

Supplementary Table S1. Evaluation of fungicide programs for the management of apple disease in ‘Rome Beauty’ (adapted from PDMR 17:PF027).

Treatment programs (amt./A)	Timing ^y	Mean incidence of Marssonina leaf blotch on terminals (%) ^z	Mean incidence of apple scab on terminals (%) ^z	Mean incidence of powdery mildew (%) ^z
Untreated	Pk-2C	66.9 ± 8.9 a	10.9 ± 5.0 a	24.7 ± 2.4 a
Manzate Max 2.4 qt + Captan 4L 2 qt	Pk-2C	32.2 ± 19.7 de		
Captan 4L 2 qt	3C-10C		0.6 ± 0.4 c	24.4 ± 10.9 ab
Luna Flex 8 fl oz + Syl-Coat 0.125%	Pk,Bl,2C	43.8 ± 8.1 bcd		
Manzate Max 2.4 qt + Captan 4L 2 qt	PF,1C		3.8 ± 1.6 c	12.8 ± 2.4 abc
Luna Sensation 5 fl oz + Syl-Coat 0.125%	Pk,Bl,2C			
Captan 4L 2 qt + Manzate Max 2.4 qt	PF,1C	26.3 ± 4.2 def	1.6 ± 0.9 c	7.5 ± 1.8 c
Luna Tranquility 11.2 fl oz + Syl-Coat 0.125%	Pk,Bl,2C	23.8 ± 4.6 defg		
Captan 4L 2 qt + Manzate Max 2.4 qt	PF,1C		4.4 ± 3.1 bc	10.0 ± 3.7 bc
Inspire Super 12 fl oz + Syl-Coat 0.125%	Pk,Bl,2C	38.8 ± 12.8 bcde		
Captan 4L 2 qt + Manzate Max 2.4 qt	PF,1C		0.9 ± 0.94 c	10.4 ± 3.6 abc
Cevya 5 fl oz + Syl-Coat 0.125%	Pk,Bl,2C	38.4 ± 9.3 bcde		
Captan 4L 2 qt + Manzate Max 2.4 qt	PF,1C		1.9 ± 1.5 c	12.8 ± 3.3 abc
Cevya 5 fl oz + Syl-Coat 0.125%	Pk,Bl,1C,2C			
Merivon 5.5 fl oz	PF,4C,6C,8C	7.2 ± 4.8 fg		
Captan 4L 2 qt	5C,7C,9C,10C		0.3 ± 0.3 c	10.3 ± 2.6 abc
Tesaris 4.5 fl oz + Syl-Coat 0.125%	Pk,Bl,1C,2C	18.8 ± 12.6 efg		
Manzate Max 2.4 qt	PF		1.6 ± 0.9 c	7.8 ± 3.6 c
Manzate Max 2.4 qt	Pk,Bl,1C,2C	3.8 ± 0.9 g		
Merivon 5.5 fl oz	PF,4C,6C,8C			
Cevya 5 fl oz + Syl-Coat 0.125%	3C,5C,7C,9C		0.9 ± 0.6 c	9.7 ± 3.5 c
Kenja 12.5 fl oz + Syl-Coat 0.125%	Pk-2C	57.9 ± 12.3 abc		
Manzate Max 2.4 qt	PF		2.5 ± 1.1 c	17.8 ± 5.8 abc
Gatten 6.5 fl oz + Syl-Coat 0.125%	Pk-2C	38.8 ± 20.1 bcde	1.9 ± 0.8 c	20.0 ± 6.5 abc
Torino 6.8 fl oz	Pk-2C	56.3 ± 9.8 abc	5.0 ± 4.2 bc	11.3 ± 1.6 abc

^y Application timings were made on 8 to 14 day intervals: Pink (Pk), Bloom (Bl), Petal Fall (Pf), and First Cover (1C) through 10th Cover (10C).

^z All values are disease incidence and the means and standard errors of at least 10 terminal shoots across four replicate trees. Values within columns followed by the same letter are not significantly different ($P < 0.05$) according to LSMEANS procedure in SAS 9.4 with an adjustment for Tukey's HSD to control for family-wise error.

