

flea beetle, brassicae leaf beetle, cabbage stink bug, cabbage sawfly, moths, slugs etc. Peak time of each pest is like this; aphids is early June and middle October, striped cabbage flea beetle is middle June, early July and early October, cabbage stink bug is late June, early and middle August. cabbage sawfly is middle and late September, moths are from early June to late June, slug is middle August, late October. Cabbage has the most kinds of pests and the damage is severe. We investigated the occurrence of moths using the sex pheromone trap. Peak occurrence time of the oriental leafworm moth is early September, tobacco budworm is early August, the beet armyworm is early September, the diamondback moth is early October. We made the insect pest pictorial book of farm weekend and distributed it the provincial government, and so forth.

The lavender oil applied as 6 g/L spray provided 100% mortality toward larvae from either of susceptible and pyrethroid-resistant diamondback moth (DBM). Reasonable DBM control can be achieved by the spray formulation containing the 6 g/L oil as potential contact-action fumigants. The 17 essential oils applied as 30 g/L spray provided 100% mortality toward green peach aphid and cotton aphid adults, palm thrips adults, western flower thrips adults, sweetpotato whitefly adults, and beet armyworm larvae, without toxicity to pollinators (honeybee and bumble bee) and parasites (*Aphidius colemani* and *Aphidius matricariae*). This will warrant possible applications of essential oil-derived products as potential insecticides with broad spectrum. The monoterpenoids ( $\pm$ )-Limonene, (+)-limonene,  $\alpha$ -pinene,  $\beta$ -pinene, camphor, and linalool strongly inhibited aphid cetylcholinesterase, whereas the mechanism of insecticidal action of camphene might be due to interference with the octopaminergic system. Currently, 157 eco-friendly organic insecticides are registered in our country and we selected 2 products to be used in urban farming. The active ingredient of the products are Sophora extract-based mixtures containing more 2 or 3 plant extracts.