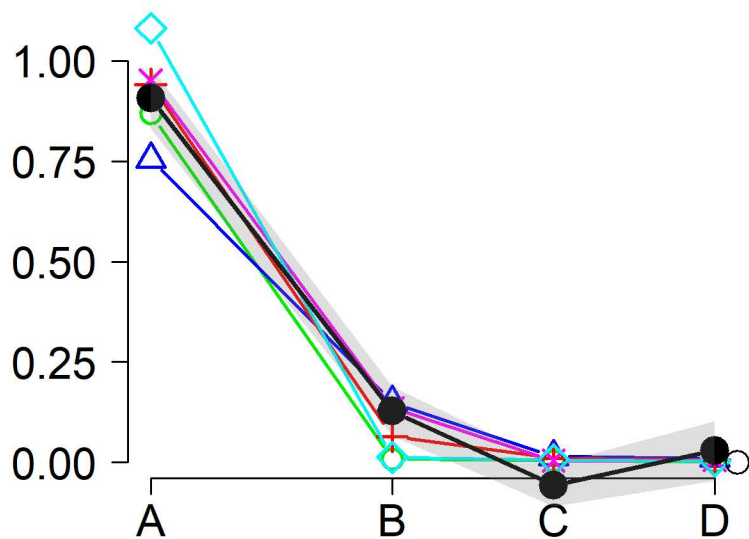


Figure S4: Spatiotemporal transcriptional regulation of analysed genes in all performed experiments. Spatial expression of the selected genes and relative viral RNA abundance was followed in nontransgenic Rywal and NahG-Rywal after inoculation with PVY^{NTN}, PVY^N-GFP or PVY^N-Wilga at the stage of fully developed and early visible lesions. Graphs are organised per lesion development stage, experiment and gene functional group. In case of early visible lesions, spatial expression of the selected genes and relative viral RNA abundance was followed in two perpendicular directions, here marked with 1st and 2nd, respectively. Spatial profiles of both directions and their average is shown. See Figure 2 legend for the full description of the graphs and Figure 1 for full gene names.

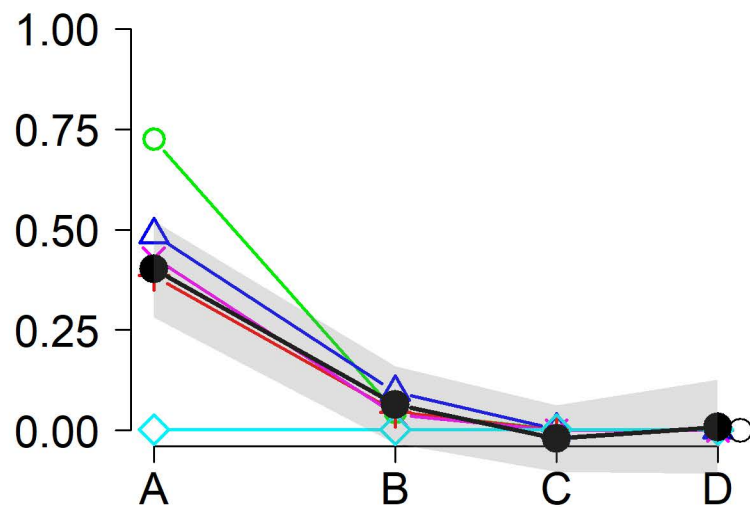
**Note: for easiest browsing select Bookmarks view (e.g. left panel in Adobe Reader) and than select the graph you want to inspect.*

Fully developed lesions

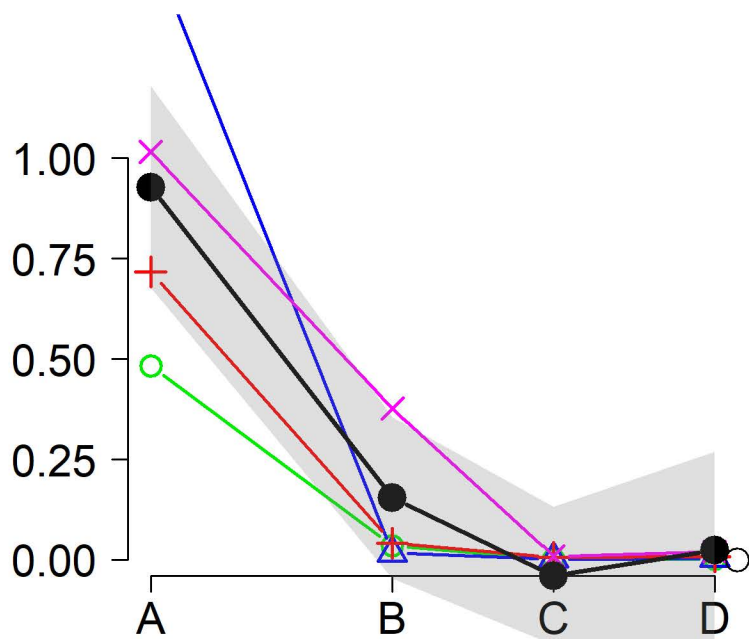
PVY



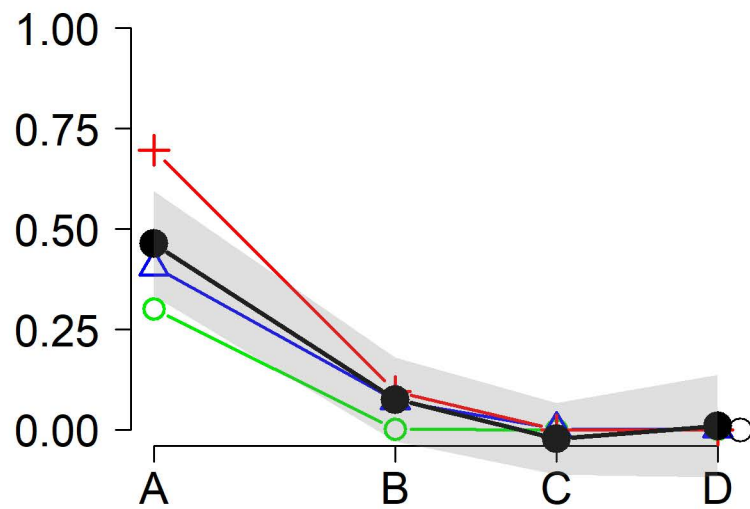
Rywal (PVY-Wilga)



NahG-Rywal (PVY-Wilga)

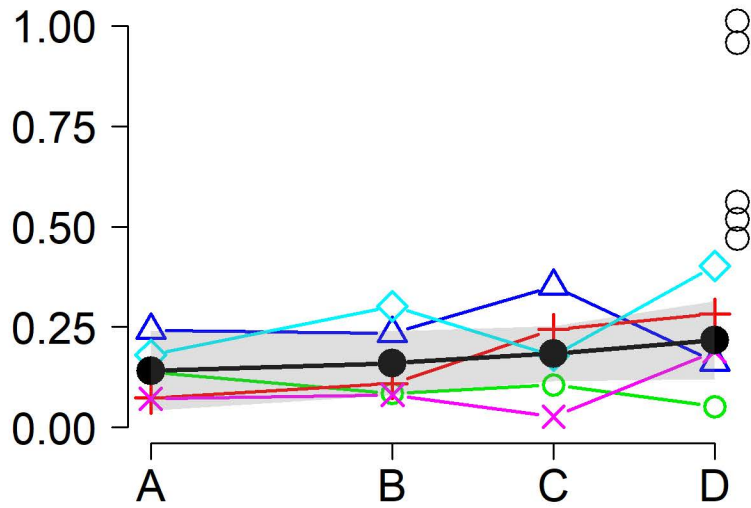


Rywal (PVY-NTN)

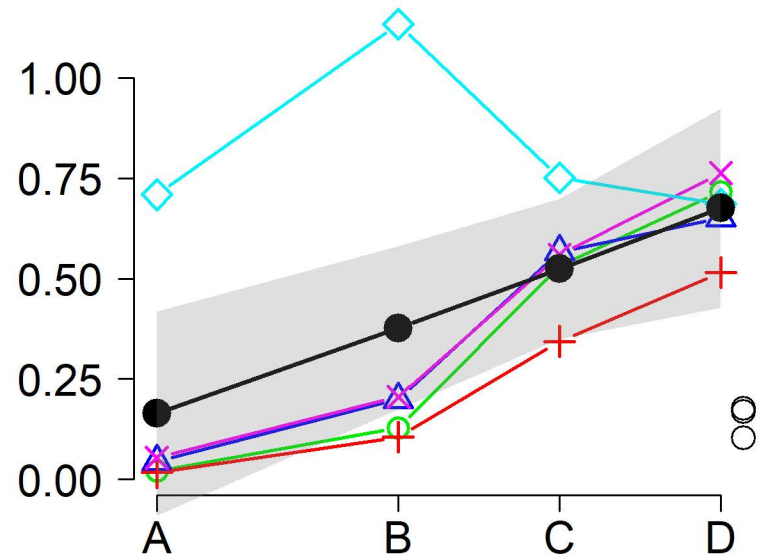


NahG-Rywal (PVY-NTN)

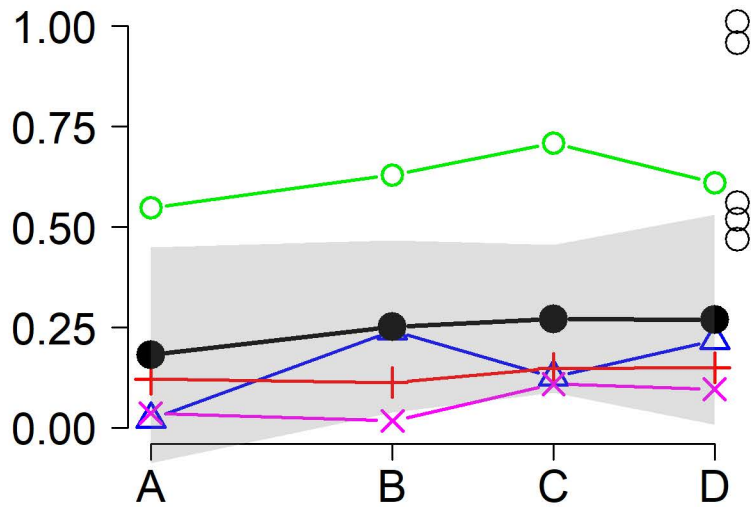
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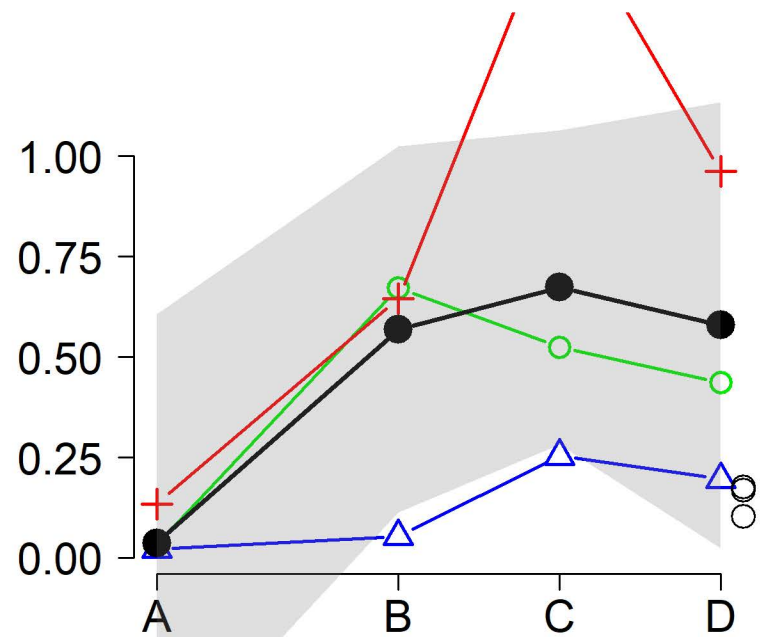
Rywal (PVY-Wilga)



NahG-Rywal (PVY-Wilga)

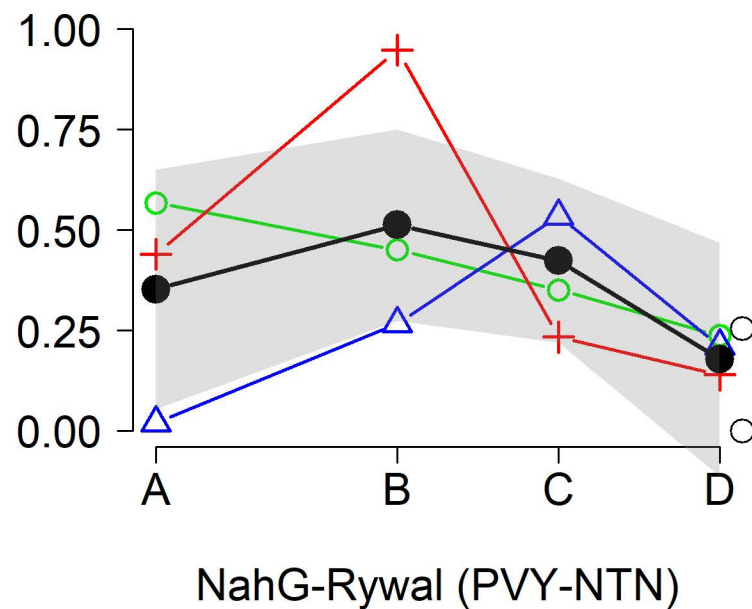
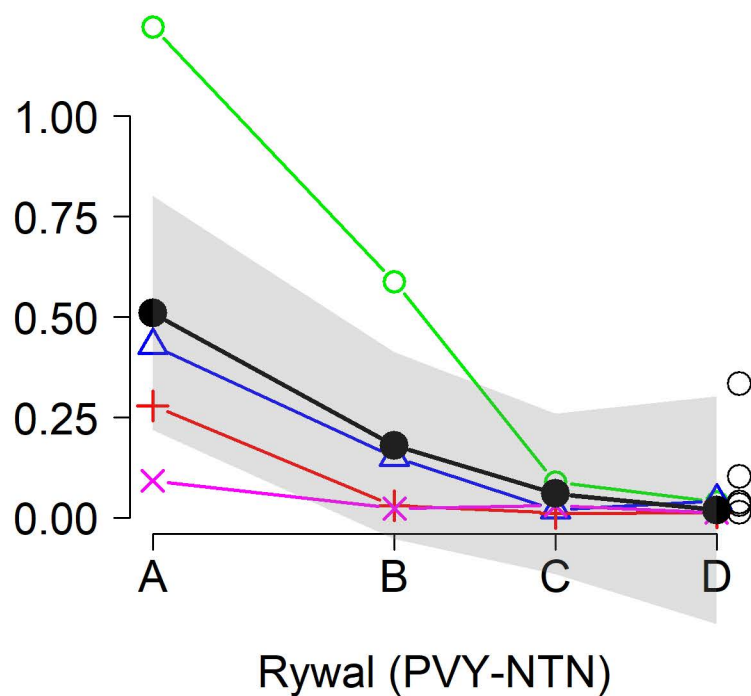
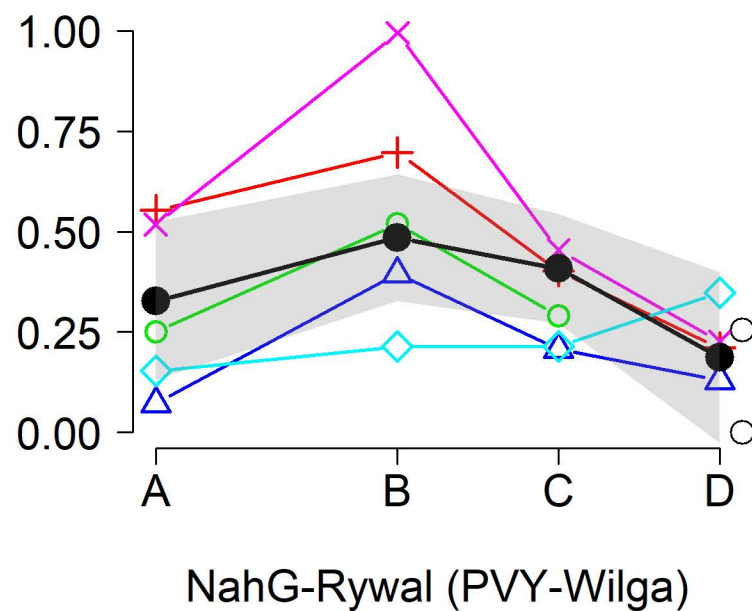
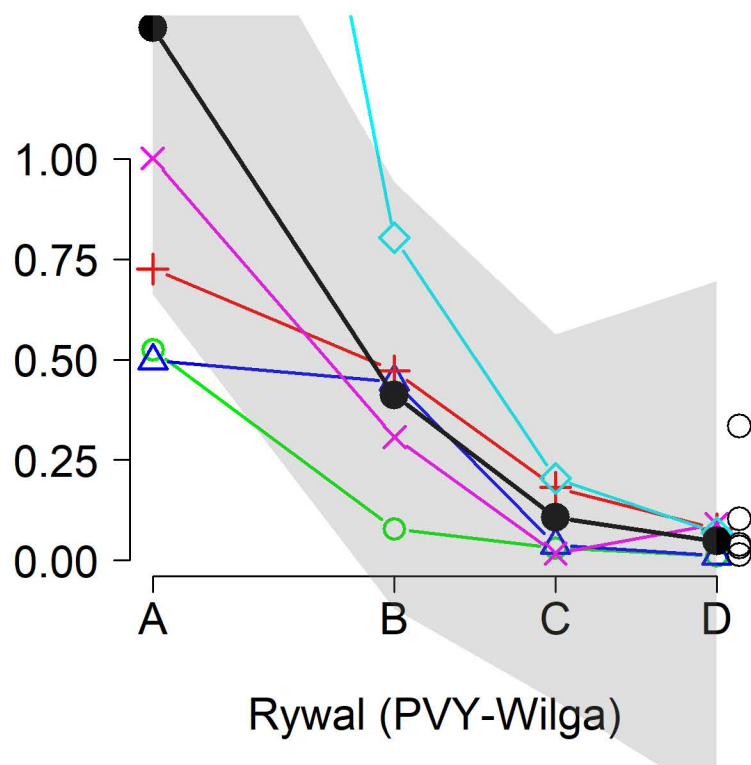


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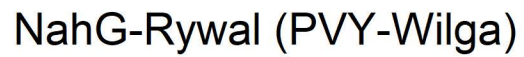


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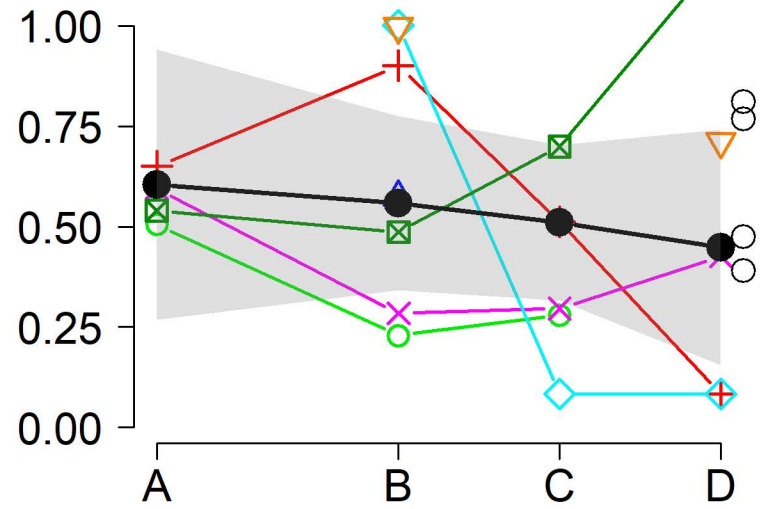
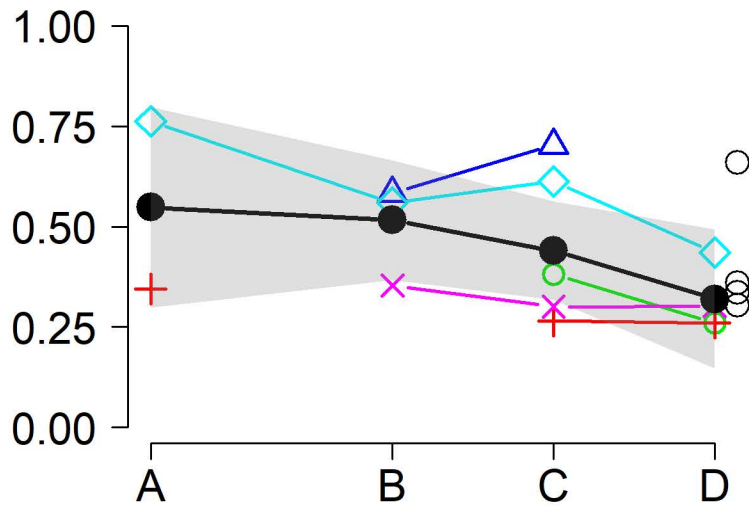
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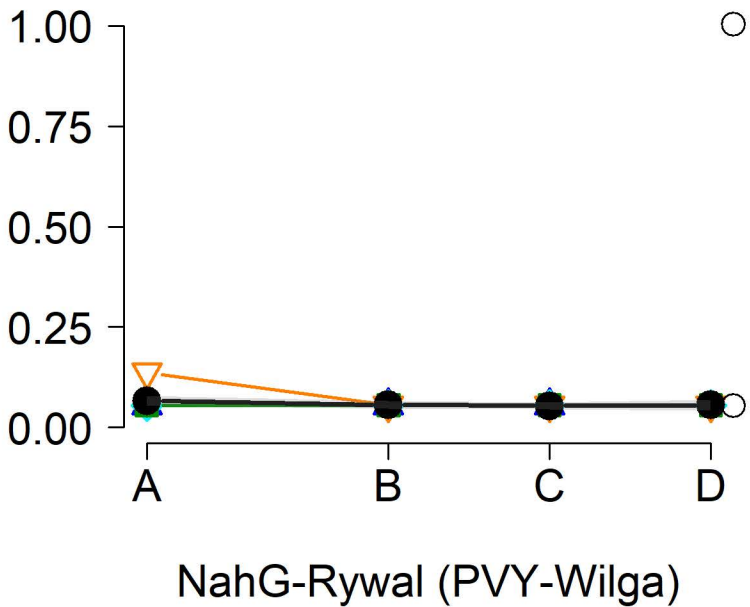
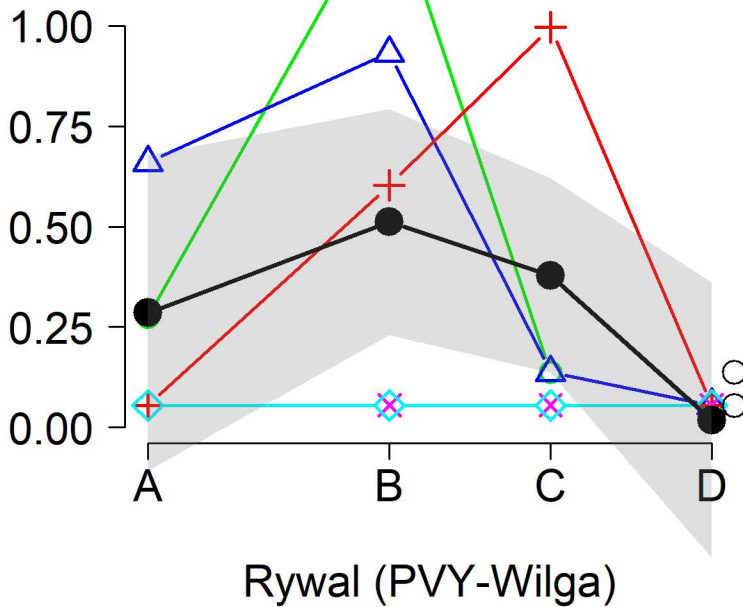
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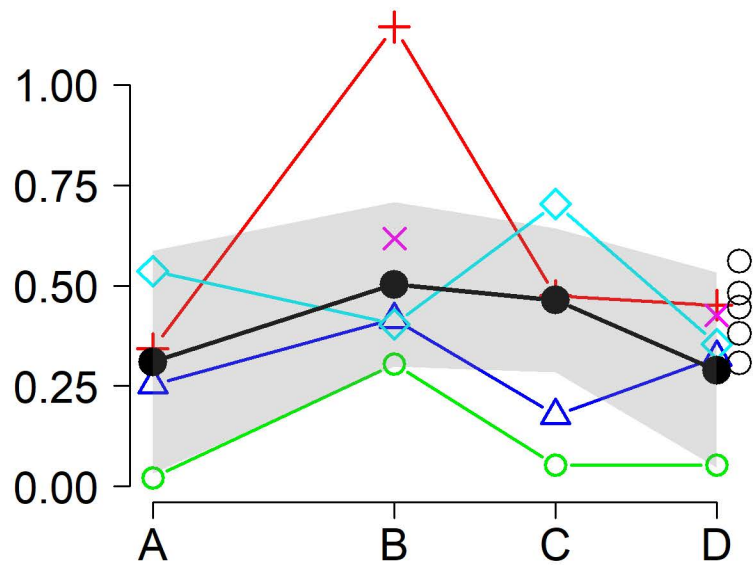
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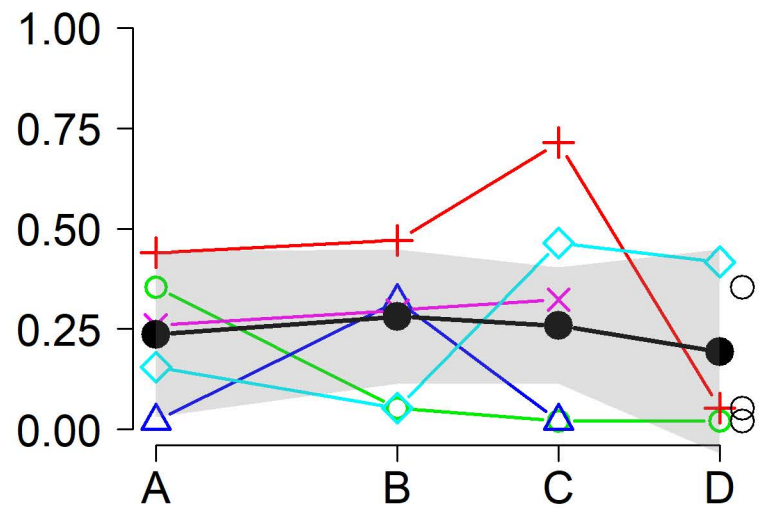
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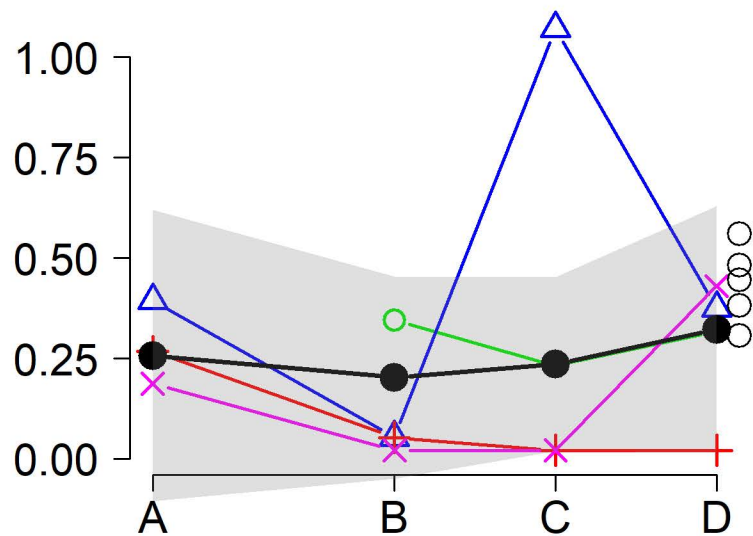
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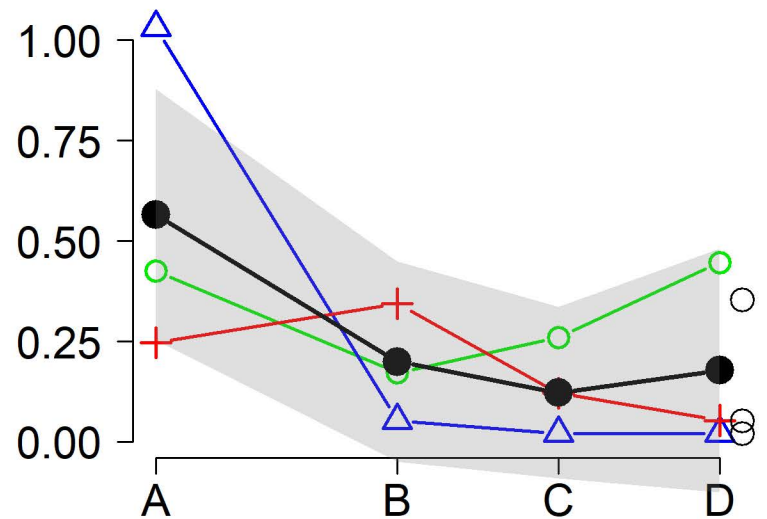
Rywal (PVY-Wilga)



NahG-Rywal (PVY-Wilga)

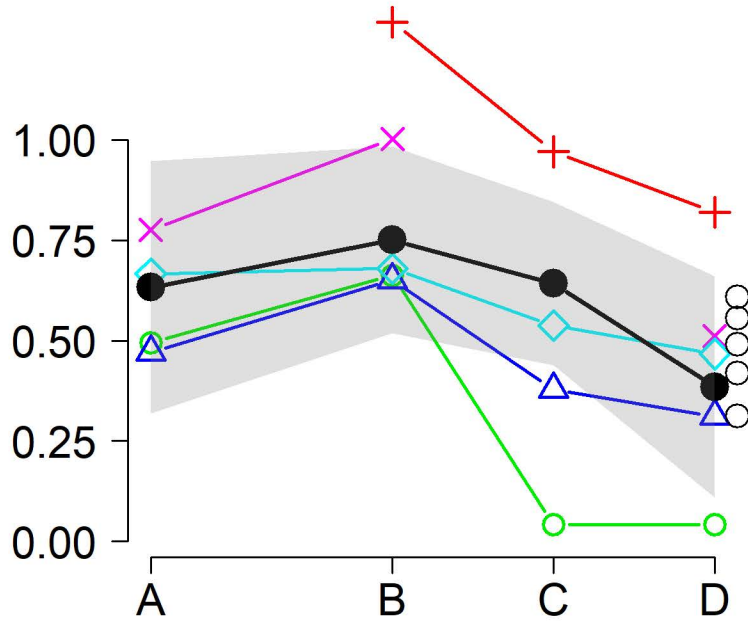


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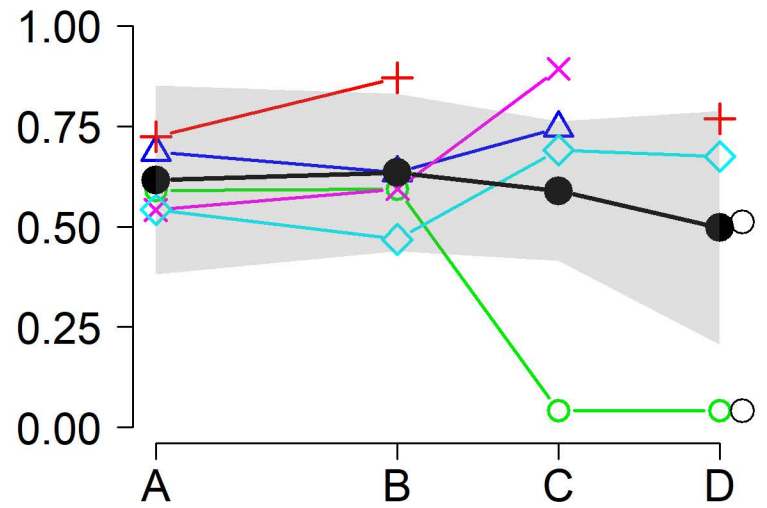


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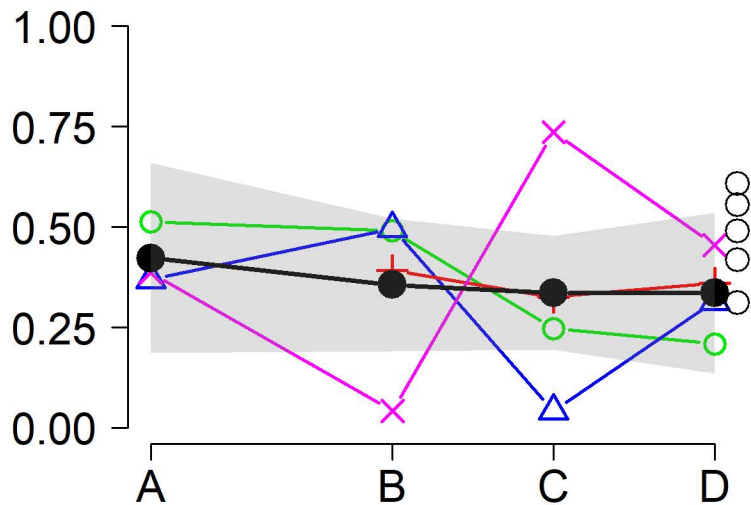
MKP1



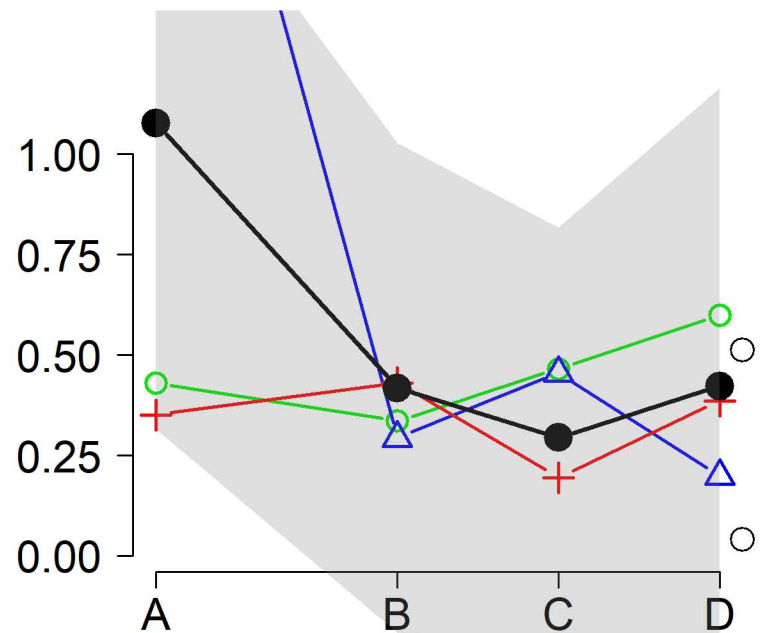
Rywal (PVY-Wilga)



NahG-Rywal (PVY-Wilga)

