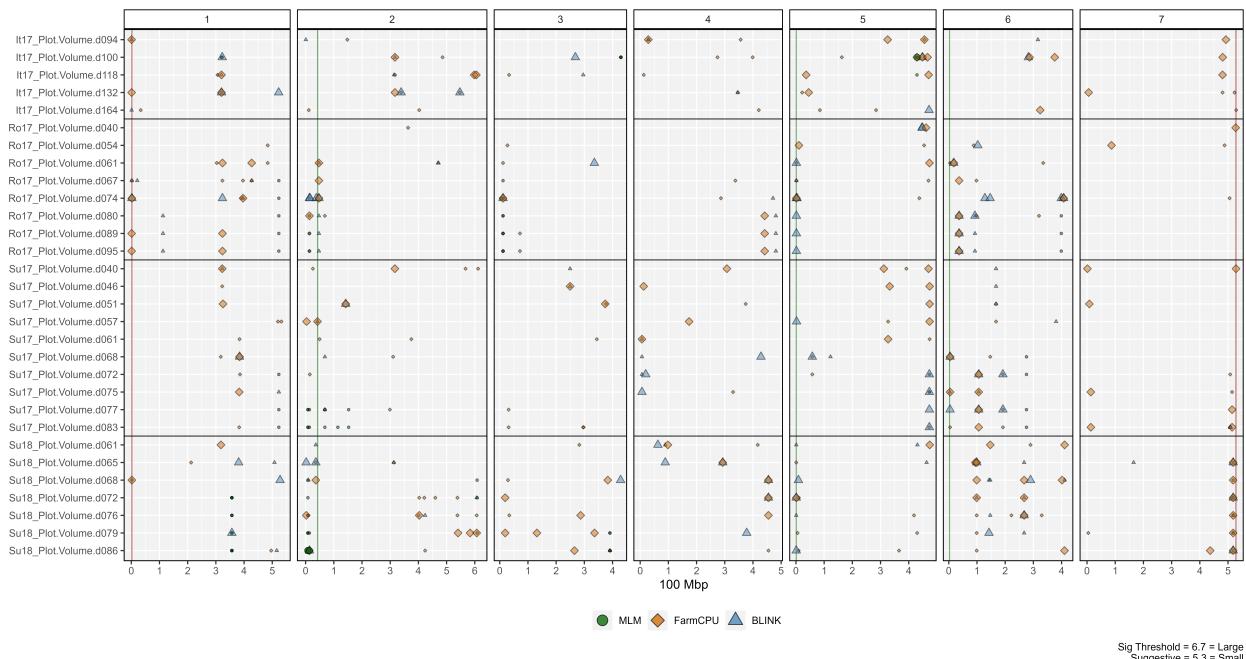
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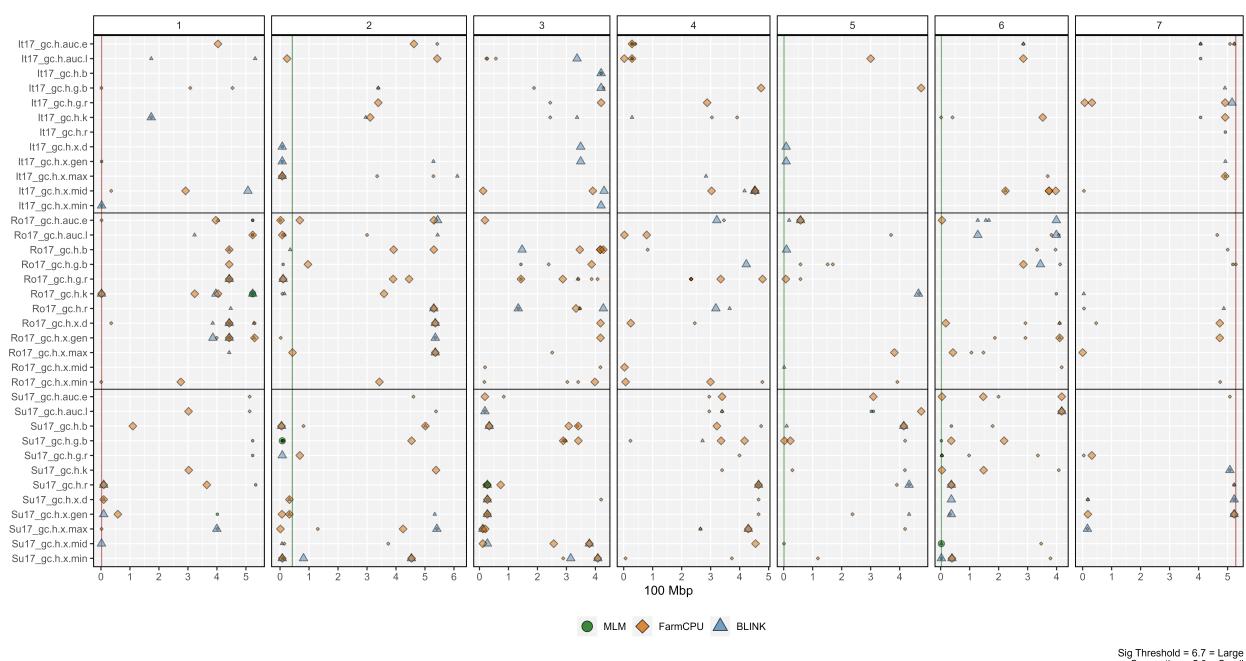
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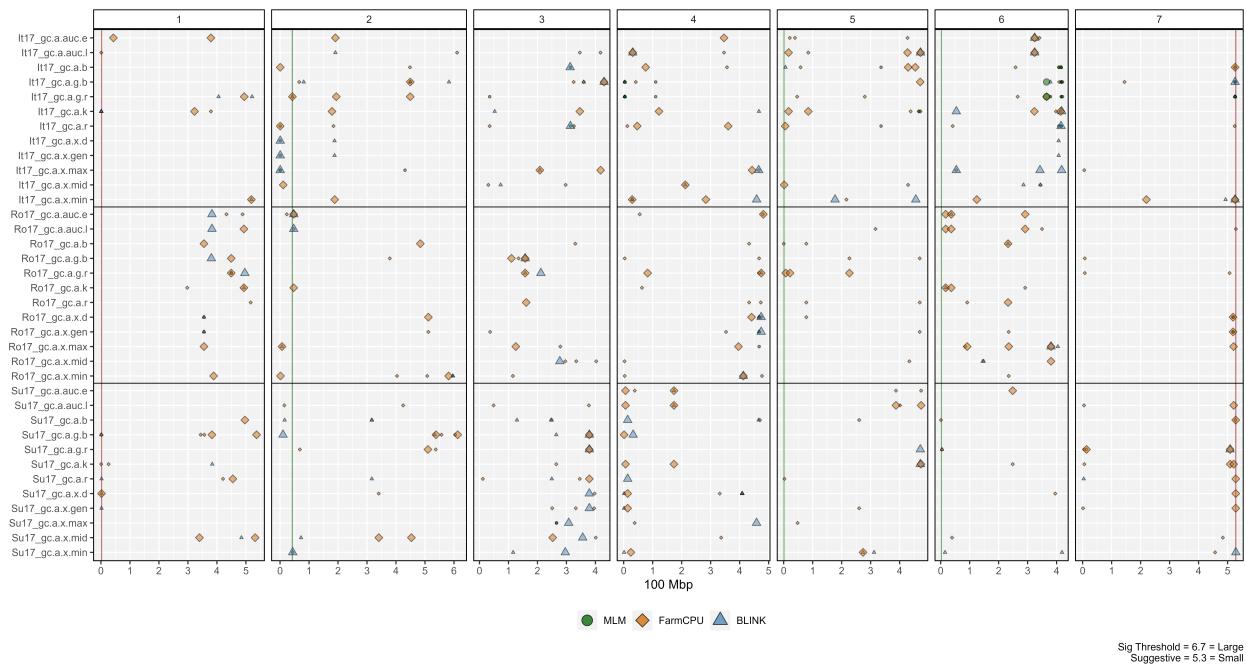
