

Predatory mite management in strawberries

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Following grower complaints of predatory mites failing to establish in strawberry fields despite releasing millions starting in 2019, the Strawberry Center Entomology lab has been taking in predatory mite samples for quality testing and has received 24 samples in 2021 and 31 samples in 2022 (Figure 1). Many factors affect predatory mites, but the initial quality that a grower receives is essential.



Figure 1. Predatory mite bottles are usually labeled to contain 2,000, 4,000 or 10,000 mites. These are either delivered to the grower directly, brought to a pickup point, or shipped directly to the growers.

Table 1. Predatory mite samples were submitted to our lab in 2021 and 2022 from growers. These were assessed for quality including the total number of live mites per bottle and fecundity.

Year	Company	No. samples received
2021	Biotactics	4
	Bioline	10
	Koppert	6
	Mighty Mite	4
2022	Biobest	2
	Bioline	2
	Mighty Mite	12
	Smities	12
	USA AG	2
	Central Coast Insectary	1



Figure 2. The most common predatory mites shipped in strawberries for spider mites are *Neoseiulus californicus* and *Phytoseiulus persimilis* (pictured here eating a two spotted spider mite).

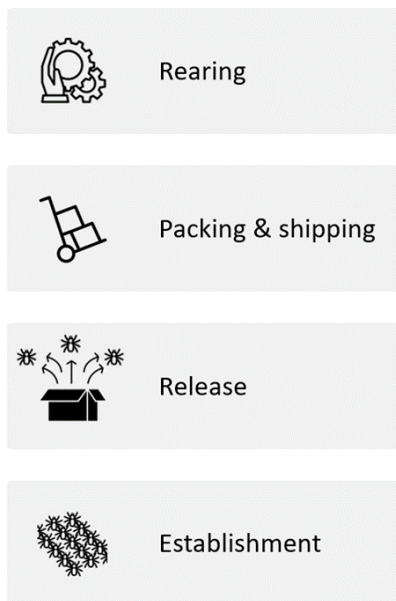


Table 2. The average number of live mites per bottle out of the total number of mites per bottle per species per year. The company names have been coded here, however the growers and the corresponding companies have the results from their respective samples.

Year	Predatory mite company	Average number live mites per bottle	Species
2021	PM-A	100%	<i>Neoseiulus californicus</i>
2021	PM-A	47%	<i>Phytoseiulus persimilis</i>
2022	PM-A	41%	<i>Phytoseiulus persimilis</i>
2021	PM-B	64%	<i>Neoseiulus californicus</i>
2021	PM-C	19%	<i>Phytoseiulus persimilis</i>
2022	PM-C	40%	<i>Phytoseiulus persimilis</i>
2021	PM-D	70%	<i>Phytoseiulus persimilis</i>
2021	PM-E	75%	<i>Phytoseiulus persimilis</i>
2022	PM-E	54%	<i>Phytoseiulus persimilis</i>
2022	PM-F	75%	<i>Phytoseiulus persimilis</i>
2022	PM-G	12%	<i>Phytoseiulus persimilis</i>