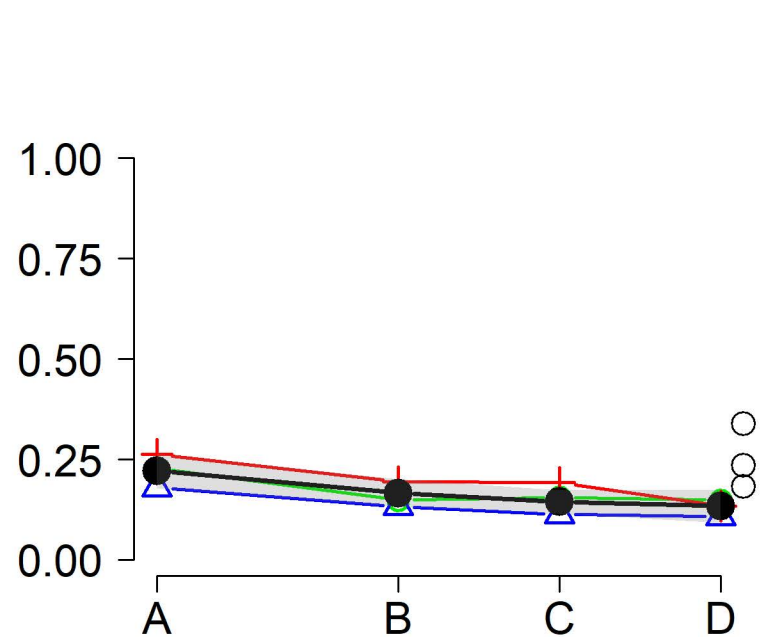
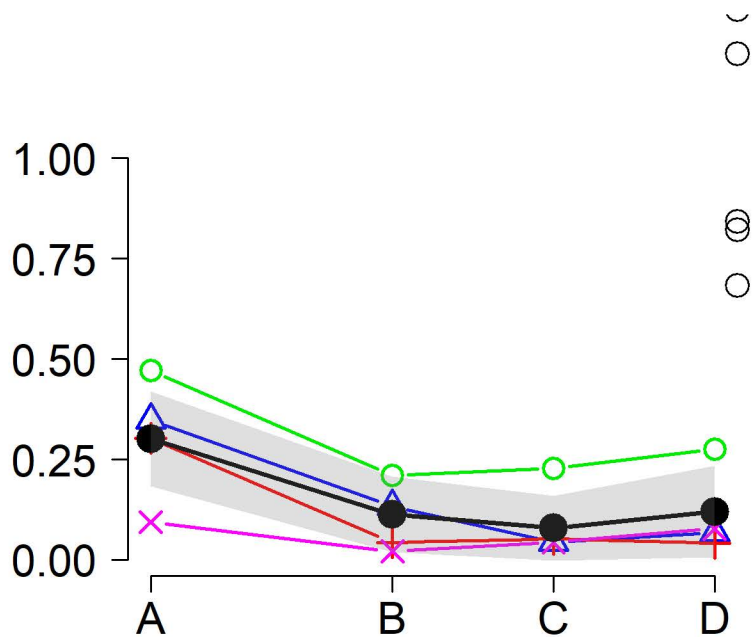
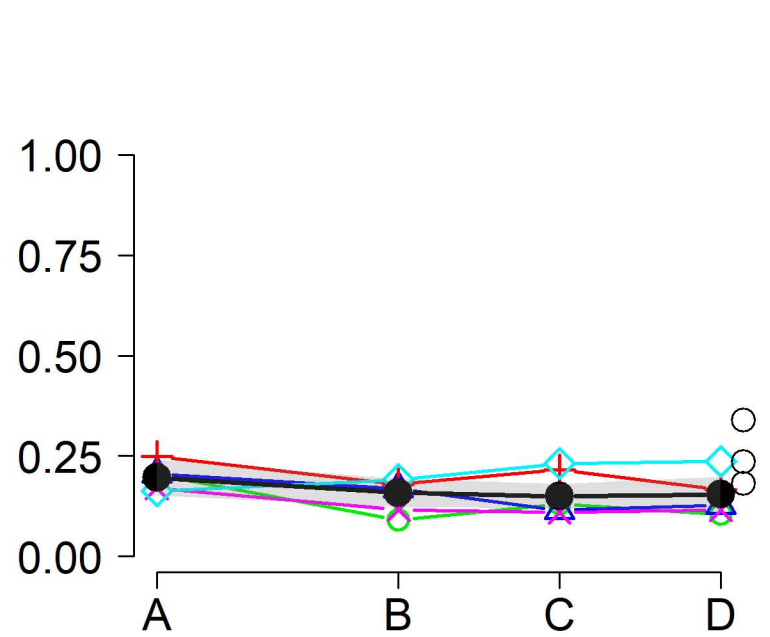
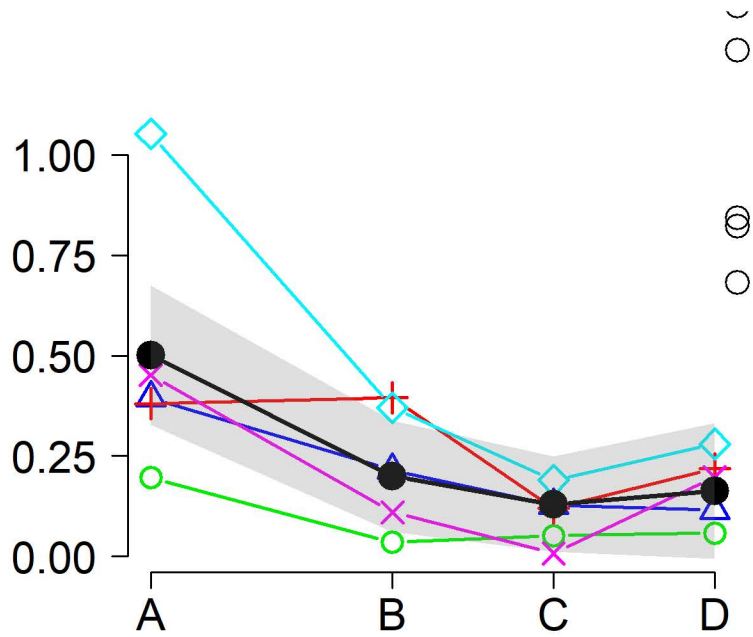


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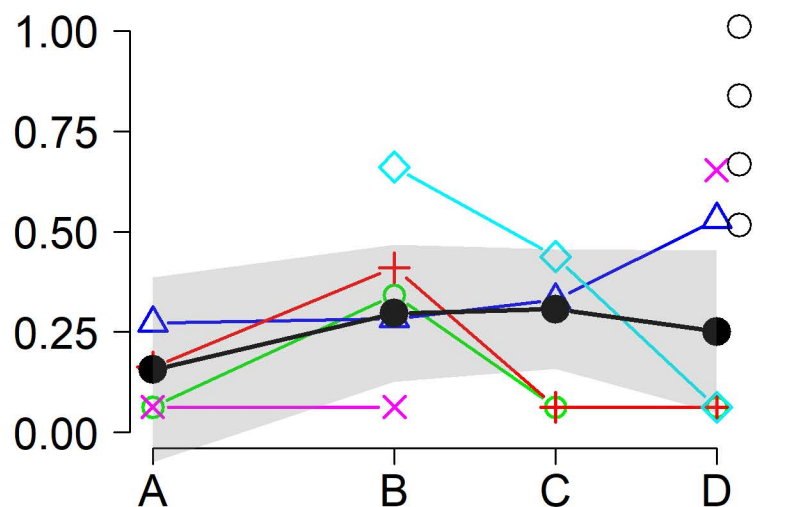


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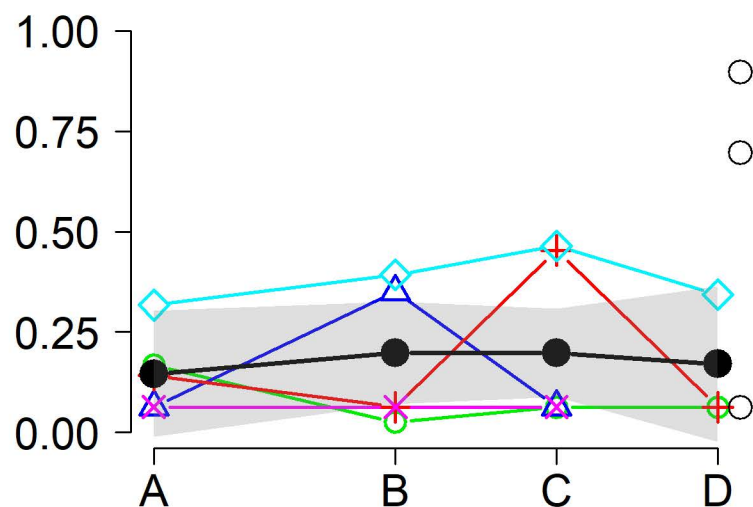
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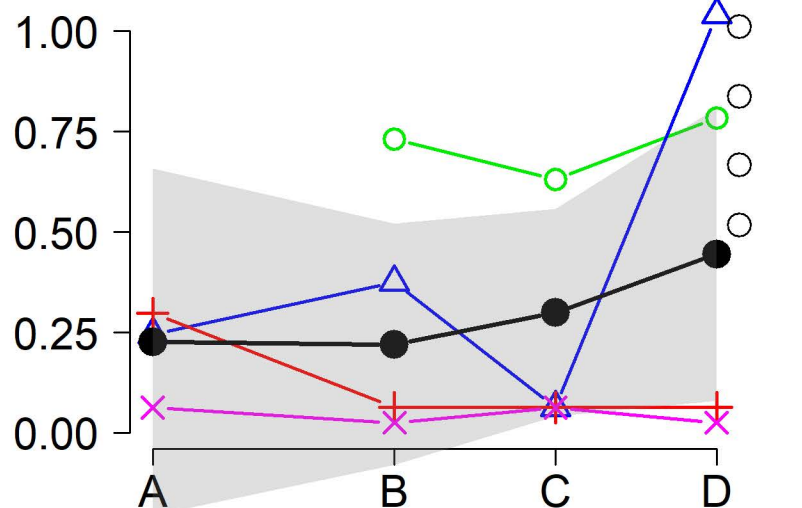
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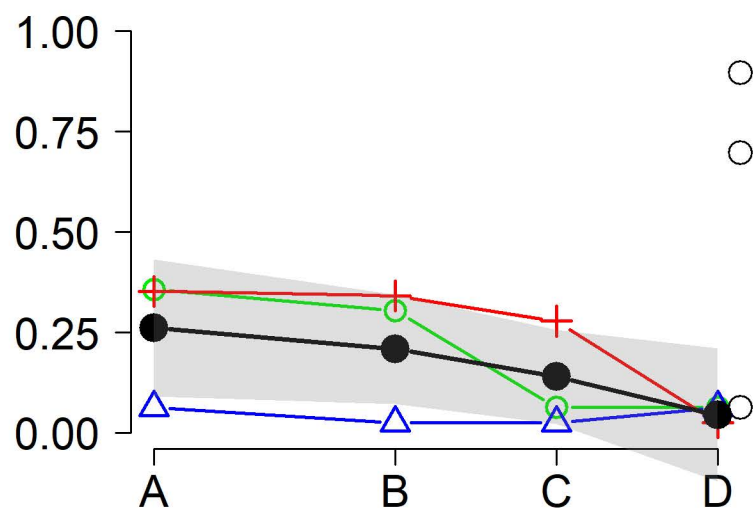
Rywal (PVY-Wilga)



NahG-Rywal (PVY-Wilga)

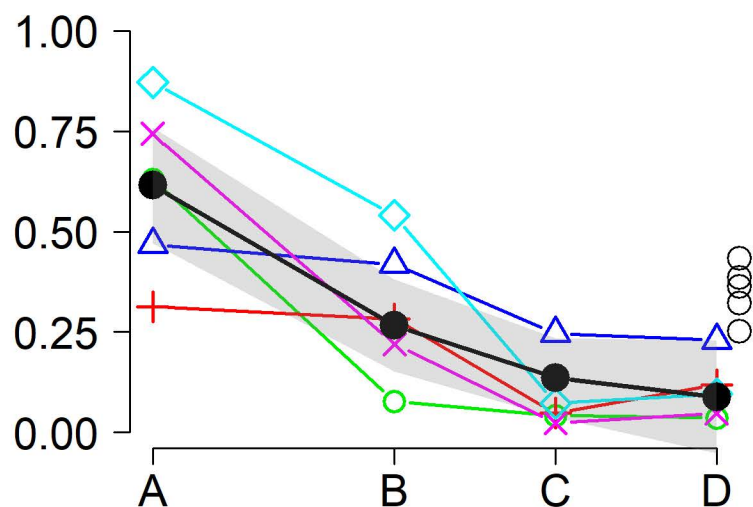


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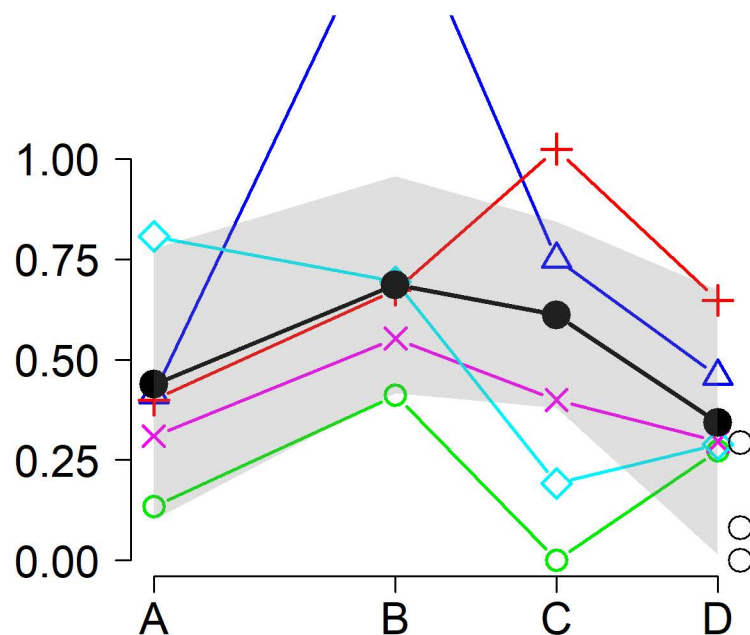


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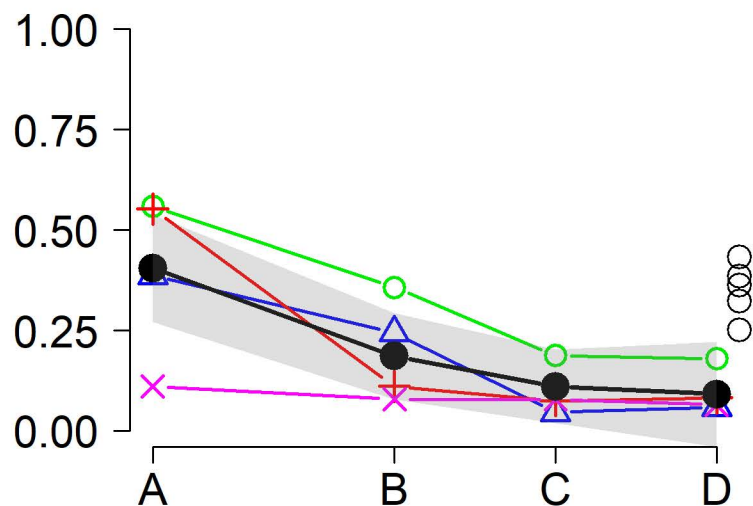
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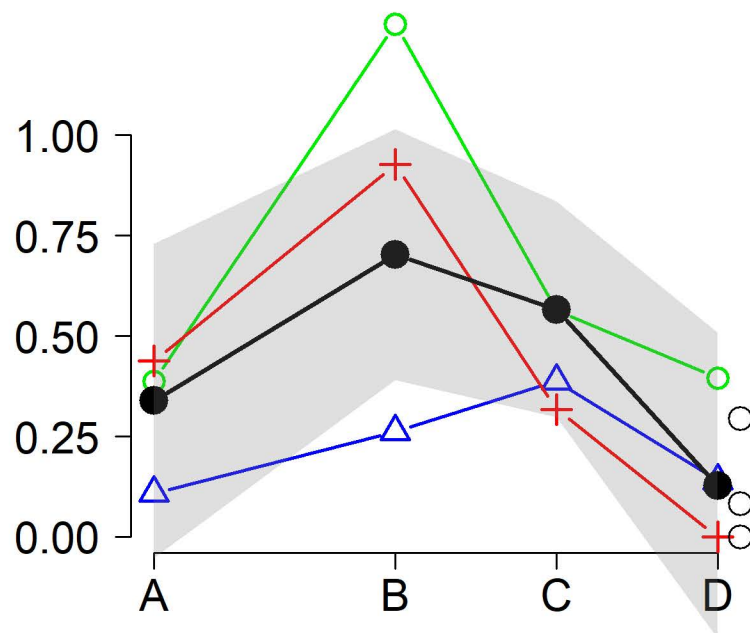
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NahG-Rywal (PVY-Wilga)

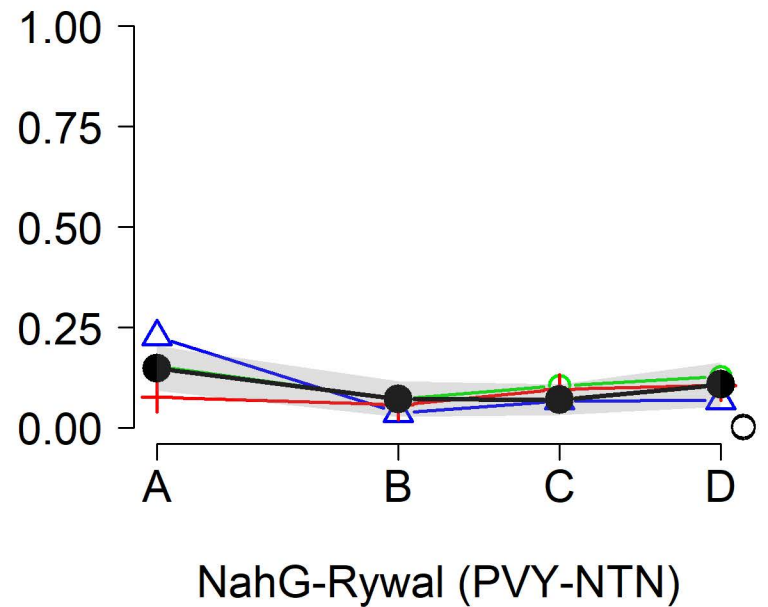
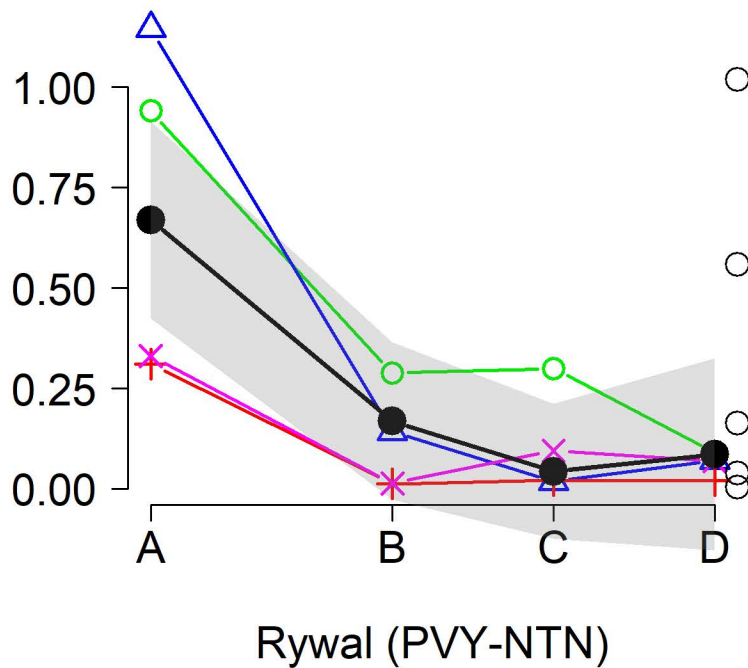
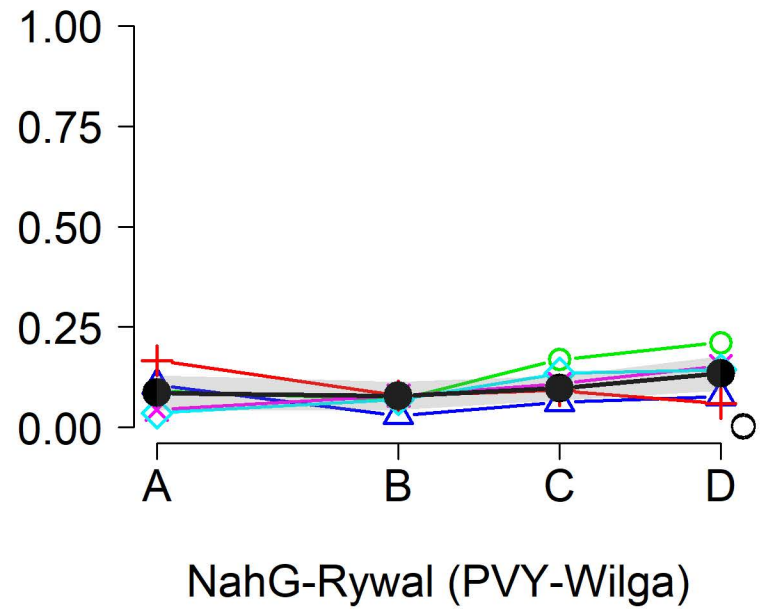
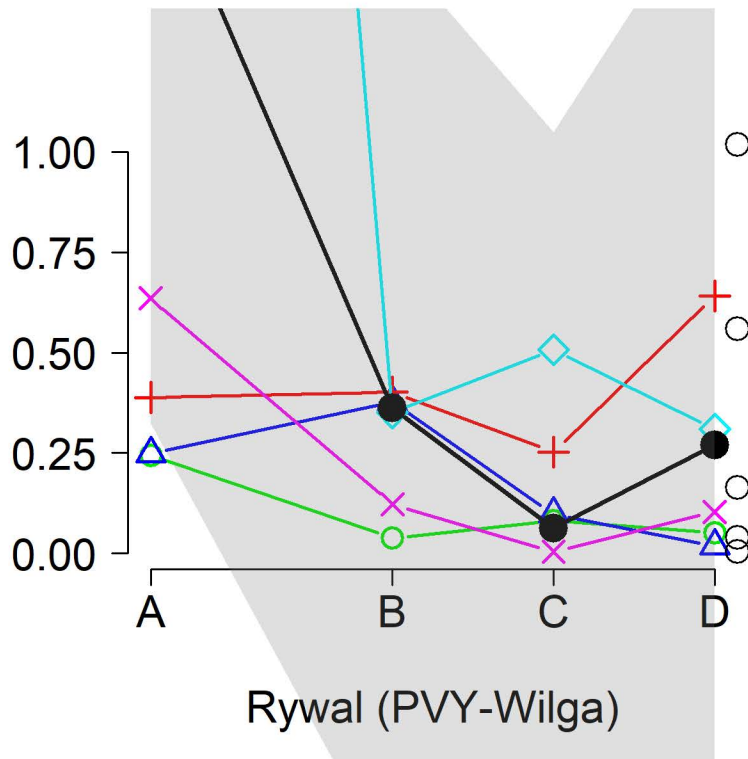


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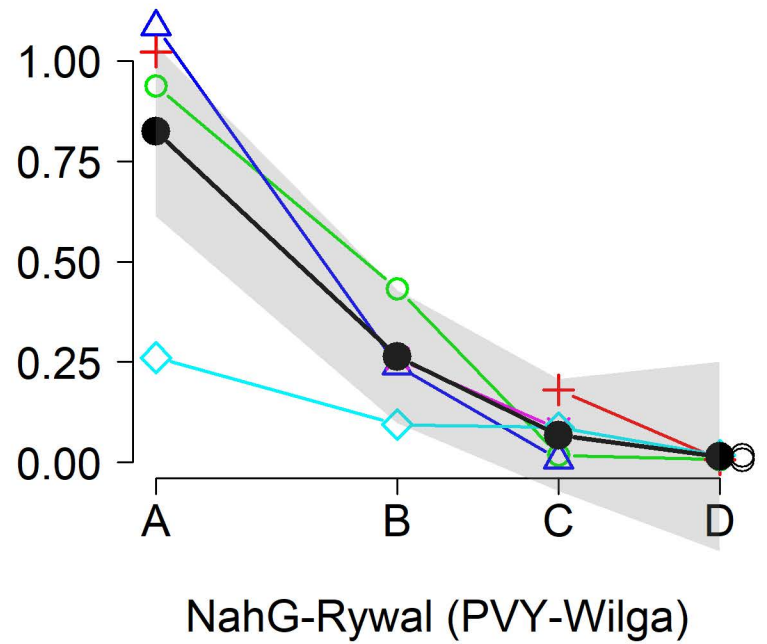
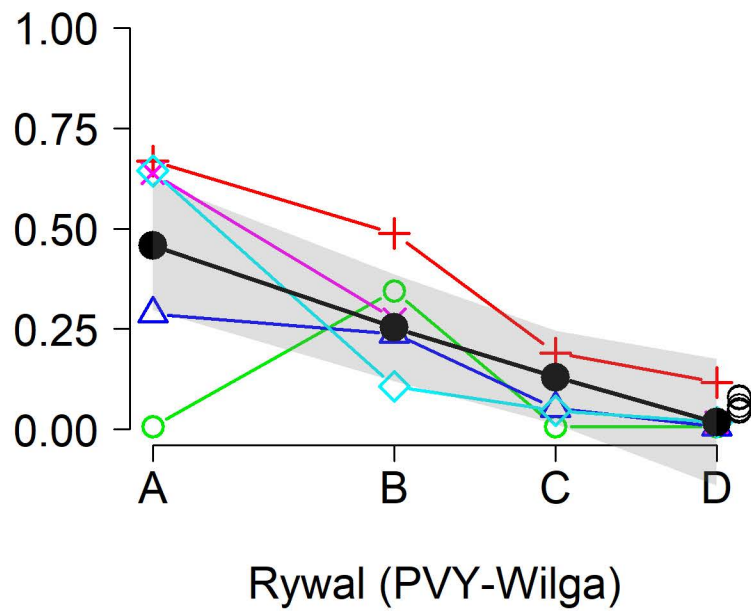


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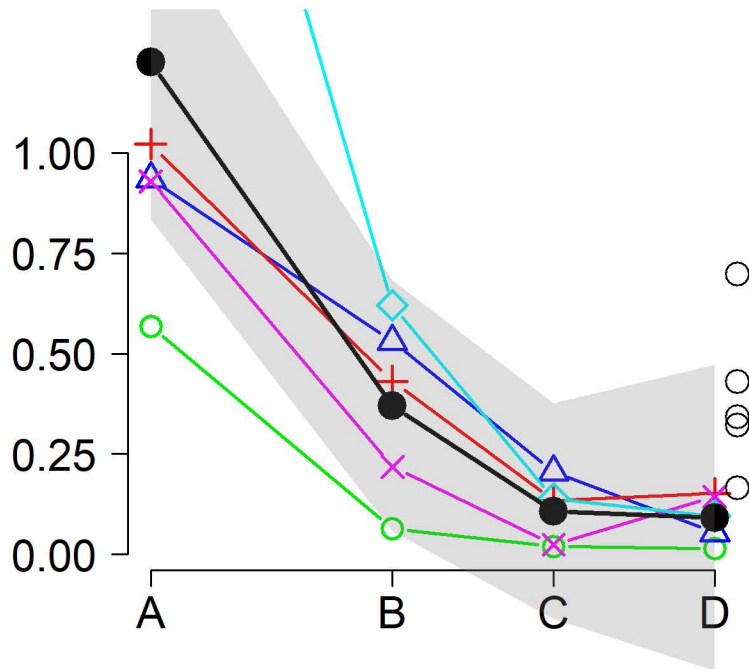
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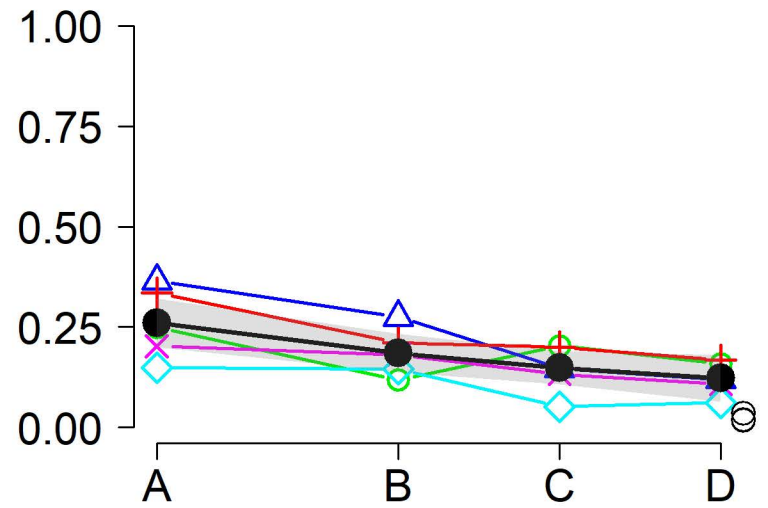
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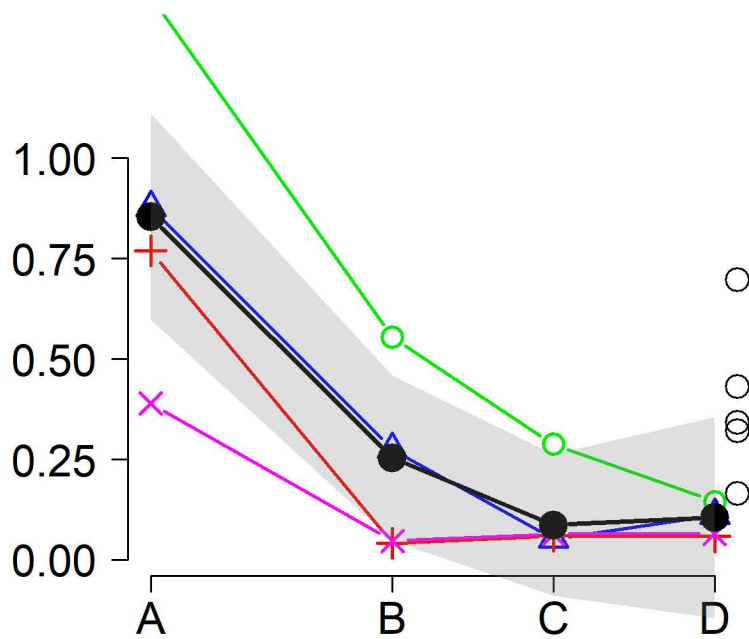
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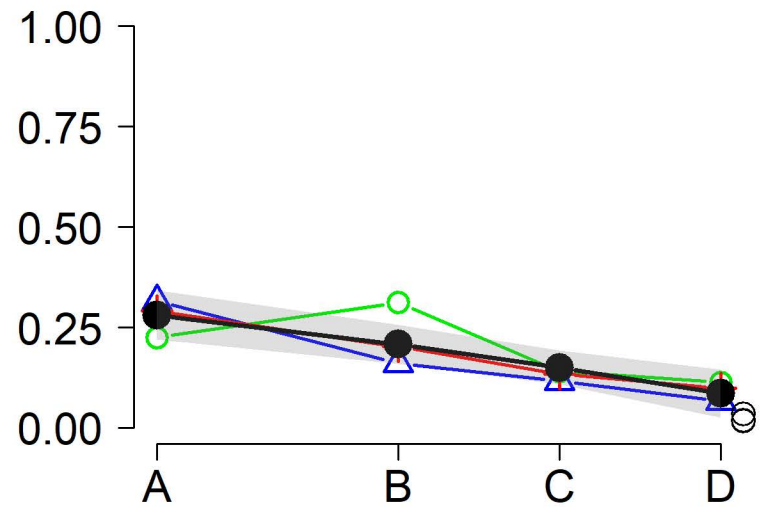
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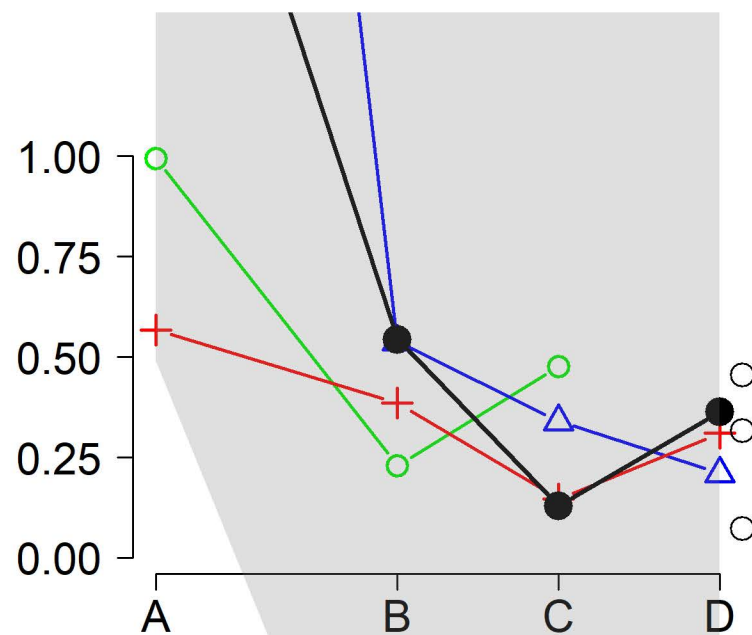
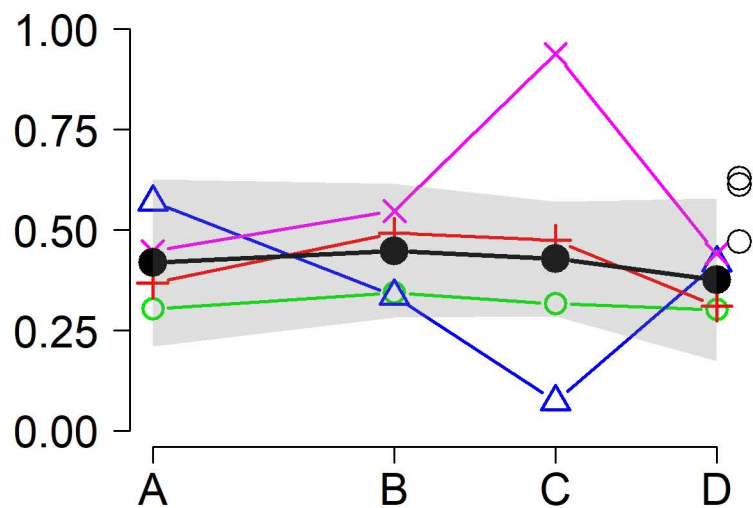
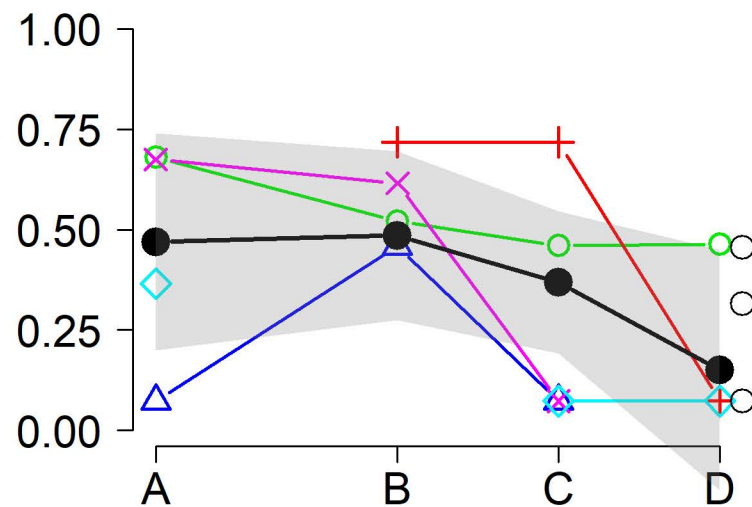
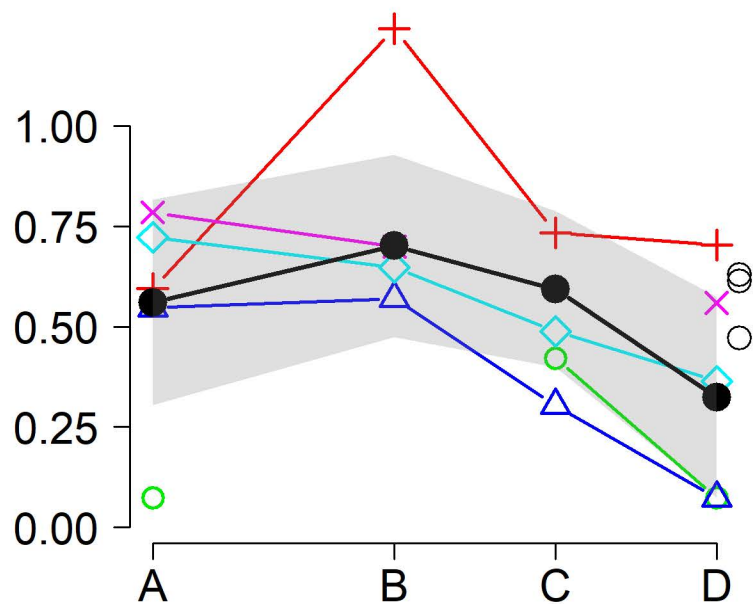


