

Table 1. Summary statistics and mean comparisons between hop yards where powdery mildew was detected or not for selected variables used in generalized random forest models

Variable ^a	Full Sample		Powdery mildew not detected		Powdery mildew detected		Difference	t test	P-value	Variable importance ^b	
	Mean	SD	Mean	SD	Mean	SD				Annual cost	Active constituents
Mean incidence of diseased plants (proportion)	0.03	0.08	0.00	0.00	0.08	0.12	0.08	10.29	< 0.001	---	---
Mean incidence of diseased plants in May (proportion)	0.0032	0.0254	0.00	0.00	0.01	0.04	0.01	3.06	0.002	---	---
Pruning thoroughness (1 to 5)	2.98	1.53	2.99	1.65	2.98	1.38	-0.01	-0.04	0.963	0.186	0.180
Susceptibility to non-V6-virulent strains (0 to 5)	1.84	1.49	1.92	1.44	1.76	1.57	-0.16	-1.08	0.276	0.120	0.152
Susceptibility to V6-virulent strains (0 to 5)	2.73	1.31	2.35	1.36	3.21	1.10	0.86	7.35	< 0.001	0.092	0.087
Degree centrality non-R6-cultivars May-June (count)	1.02	3.46	0.00	0.00	2.26	4.88	2.26	7.35	< 0.001	0.124	0.063
Degree centrality non-R6-cultivars June-July (count)	0.49	1.88	0.00	0.00	1.10	2.69	1.10	6.51	< 0.001	0.073	0.071
Initial strain V6-virulent (0/1/2) ^c	0.72	0.91	0.00	0.00	1.61	0.64	1.61	39.61	< 0.001	0.029	0.032
Active constituents (count)	6.63	2.97	5.75	2.85	7.70	2.78	1.95	7.39	< 0.001	---	---

Annual cost (USD/ha)	\$444.38	275.9	\$384.95	276.89	\$516.44	257.57	\$131.49	5.21	< 0.001	---	---
Observations	458		251		207						

^a Variable descriptions are as described in the Materials and Methods. Form of the data or units are noted parenthetically. Dummy variables associated with the quadrant of the landscape where yards were located is not presented because the summary statistics are not meaningful.

^b Variable importance for selected variables was calculated as the weighted sum of how many times a feature *i* was split on at each depth in the forest. Dash marks indicate variable importance is not relevant.

^c Means for this variable indicates the proportion of all yards where the initial strain of *Podosphaera macularis* detected possessed V6-virulence. In the total of 207 yards where powdery mildew occurred, in 0.22 proportion of yards the initial strain was non-V6-virulent and in 0.78 proportion the initial strain was V6-virulent.