Supplementary Material

Title: Optimizing Fruit Thinning Strategies in Peach (*Prunus persica*) Production

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Table S1. Bloom dates during 2017-2019 for peach trees used in this study.

Cultivar	Full Bloom Dates		
	2017	**2018**	**2019**
Springprince	14 March	---	---
Juneprince	14 March	---	---
Cary Mac	14 March	27 Feb	27 Feb
Julyprince	---	8 March	12 March
Summer Flame	---	8 March	12 March

Table S2. Harvest dates during 2017-2019 for peach trees used in this study.

Cultivar	Harvest Dates		
	2017	**2018**	**2019**
Springprince	31 May	---	---
Juneprince	8 June	---	---
Cary Mac	1 June-19 June[z]	1 June-11 June	6 June-13 June
Julyprince	---	2 July-18 July	2 July- 10 July
Summer Flame	---	2 July-18 July	2 July- 25 July

[z] Date range indicates there were multiple harvests performed.

Table S3. Polynomial regression equations for relationships among fruit size, fruit number and yield in peach.

Regression variables	Regression equation
'Cary Mac'	
FD[a] (Y) and FN[b] (X)	$Y = 77.91 – 0.036(X) + 0.00002 (X^2)$
FW[c] (Y) and FN (X)	$Y = 238.54 – 0.26(X) + 0.0001 (X^2)$
Yield (Y) and FD (X)	$Y = 978.46 – 22.99(X) + 0.137 (X^2)$
Yield (Y) and FW (X)	$Y = 278.45 – 2.018(X) + 0.0039 (X^2)$
'Julyprince'	
FD (Y) and FN (X)	$Y = 94.52 – 0.05(X) + 0.000016 (X^2)$
FW (Y) and FN (X)	$Y = 375.42 – 0.438(X) + 0.0002 (X^2)$
Yield (Y) and FD (X)	$Y = -236.87 + 10.99(X) – 0.087 (X^2)$
Yield (Y) and FW (X)	$Y = 96.28 + 0.242(X) – 0.0011 (X^2)$
'Summer Flame'	
FD (Y) and FN (X)	$Y = 81.61 – 0.11(X) + 0.0004 (X^2)$

[a]FD: fruit diameter (mm)

[b]FN: fruit number per tree

[c]FW: fruit weight (g)

Supplementary Figures

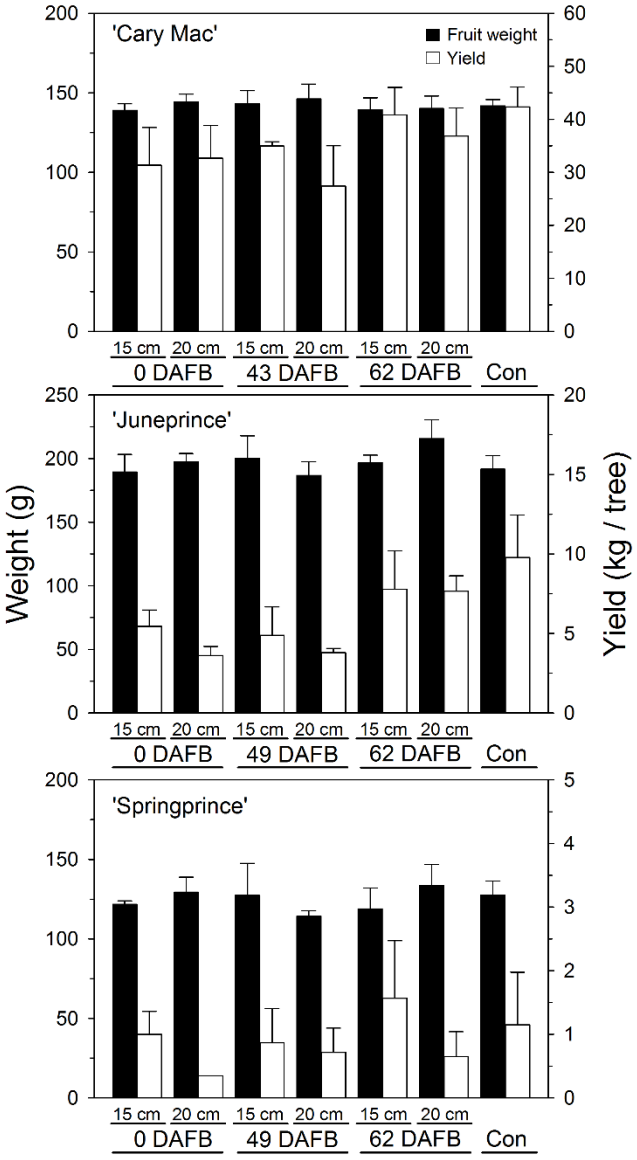

Figure S1. Fruit weight and yield per tree in response to thinning timing and intensity in experiment I (2017). Thinning was performed at bloom (0 DAFB: d after full bloom) and at two stages of early fruit development in three cultivars. At each stage, thinning was performed to allow for a spacing of 15 cm or 20 cm between flower/fruit. Control (Con) treatment involved un-thinned trees. Mean ± S.E. of the mean are presented for fruit weight and yield data (n = 3).