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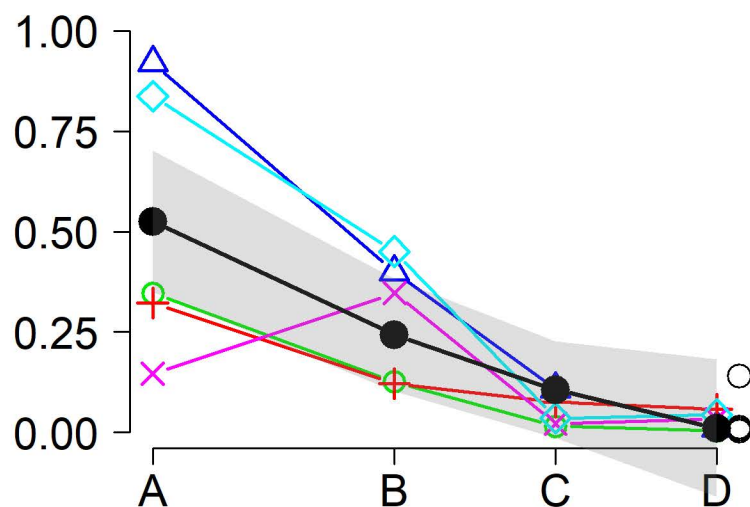


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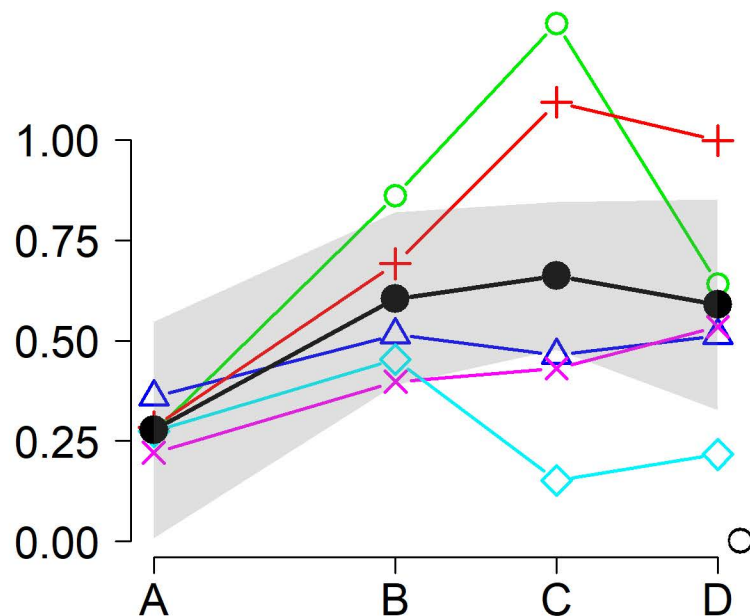
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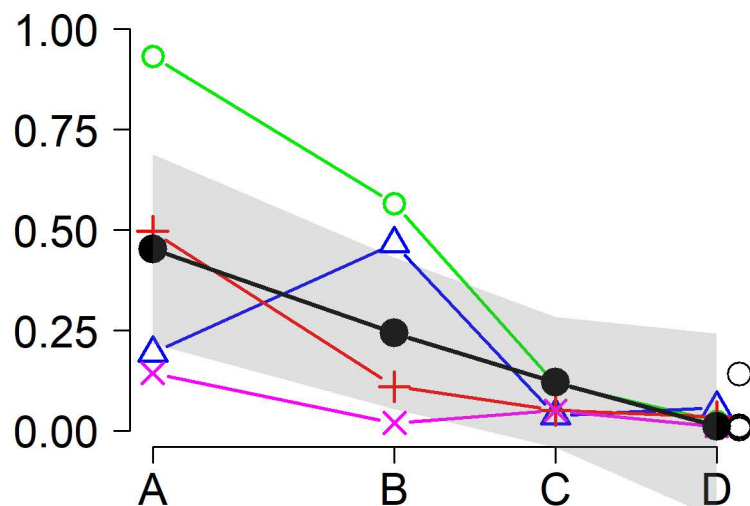
PR1B



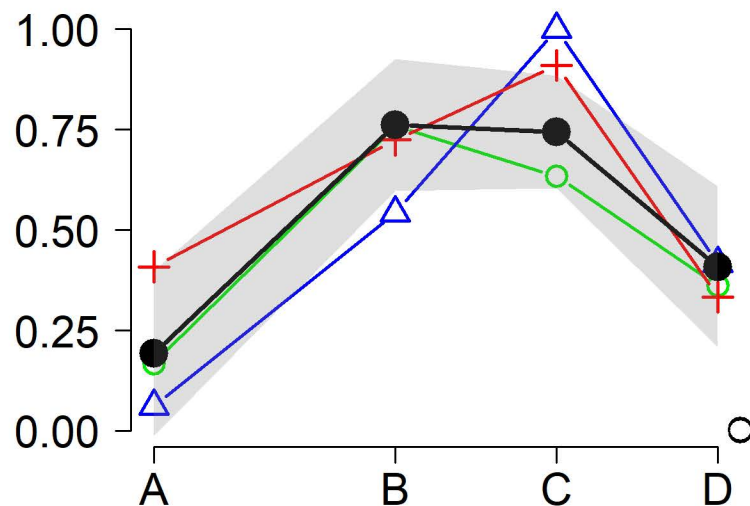
Rywal (PVY-Wilga)



NahG-Rywal (PVY-Wilga)

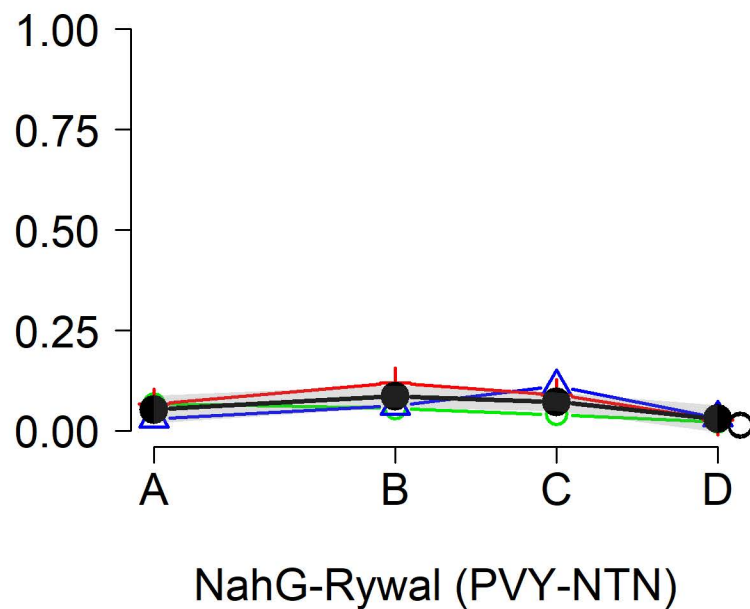
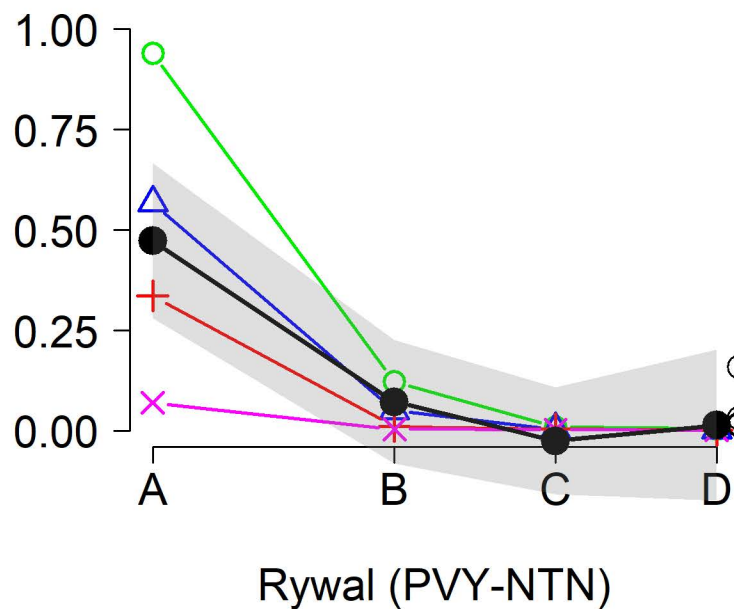
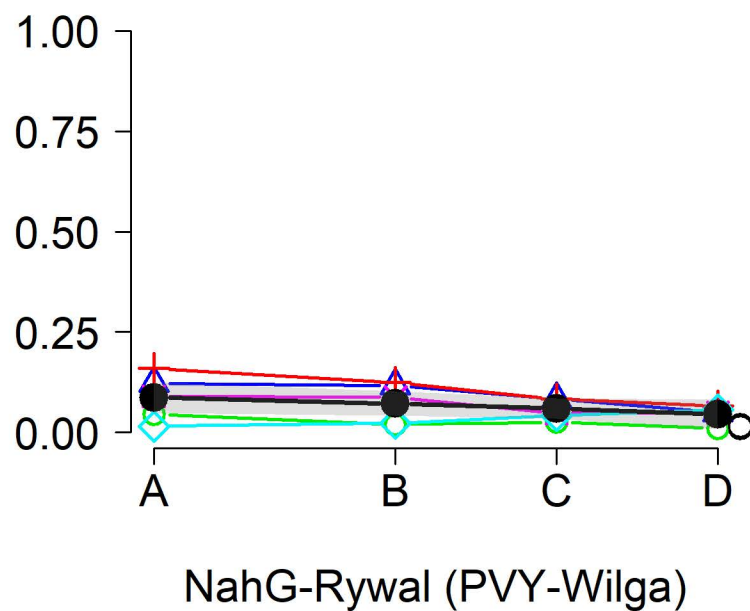
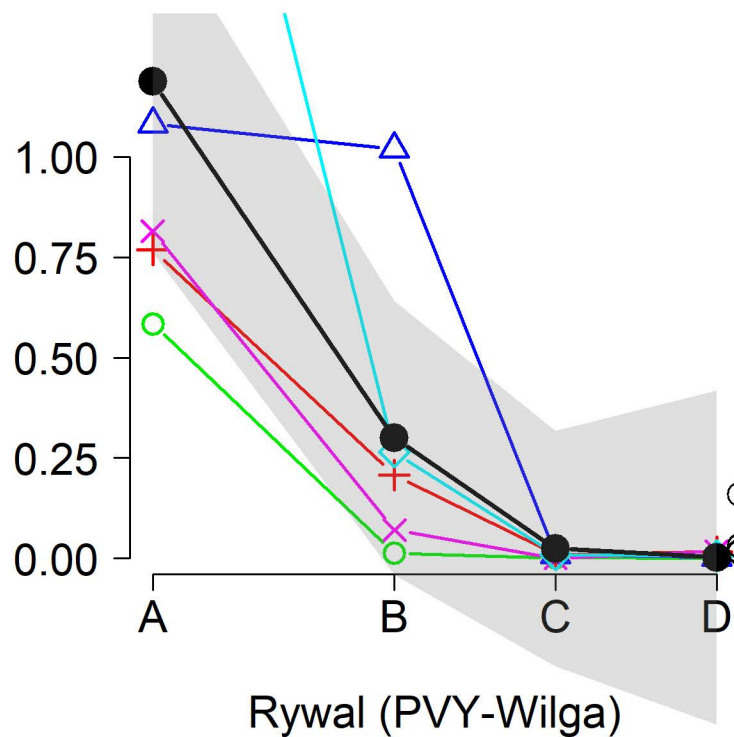


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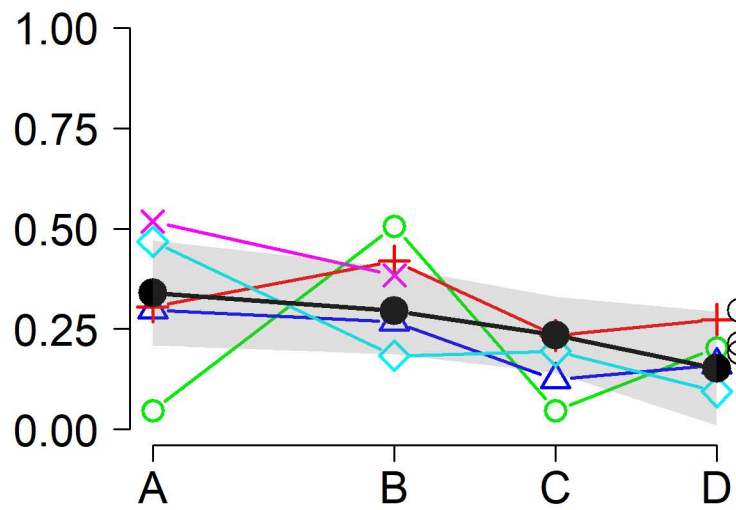


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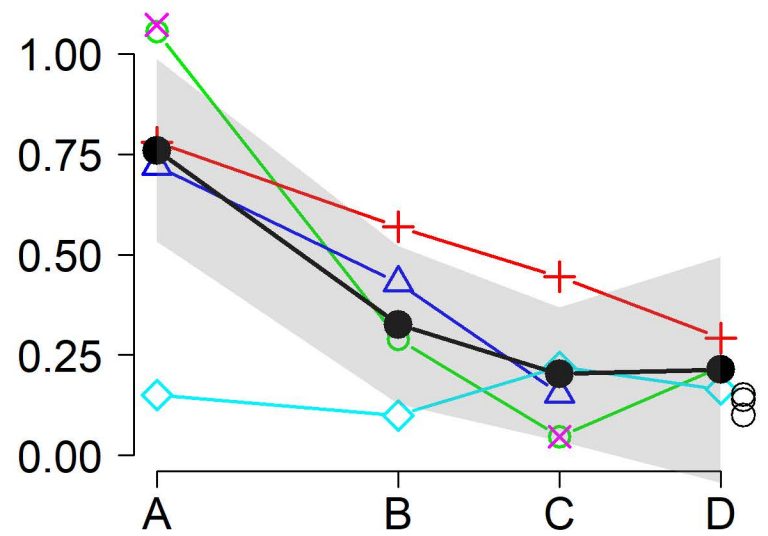
BGLU2



AGO2

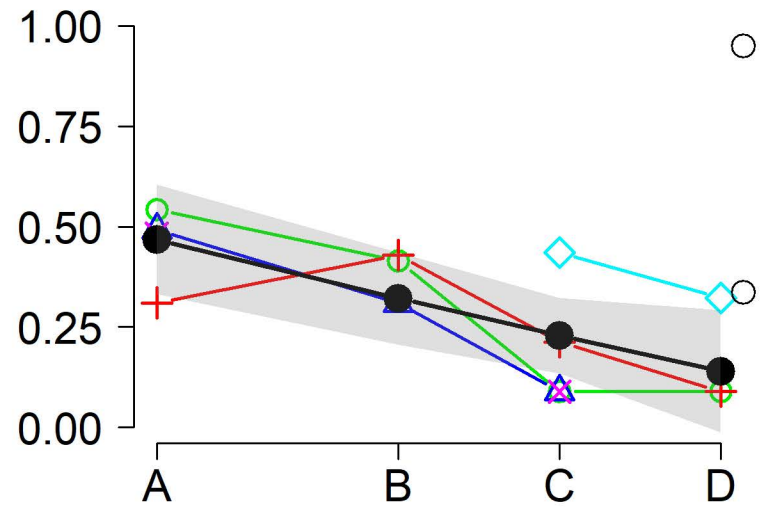
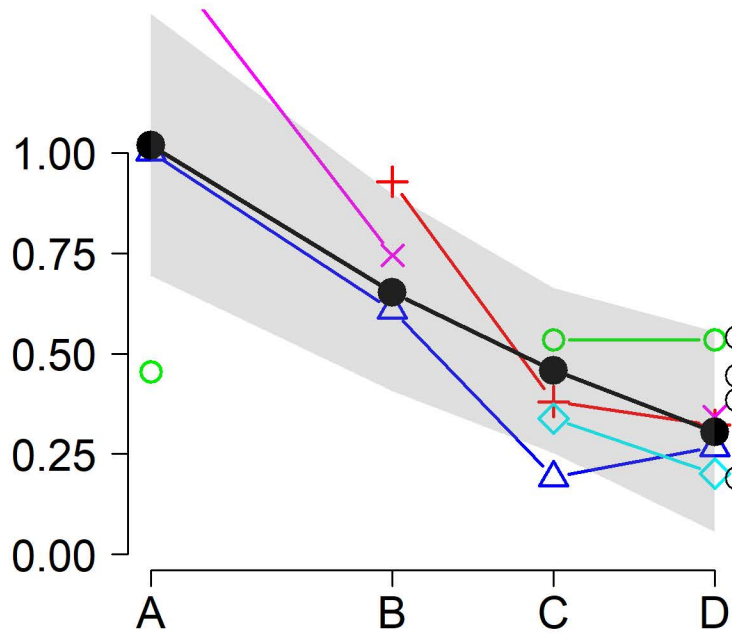


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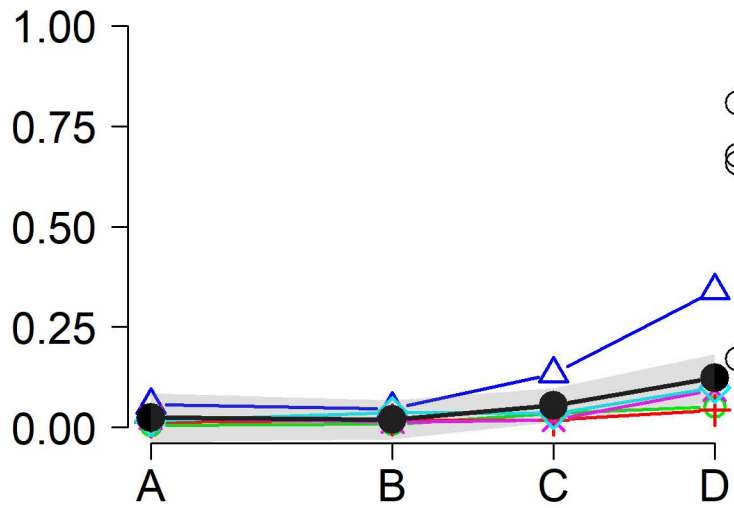


NahG-Rywal (PVY-Wilga)

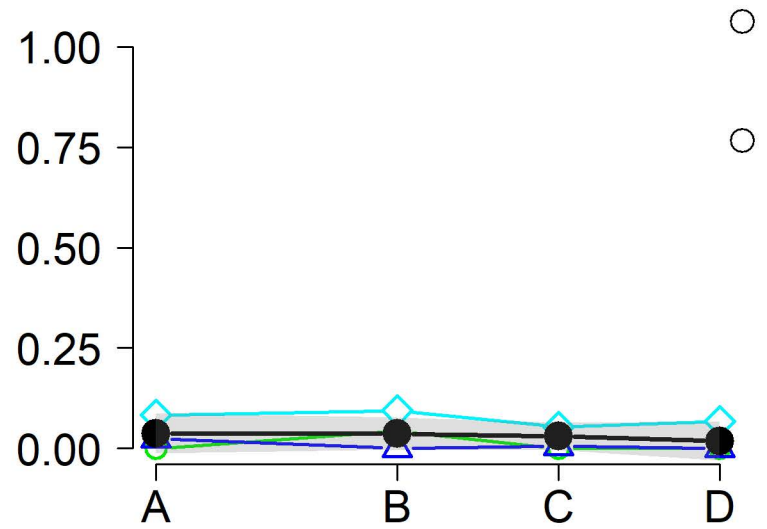
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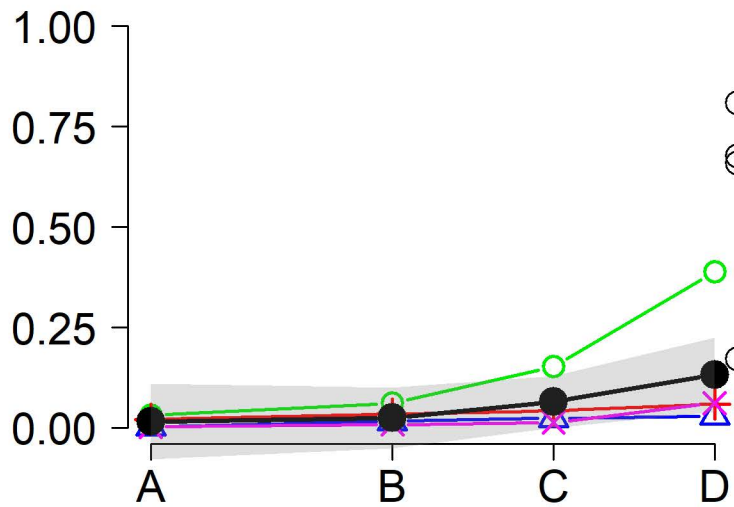
GBSS1



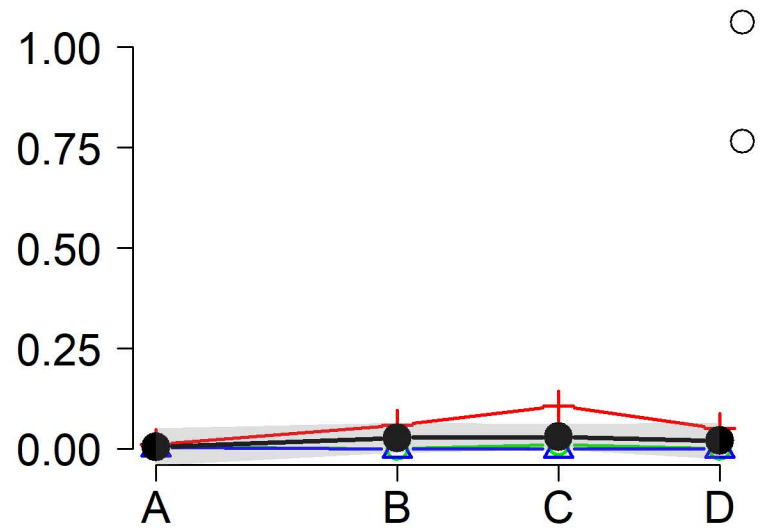
Rywal (PVY-Wilga)



NahG-Rywal (PVY-Wilga)

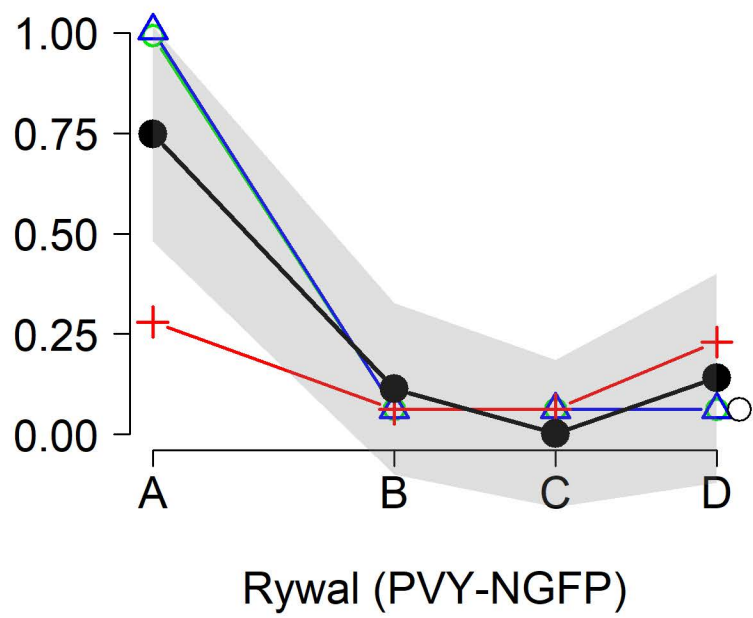


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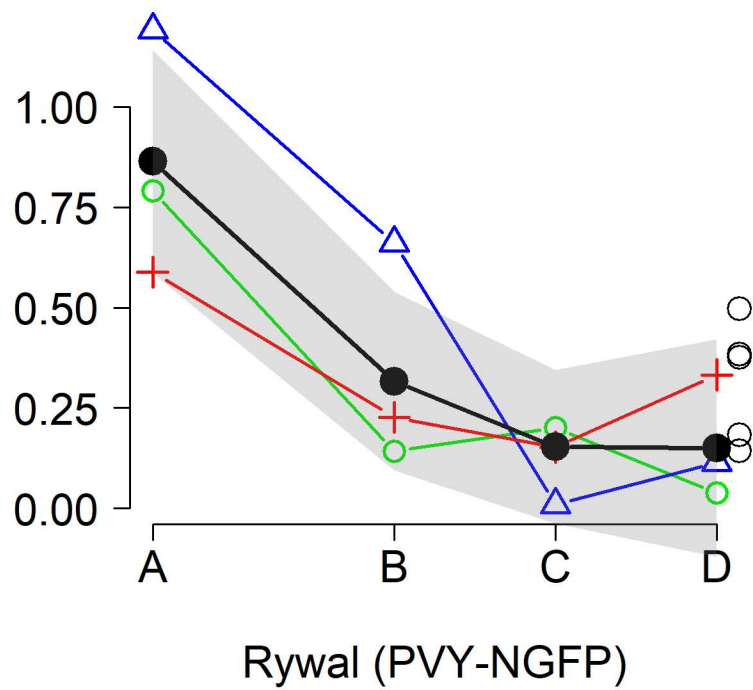


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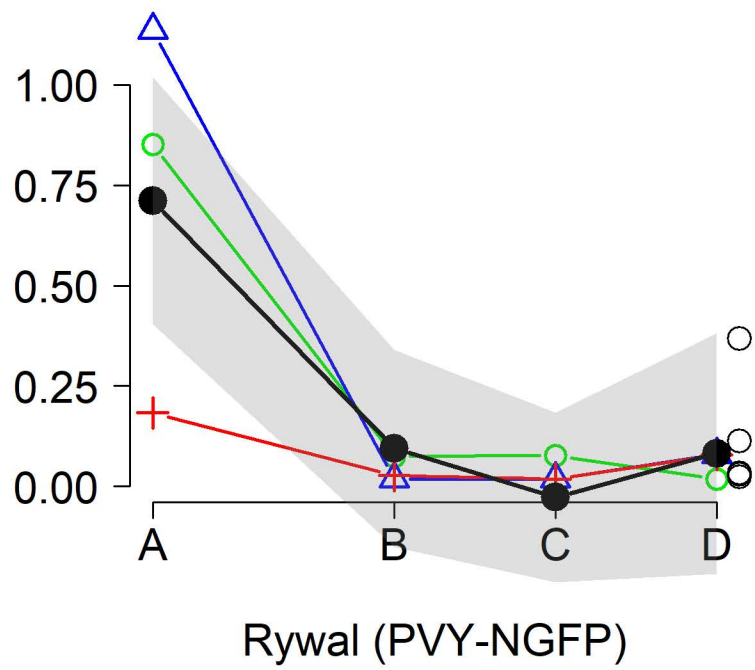
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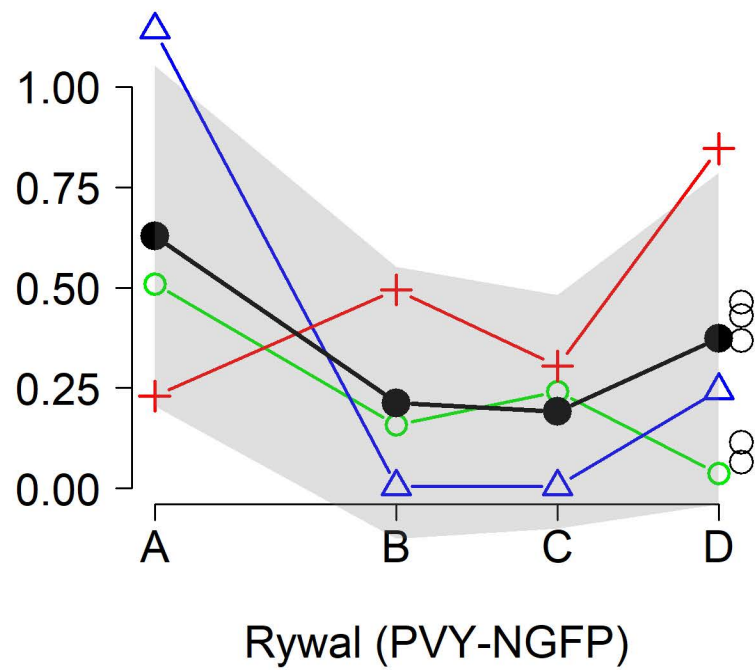
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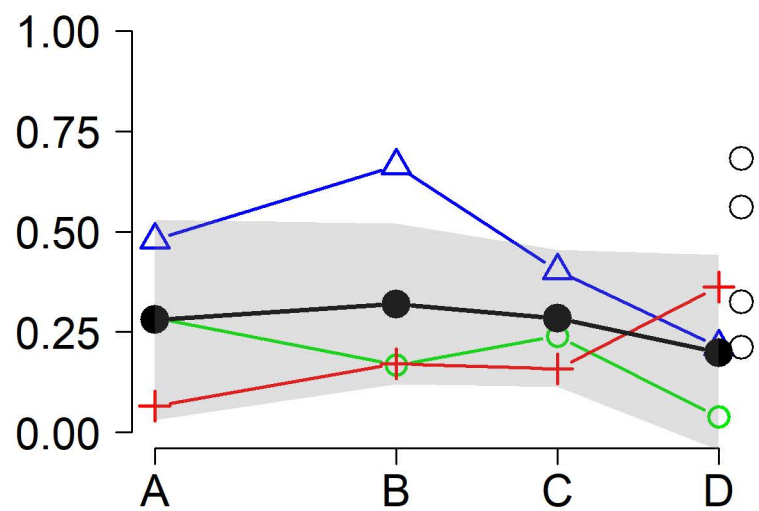
PRX28



RBOHA

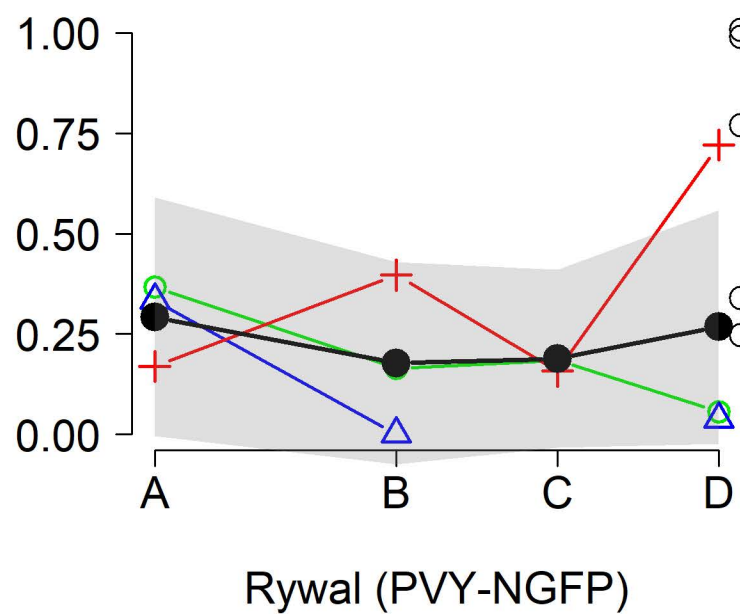


RBOHC

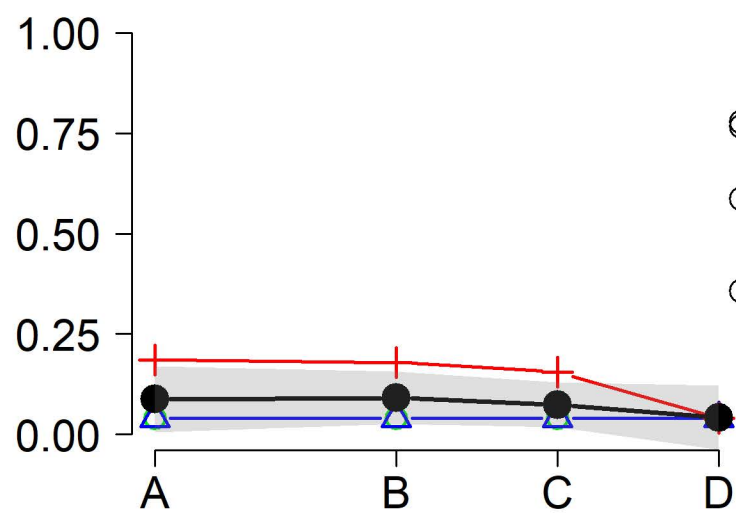


Rywal (PVY-NGFP)

RBOHD

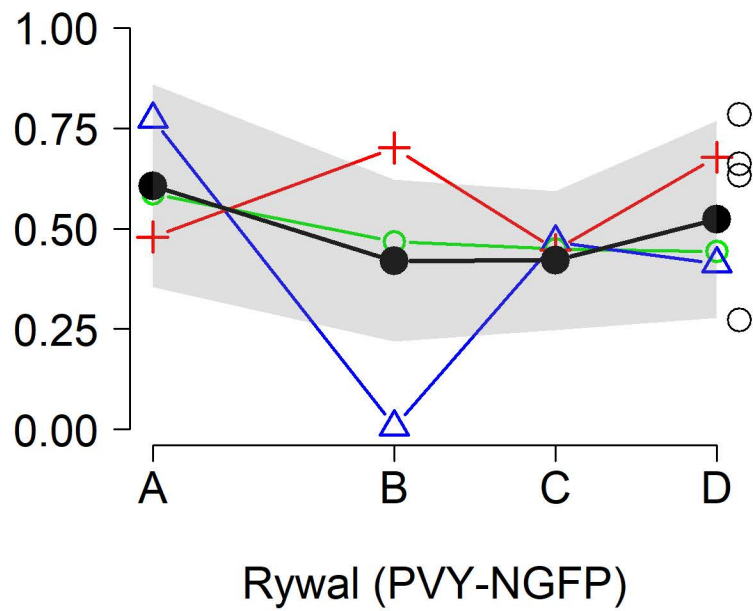


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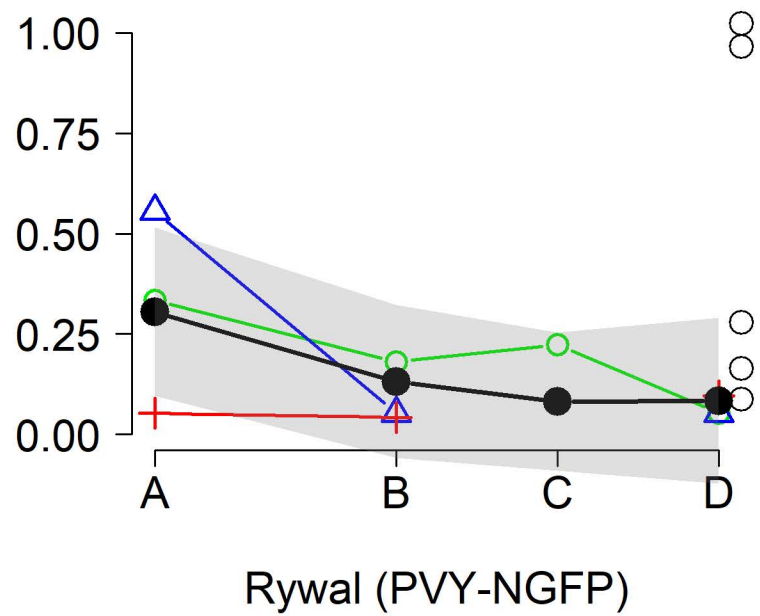