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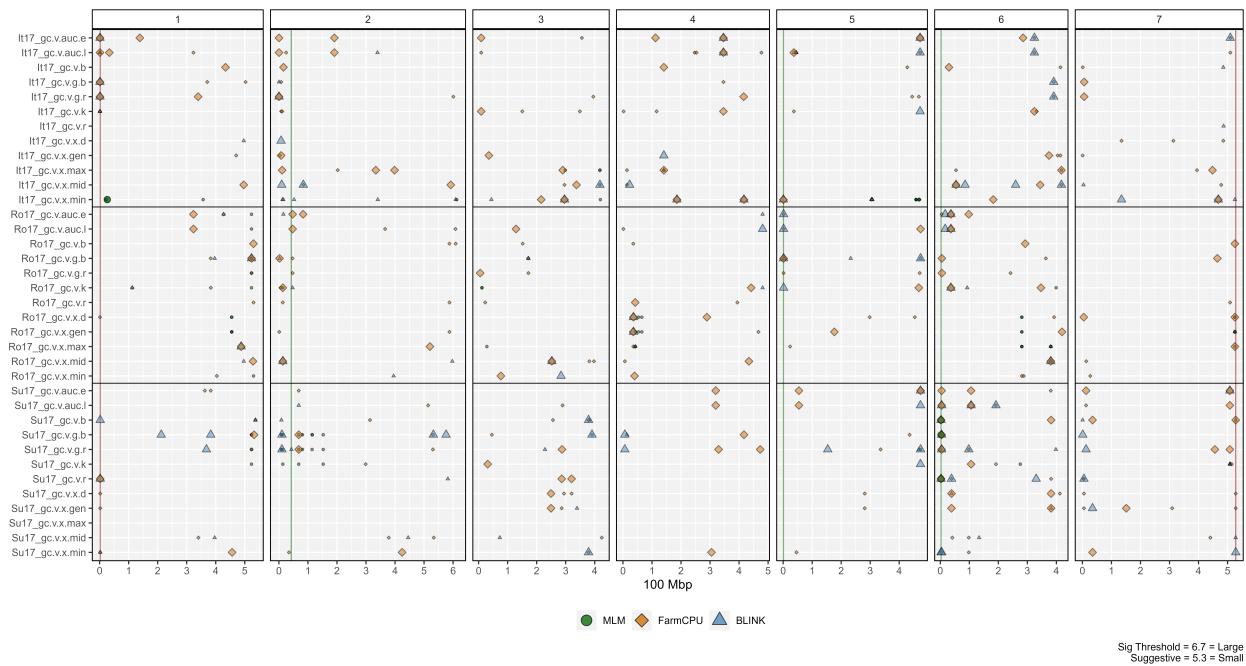
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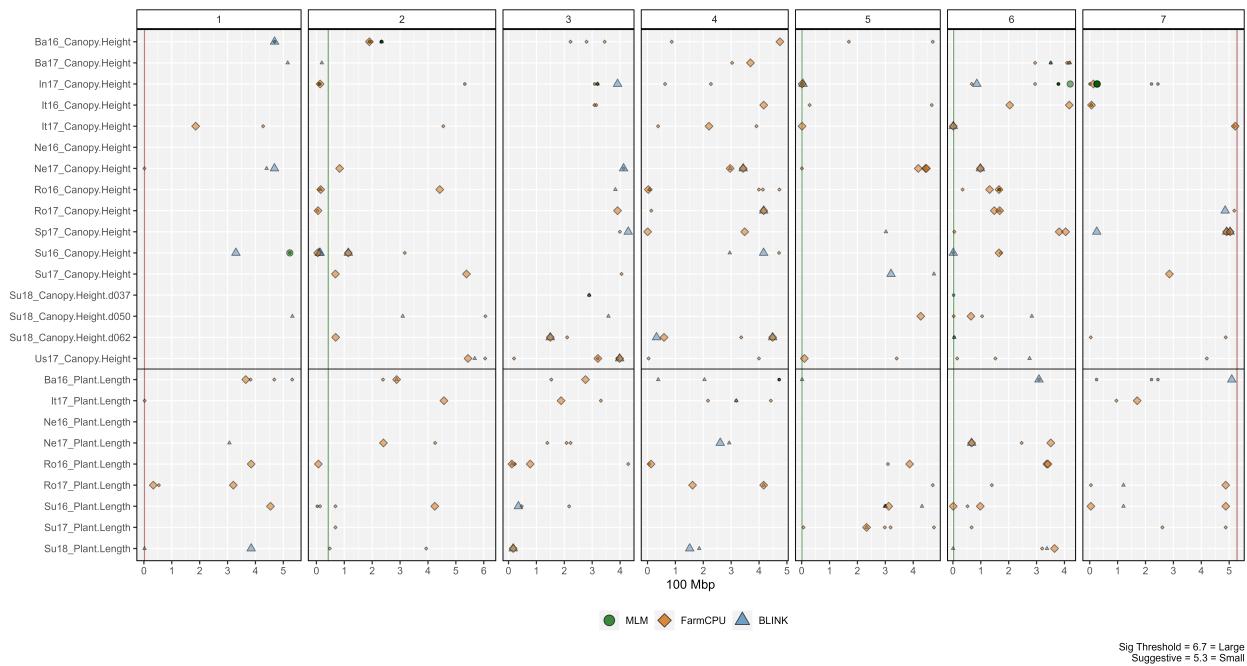