Commented [CD1]: Send in Microsoft Word.

Label the table “**Supplementary Table S1**” followed by a table title.

The table should fit on one page.

Commented [CD2]: Use trade names or code designations followed by the formulation used. Present information such that different formulations can be compared. Do not use fractions (use 1.5 lb/A instead of 1 ½ lb/A).

Where products were used in combination, state the rate immediately after the product name and formulation, then use a “+” and state the second product, etc.

Commented [CD3]: Label the footnotes so that the last one is z.

Use footnotes to provide additional information about treatments, rating systems and evaluations.

Supplementary Table S1. Evaluation of fungicide programs for the control of grape powdery mildew (adapted from *PDMR* 15:PF017).

Treatment and amount/A	Days after first application^w	Incidence (%)	Severity^x (%)	% Control^y
Cevya 3 fl oz	0, 15, 26, 40, 54	0.0 c ^z	0.00 b	100
Cevya 4 fl oz	0, 15, 26, 40, 54	0.0 c	0.00 b	100
Cevya 5 fl oz	0, 15, 26, 40, 54	0.0 c	0.00 b	100
Manzate Pro-Stick 75DF 3 lb	0, 15			
METTLE 125ME 5 fl oz	0, 26			
Vivando 10.3 fl oz	15, 66			
Ziram 76DF 4 lb	26, 40, 54			
Torino 3.4 fl oz	40			
Quintec 4 fl oz	54			
Badge X2 1.75 lb + lime 1.75 lb	80	13.5 b	0.63 b	98
Manzate Pro-Stick 75DF 3 lb	0, 15			
Quintec 4 fl oz	15			
Endura 4.5 oz	26			
Ziram 76DF 4 lb	26, 40, 54			
Vivando 10.3 fl oz	40			
Tebuzol 5 oz	54			
Badge X2 1.75 lb + lime 1.75 lb	66, 80	3.5 c	0.12 b	100
Untreated Control	–	94.0 a	28.47 a	–

^wTiming: The first fungicide application was made on 1 Jun. 0 = 10-12" shoots; 15 = immediate pre-bloom; 26 = 1st post-bloom; 40 = 2nd post bloom; 54 = 3rd post bloom; 66 = 4th post bloom; 80 = 5th post bloom.

^xSeverity was rated using the Barratt-Horsfall scale (0-11) and was converted to % area infected (0-100 %) using Elanco conversion tables.

^yPercent control = control of disease severity on clusters relative to the untreated control.

^zMeans followed by the same letter within columns are not significantly different according to Fisher's LSD ($P \leq 0.05$).

Commented [CD4]: Make the column headings bold.

Commented [CD5]: Statistical analysis must be done and the test used and significance level(s) stated in a footnote.

For multiple comparisons of means, avoid the use of Duncan's Multiple Range Test and Student Newman Keuls as they fail to control for familywise errors (Type 1 errors). Appropriate procedures include Fisher's Protected LSD test, Tukey's, or Scheffe's method. Reports without statistically analyzed data will be rejected.

Supplementary Table S1. Evaluation of fungicides for the management of southern blight on tomato (adapted from *PDMM* 18:PF098).

	Treatment, rate (appl.) ^w	Disease incidence (%) ^x				rAUDPC ^y
		9 September	15 September	23 September	13 October	
1	Non-treated control	34.6 a ^z	39.9 a	43.2 a	41.5 a	0.403 a
2	Priaxor, 8 fl oz/A (drench 3, 4)	36.7 a	45.1 a	53.3 a	55.0 a	0.486 a
3	Excalia (2172), 2 fl oz/A (transplant 1, drench 2, foliar 3)	0.0 b	1.8 b	5.4 b	8.9 b	0.044 b
4	Excalia (2172), 2 fl oz/A (transplant 1, drench 2, drip 3)	1.9 b	5.5 b	8.9 b	7.2 b	0.063 b
5	Excalia (2172), 2 fl oz/A (transplant 1, drench 2, foliar 4)	0.0 b	3.4 b	0.0 b	3.3 b	0.015 b
6	Excalia (2172), 2 fl oz/A (transplant 1, drench 2, drip 4)	1.9 b	17.9 b	19.4 b	19.4 b	0.153 b
7	Excalia (2172), 2 fl oz/A (transplant 1, drench 2)	1.7 b	5.5 b	7.0 b	7.0 b	0.056 b
8	Excalia (2172), 2 fl oz/A (transplant 1, drench 2)	3.5 b	7.1 b	10.4 b	8.7 b	0.079 b
9	Non-inoculated control	0.0 b	9.2 b	10.9 b	10.9 b	0.082 b
10	Proline, 5.7 fl oz/A (drench 2)	5.2 b	15.5 b	17.0 b	17.0 b	0.142 b
	<i>P</i> =	0.0001	0.0003	0.0001	0.0001	0.0001

