Table S1. Influence and leave-one-out sensitivity analyses. the ten most influential of each outcome.

Outcome	Study	Cluster	b_without	Δb	τ^2_without	$\Delta\tau^2$
Accuracy	Taylor et al. [28]	2	0.086	1.402	479.08	84.85
Accuracy	Taylor et al. [28]	1	0.009	1.325	490.89	73.04
Accuracy	Taylor et al.. [28]	4	-0.068	1.247	501.91	62.03
Accuracy	Taylor et al. [28]	3	-0.147	1.169	512.18	51.75
Accuracy	Taylor et al. [28]	5	-0.147	1.169	512.18	51.75
Accuracy	Schrödter and Ullrich [32]	2	-0.17	1.146	516.02	47.91
Accuracy	Bosco et al. [37]	1	-0.702	0.614	558.48	5.45
Accuracy	Raposo et al. [40]	2	-1.775	0.459	569.28	5.35
Accuracy	Raposo et al. [40]	1	-1.775	0.459	569.3	5.37
Accuracy	Raposo et al. [40]	3	-1.772	0.457	569.39	5.46
Fungicide reduction	Raposo et al. [40]	1	0.347	0.796	254.72	22.28
Fungicide reduction	Leonard and Dowley [47]	2	-1.238	0.79	257.1	19.9
Fungicide reduction	Liu et al. [62]	4	0.297	0.746	258.38	18.62
Fungicide reduction	Liu et al. [62]	1	0.297	0.746	258.38	18.62
Fungicide reduction	Taylor et al. [28]	1	0.221	0.67	263.23	13.77
Fungicide reduction	Leonard and Dowley [47]	1	-0.981	0.533	269.57	7.42
Fungicide reduction	Raposo et al. [40]	2	0.072	0.521	273.84	3.16
Fungicide reduction	Bosco et al. [37]	1	-0.948	0.5	270.98	6.01
Fungicide reduction	Schrödter and Ullrich [32]	2	-0.924	0.476	274.21	2.79
Fungicide reduction	Small et al. [66]	3	0.015	0.464	273.91	3.09

Table S2. Components of the Egger´s regression test.

outcome	k_obs	I^2	Egger_z	Egger_p	TF_missing	TF_est	TF_se	TF_p	TF_ci_lb	TF_ci_ub
Accuracy	57	84.71	1.13	0.26	-44	-6.82	3.36	0.042	-13.41	-0.23
Fungicide reduction	57	82.43	1.19	0.23	-51	-3.76	2.76	0.173	-9.18	1.65

Table S3. Bonferroni test for the statistical difference in accuracy.

Comparison by Generation	**P. unadjusted**	**P. adjusted**
1 - 2	2.83682×10^{-6}	8.51046×10^{-6}
1 - 3	7.84591×10^{-7}	2.35377×10^{-6}
2 - 3	0.302	0.907
Comparison by Mechanism		
1 - 2	0.002	0.005
1 - 3	0.001	0.002
2 - 3	0.737	0.991

Table S4. Bonferroni test for groups statistical difference in fungicide reduction.

Comparison by Generation	P. unadjusted	P. adjusted
1 - 2	0.393	0.999
1 - 3	0.415	0.999
2 - 3	0.001	0.001

Table S5. Components of the mixed effects method.

Outcome	k	tau2	tau	I^2_pct	Q	Q_df	Q_p	se	z	p	ci.lb	ci.ub
Accuracy	57	563.94	23.75	84.71	350.25	56	0	3.78	-0.35	0.73	-8.71	6.09
Fungicide reduction	57	277.0	16.64	82.43	410.54	56	0	2.71	-0.16	0.87	-5.76	4.86

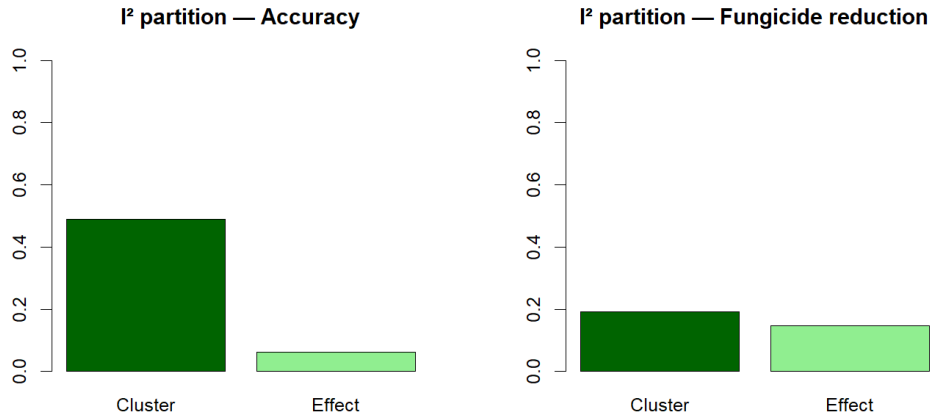


Figure S1. Heterogeneity structure of the hybrid multilevel model.