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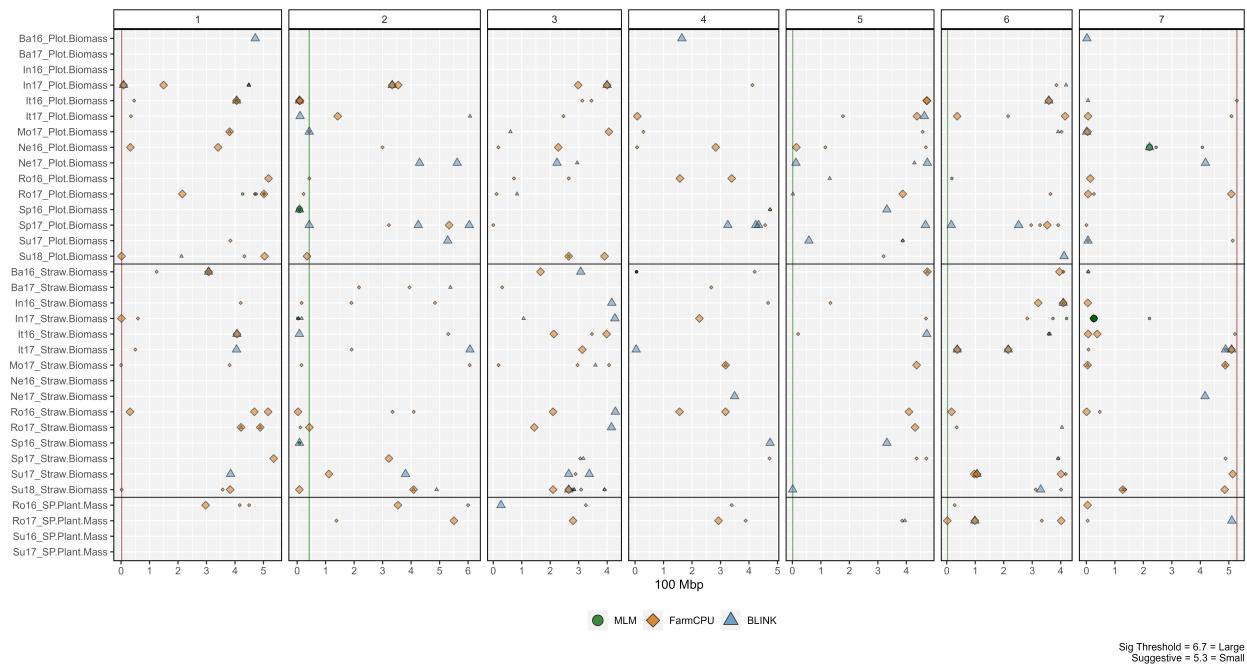
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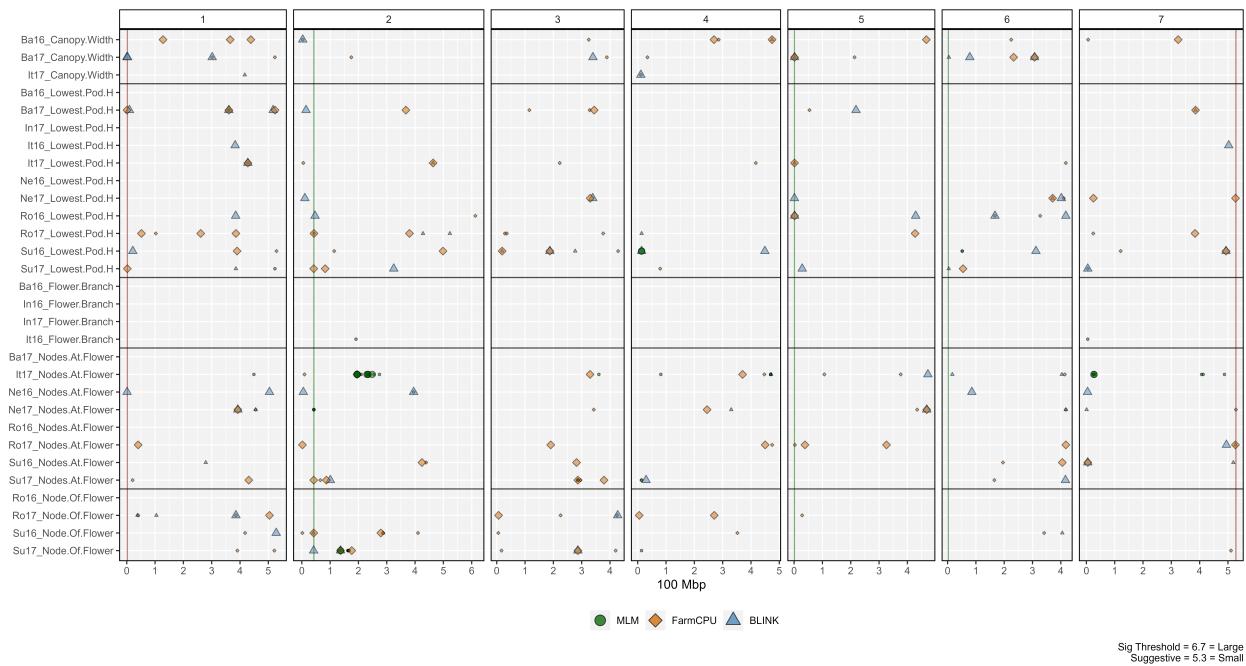
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## Additional/Additional\_Figure\_12\_9.html



## Manhattan Plots

Additional/ManH/

## Markers

Additional/Markers/

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