^wTransplant, drench, drip, and foliar treatment applications (appl.) were made on 23 and 30 Aug, 28 Sep, and 14 Oct (corresponding to 1–4).

^xDisease incidence was determined as the averaged percentage of symptomatic plants per plot.

^yRelative area under the disease progress curves (rAUDPC) was calculated using the formula: $\Sigma[(x_i + x_{i-1})/2](t_i - t_{i-1})/AUDPC_{MAX}$ where x_i is the rating at each evaluation time and $(t_i - t_{i-1})$ is the time between evaluations. $AUDPC_{MAX}$ = maximum possible AUDPC during trial period.

^zValues followed by the same letter within columns are not statistically significant ($P = 0.05$) according to Fisher's LSD test.

Supplementary Table S1. Evaluation of commercial sugar beet cultivars for rhizomania resistance and storability (adapted from PDMR 18:V012).

Cultivar [†]	Rhizomania rating [‡]		Surface root rot (%) [‡]	Weight reduction (%) [‡]	Root yield (t/A)	ERS at harvest (lb/A) [‡]	Sucrose reduction (%) [‡]	ERS after storage (lb/A)
	Foliar (%)	Root						
HIL2357NT	1 c	2.3 f	12 mn	12.3 hi	38.62 b-f	11,416 b-d	28 m	8,159 a
HIL2356NT	1 c	2.5 de	11 n	11.8 i	36.81 e-h	10,670 d-h	29 lm	7,609 ab
SX036	0 c	2.2 fg	18 j-n	16.3 c-g	39.70 b-d	11,571 b	35 k-m	7,507 ab
B-66	0 c	2.3 f	14 k-n	13.6 e-i	38.26 c-f	11,278 b-d	34 k-m	7,424 a-c
C-49	0 c	2.2 fg	23 i-m	16.1 c-h	38.54 b-f	11,292 b-d	35 k-m	7,366 a-c
B-74	0 c	2.3 f	36 f-h	13.6 e-i	38.24 c-f	11,171 b-d	36 k-m	7,195 a-d
SV039	0 c	2.3 f	24 i-k	13.5 e-i	38.71 b-e	11,609 b	38 i-k	7,159 b-d
SV038	0 c	1.8 h	21 j-n	12.6 g-i	43.31 a	12,742 a	46 g-i	6,894 b-e
B-69	0 c	2.2 fg	24 i-k	13.1 f-i	39.83 bc	11,486 bc	41 h-k	6,807 b-e
SX040	7 b	2.4 ef	12 l-n	13.0 f-i	37.22 e-g	10,682 d-h	37 j-l	6,670 b-f
SV036	0 c	2.1 gh	21 j-n	15.0 c-i	40.60 b	12,391 a	46 g-i	6,642 b-f
C-56	0 c	2.5 de	33 f-i	18.7 bc	36.91 e-h	10,957 b-f	40 h-k	6,519 c-f
C-58	0 c	2.4 ef	28 g-j	17.9 b-d	37.50 d-g	11,081 b-e	41 h-k	6,518 d-f
C-61	0 c	2.5 de	24 i-l	16.9 c-f	36.50 f-h	10,754 c-g	40 h-k	6,444 d-g
SX037	0 c	2.8 b-d	19 j-n	13.0 f-i	34.14 i-k	9,941 h-j	36 k-m	6,382 d-h
HIL2355NT	1 c	2.2 fg	16 k-n	13.9 e-i	38.39 c-f	11,190 b-d	45 g-j	6,086 e-h
C-62	0 c	2.4 ef	26 h-k	16.3 c-g	37.35 e-g	10,958 b-f	48 f-h	5,694 f-h
B-81	0 c	2.6 cd	41 ef	14.7 d-i	34.22 ij	10,280 f-i	46 g-i	5,509 gh
B-78	0 c	2.4 ef	37 fg	15.1 c-i	37.23 e-g	10,983 b-f	51 e-g	5,433 h
HIL2384	5 b	2.8 b-d	37 f-h	17.1 b-e	33.33 jk	9,626 ij	56 d-f	4,203 i
HIL9916	3 b	2.6 cd	33 f-i	15.4 c-i	34.97 h-j	10,003 g-j	57 de	4,179 i
C-59	0 c	2.9 a-c	50 de	14.7 d-i	32.00 k	9,409 j	62 cd	3,576 ij
B-80	0 c	2.5 de	34 f-i	13.4 e-i	35.60 g-i	10,345 e-i	72 b	2,878 jk
HM125891	0 c	2.4 ef	55 cd	17.1 b-e	37.85 c-f	9,483 j	70 bc	2,792 jk
HM126457	7 b	3.2 ab	64 bc	23.5 a	27.85 l	8,032 k	72 b	2,282 k
Check BTS4D20	100 a	4.0 ab	75 b	20.8 ab	24.51 m	6,065 l	82 a	1,067 l
C-209	100 a	5.0 a	87 a	18.8 bc	13.29 n	3,006 m	87 a	376 l
<i>P</i> > <i>F</i> [‡]	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
LSD ($\alpha = 0.05$)	Trans	Trans	12	3.9	2.20	755	8	981