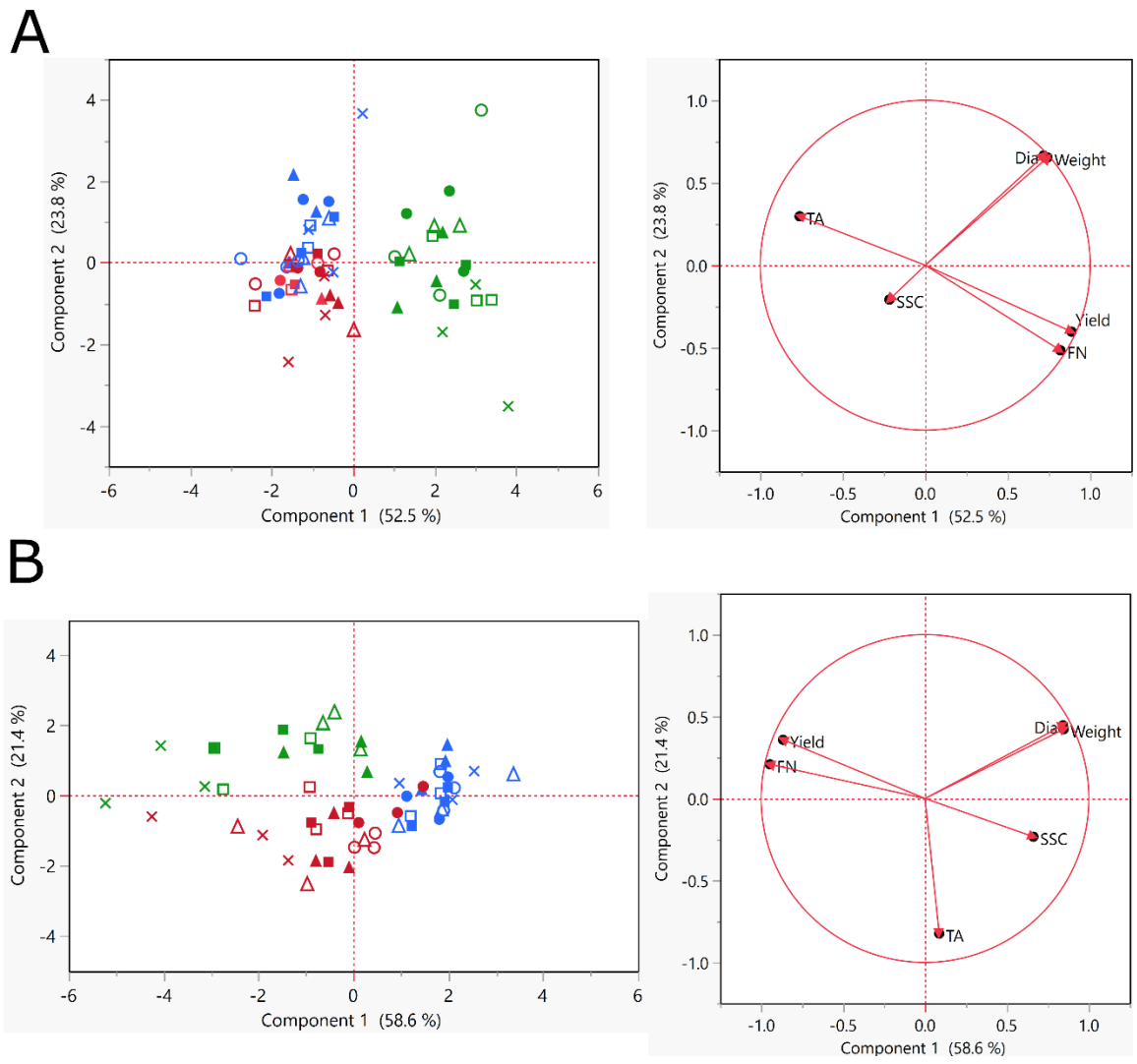

Figure S2. Principal components analysis (PCA) of data from 2018 (A) and 2019 (B). Fruit diameter (Dia), weight, yield, fruit number (FN), soluble solids content (SSC), and titratable acidity (TA) data were subjected to PCA. The scatter and loading plots are displayed for each year separately. Red symbols: 'Cary Mac'; Green: 'Julyprince' and Blue: 'Summer Flame'. Circles represent data from thinning treatment at 0 d after full bloom (DAFB); triangles represent data from early S1 fruit thinning treatments; and squares represent data from late S1 fruit thinning treatments. Closed symbols represent 15 cm spacing (thinning) treatments while open symbols represent 20 cm spacing (thinning) treatments. The crossed symbols represent unthinned control treatments.