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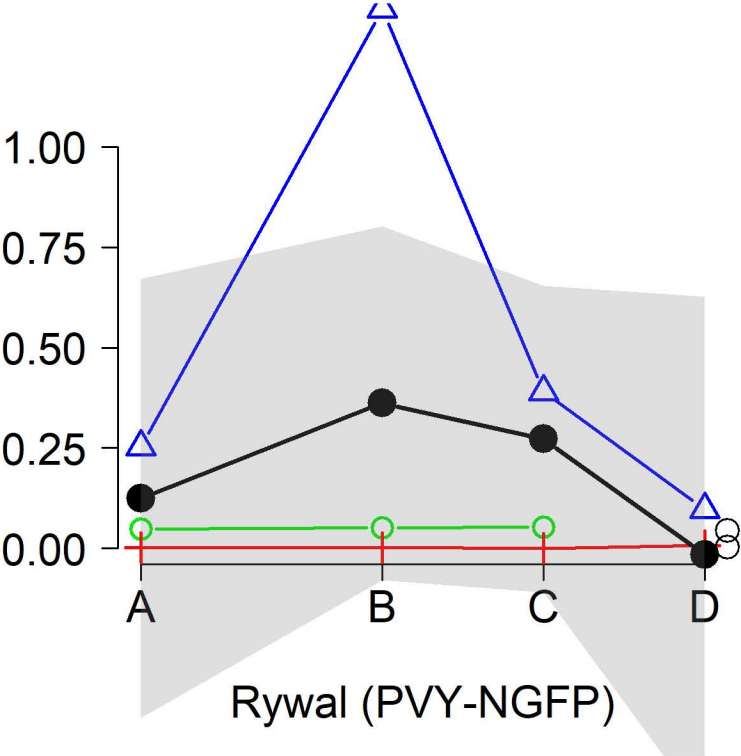
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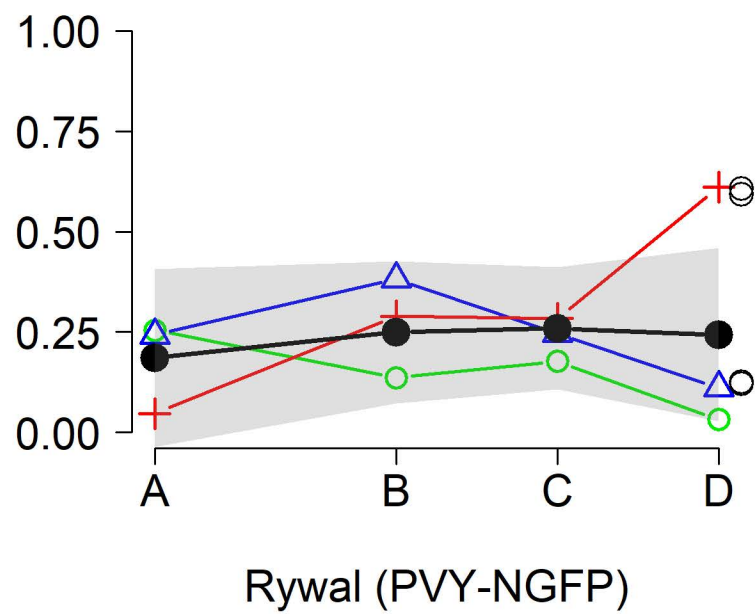
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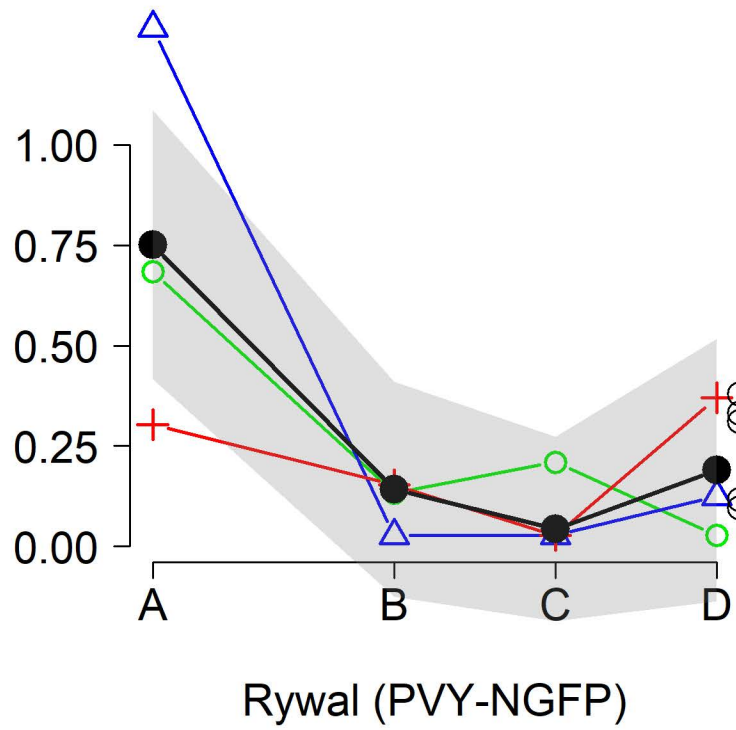
9-LOX



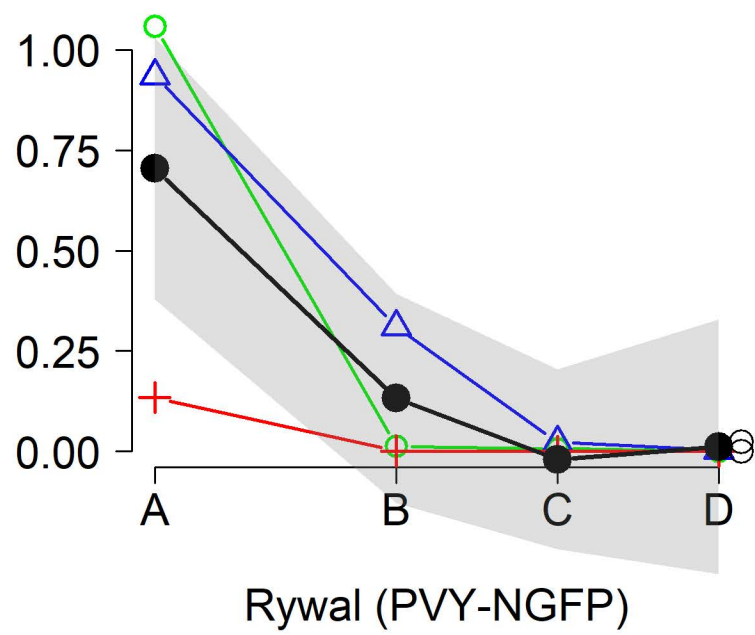
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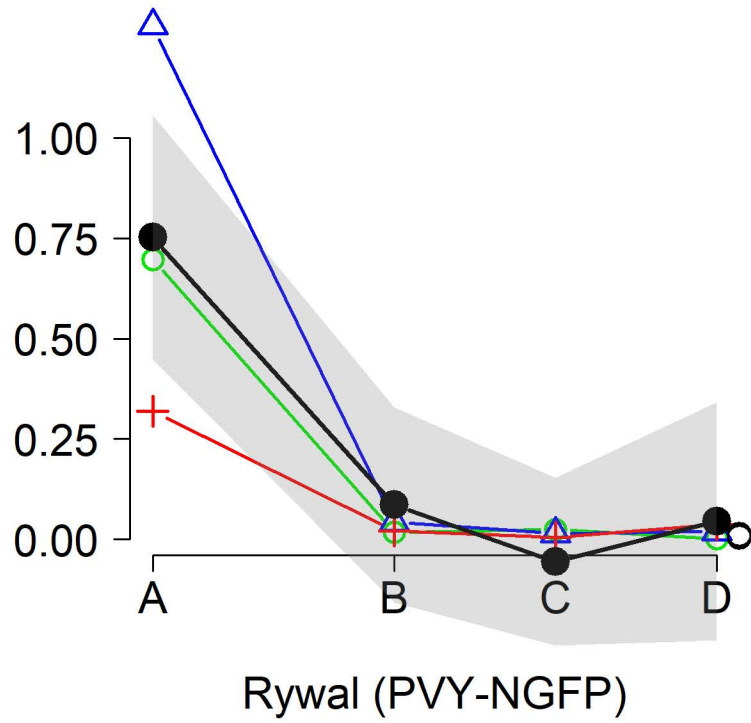
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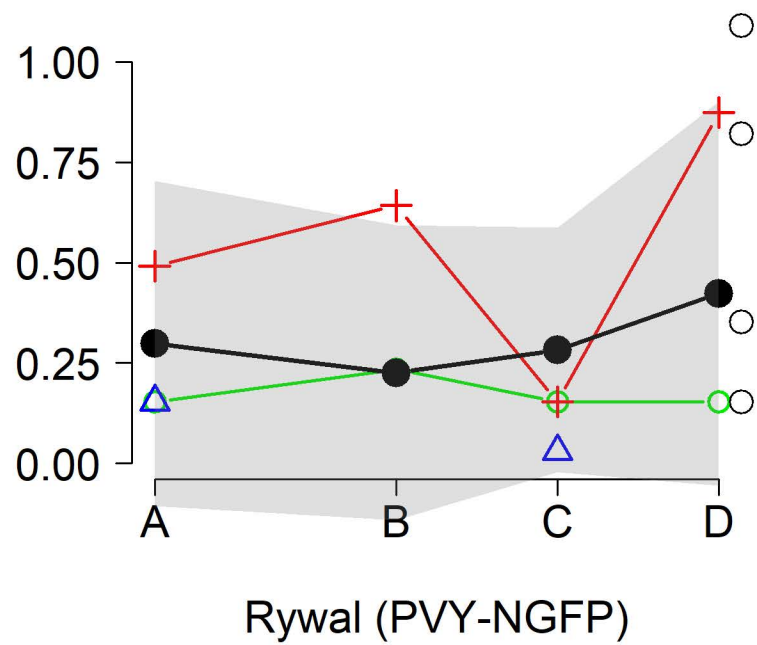
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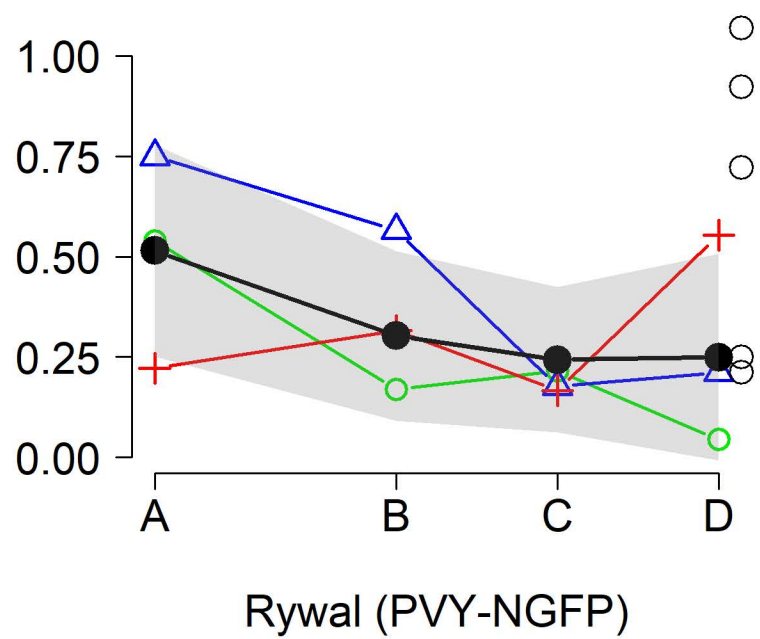
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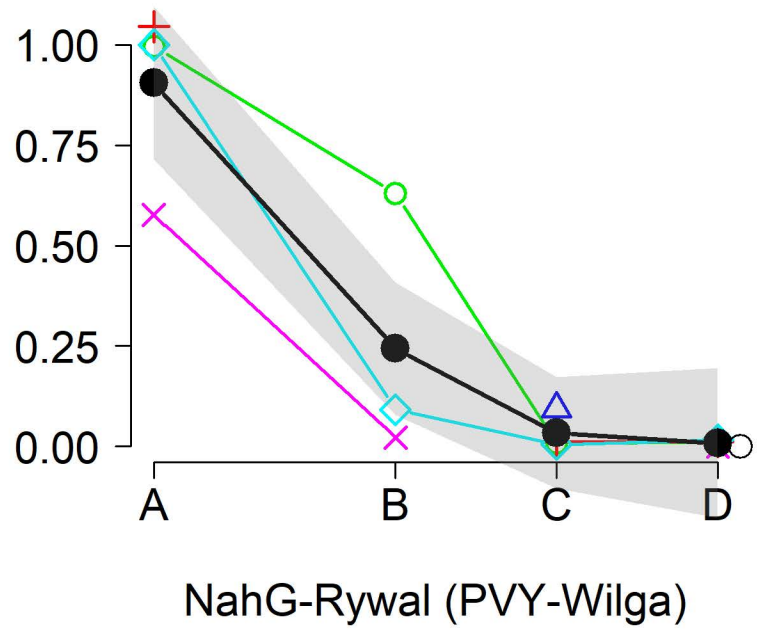
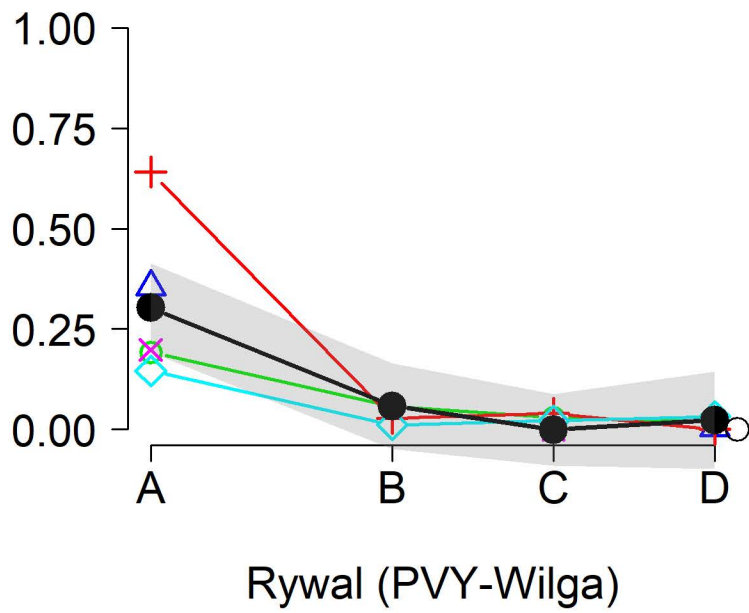
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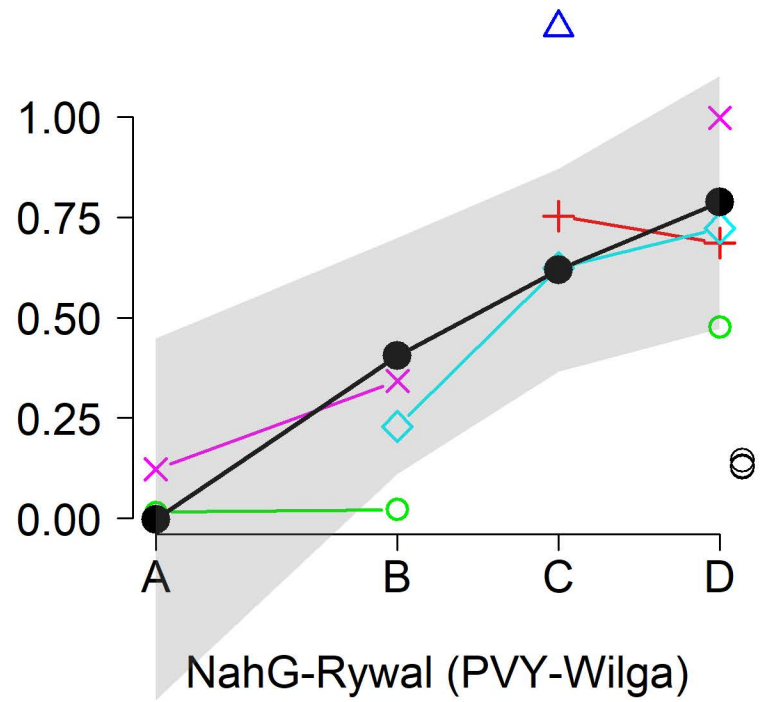
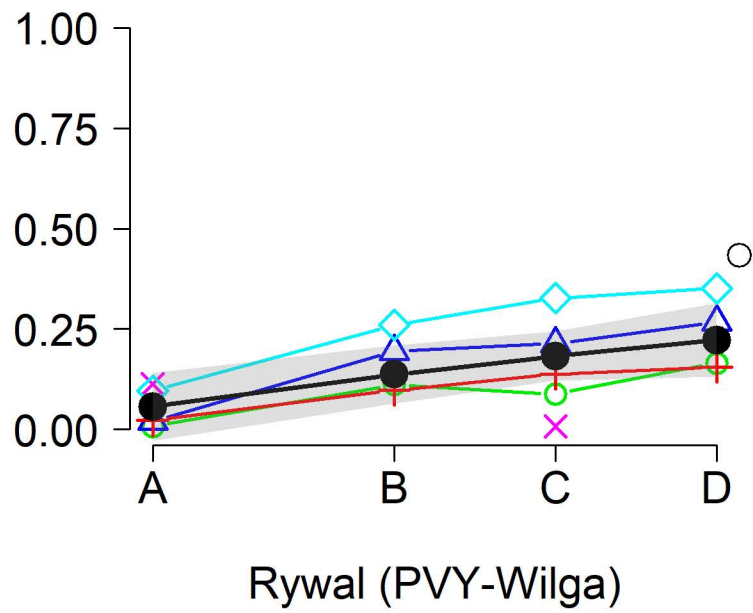
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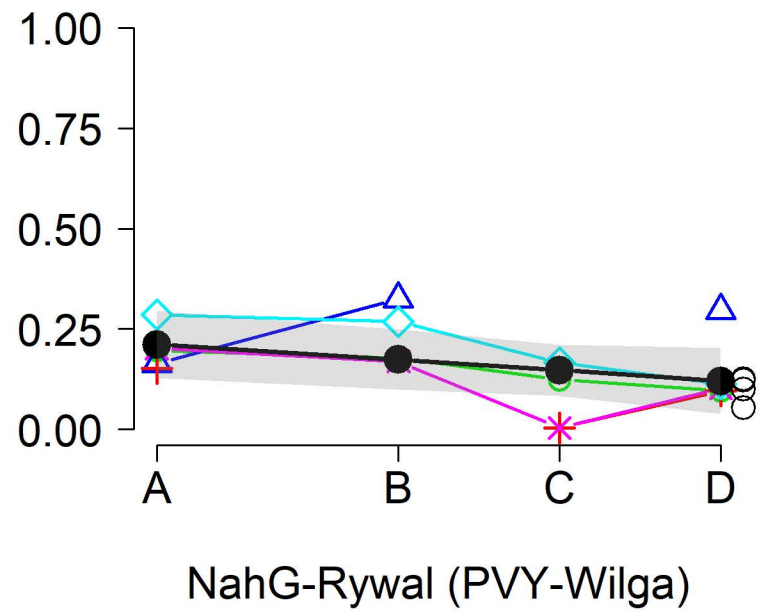
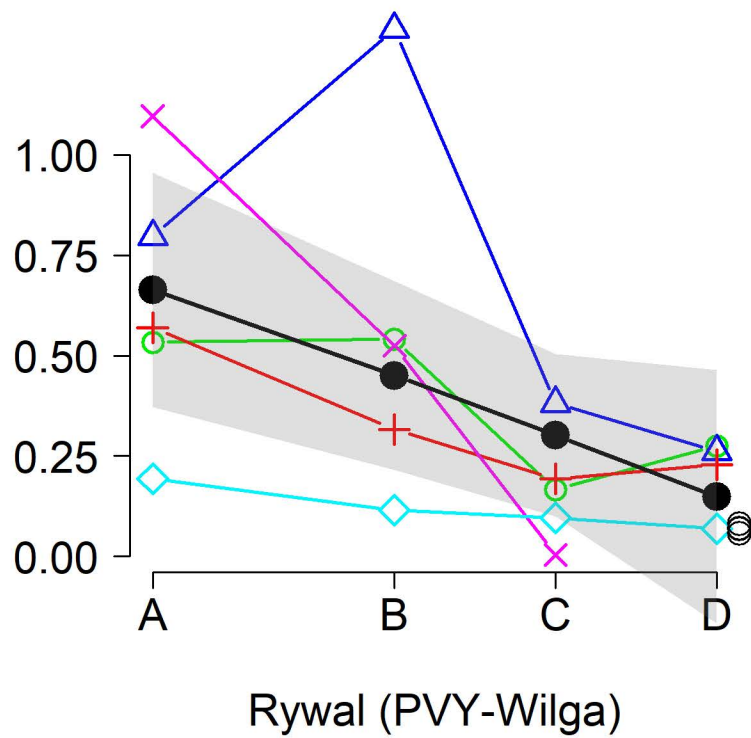
PVY



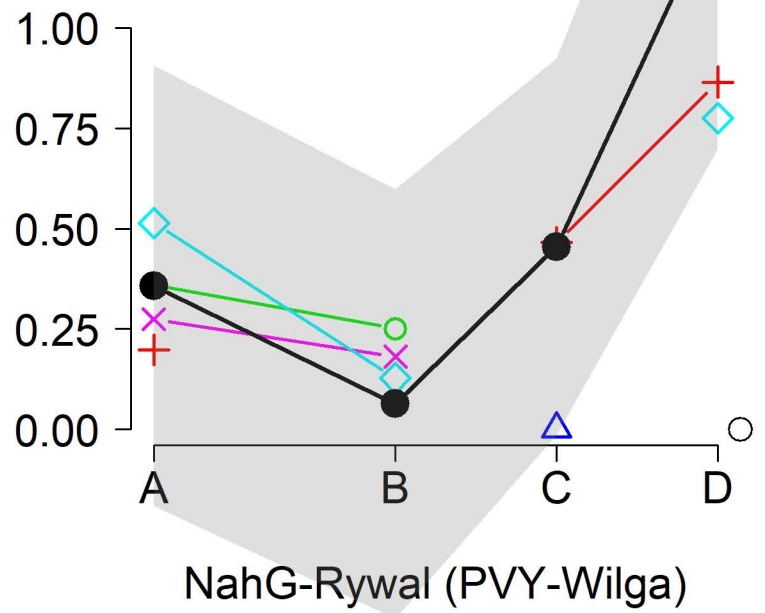
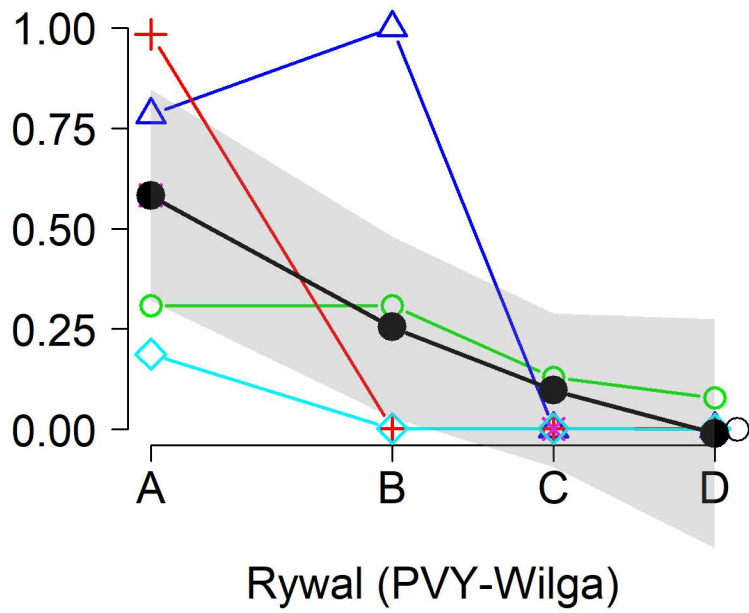
CAT1



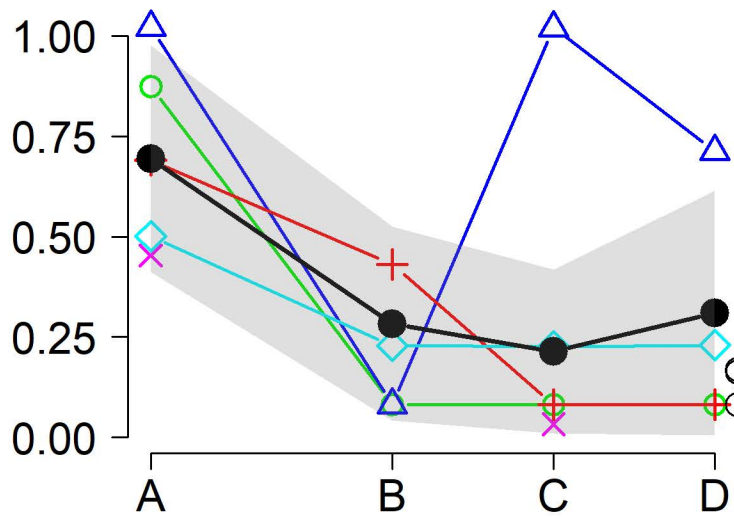
TRXH



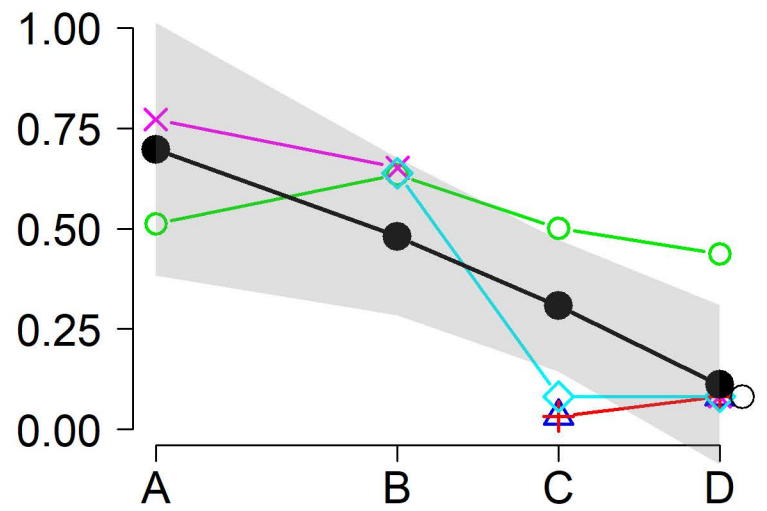
9-LOX



ACX3

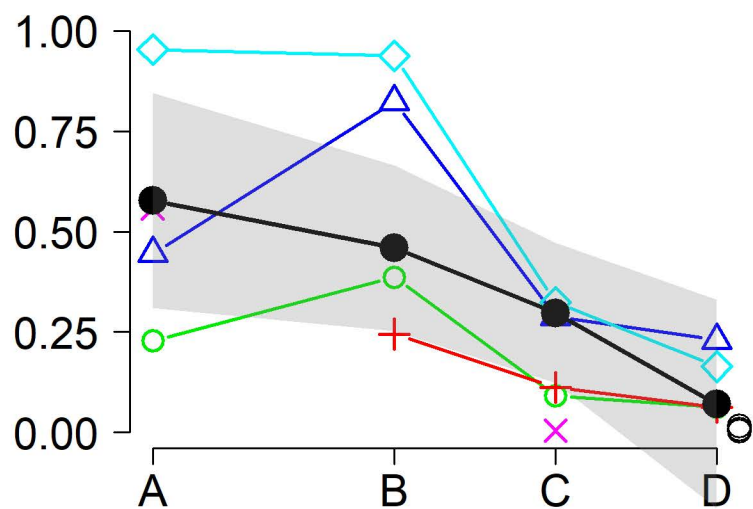


Rywal (PVY-Wilga)

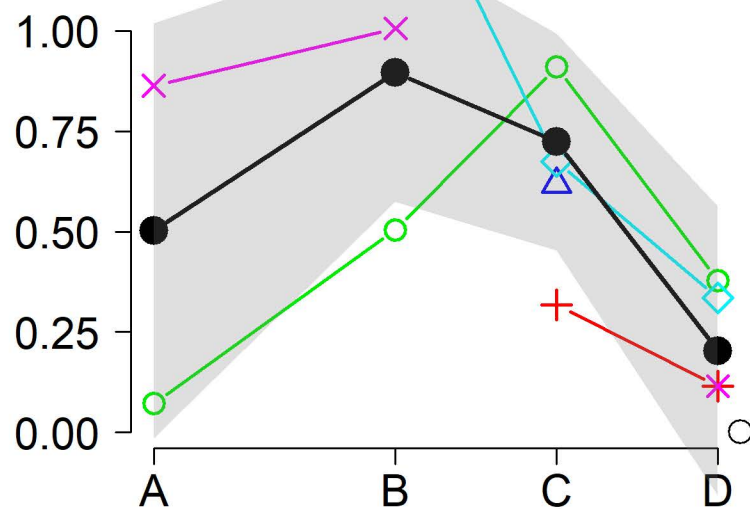


NahG-Rywal (PVY-Wilga)

PR1B

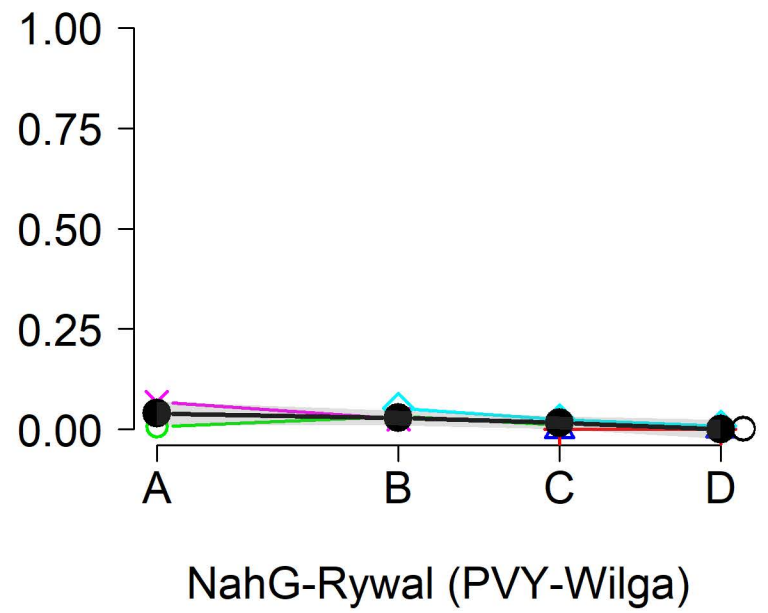
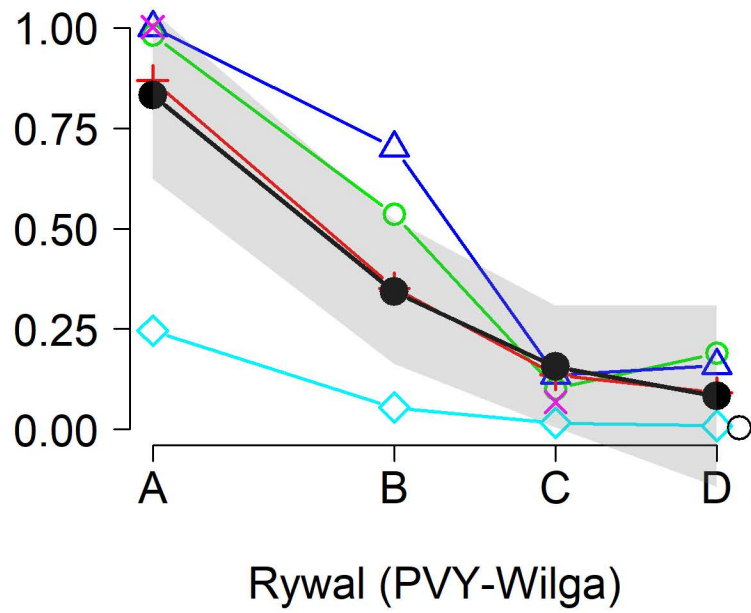


Rywal (PVY-Wilga)

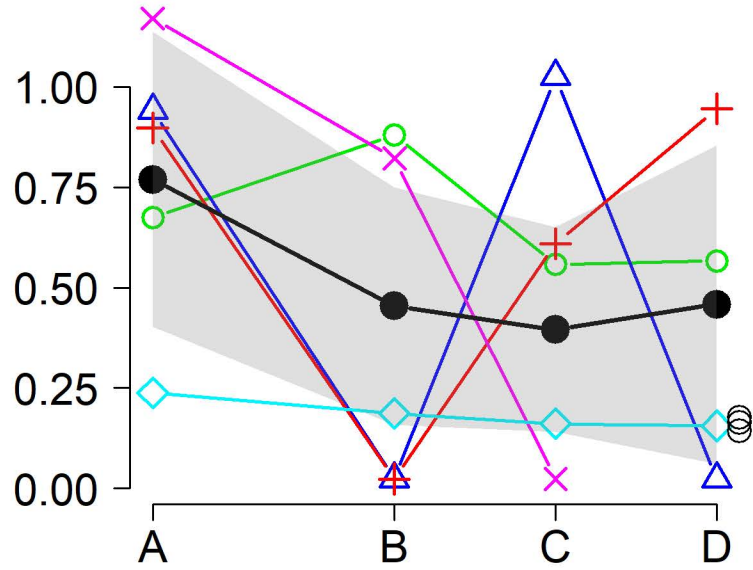


NahG-Rywal (PVY-Wilga)

