Table 2. Success Rate of Controlled Self- and Cross Pollinations Using Pollen Sourced from Among and Within Woodland and Orchard Sites in 2022 – 2025[1].

Pollen Source	No. Crosses Initiated (no.)	Initial Pollination Success[2] (no.)	Final Pollination Success[3] (no.)	Overall Pollination Success Rate (%)	Fruit in Cluster[4] (no.)
		2022 Woodland Site[5]			
Between Plots	64	22	11	17.2	1.9
Within Plots	64	26	23	35.9	1.8
		2023 Woodland Sites[6]			
Between Sites	112	30	23	20.5	2.2
Within Plots	123	25	13	10.6	1.7
Cultivar Bulk	90	40	29	32.2	2.8
Self	87	8	3	3.4	1.3
		2024 Woodland Site[7]			
Woodland Bulk	64	37	26	40.6	1.6
Within Plots	62	26	16	25.8	2.0
Cultivar Bulk	62	39	28	45.2	1.9
Self	64	3	1	1.6	–
		2024 Orchard Site[8]			
Woodland Bulk	61	39	26	42.6	3.9
Cultivar Bulk	63	43	37	58.7	3.2
Self	62	7	1	1.6	–
		2025 Woodland Site[7]			
Woodland Bulk	38	10	8	21.1	1.8
Within Plots	29	5	5	17.2	2
Cultivar Bulk	34	15	15	44.1	2.6
Self	33	1	1	3.0	–
		2025 Orchard Site[8]			
Woodland Bulk	43	22	22	51.2	3.7
Cultivar Bulk	43	23	18	41.9	3.1
Self	48	2	2	4.2	1.5

[1]To control pollinations, immature flowers (i.e., those without maroon color development) were covered using fine-meshed nylon crossing bags to exclude natural pollinators. As stigmas reached receptivity (determined by visual inspection for color and the presence of exudate) bags were temporarily removed and pollen from a designated source (collected earlier) was transferred to the stigmatic surface with a soft artist's brush. The bags were then replaced to prevent subsequent insect visitation.

[2]Initial fruit development in clusters from controlled self-and cross-pollinations was monitored approximately four-six weeks after pollination and just after the "June Drop", a common phenomenon by many fruit tree species to self-regulate crop load.

[3]Fruit clusters from controlled self- and cross-pollinations bearing harvestable fruit at physiological maturity (≈100 days after pollination).

[4]Average no. of fruit in clusters from all pollinations harvested within pollen source category.

[5]Pollinations at Woodland Site 1 in Columbus, OH, 4 plots within the site.

[6]Pollinations at Woodland Sites 1 and 2 in Columbus, OH and Woodland Sites 3 and 4 in Belmont, OH, 4 plots within Columbus Woodland Site 1; Cultivar pollen collected from our research orchard at the OSU Waterman Agricultural and Natural Resources Laboratory adjacent to Woodland Site 1; Between-sites pollinations made using bulk pollen from the two Columbus sites applied to stigmas in Belmont site flowers and vice-versa.

[7] Pollination conducted at Columbus Woodland Site 1. "Woodland bulk" is a composite of pollen from all four woodland plots within Site 1. "Cultivar bulk" is a composite of pollen collected from 5 cultivars growing in the Waterman Orchard.

[8]Pollinations conducted on the Waterman Orchard using pollen sources described in footnote 7 above.