

Abstract

The objective of this study was to examine of technologies based on safety and quality for economical plantations in Royal Project Extension Areas Pakloy, Jom Thong, Chiang Mai. Target plants were cabbage, chinese cabbage, sweet pepper and avocado. The best practices of previously research were selected to implement among the crop. The results concluded

(1) preparing plot as terrace, application of media mixing 3 beneficial microorganisms and seedling in tray, applying dolomite to soil before planting 30 days, application of chicken manure fermenting mixed with phosphate rock and chemical fertilizers by grounding before transplanting, spraying mixer as P.D. 2, P.D.7, calcium, copper and boron after transplanting caused inducing pH of soil to 4.47-5.44, reducing cost of seed at 3 times and fertilizers at 303.50 baht/16 m². The highest weight of cabbage as above-mentioned was 1,700 kg while, by practices of general farmers was 1,300 kg. Technology from researches caused increasing yield of chinese cabbage which planted in plot more than 10 years and previously, showed lower yield so the highest was 800 kg. However, practices of general farmers and planted in new plot showed 1,350 kg.

(2) technology of green house and fertilizing with drip irrigation for sweet pepper, application of media consisting 3 benefit microorganisms and seedling in tray, emphasize of spraying bio-pesticides to control pest and applying pesticides based on safety guideline if necessary caused minimum and maximum pesticide cost per plant at 1.4 and 1.2 baht, respectively. The result of minimum - maximum fertilizer cost and yield at 207 days indicated that general farmer management used fertilizer at 21.57 and 8.60 baht and the yields per plant were 2.7 and 1.16 kg. In this case, technology as above-mentioned caused fertilizer at 14.12 and 11 baht. Yield per plant were 2.4 and 1.8 kg.

(3) antagonistic bacteria isolates Kuladum IL could inhibit *phytophthora* sp., causal agent of avocado damping off at 76.33% by dual culture technique. All protection treatments of disease showed well growth of plant after 2 month transplanting. Eradication treatments by injecting chemical to stem of avocado caused well growth while, non-treatment showed increasing decay and die back.

Keywords: Plant cropping, Chemical decreasing, Highland, Pakloy