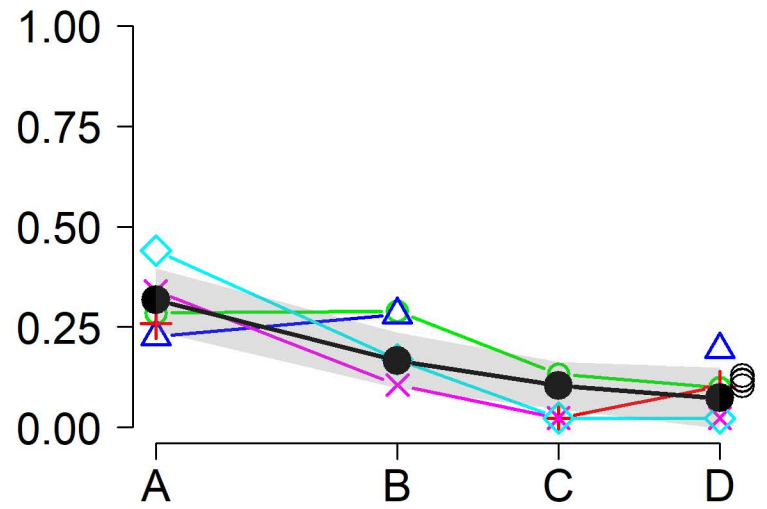
BGLU2



LSD1

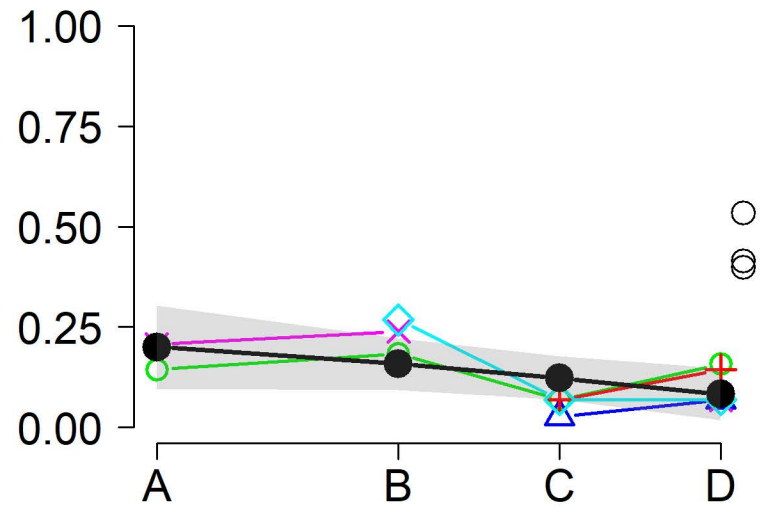
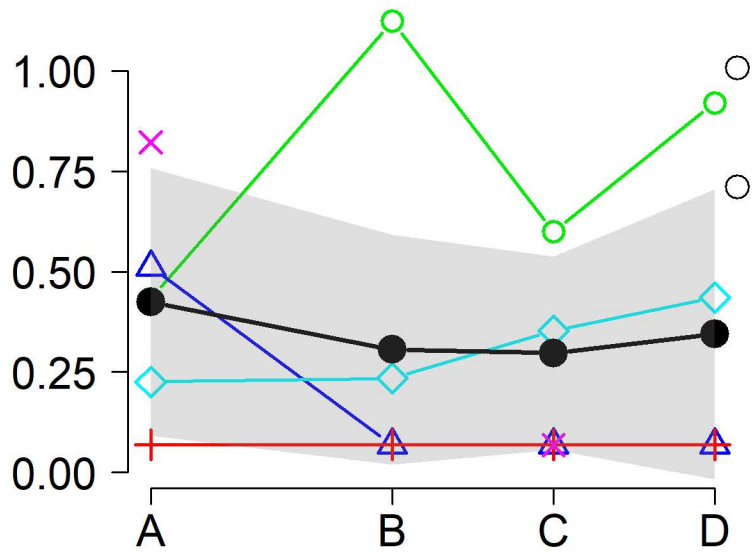


Rywal (PVY-Wilga)

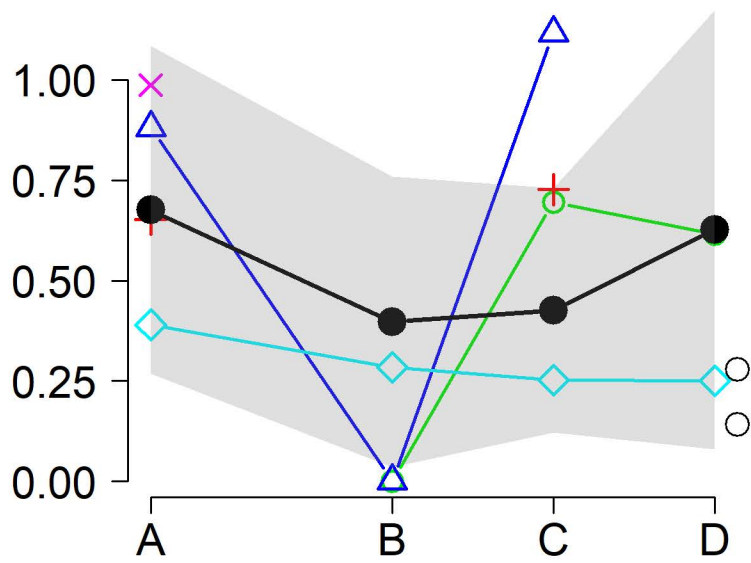


NahG-Rywal (PVY-Wilga)

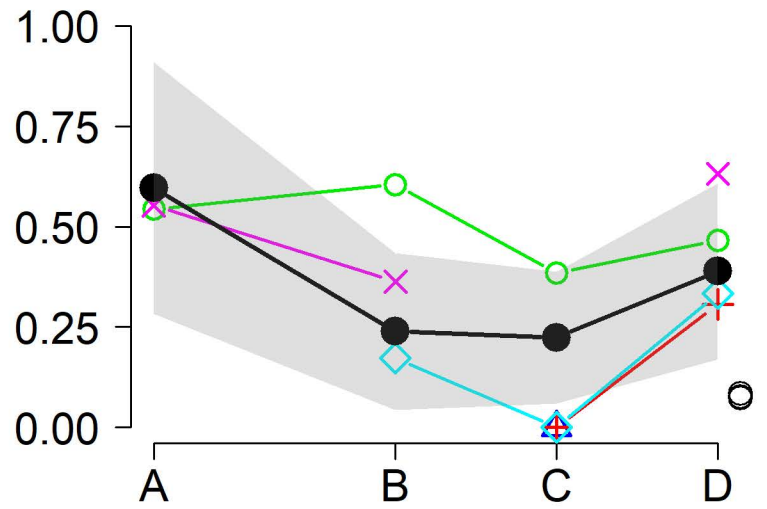
ARF2



TGA2

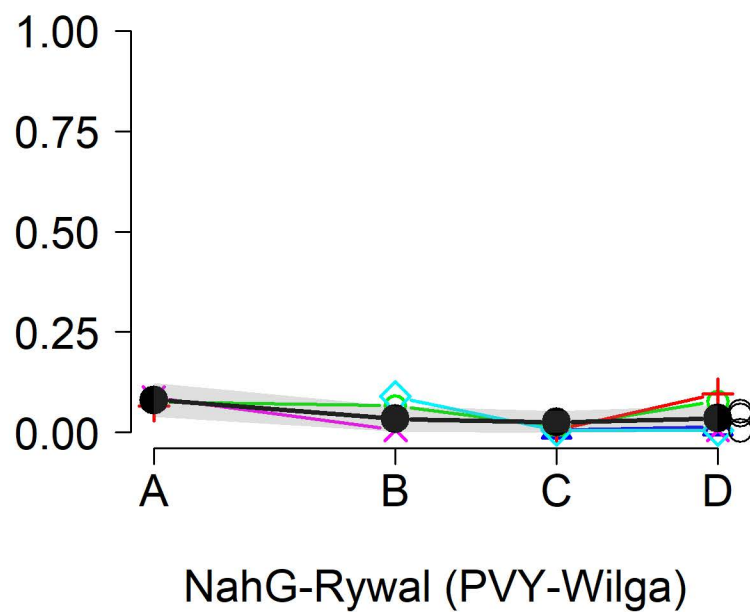
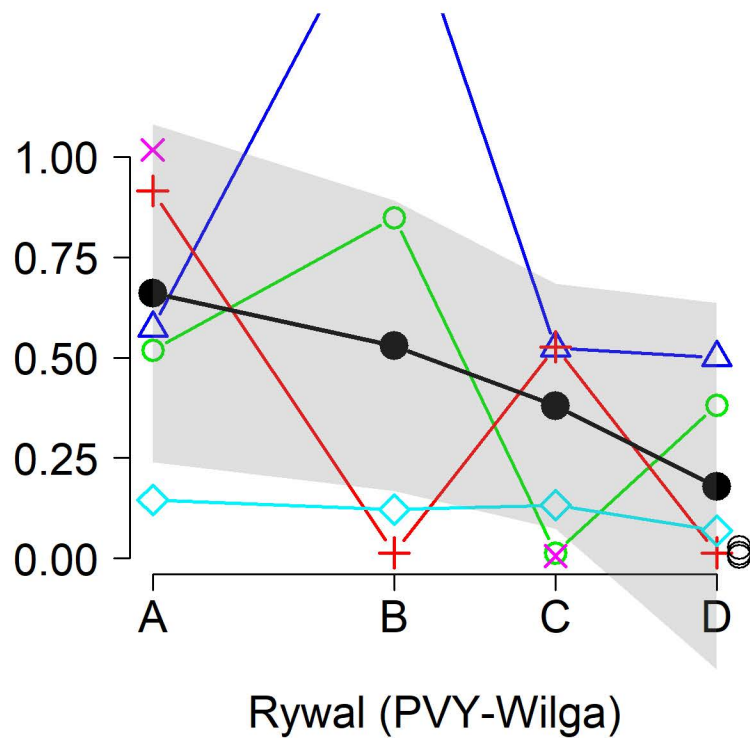


Rywal (PVY-Wilga)

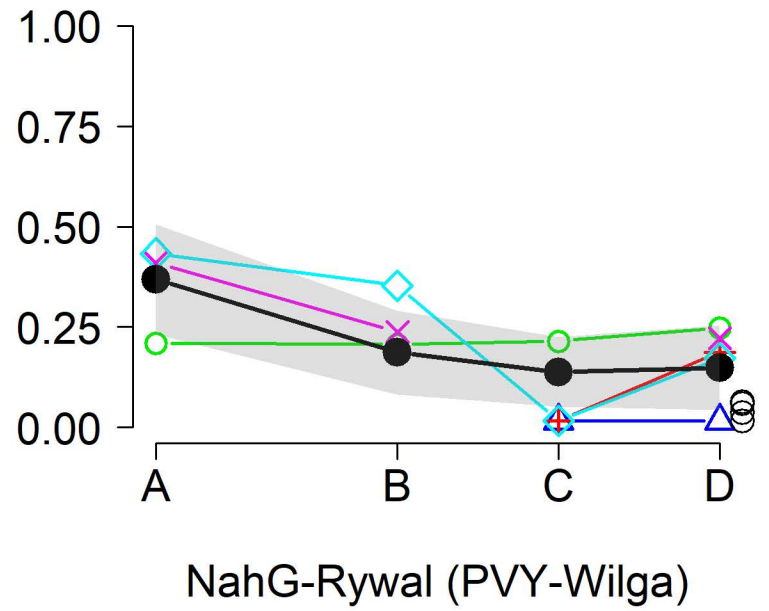
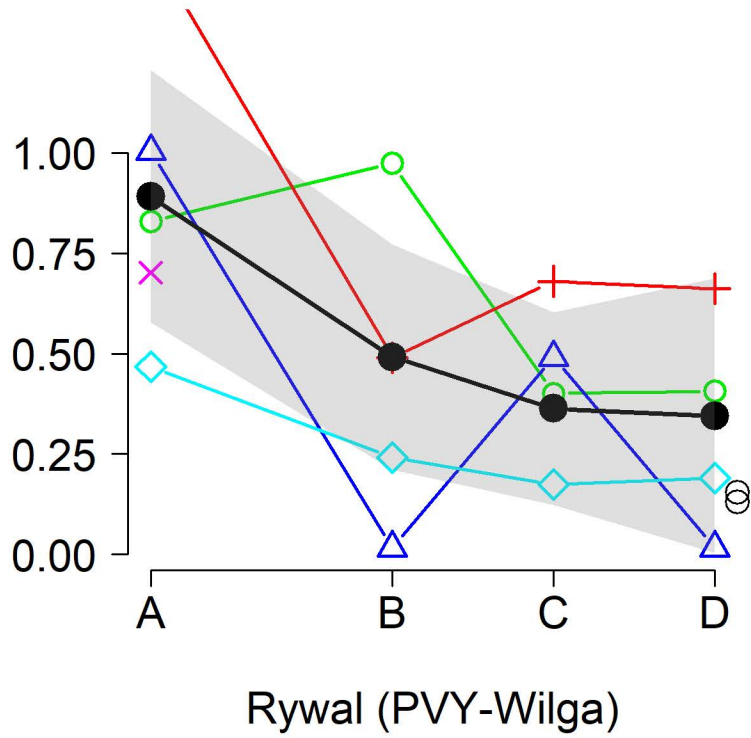


NahG-Rywal (PVY-Wilga)

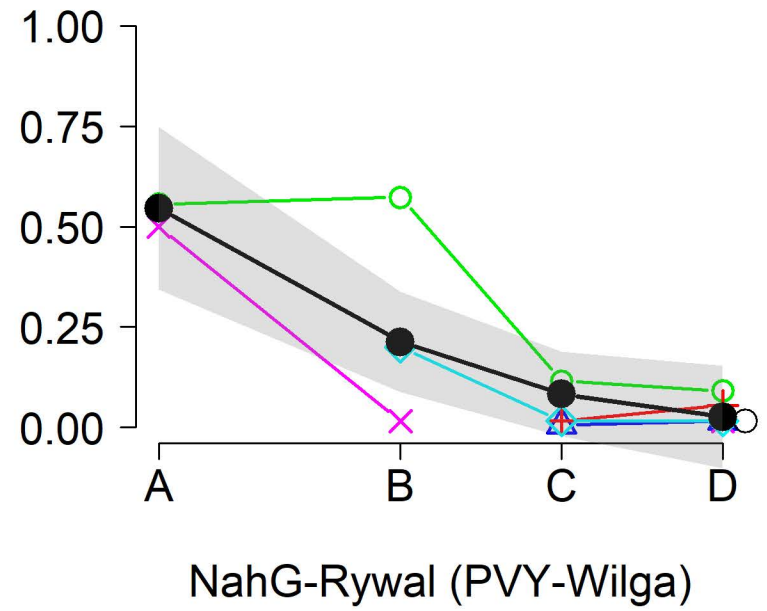
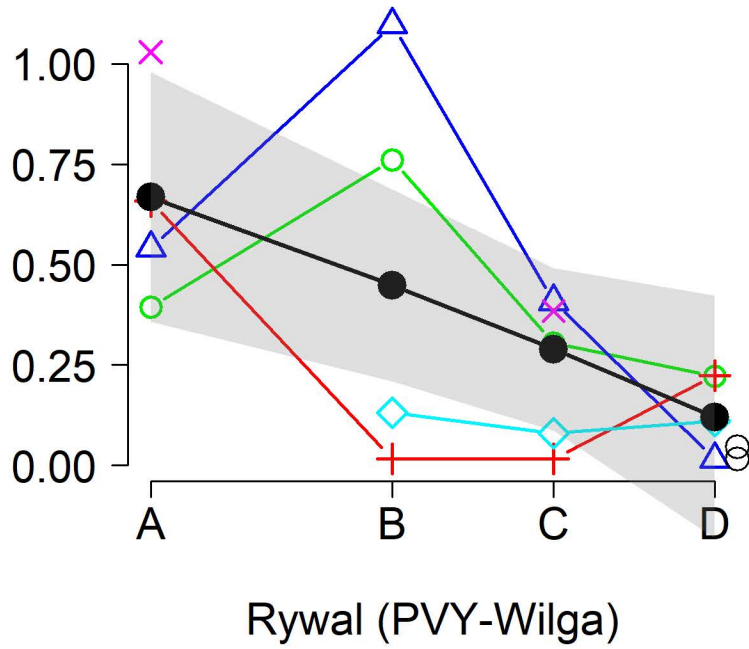
WIPK



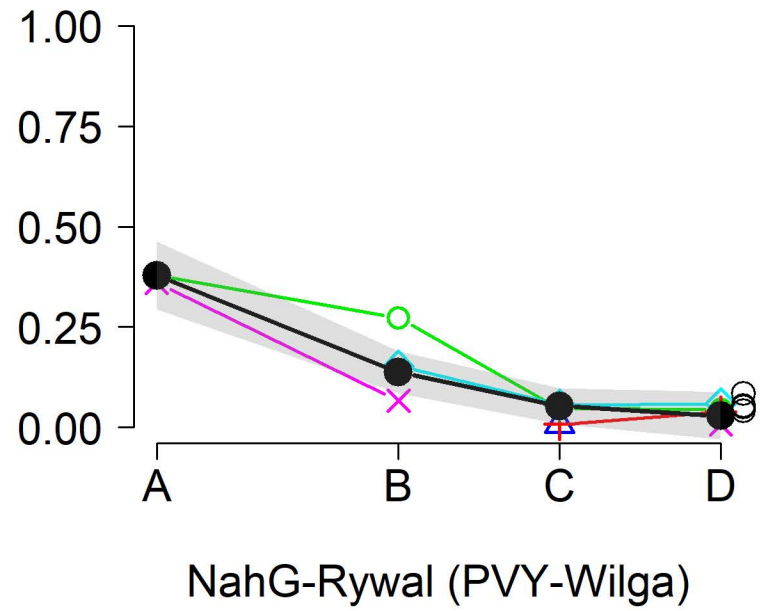
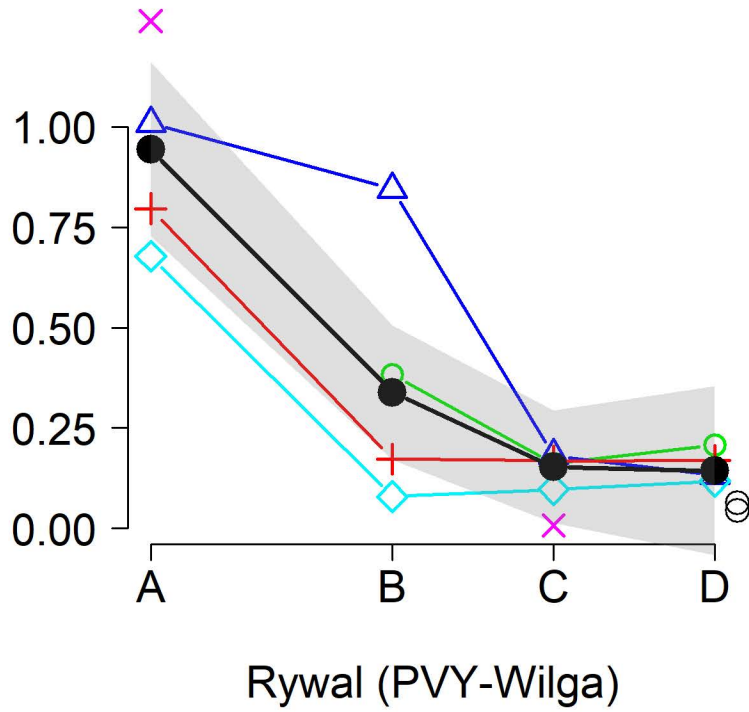
MKP1



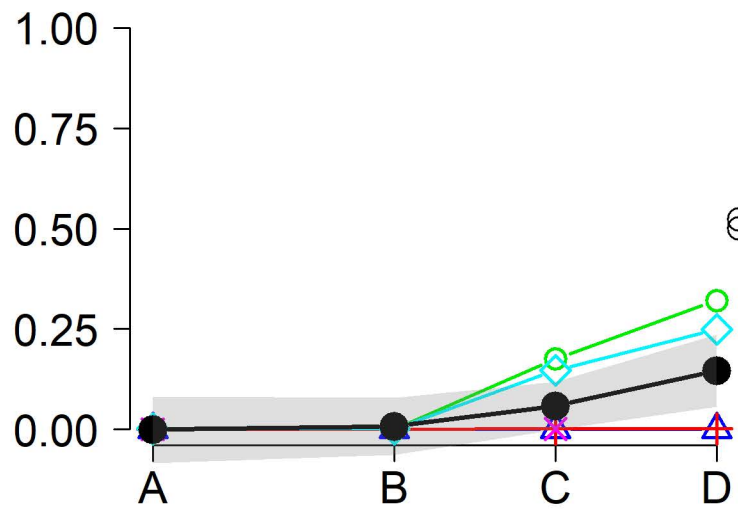
AGO2



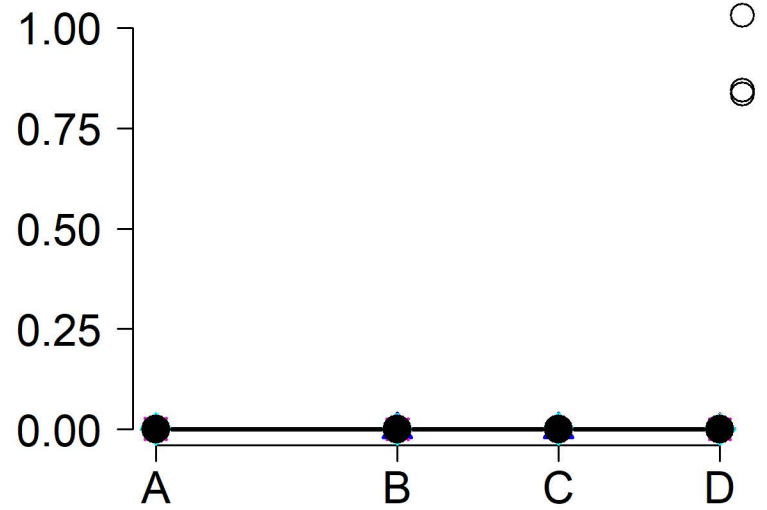
SAHH



GBSS1



Rywal (PVY-Wilga)

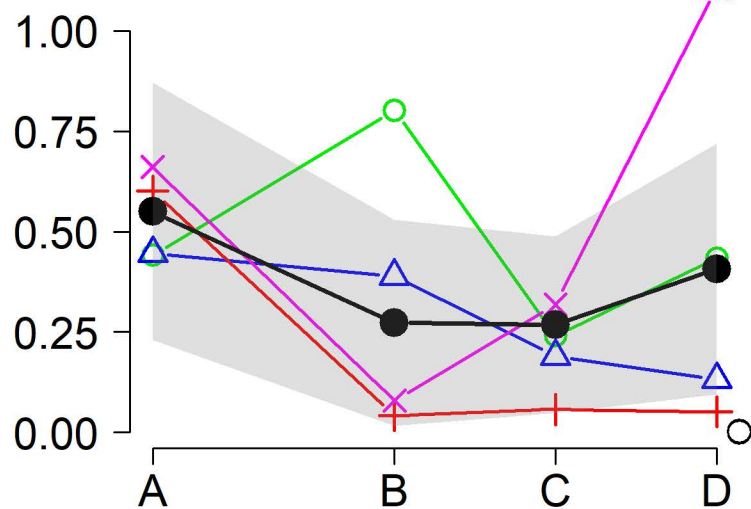


NahG-Rywal (PVY-Wilga)

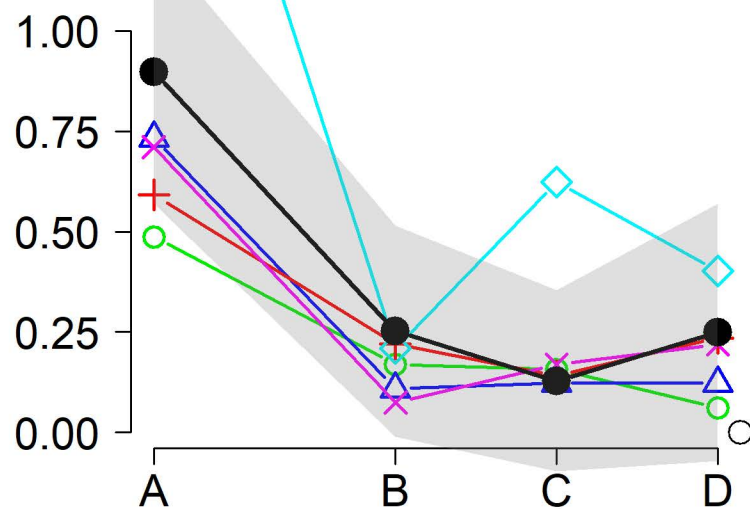
Early visible lesions

PVY

1st direction

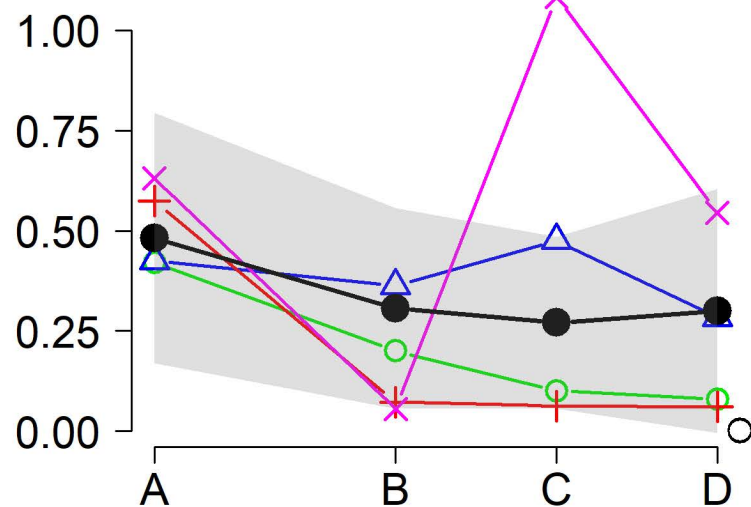


Rywal (PVY-Wilga)

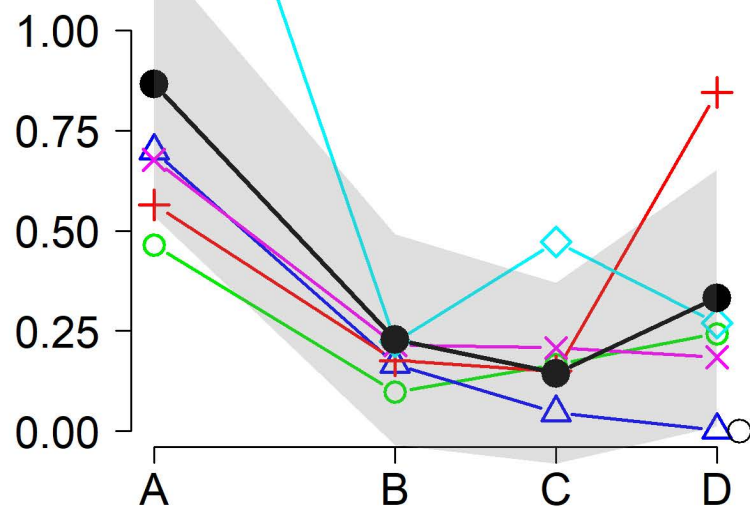


NahG-Rywal (PVY-Wilga)

2nd direction



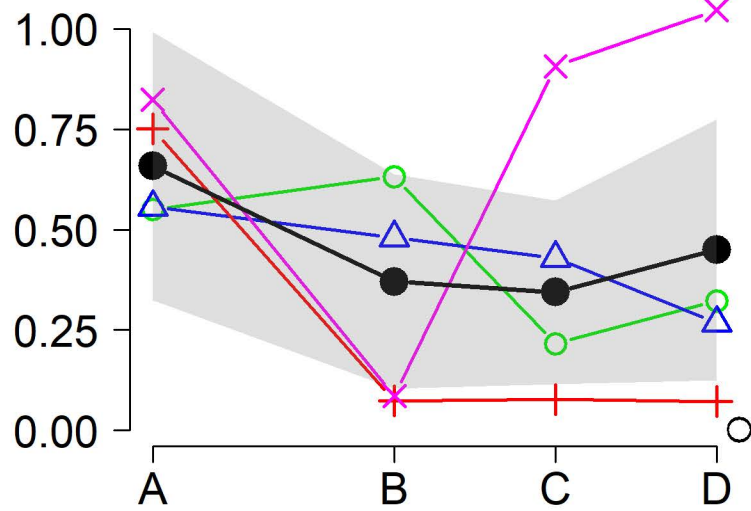
Rywal (PVY-Wilga)



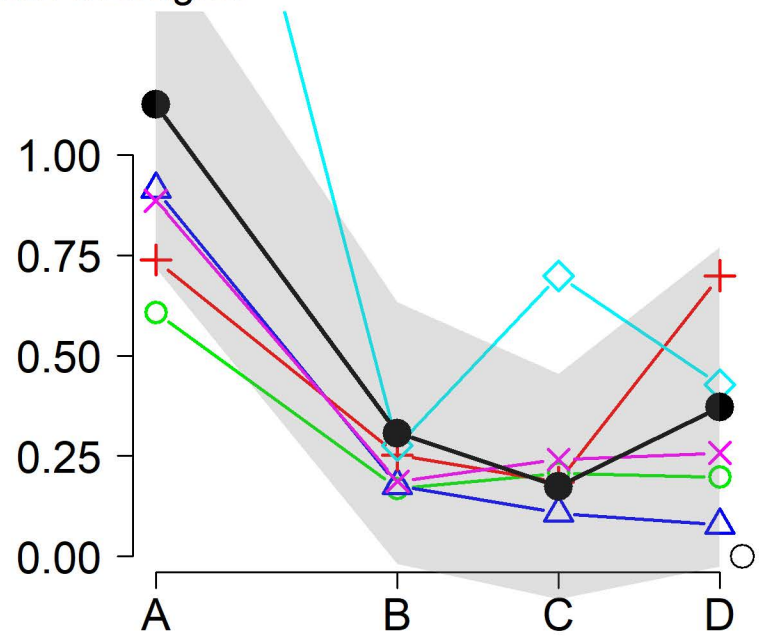
NahG-Rywal (PVY-Wilga)

PVY

1st and 2nd direction averaged



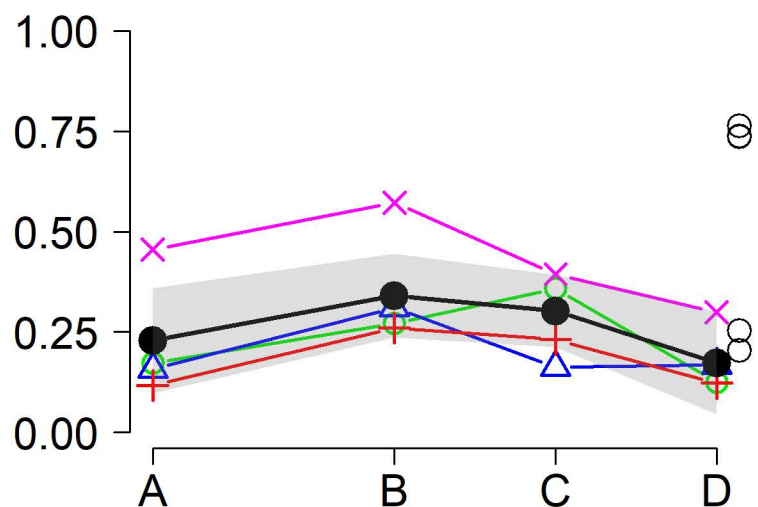
Rywal (PVY-Wilga)



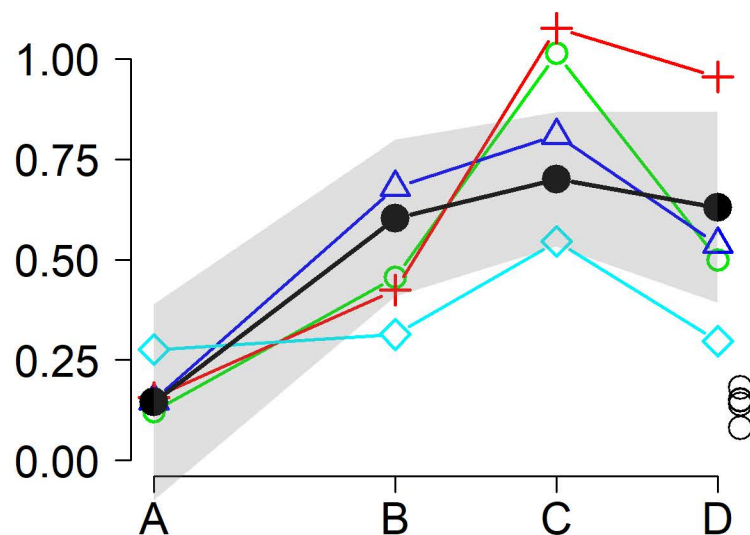
NahG-Rywal (PVY-Wilga)

CAT1

1st direction

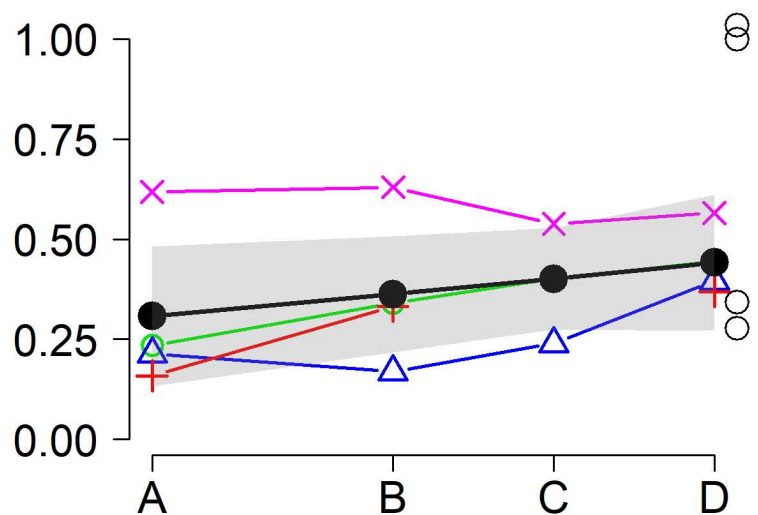


Rywal (PVY-Wilga)

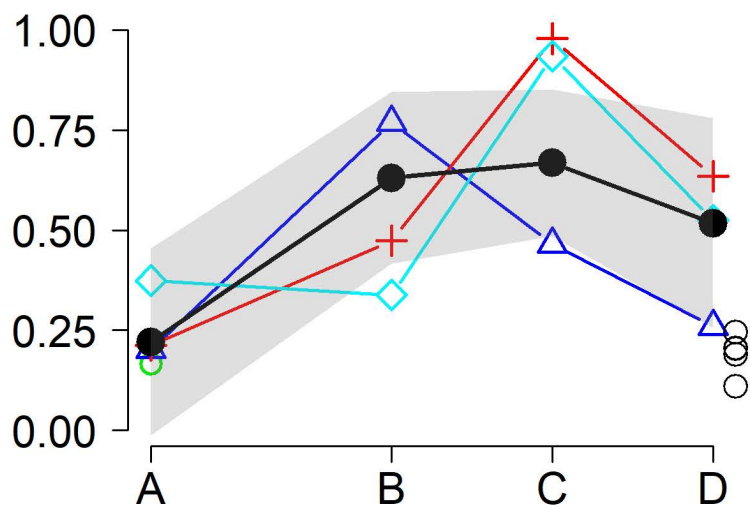


NahG-Rywal (PVY-Wilga)

2nd direction



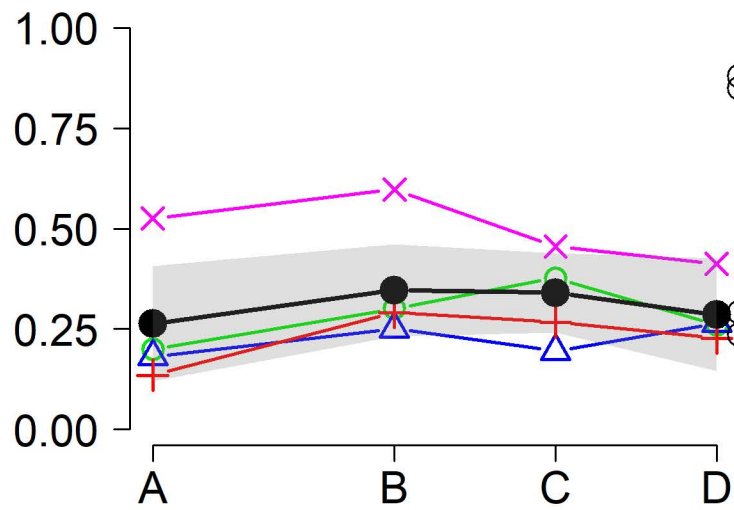
Rywal (PVY-Wilga)