Commented [CD6]: Additional data for meta analysis, such as values for MSE or LSD is encouraged but optional.

[†]For more information on coded cultivars, contact the following companies: B = Betaseed Inc., C = ACH Seeds Inc., HM and HIL = Hilleshog, SV = SESVanderHave, and SX = Seedex. Rhizomania susceptible check cultivars were BTS4D20 and C-209.

[‡]Foliar = percentage of foliage in plot with rhizomania symptoms on 15 Aug. Root = roots were evaluated for rhizomania using a scale of 0 to 9 (0 = healthy, 9 = dead; Plant Dis. 93:632-638) at harvest.

[§]Surface root rot = percentage of root surface area discolored in storage.

[¶]Weight reduction = difference in weight from harvest to the end of storage.

[∗]ERS = estimated recoverable sucrose was calculated as extraction x 0.01 x gross sucrose and extraction = 250 + [1255.2 x (conductivity -15000) x (percent sucrose - 6185)]/(percent sucrose x [98.66 - (7.845 x conductivity)]).

^{††}Sucrose reduction (%) = 1 - (((% Sucrose_{storage sample} - 1.395) x Weight_{storage sample}) / (% Sucrose_{harvest sample} x Weight_{harvest sample})) x 100.

^{‡‡}*P* > *F* was the probability associated with the *F* value. Within each variable (except for root ratings), means followed by the same letter did not differ significantly based on Fisher's protected least significant difference (LSD; $\alpha = 0.05$). Mean separation for the root ratings was based on PDIFF ($\alpha = 0.05$). Trans = the foliar data were arc sine square root transformed and the root rating data were rank transformed prior to analysis, but the non-transformed means are presented in the table.

Supplementary Table S1. Evaluation of fungicides and tank-mixtures for Pythium root rot disease prevention in creeping bentgrass (adapted from *PDMR* 18:T033).

