

Abstract

Study the greenhouses and management suitable for roses was carried out in 3 experiments as follows:

Experiment 1: The study on suitable greenhouse for rose production on highland area was operated in the area of the Royal Agricultural Station Inthanon during the period from July to August 2016 in Night day varieties. The experiment was compared between two types of greenhouses (gardener's greenhouse with greenhouse equipped spunbond fabric). The results showed that the greenhouse equipped spunbond fabric had higher temperature than gardener's greenhouse of approximately 0.7 to 4.1 degrees Celsius. The construction cost of greenhouse equipped spunbond fabric was 311.89 baht / Square meter and total yield 20.00 flowers / plants / Square meter. While the construction cost of gardener's greenhouse was 257.30 baht / Square meter and total yield 16.08 flowers / plants / Square meter.

Experiment 2: The study suitable methods for thrips management (*Frankliniella occidentalis*) of rose production on Highland area. Two varieties of rose were evaluated during May – July 2016 at Royal Agricultural Station Angkhang, Fang, Chiang Mai. The experiment was compared between two methods. The first method was the using only chemicals to control insects and diseases. The second method was Integrated Pest Management (IPM) on the following principles, Yellow sticky traps (1 sheet per 1 sq.m.) together with fermented garlic, peppers and onion. The results showed that at 10 weeks after planting found two diseases (Powdery mildew and Downey mildew). For pests found three species (Aphids (*Myzus persicae*), Thrips (*Frankliniella occidentalis*) and Common cutworm (*Spodoptera litura* (Fabricius))). Thrips (*F. occidentalis*) were significant difference that found in plots experiment using Integrated Pest Management were 0.45 insects/plant which higher than the plots experiment using only chemicals 0.00 insect/plant. In addition, Aphids (*M. persicae*) showed a statistically significant difference that found in plots experiment using Integrated Pest Management were 61-80 percents which higher than the plots experiment using only chemicals 0-20 percents. The percentage of diseases from the two methods do not statistically significant difference in Royal Baccara varieties. The percentage of disease representing 0-10 percents. Which Avalance varieties found common

cutworm (*S. litura*) that were not different statistically significant. On the other hand, Thrips (*F. occidentalis*) and Aphids (*M. persicae*) showed different statistically significant. By thrips (*F. occidentalis*) found in plots experiment using Integrated Pest Management were 1.10 insects/plant which higher than the plots experiment using only chemicals 0.00 insect/plant. Aphids (*M. persicae*) found in plots experiment using Integrated Pest Management were 61-80 percents which higher than the plots experiment using only chemicals 0-20 percents which statistically significant difference. About the percentage of diseases from the two methods do not statistically significant difference (0-10 percents).

Experiment 3: The study optimum cut flower stage. The results showed that suitable cut flower stage of two varieties rose (Titanic and Happy day rose) were stage II in Titanic rose (3.5 days vase life, diameter of flower and full bloom weren't different statistically significant from stage III). The suitable cut flower stage of Happy day rose was stage III (3 days vase life). These cut flower stage had diameter of flower which different statistically significant from stage I and II but full bloom wasn't different statistically significant from the other.