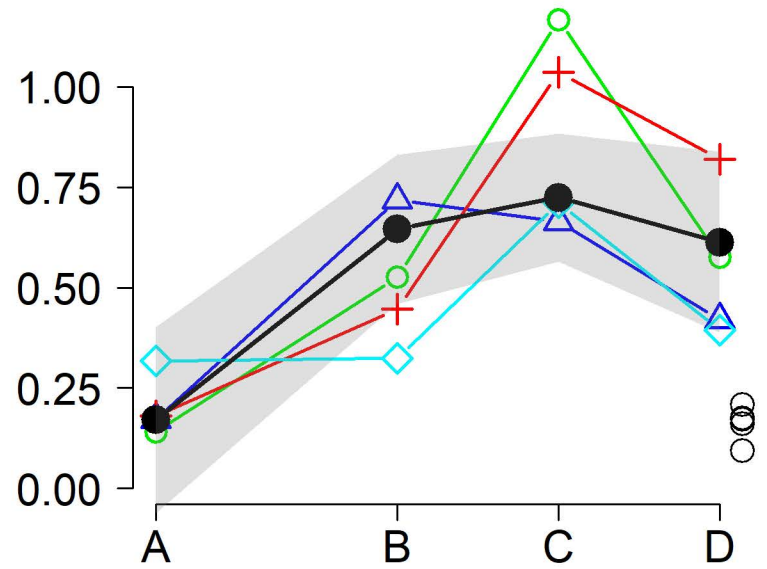
NahG-Rywal (PVY-Wilga)

CAT1

1st and 2nd direction averaged



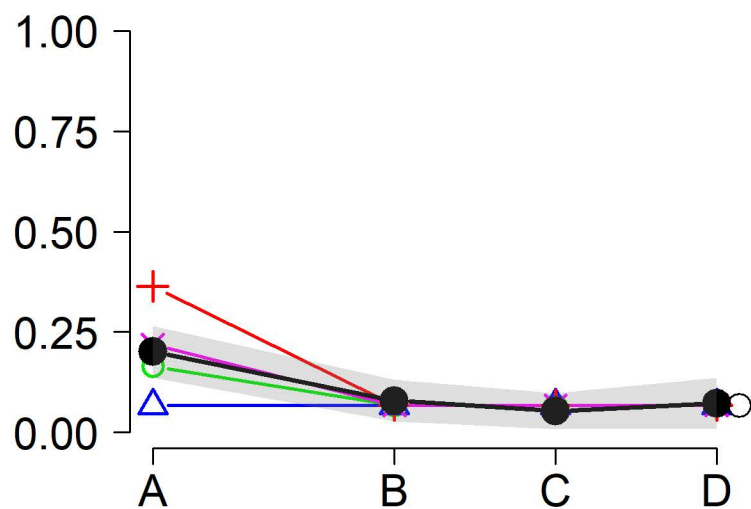
Rywal (PVY-Wilga)



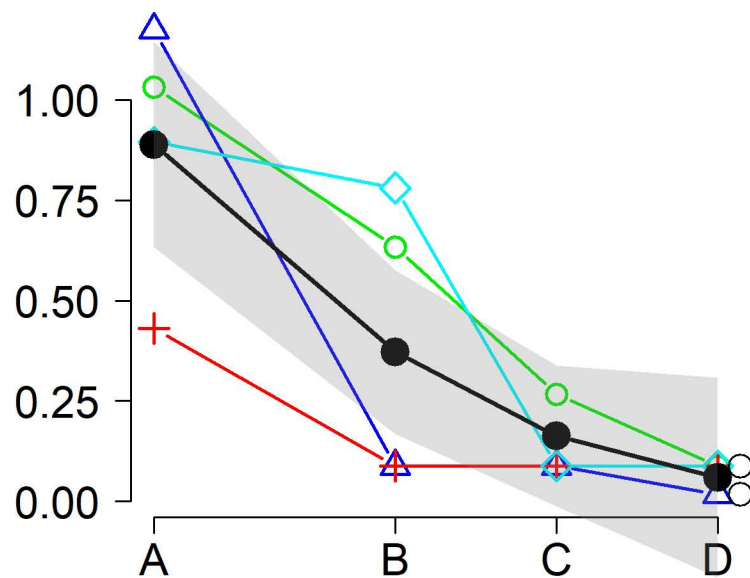
NahG-Rywal (PVY-Wilga)

PRX28

1st direction

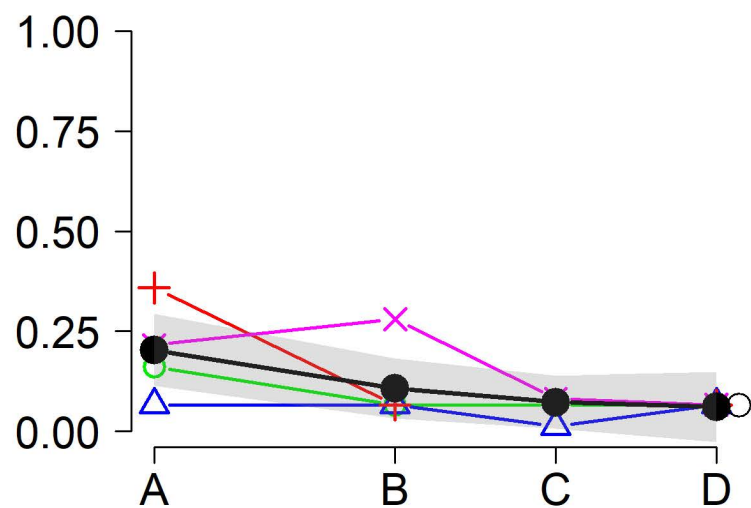


Rywal (PVY-Wilga)

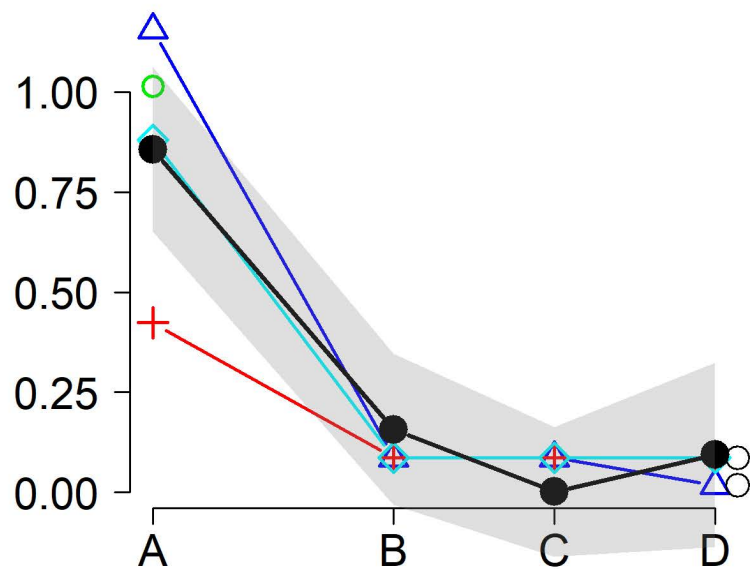


NahG-Rywal (PVY-Wilga)

2nd direction



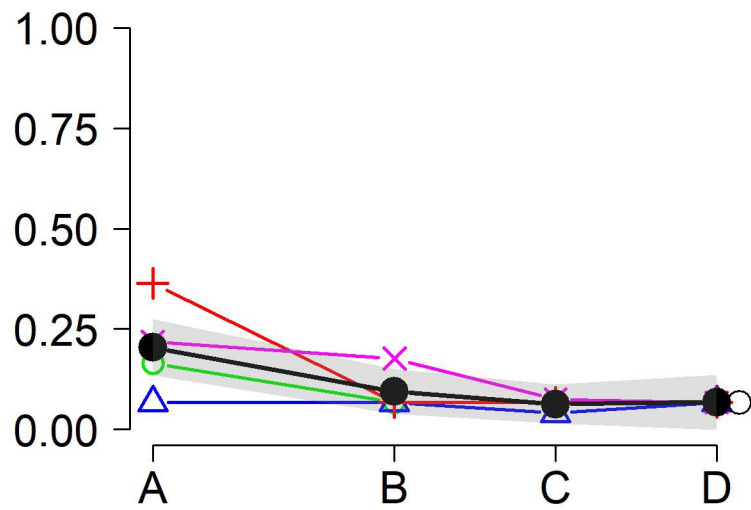
Rywal (PVY-Wilga)



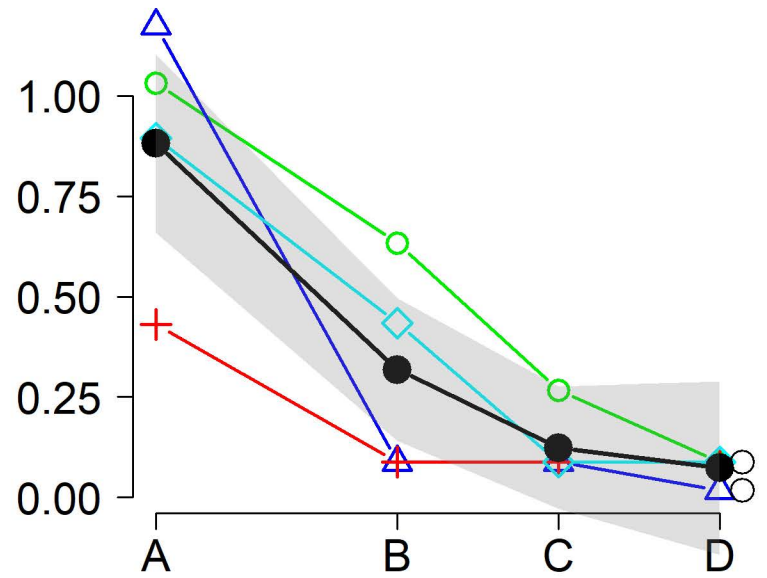
NahG-Rywal (PVY-Wilga)

PRX28

1st and 2nd direction averaged



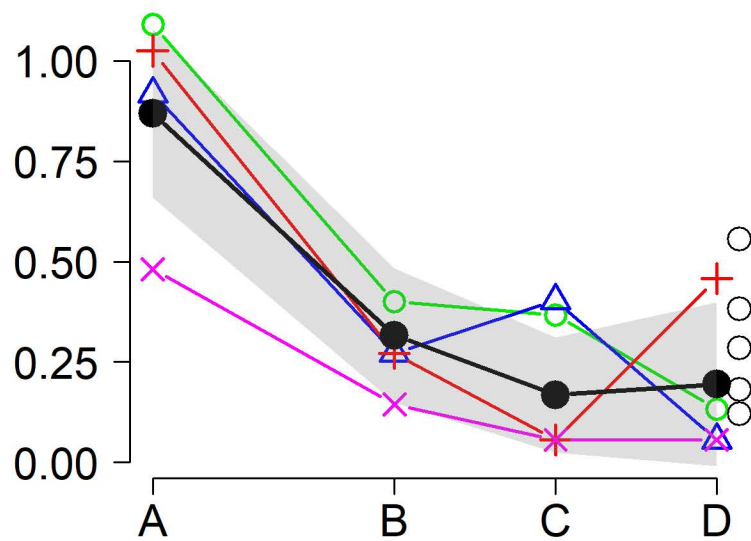
Rywal (PVY-Wilga)



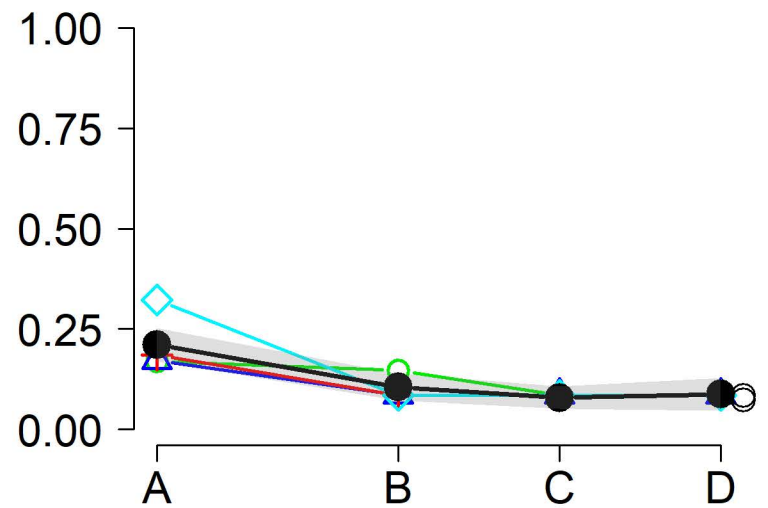
NahG-Rywal (PVY-Wilga)

RBOHA

1st direction

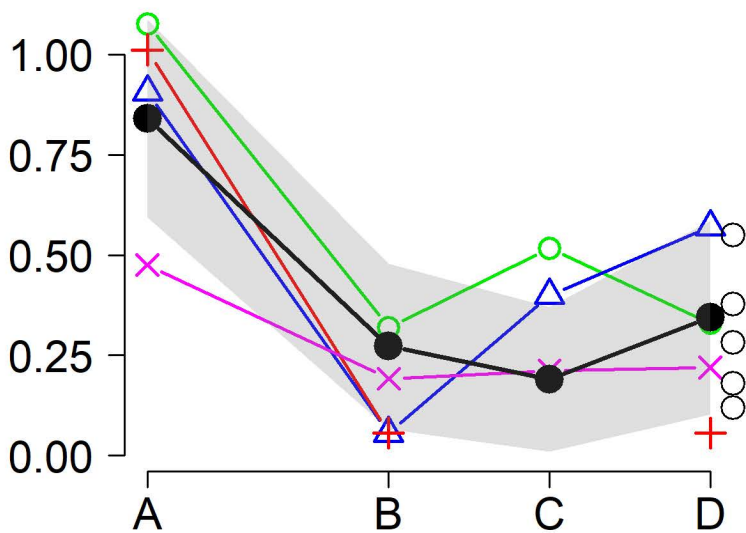


Rywal (PVY-Wilga)

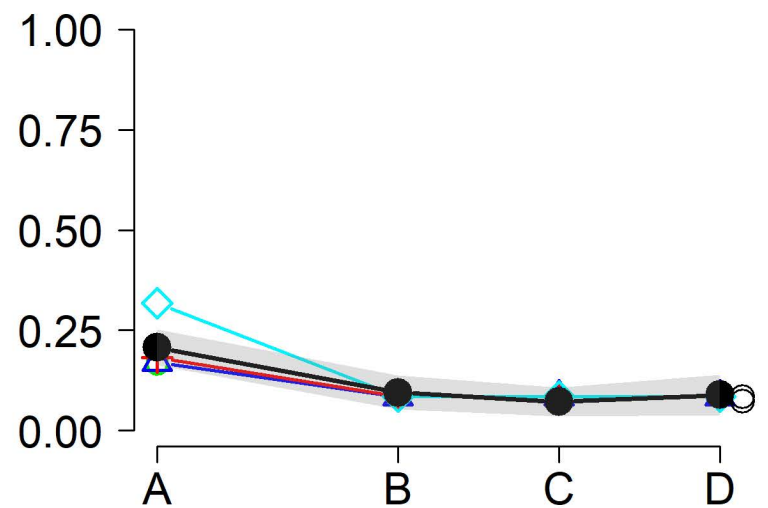


NahG-Rywal (PVY-Wilga)

2nd direction



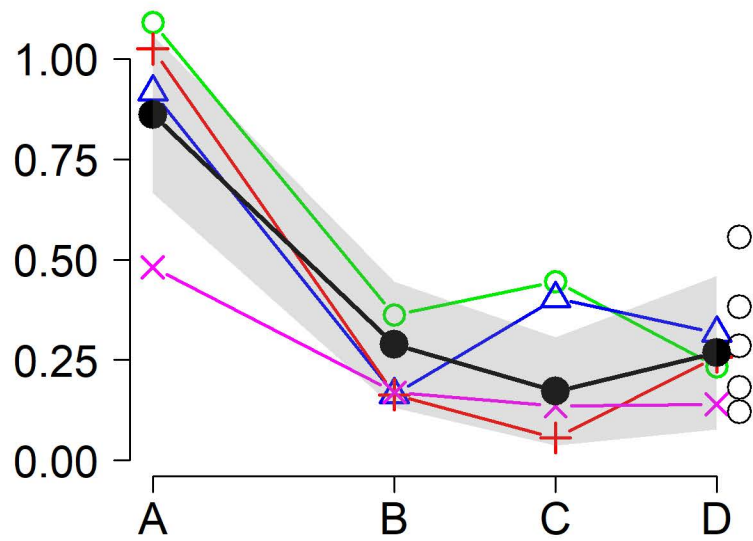
Rywal (PVY-Wilga)



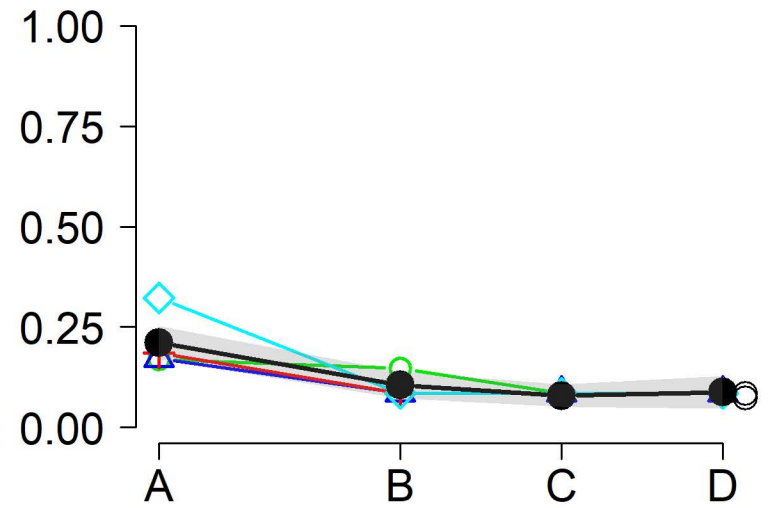
NahG-Rywal (PVY-Wilga)

RBOHA

1st and 2nd direction averaged

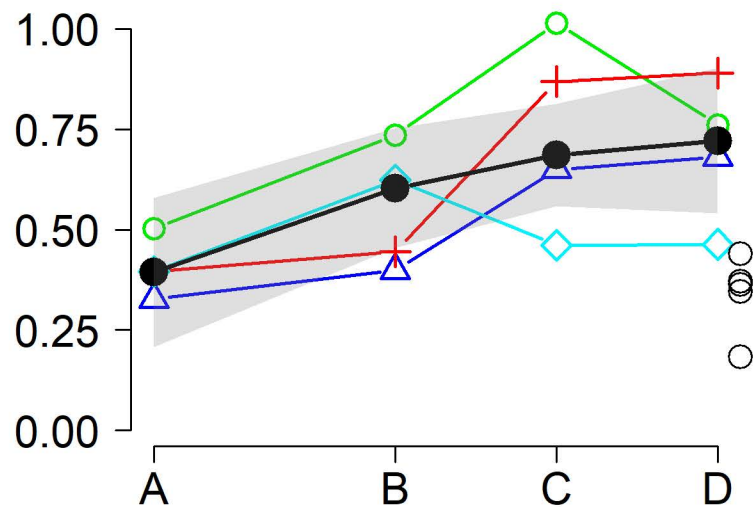
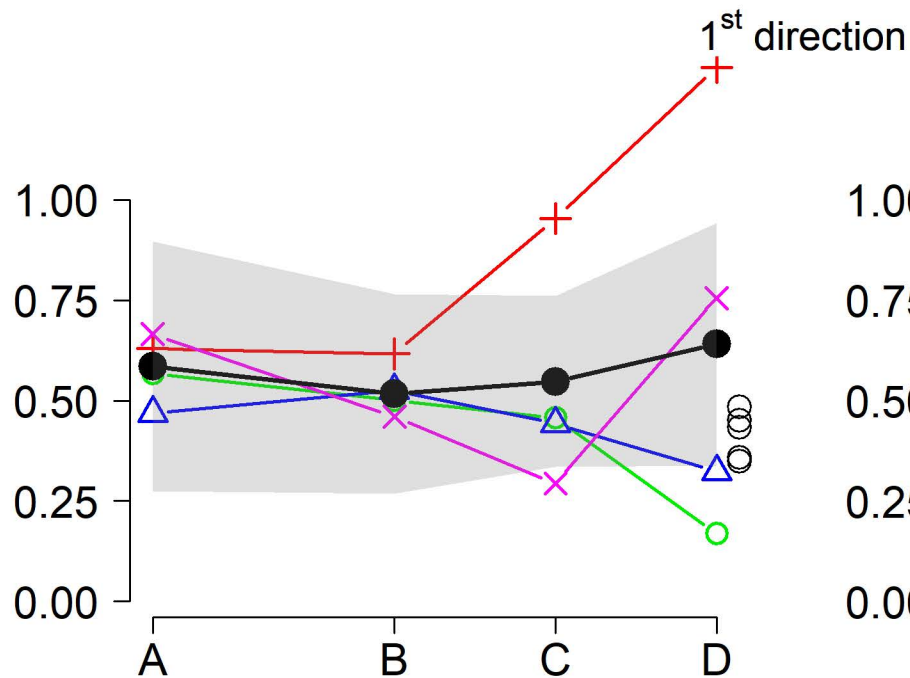


Rywal (PVY-Wilga)

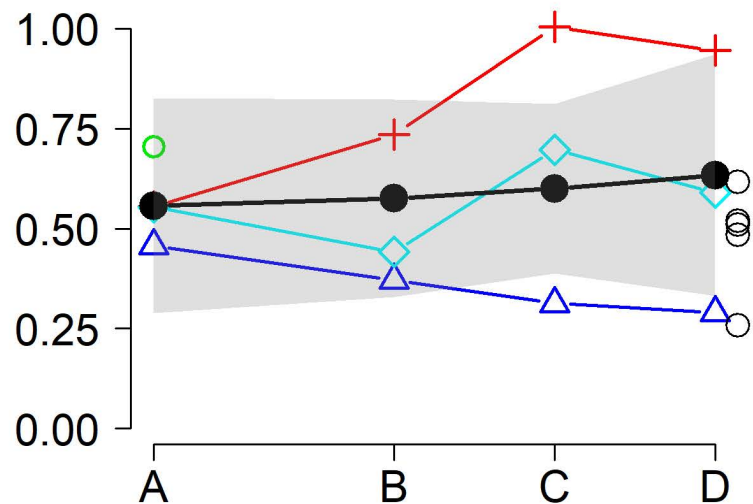
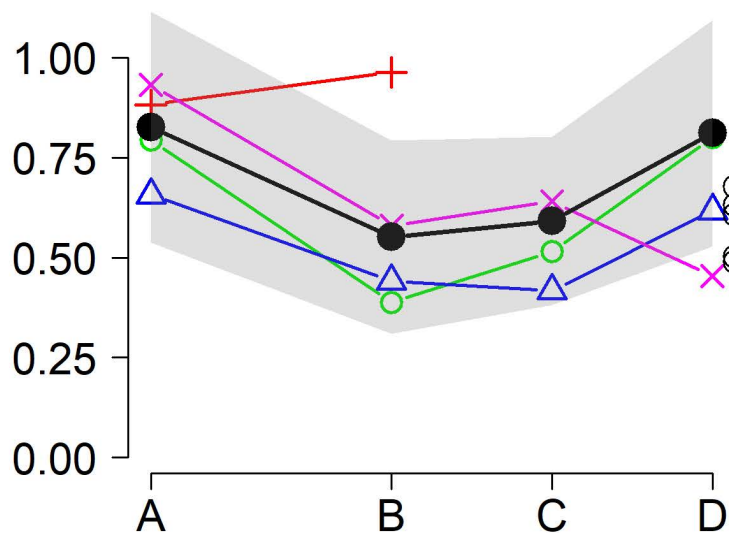


NahG-Rywal (PVY-Wilga)

RBOHC

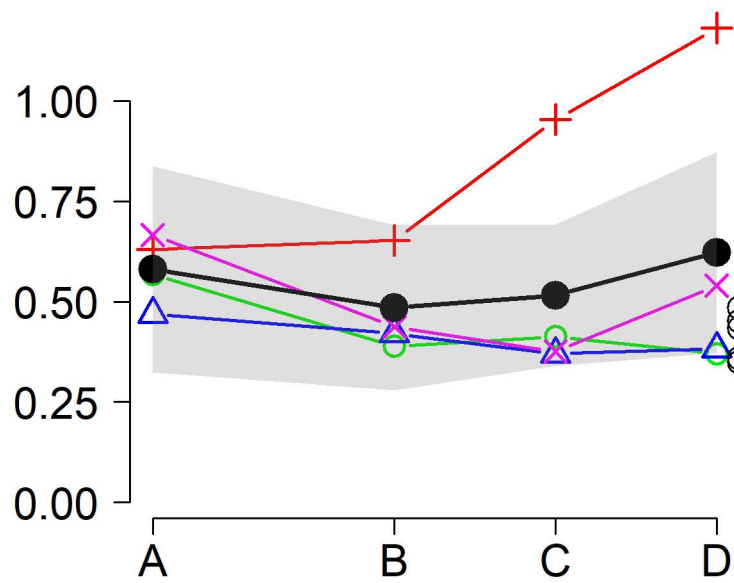


2nd direction

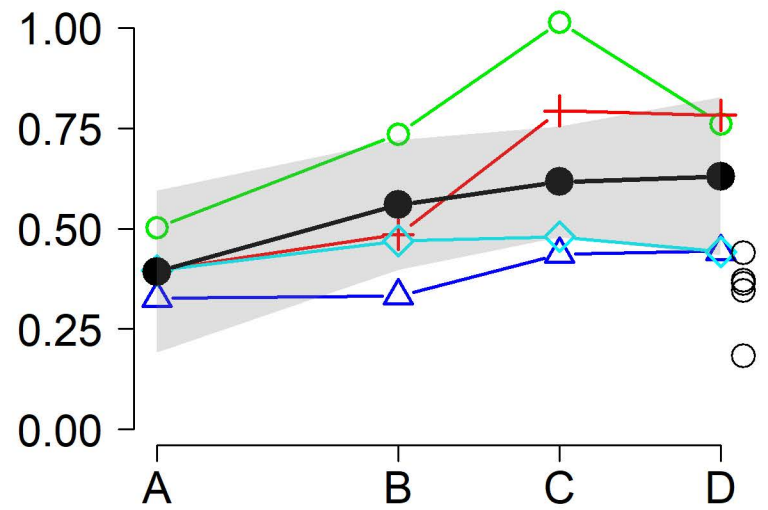


RBOHC

1st and 2nd direction averaged



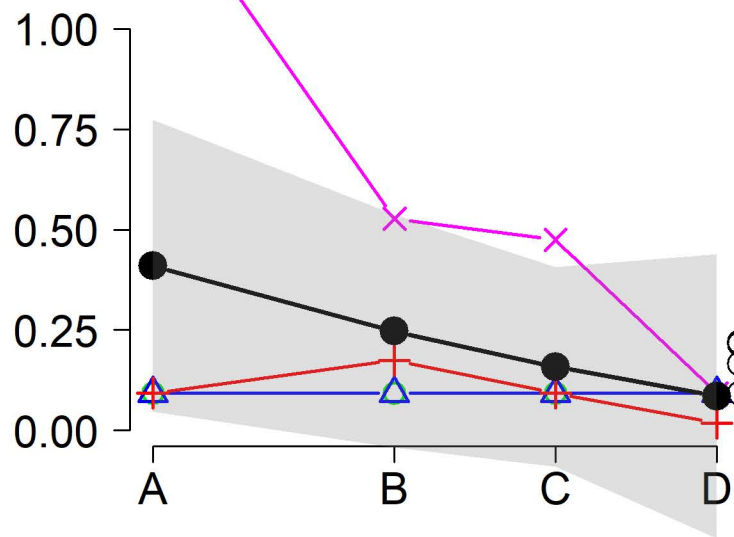
Rywal (PVY-Wilga)



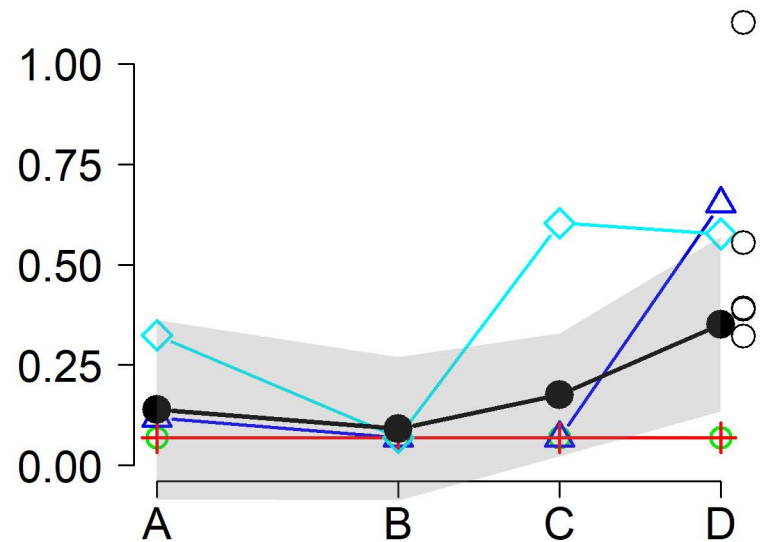
NahG-Rywal (PVY-Wilga)

RBOHD

1st direction

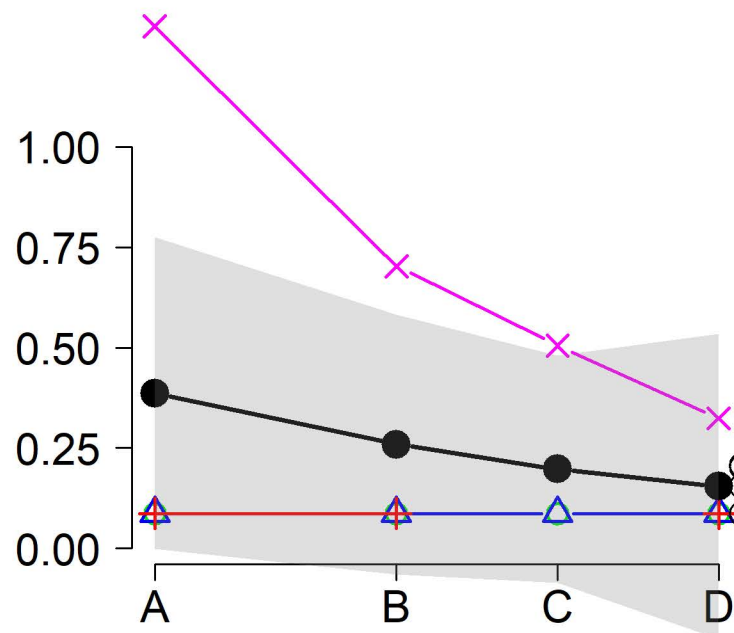


Rywal (PVY-Wilga)

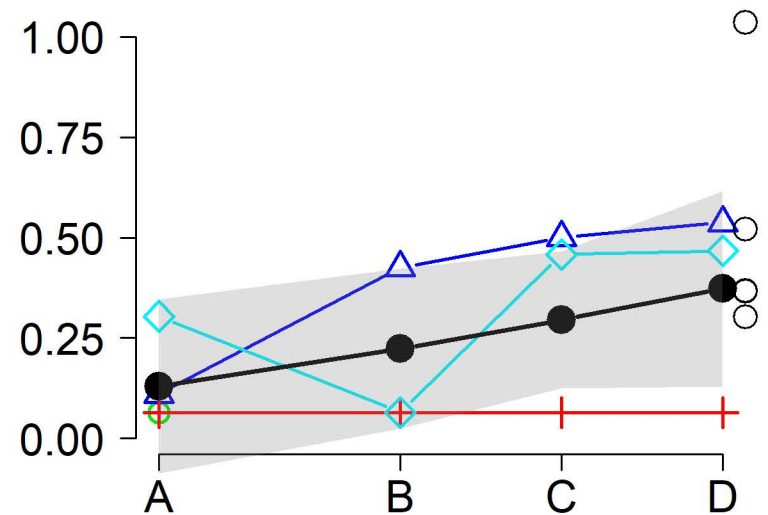


NahG-Rywal (PVY-Wilga)

2nd direction



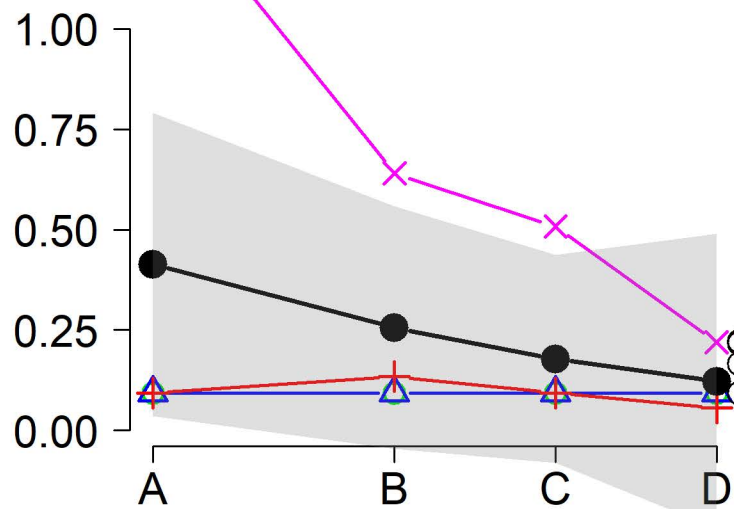
Rywal (PVY-Wilga)



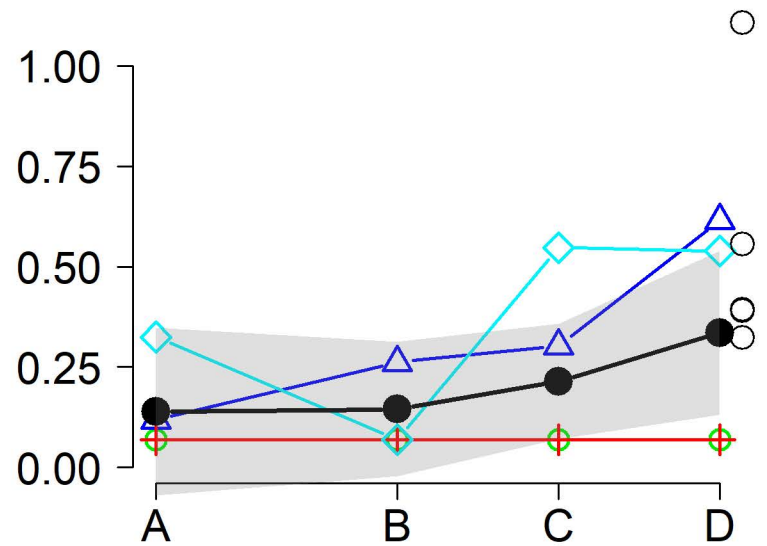
NahG-Rywal (PVY-Wilga)

RBOHD

1st and 2nd direction averaged



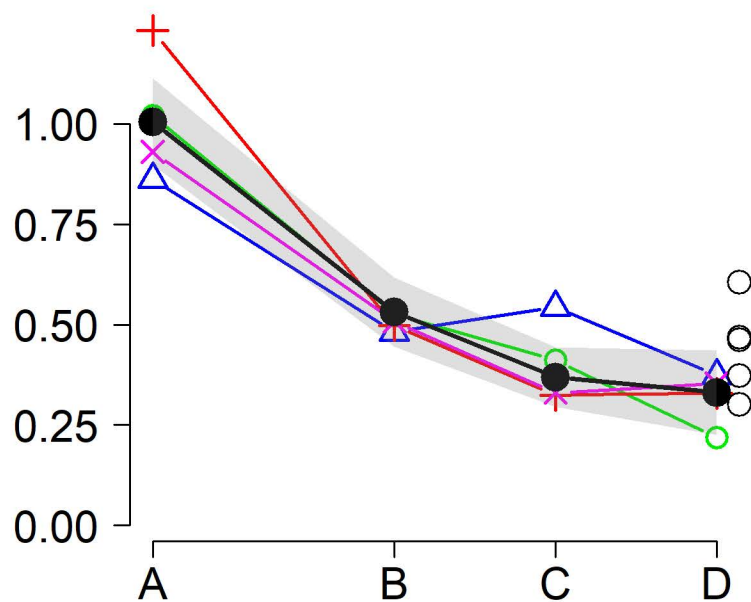
Rywal (PVY-Wilga)



