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Pieris rapae: Pest Or Pollinator

Cabbage White Butterfly larvae (*Pieris rapae*) are a worldwide pest of Brassica crops, yet they are important pollinators of many plants (www.fastplants.org). The goal of this project was to determine if the caterpillars would prefer celery, lettuce, or spinach which may keep them from destroying the broccoli (*Brassica*) plants. The hypothesis was *Pieris rapae* larvae would choose to eat the lettuce as much as the broccoli. *Pieris rapae* eggs were placed on radish (*Brassica*) leaves grown under a fluorescent light bank. When the leaves of the radish plants were eaten away, the larvae were placed in the center of a petri dish. One piece of food of each type was placed equal distances around the perimeter of each dish. Broccoli was placed in each dish as the control, since the larvae are known to eat broccoli. Food was replaced with fresh pieces as needed. The dishes were brushed out to get rid of the frass. Observations of where the frass and larvae were located identified preferences. After approximately 24 hours, the caterpillars were observed with 60.61% of the 33 caterpillars preferring to eat broccoli. This compared to preferences of 6.06% celery, 15.15% lettuce, 3.03% spinach, and 15.15% uncertain. The caterpillars were observed again after a 24 hour period and most (90.90%) of the 44 caterpillars preferred to eat broccoli. This compares to 2.27% preferences of all the other food types. The data calculations did not support the hypothesis. The caterpillars definitely preferred the broccoli.