Treatment ^x and amount/1000 ft ²	Appl. code ^y	Pythium root rot (%)		
		21 July	3 August	10 August
Non-treated check		13.90 a ^z	94.30 a	88.80 a
Serata 20WG 0.4 oz	ACEGIK	0.20 bc	7.00 bc	7.30 bc
Serata 20WG 0.6 oz	ACEG	2.80 b	6.30 bc	3.80 bc
Serata 20WG 0.8 oz	ACE	0.00 c	2.80 c	0.80 c
Serata 20WG 0.4 oz + Fame 3.98SC 0.18 oz	ACEG	0.00 c	1.5 c	1.80 c
Serata 20WG 0.6 oz + Fame 3.98SC 0.18 fl oz	ACEG	0.00 c	2.00 c	1.80 c
Serata 20WG 0.6 oz + Fame 3.98SC 0.36 fl oz	ACEG	0.00 c	2.5 c	6.30 bc
Serata 20WG 0.6 oz + CU-EXP1-PRR2 0.32 fl oz	ACEG	0.00 c	16.80 b	15.30 b
CU-EXP1-PRR2 0.32 fl oz	ACEGIK	34.80 a	86.30 a	87.50 a
Segway 3.33SC 0.45 fl oz	ACEGIK	0.60 bc	11.30 bc	10.00 bc

^xTreatments applied at designated intervals beginning 16 May in 2.1 gal H₂O/1,000 ft² using a CO₂ walk-behind sprayer equipped with two TeeJet 8002 nozzles. All treatments received immediate post-application irrigation at ~0.125 acre-inch.

^yApplication codes representing intervals for treatment applications: A - 16 May, C - 30 May, E - 13 June, G - 27 June, I - 11 July, and K - 25 July.

^z Means within columns followed by the same letter are not significantly different according to Fisher's LSD test ($\alpha < 0.05$).

Supplementary Table S1. Evaluation of fungicides for the control of downy mildew of impatiens (adapted from *PDMR 18:OT026*).

Treatment and amount/100 gal; application method	Leaves with sporulating <i>P. obducens</i> (%)	
	30 May	2 June
Untreated inoculated	88.3 a ²	79.3 a
Segovis SC 3.2 fl oz; <i>drench</i>	0.0 c	0.0 b
Stature SC 12.25 fl oz; <i>spray</i>	0.0 c	0.0 b
Pageant 38 WG 18 oz; <i>spray</i>	0.2 c	0.8 b
Avelyo SC 8 fl oz; <i>spray</i>	69.2 b	73.2 a
<i>P value</i>	<0.0001	<0.0001

² Column means with a letter in common are not significantly different (Fisher's protected LSD; *P* = 0.05)

Supplementary Table S1. Evaluation of foliar fungicides for management of soybean diseases (adapted from *PDMR* 18:CF088).

Treatment, amount/A and timing ^u	# Green stem (64 DAA) ^v	Moisture (%)	Test weight	Yield ^w (bu/A)	Avg. purple seed stain ^x	Avg. Diaporthe/Phomopsis seed decay ^y
Non-treated control	1.4 c	16.3	53.6	44.1	2.0	6.2
Topguard EQ 4.29 SC, 5 fl oz at R3	5.6 abc	16.4	53.9	45.4	3.4	5.6
Lucento 4.17 SC, 5 fl oz at R3	6.3 abc	16.4	53.6	47.2	2.8	5.8
Adastrio 4.0 SC, 8 fl oz at R3	7.6 abc	16.4	53.9	42.3	3.2	4.8
Revytek 3.33 SC, 7 fl oz at R3	9.8 ab	16.4	53.8	45.0	2.8	4.8
Veltyma 7 fl oz at R3	7.8 abc	16.2	53.9	44.6	1.6	4.0
Miravis Neo 2.5 SE, 13.7 fl oz at R3	5.9 abc	16.5	53.7	44.8	1.6	4.6
Miravis Top 1.67 SC, 13.7 fl oz at R3	13.6 a	16.3	53.5	42.8	3.0	5.8
Delaro Complete 3.83 SC, 8 fl oz at R3	8.3 abc	16.4	53.8	47.2	4.0	5.6
<i>P</i> value ^z	0.002	<i>ns</i>	<i>ns</i>	<i>ns</i>	<i>ns</i>	<i>ns</i>

^u Foliar applications were made using a CO₂ pressurized backpack sprayer equipped with extended range 8002VS flat fan nozzles calibrated to deliver 20 GPA at 40 psi. All R3 treatments were applied on 3 August and included 0.125% non-ionic surfactant, Induce 90SL.

^v Row 2 of each plot was used to count the number of visible green stems. Counts took place 64 days DAA (days after fungicide application).