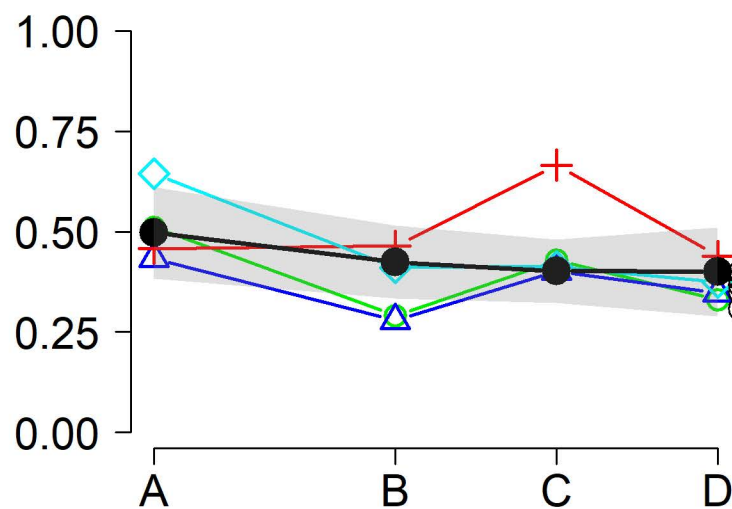
NahG-Rywal (PVY-Wilga)

TRXH

1st direction

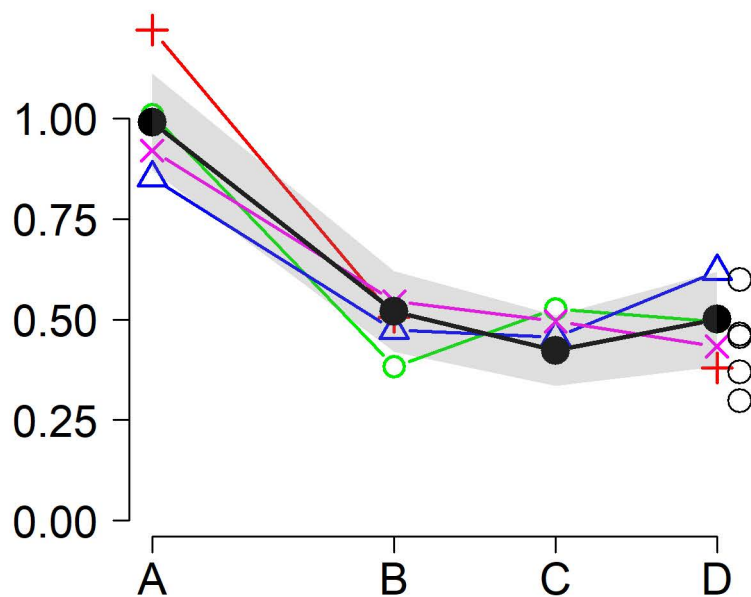


Rywal (PVY-Wilga)

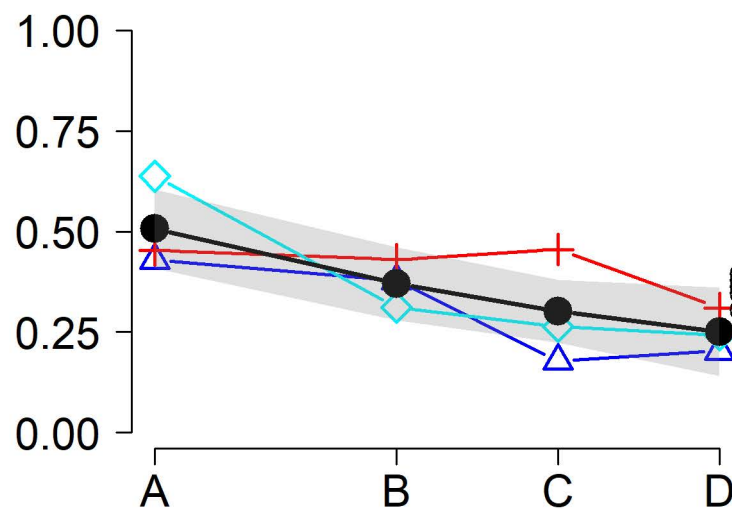


NahG-Rywal (PVY-Wilga)

2nd direction



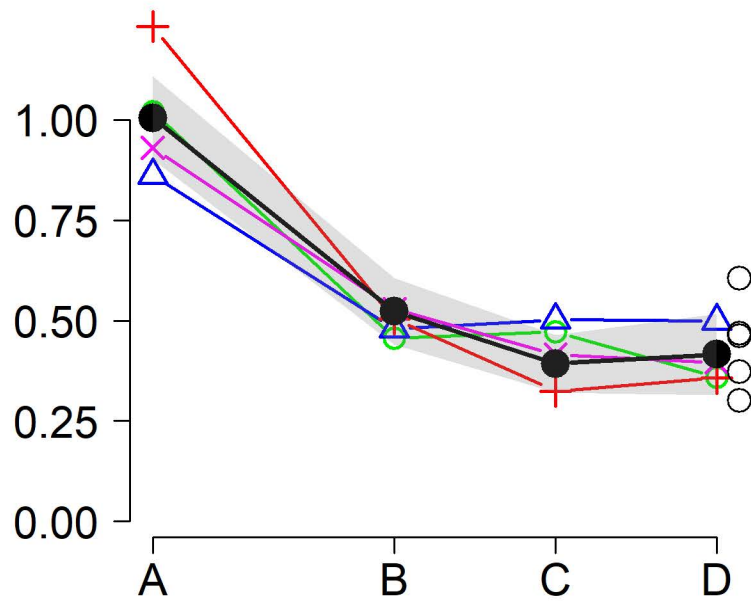
Rywal (PVY-Wilga)



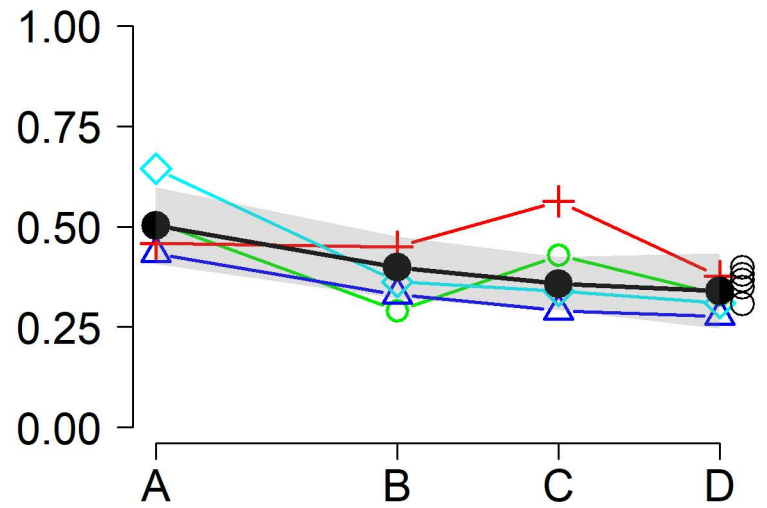
NahG-Rywal (PVY-Wilga)

TRXH

1st and 2nd direction averaged



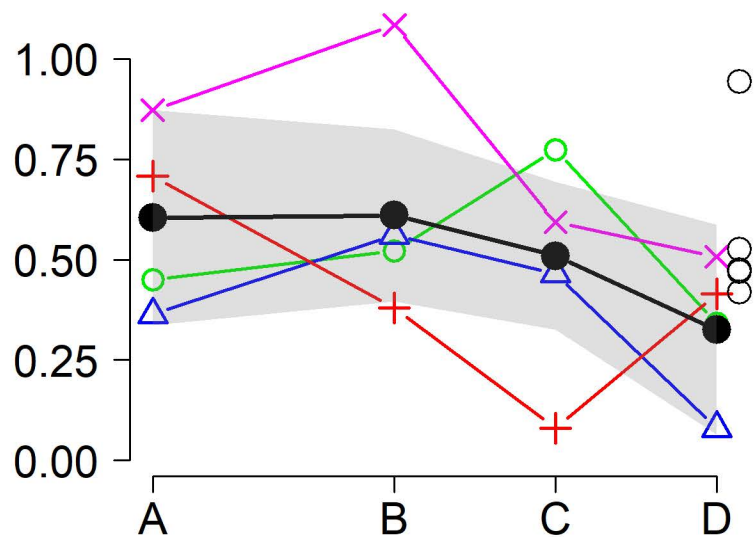
Rywal (PVY-Wilga)



NahG-Rywal (PVY-Wilga)

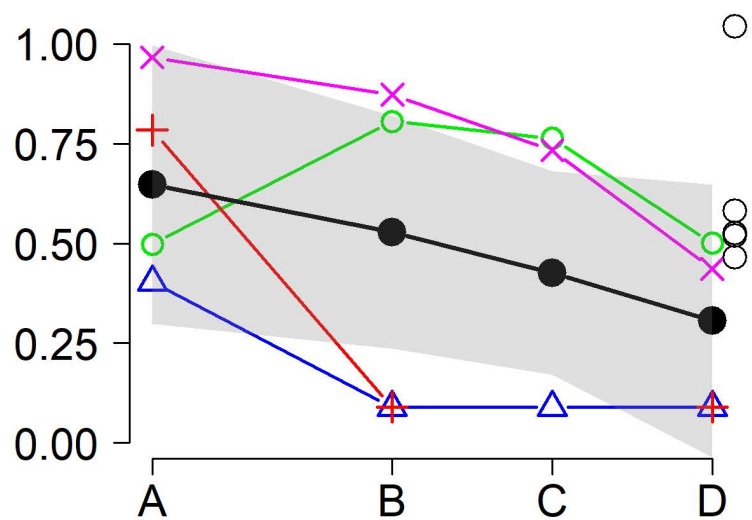
TRXO

1st direction



Rywal (PVY-Wilga)

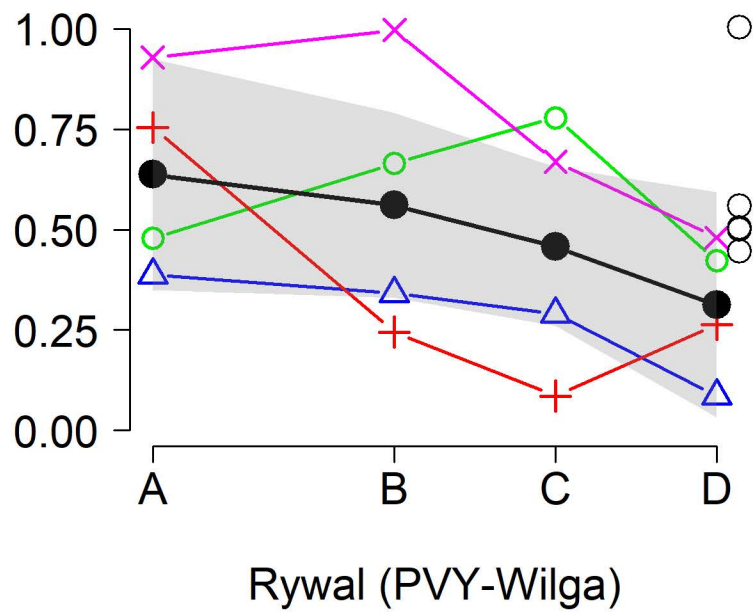
2nd direction



Rywal (PVY-Wilga)

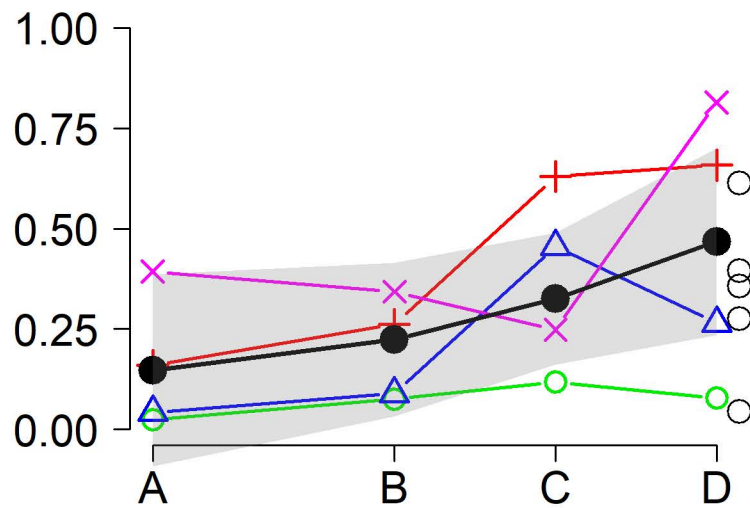
TRXO

1st and 2nd direction averaged

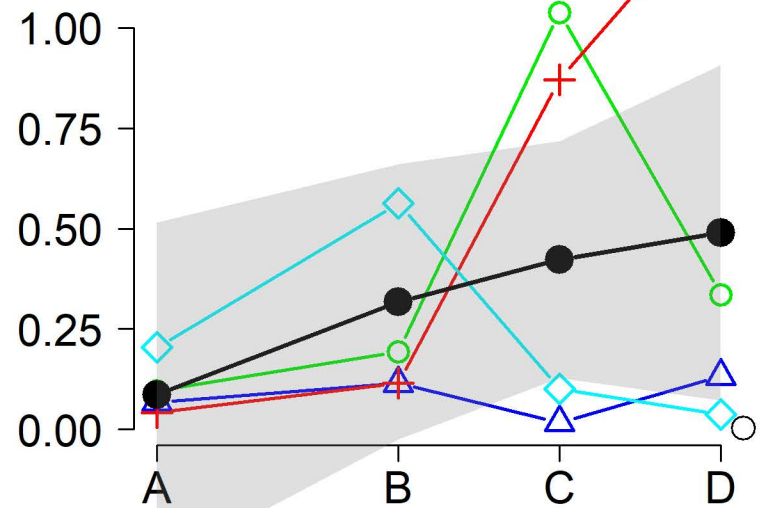


9-LOX

1st direction

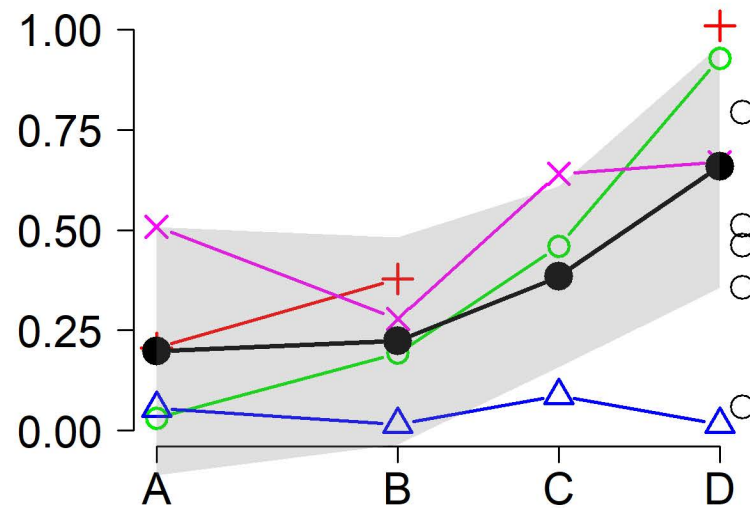


Rywal (PVY-Wilga)

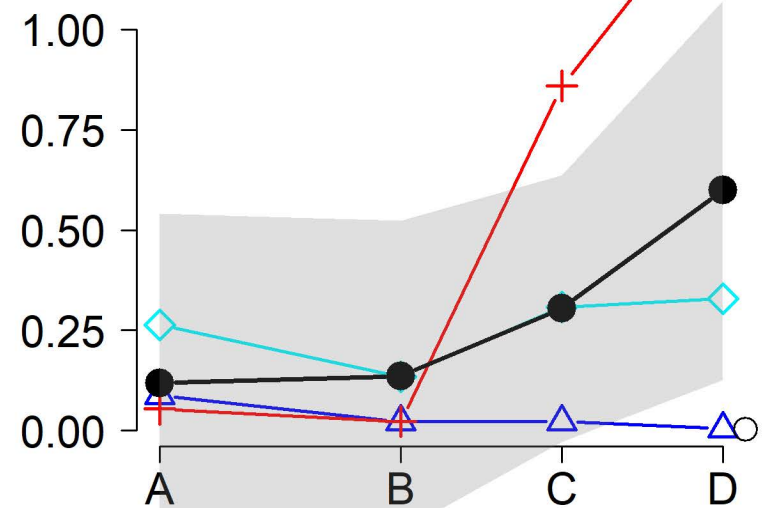


NahG-Rywal (PVY-Wilga)

2nd direction



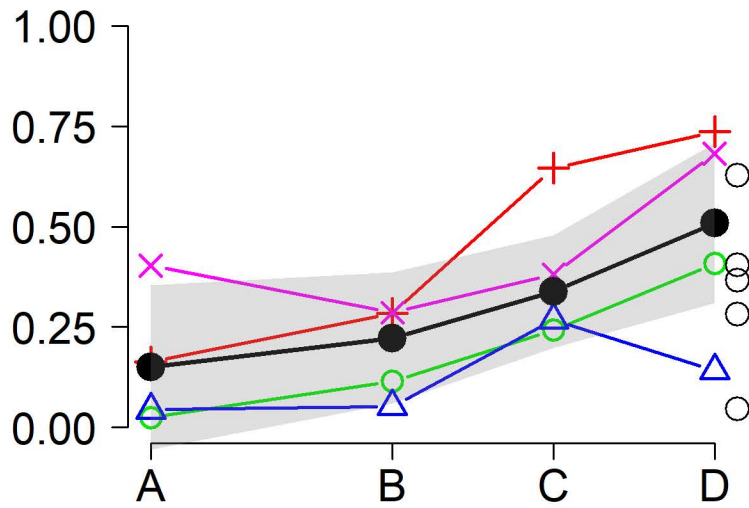
Rywal (PVY-Wilga)



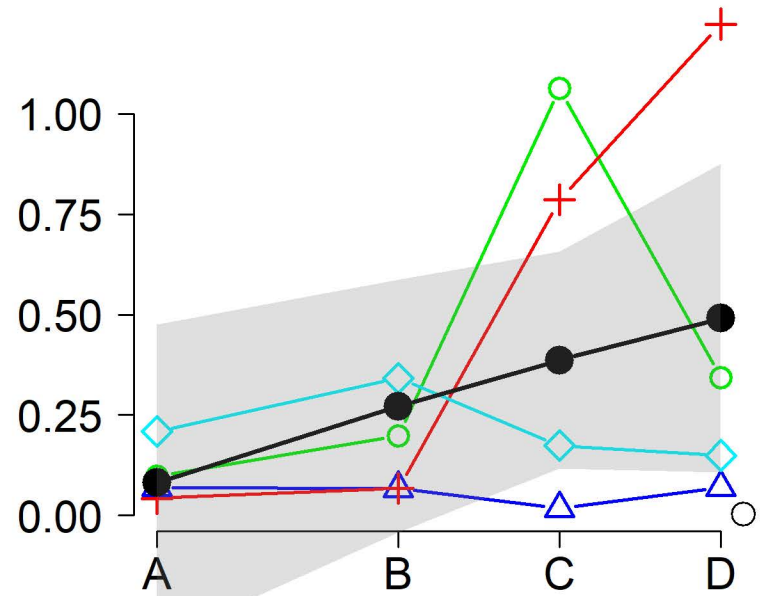
NahG-Rywal (PVY-Wilga)

9-LOX

1st and 2nd direction averaged

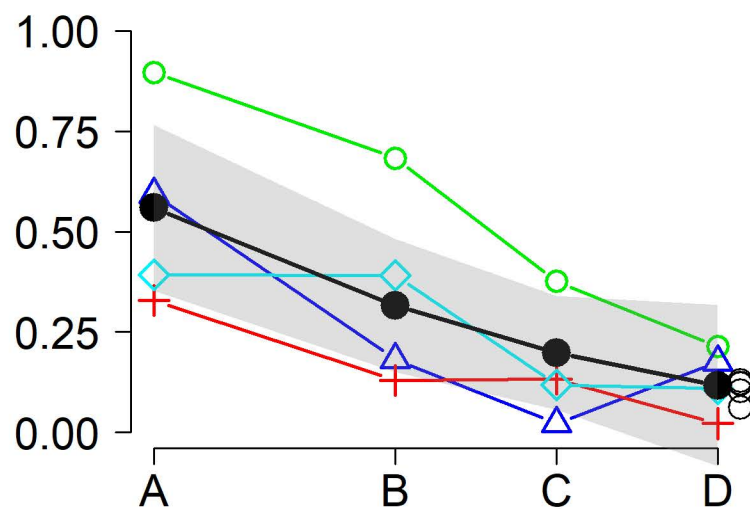
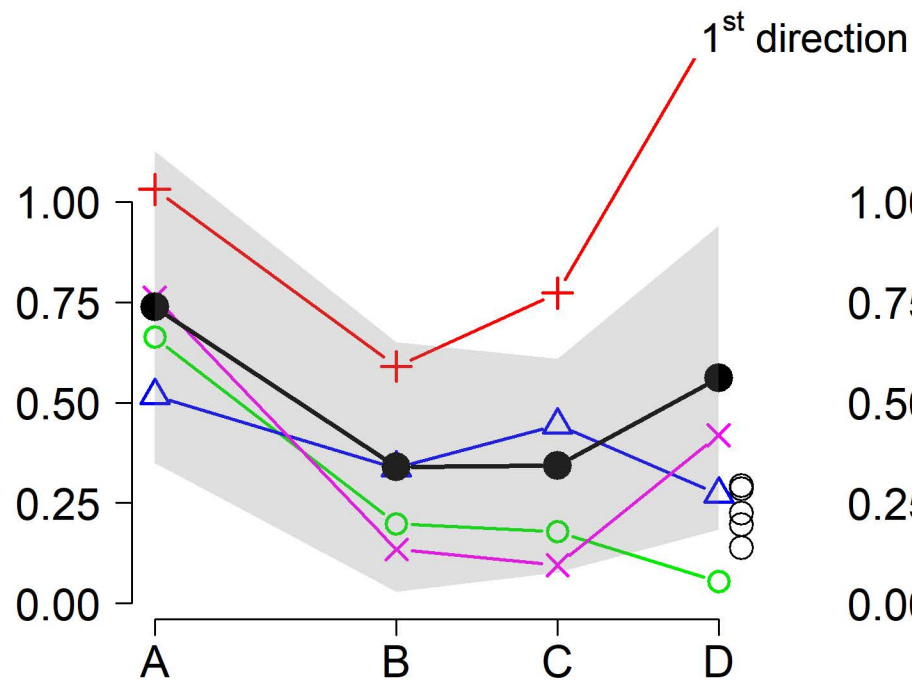


Rywal (PVY-Wilga)

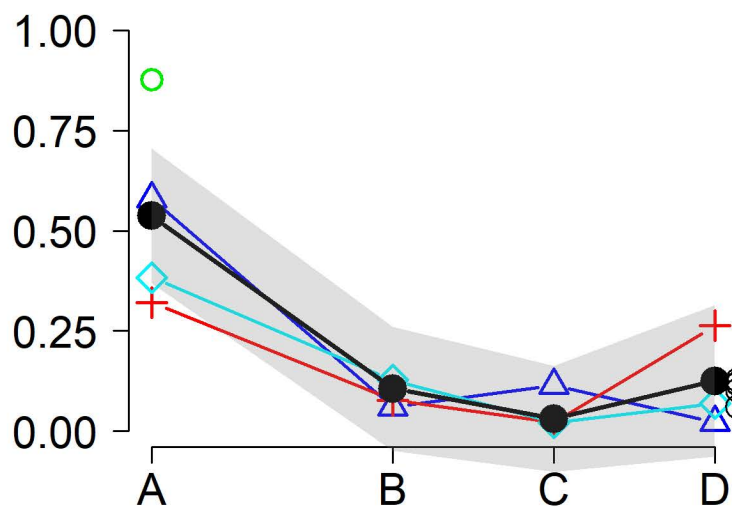
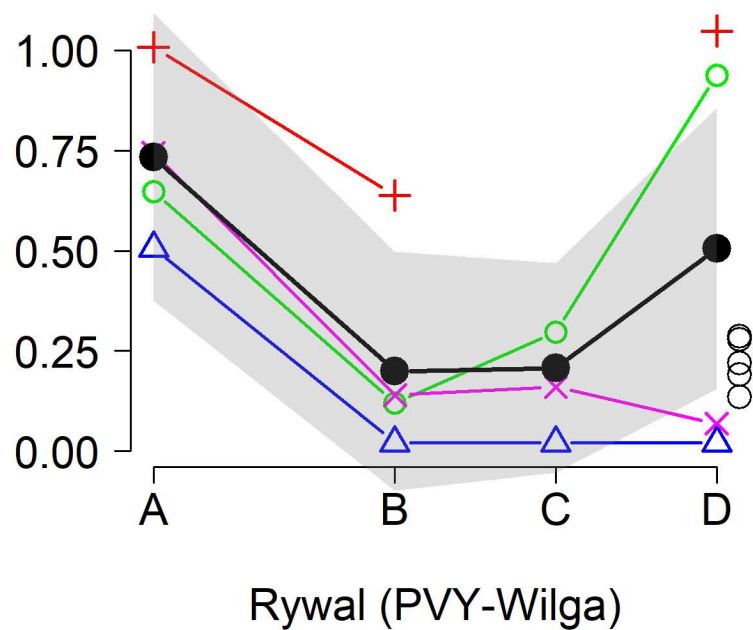


NahG-Rywal (PVY-Wilga)

13-LOX

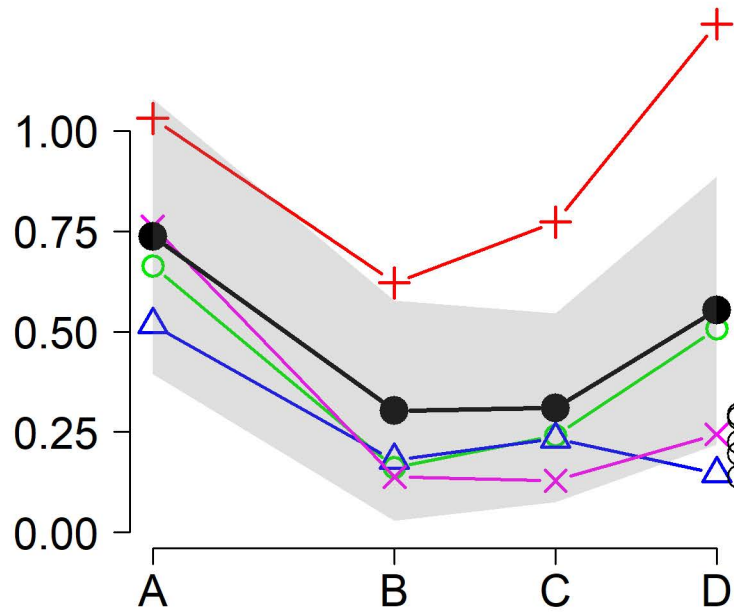


2nd direction

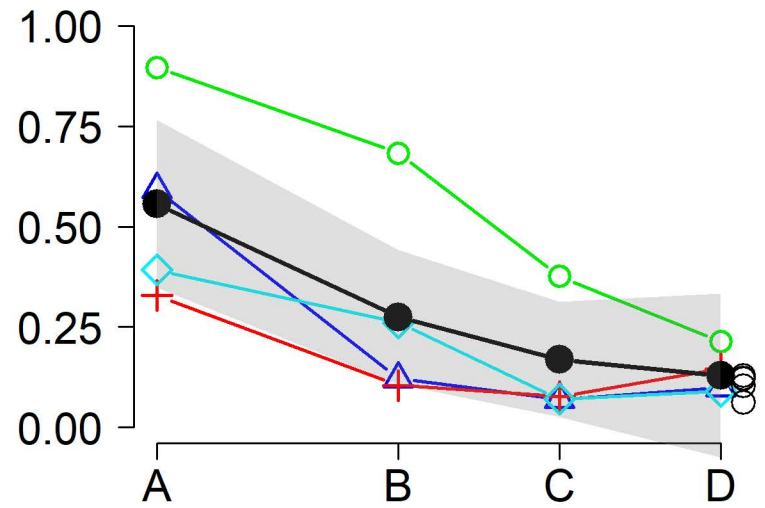


13-LOX

1st and 2nd direction averaged



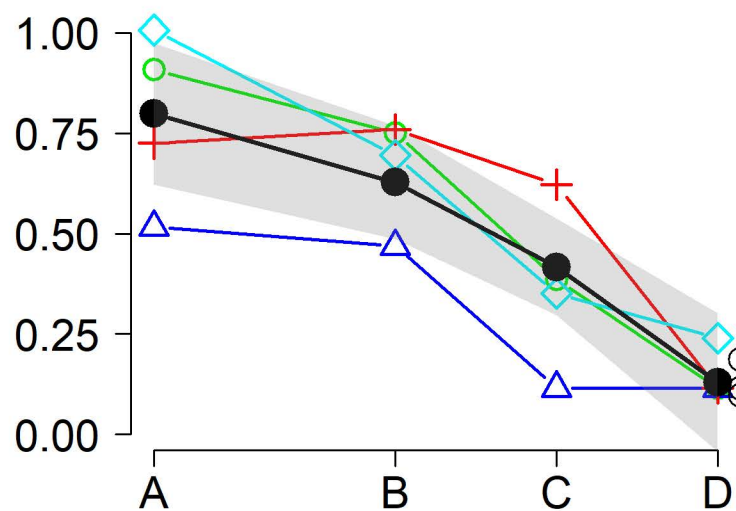
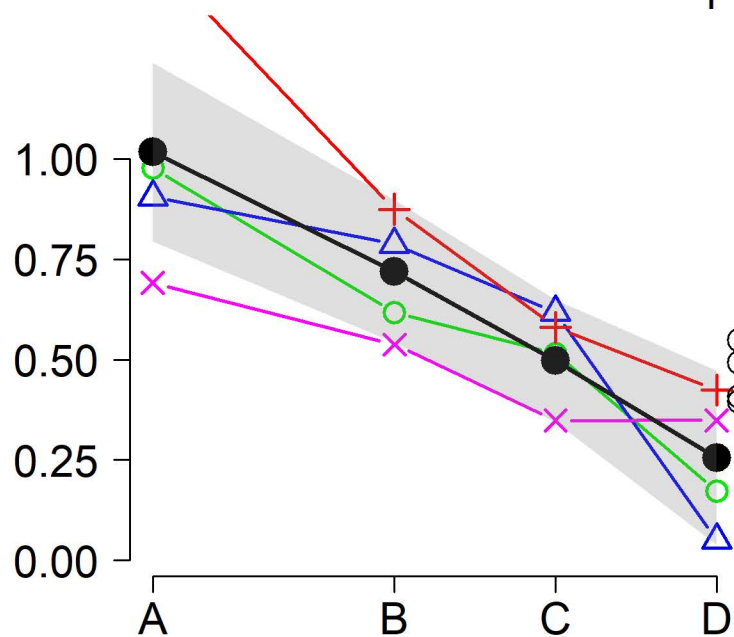
Rywal (PVY-Wilga)



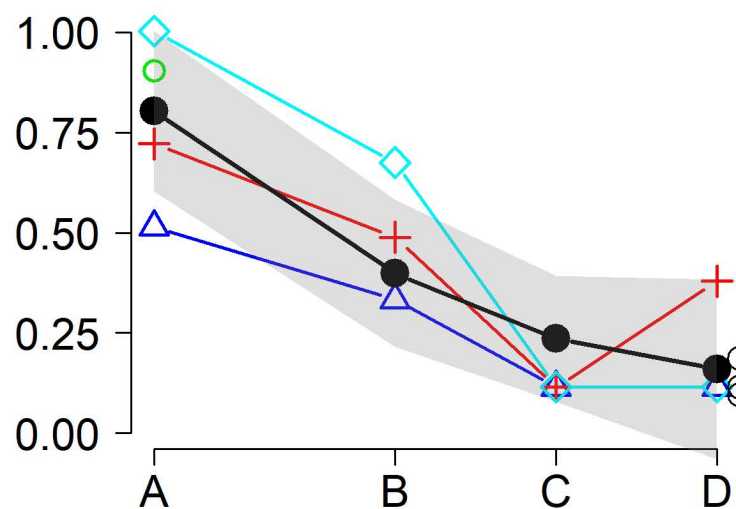
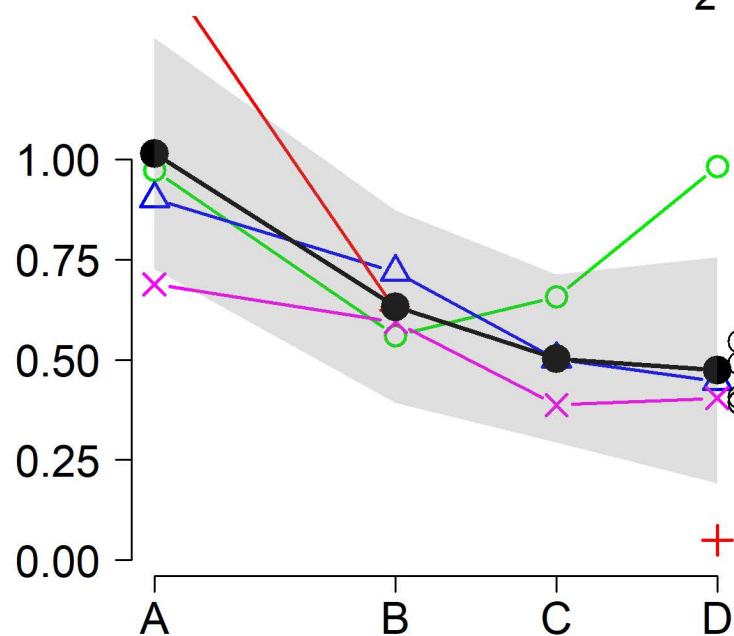
NahG-Rywal (PVY-Wilga)

ACX3

1st direction



2nd direction

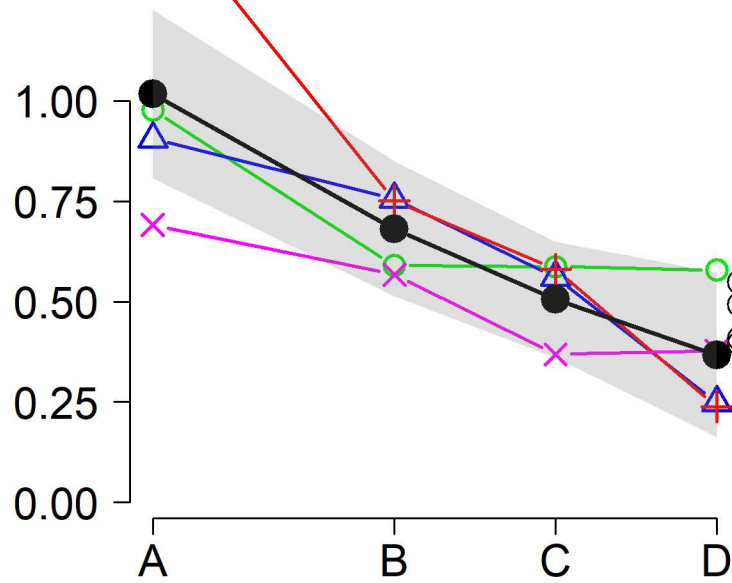


Rywal (PVY-Wilga)

