

Thesis Title The "Application of Nylon Net in Combination
with Neem Extracts for the Control of Insect
Pests of Chinese kale.

Name Pataraporn Sommanus

Degree Master of Science (Appropriate Technology
for Resource Development)

Thesis Supervisory Committee

Raywadee Roachanakanan, M.Sc.

Kwanchai Sombatsiri, Dr. Agr.

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ABSTRACT

The nylon net and neem extracts were used against chinese kale's insect pest in farmer's field in Amphoe Bangkrui, Nonthaburi Province, comparing with chemical insecticides inside and outside nylon net. The experiment was designed in randomized complete block with plots of $2.5 \times 4.0 \text{ m}^2$. Each treatment is replicated three times. The first spray of neem extracts and insecticides commenced on about the 15th day after sowing and continued once every 4 days until 7 days before harvesting. The efficiency of the treatments was indicated in the quantity and quality of chinese kale.

The chinese -kale sprayed the water extract of neem seed kernel (2.5%) both inside and outside the nylon net is significantly different in weight per plot, weight per unit and height at probability level of 95% consequently. The result is as equal level as the conventional insecticides, methamidophos plus chlofluazuron using inside and outside nylon net. But the water neem leaf extract (2.5%) showed the same result as the control. There was an outbreak of aphids in chinese kale that cultivated in nylon net only before harvest two weeks but the same problem was not happened in other nylon net treatments.

The percentage of damage of chinese kale in every treatments including the control that showed no significant difference. Among the treatments, there was also no significant difference by Duncan's Multiple Range Test. The leaf of chinese kale was damaged by the flea beetle when it was young. This result showed that the application of nylon net combination with the neem extract could not protect the damage from the flea beetle.

The residual analysis of methamidophos and carbofuran in soil and water in the experimental plot showed no residue in every treatments.