^w Yield was calculated from the center two rows of each plot and adjusted to 13% moisture.

^x Avg. number of seeds in 10 g subsample from each plot with purple discoloration.

^y Avg. number of seeds in 10 g subsample from each plot with white/chalky appearance.

^z *P* values indicate treatment differences shown in the ANOVA. Variables with significant treatment differences ($P < 0.05$) had means separated using Tukey's honestly significant difference (HSD; $\alpha = 0.05$); *ns* = not significant.

Supplementary Table S1. Evaluation of nematicides on two cotton cultivars in a field infested with *Meloidogyne incognita* (adapted from PDMR 18:N018).

	Plant stand (10 row ft) 28 DAP	Vigor ^Y (0-5 scale) 28 DAP	Root galling (%) 43 DAP	Seed cotton (lb/A)
Cultivar				
DP 2012 B3XF	32.1	4.3	1.6 b	2,458
DP 2141NR B3XF	33.0	4.3	0.4 a	2,501
Nematicide and rate				
NTC	32.6	4.1 c ^Z	1.4	2,347
Avicta 500 FS (0.15 mg ai/seed)	30.9	4.3 bc	0.8	2,500
Copeo 600 FS (0.20 mg ai/seed)	32.8	4.0 c	0.8	2,725
BioST Nematicide 100 (7.0 fl oz/cwt)	34.1	4.0 c	1.0	2,308
Velum 4.16 SC (6 fl oz/A)	31.8	4.1 bc	0.9	2,574
AgLogic 15 GG (5 lb/A)	33.0	5.0 a	0.5	2,660
Averland 0.7 FC (6 fl oz/A)	32.6	4.5 b	0.7	2,241
Statistics: P > F				
Cultivar	0.35	0.32	<0.01	0.87
Nematicide	0.45	<0.01	0.56	0.13
Cultivar x Nematicide	0.98	0.45	0.46	0.92

^Y Vigor is based on six-point scale where 0 = poor vigor and 5 = good vigor.

^Z Different letters after means are significantly different according to Tukey's HSD procedure at $\alpha = 0.05$.

Supplementary Table S1. Comparison of planting dates and seed treatment on soybean (adapted from *PDMR 18:ST004*).

Planting dates and seed treatments ^a	Stand count (#/A)	SDS (% incidence) ^v	Root rot (%) ^w	Root weight (g) ^x	Yield ^y (bu/A)
Planting date 1 (14 April)	98,337 a	5.0 a	0.3 a	27.0	69.2 a
Planting date 2 (27 April)	79,933 b	1.2 b	0.2 a	27.6	71.6 a
Planting date 3 (11 May)	99,698 a	0.3 b	0.2 a	27.4	63.3 b
Planting date 4 (31 May)	75,958 b	0.0 b	0.1 b	25.6	56.6 c
Nontreated control	88,917	1.1	0.2	26.6	65.5
CruiserMaxx APX (with Thiamethoxam)	91,639	2.2	0.2	27.7	65.1
Thiamethoxam	80,041	1.2	0.2	28.4	66.9
CruiserMaxx APX (without Thiamethoxam)	93,327	2.1	0.2	24.9	63.1
<i>P</i> value planting date ^z	<0.0001	0.0049	0.0163	0.6030	<0.0001
<i>P</i> value seed treatment	0.0511	0.8141	0.5660	0.1766	0.4386
<i>P</i> value planting date*seed treatment	0.4390	0.9701	0.9610	0.1728	0.4004

^aSeed treatments applied prior to planting at 10 g a.i./100 kg seed.

^vDisease incidence visually assessed as a percentage (0–100%) of plants with disease symptoms on 22 August. SDS = sudden death syndrome.

^wRoot rot visually assessed as a percentage (0–100%) of dark discoloration on roots on 8 Sep.

^xWeight of 10 dried root samples in grams (g).

^yYields were adjusted to 13% moisture and harvested on 3 October.

^zAll data were analyzed in SAS 9.4 (SAS Institute, Cary, NC). A generalized linear mixed model analysis of variance was performed using PROC GLIMMIX. Values are least squares means and values with different letters are significantly different based on least square means test ($\alpha = 0.05$).