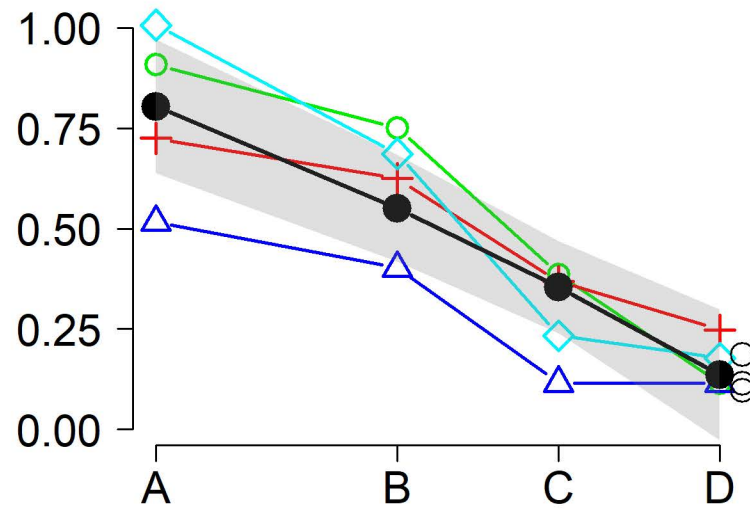
NahG-Rywal (PVY-Wilga)

ACX3

1st and 2nd direction averaged



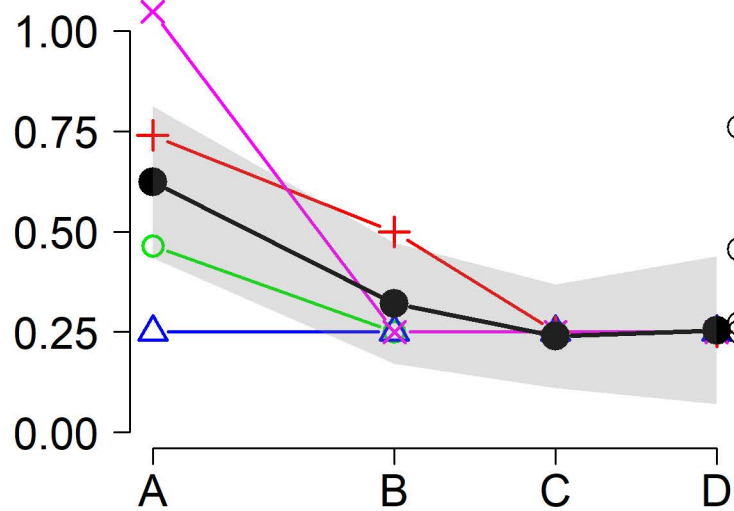
Rywal (PVY-Wilga)



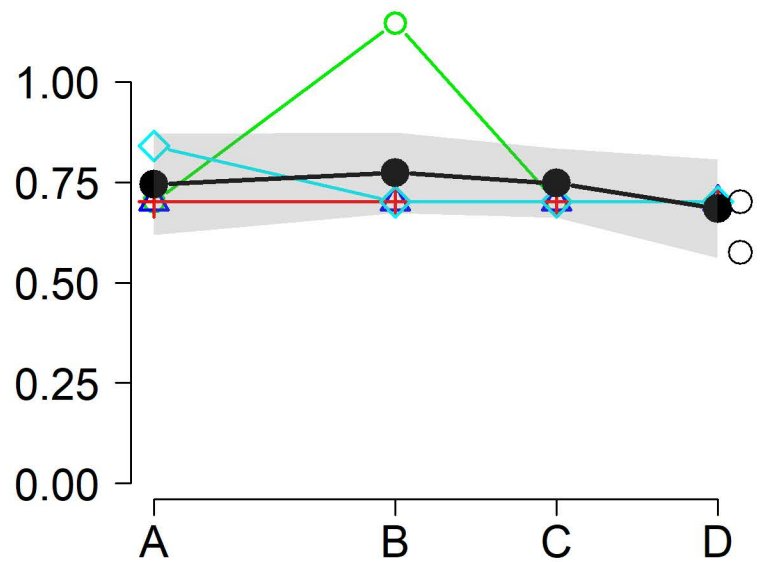
NahG-Rywal (PVY-Wilga)

ERF1

1st direction

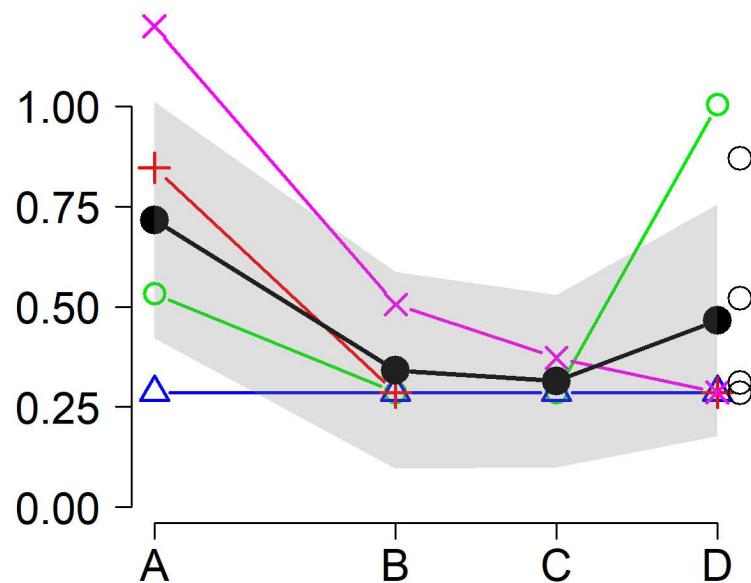


Rywal (PVY-Wilga)

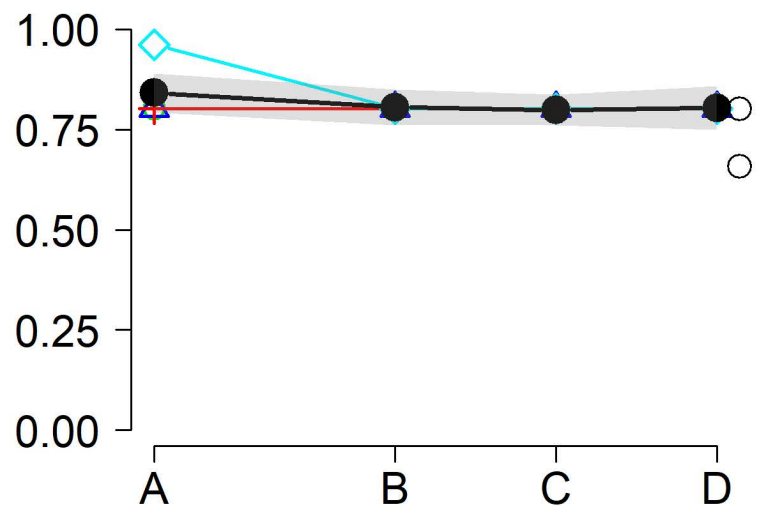


NahG-Rywal (PVY-Wilga)

2nd direction



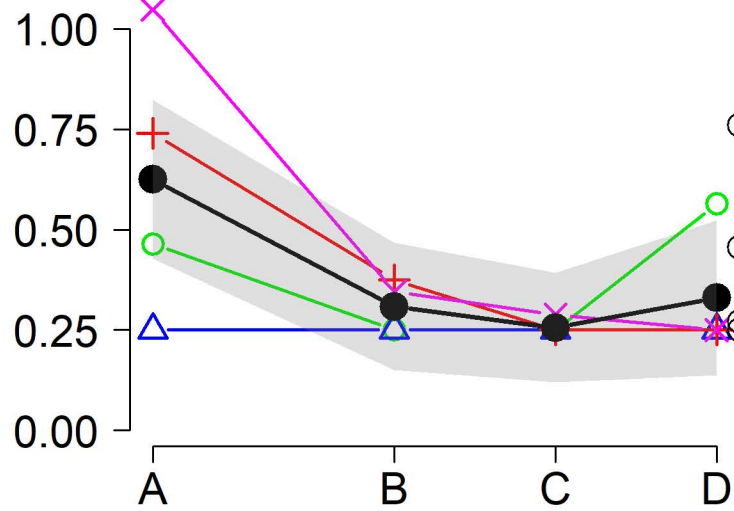
Rywal (PVY-Wilga)



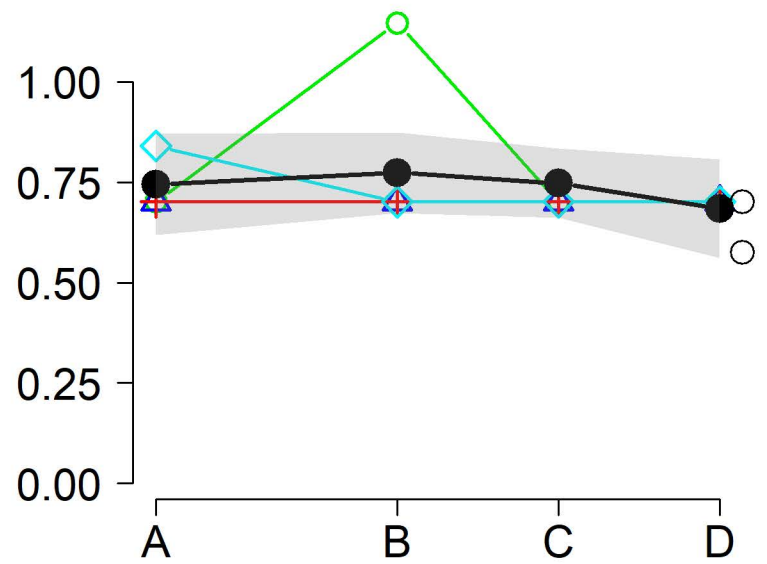
NahG-Rywal (PVY-Wilga)

ERF1

1st and 2nd direction averaged



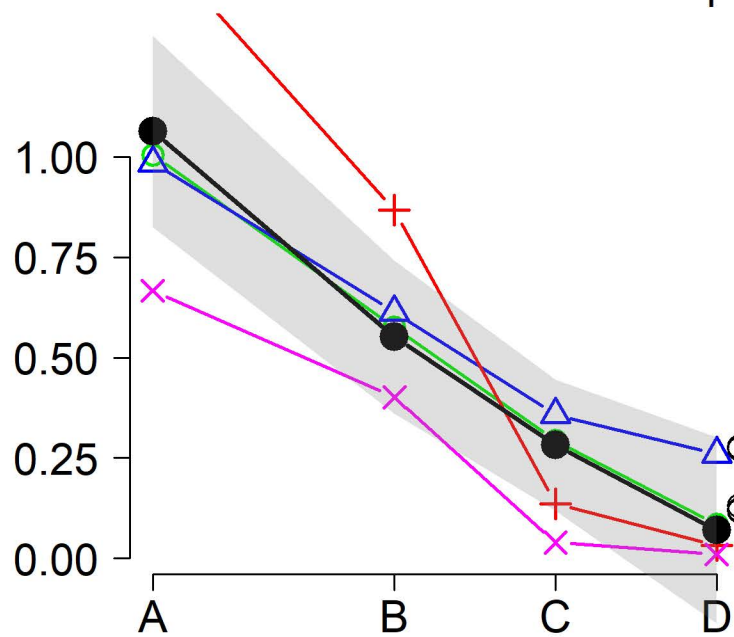
Rywal (PVY-Wilga)



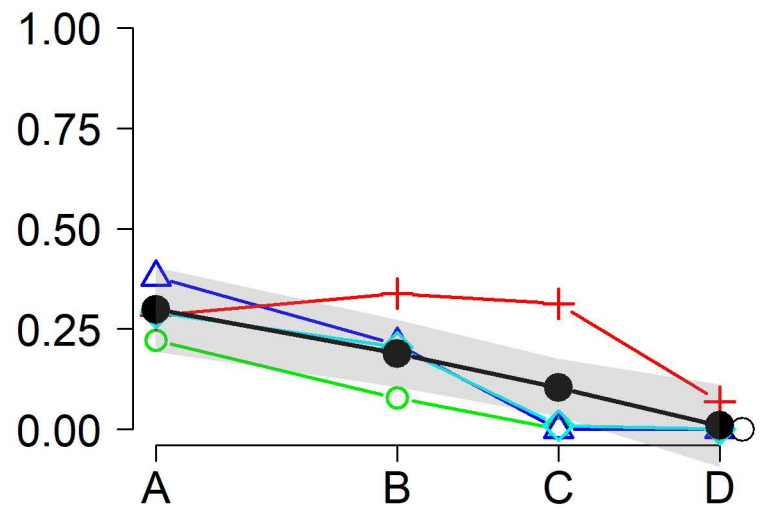
NahG-Rywal (PVY-Wilga)

PR1B

1st direction

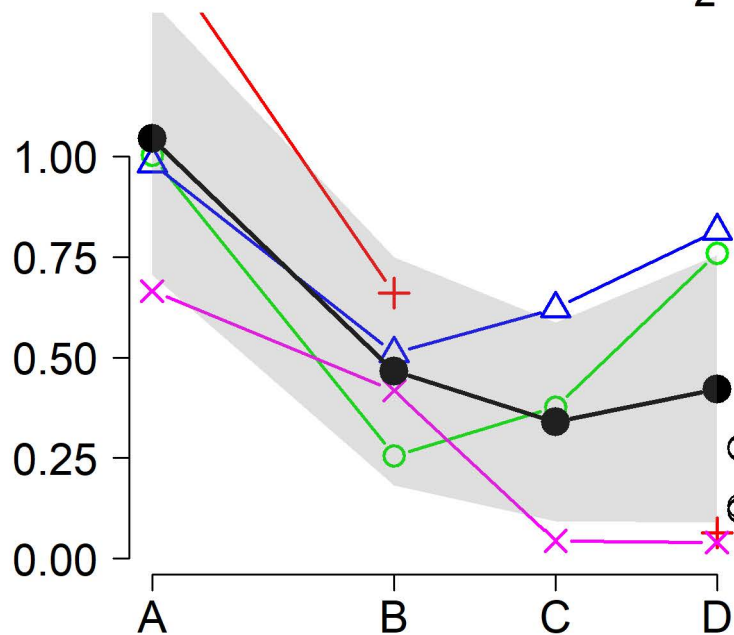


Rywal (PVY-Wilga)

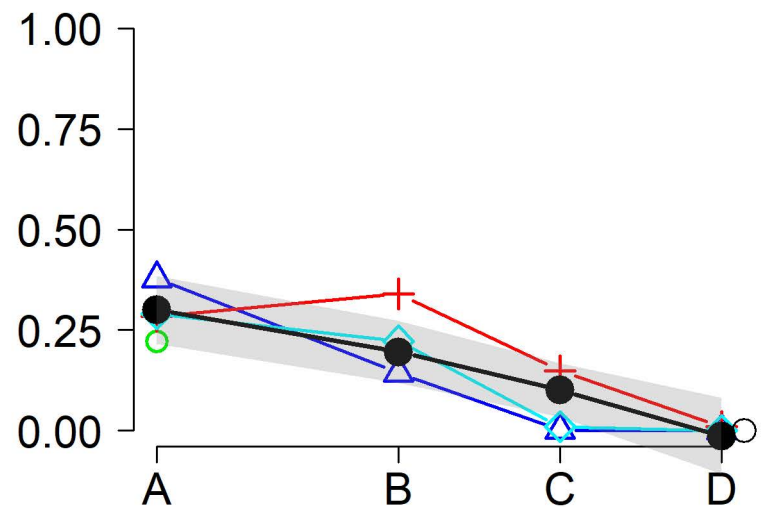


NahG-Rywal (PVY-Wilga)

2nd direction



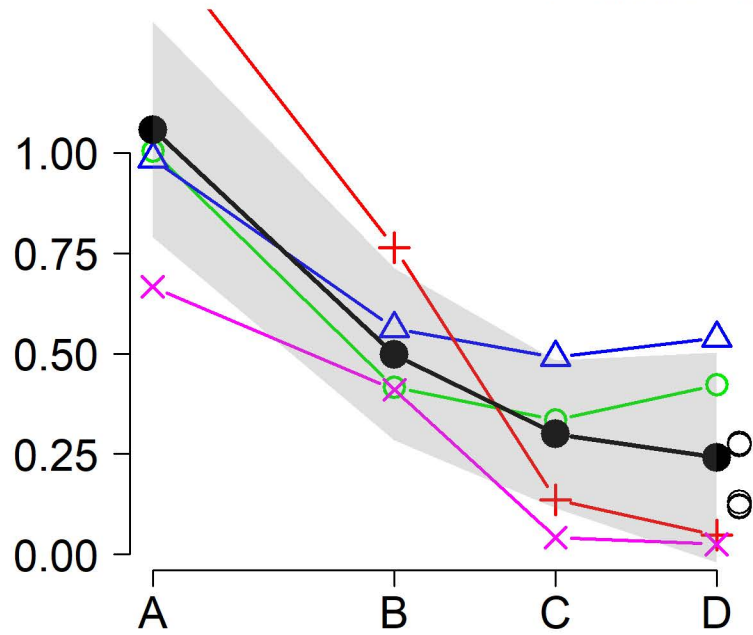
Rywal (PVY-Wilga)



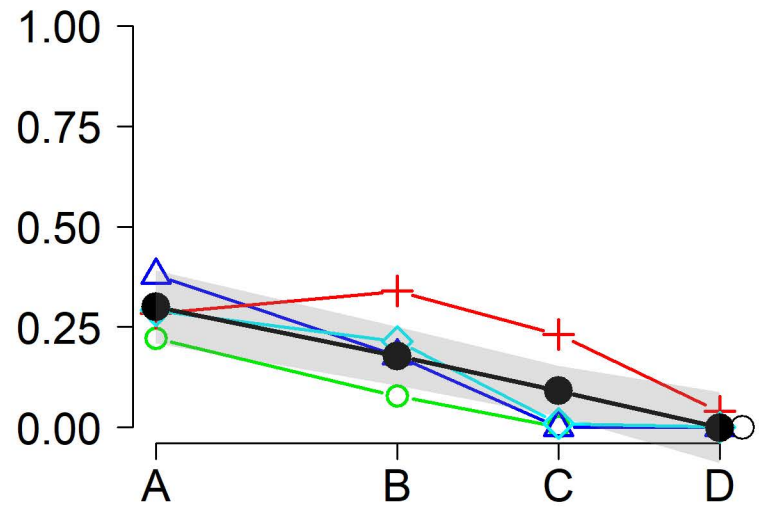
NahG-Rywal (PVY-Wilga)

PR1B

1st and 2nd direction averaged



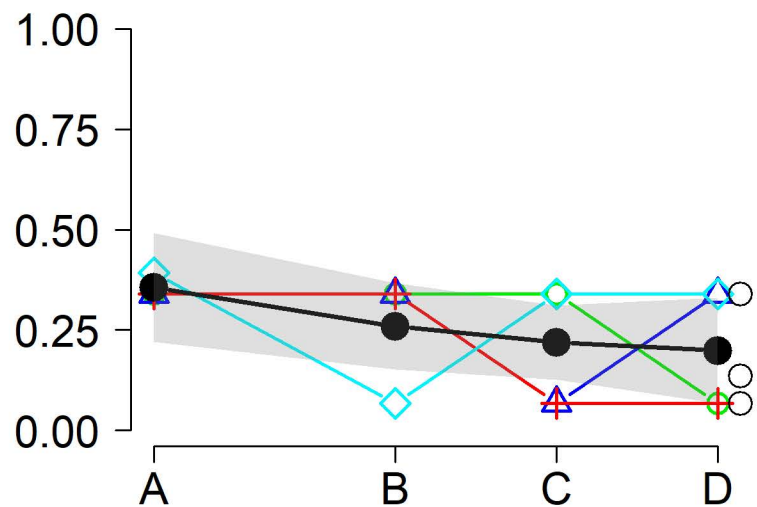
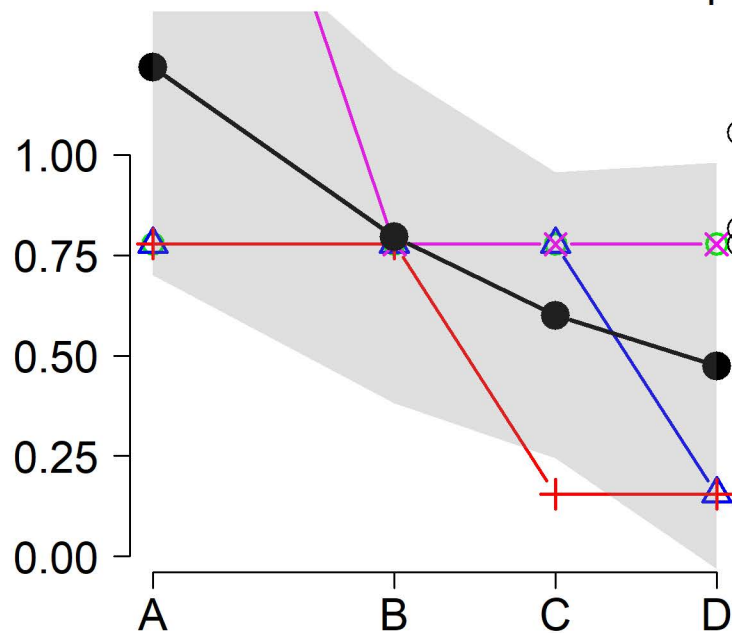
Rywal (PVY-Wilga)



NahG-Rywal (PVY-Wilga)

MC3

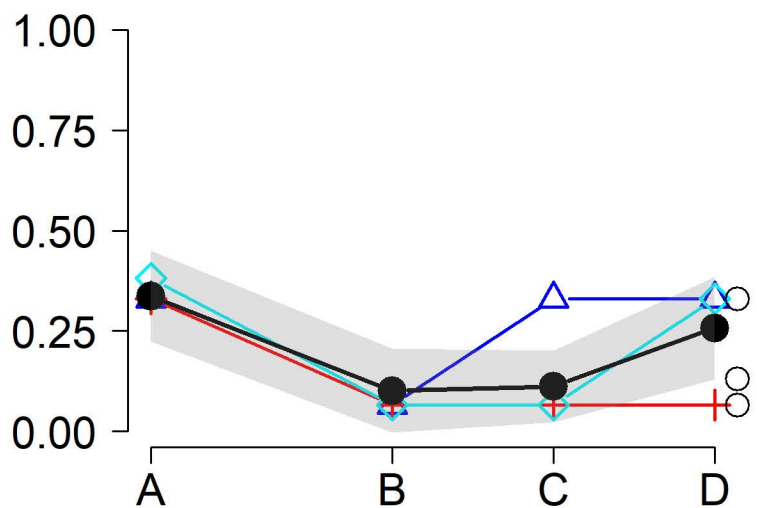
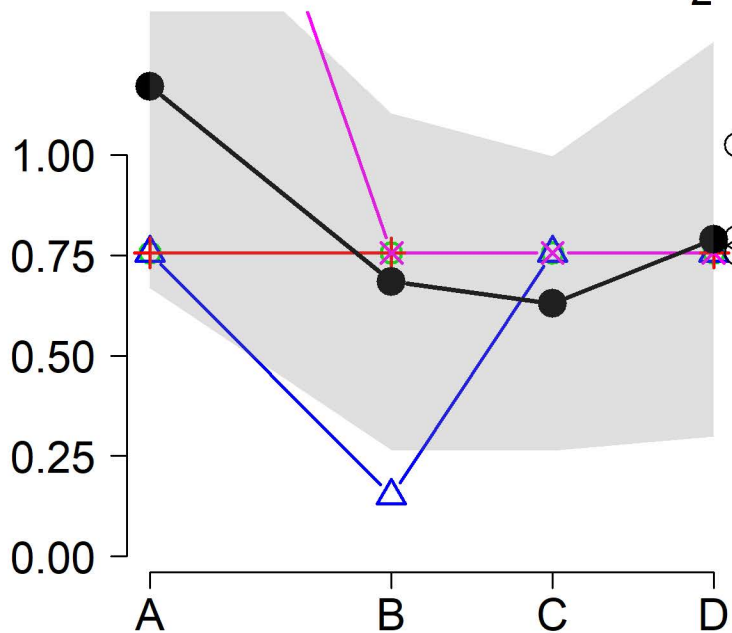
1st direction



Rywal (PVY-Wilga)

NahG-Rywal (PVY-Wilga)

2nd direction

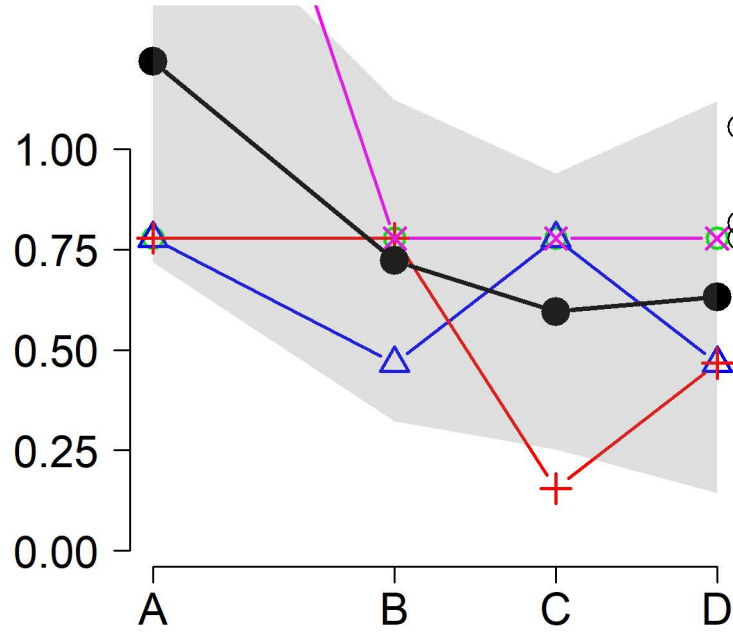


Rywal (PVY-Wilga)

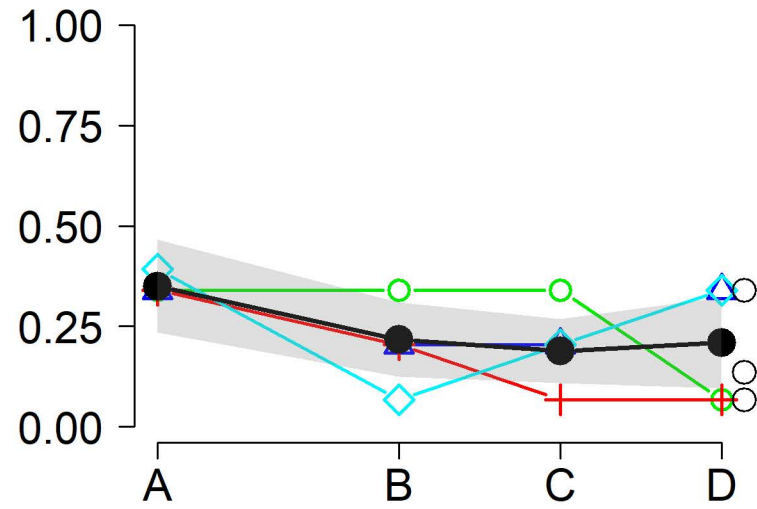
NahG-Rywal (PVY-Wilga)

MC3

1st and 2nd direction averaged



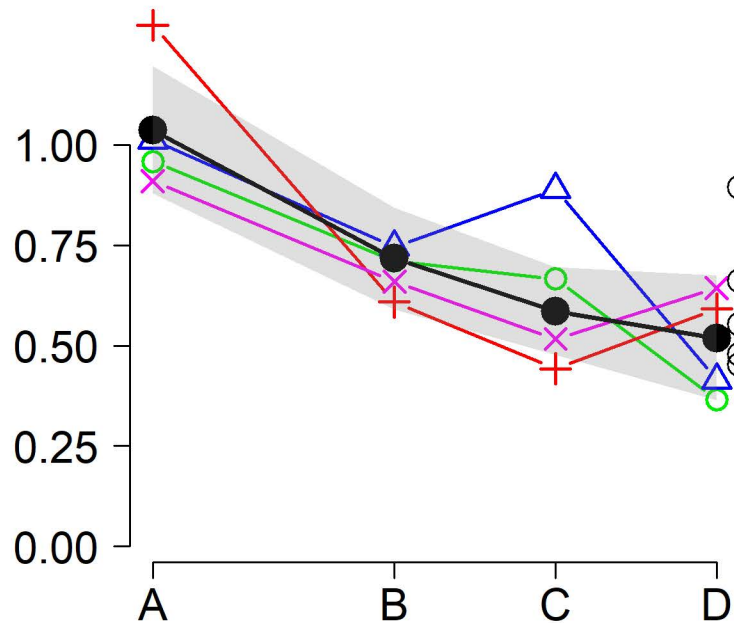
Rywal (PVY-Wilga)



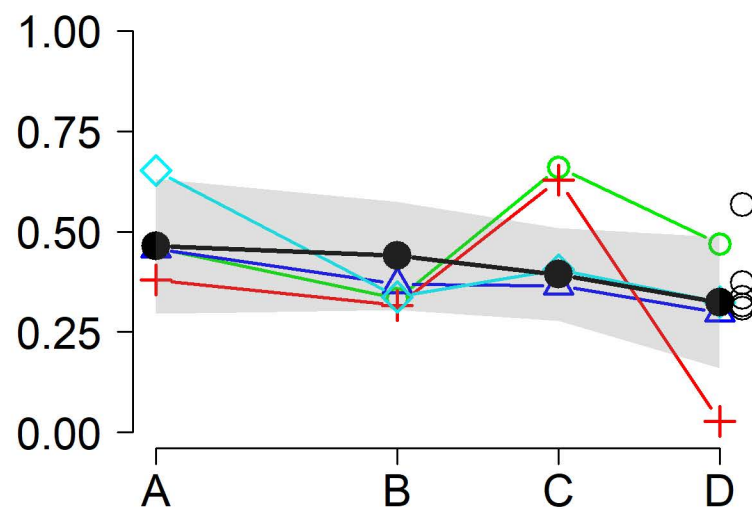
NahG-Rywal (PVY-Wilga)

LSD1

1st direction

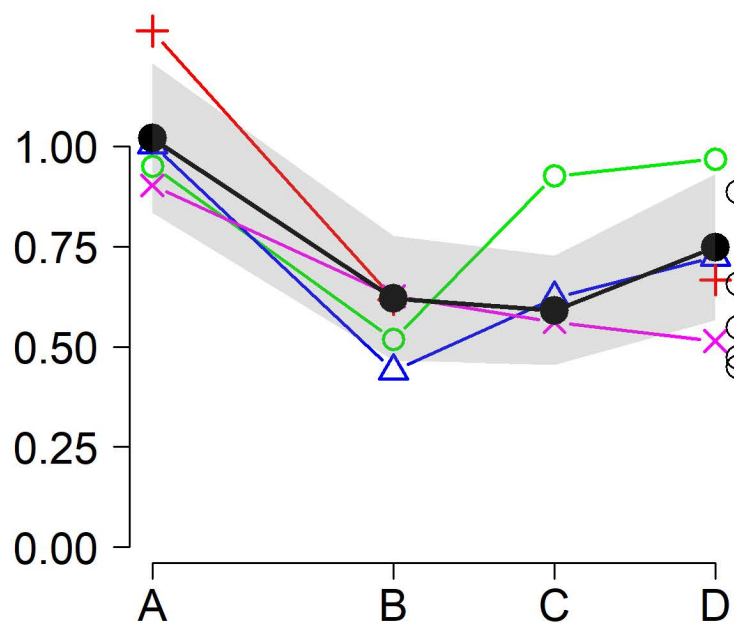


Rywal (PVY-Wilga)

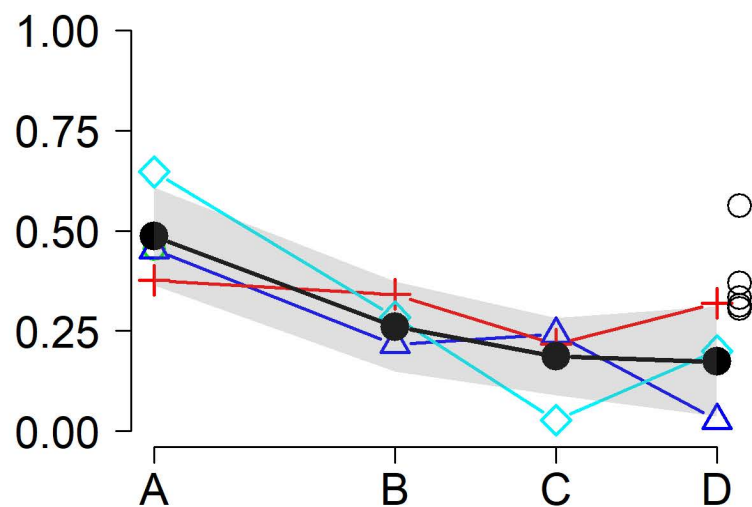


NahG-Rywal (PVY-Wilga)

2nd direction



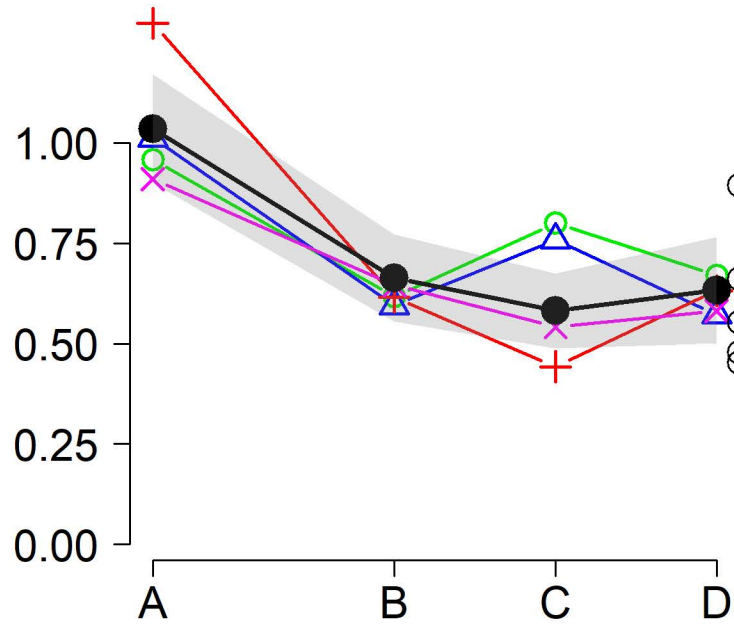
Rywal (PVY-Wilga)



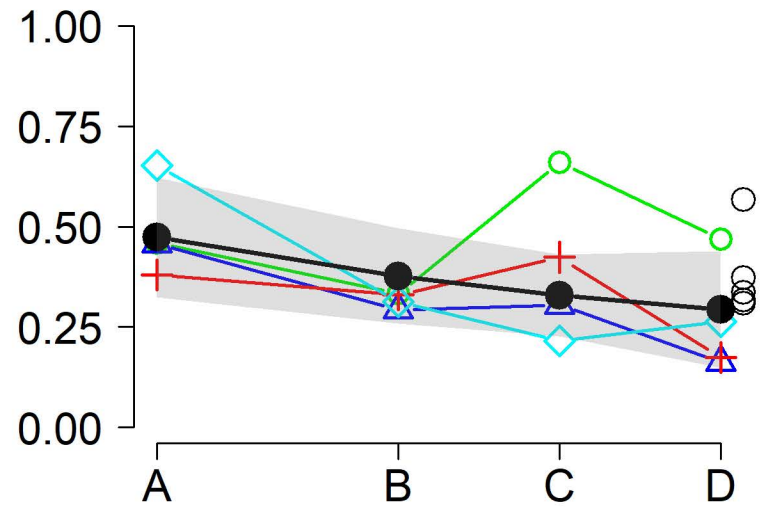
NahG-Rywal (PVY-Wilga)

LSD1

1st and 2nd direction averaged



Rywal (PVY-Wilga)



NahG-Rywal (PVY-Wilga)