

Abstract

The effect from agrochemical applications during planting to health of farmers and consumers including contamination of toxins to environment had highly severed at present. The objective of this study was to examine of technologies based on safety and quality for economical plantations in Highland Development Project Using Royal Project System “Pakloy”, Jom Thong, Chiang Mai. The ethnic of farmers was Mong. Target plants were cabbage, chinese cabbage, sweet pepper and avocado. The results concluded (1) application of media consisting 3 supporting growth microorganisms with seeding tray, preparing plot as terrace, applying dolomite to soil before planting 30 days, application of chicken manure fermenting with phosphate rock and chemical fertilizers by grounding before transplantation, spraying of P.D. 2 and P.D.7 which were mixed with calcium, copper and boron 4 times, spraying bio-pesticides from researches to control pest and applying pesticide base on safety guideline if necessary showed preferable growth and weight per head of cabbage. The maximum yield in area (1 ngan) was 4,780 kilograms so that the total cost as fertilizer, pesticides, tools and wages was 3,562 baht (0.62 baht/kilogram). In this case, general farmers must paid 3,786 baht of total cost for 4,100 kilograms of highest yield so the cost was 1.80 baht/kilogram. (2) In examination on chinese cabbage, the results indicated total cost of general farmers for 2,880 kilograms of yield was 3,090 baht (1.07 baht/kilogram) while the cost of technology was 1,540 baht (2.32 baht/kilogram) obtained higher yield as 3,570 kilograms. (3) technology of green house and fertilizing with drip irrigation for sweet pepper, emphasize of spraying bio-pesticides from research to reduce chemical showed highest yield/plant (3 kilogram) on the best farming practice while general farmer management was 1.93 kilogram. When considering on cost/plant, the results showed lower cost of pesticides as 2.72 baht and total cost was 68.72 baht which was 22.90 baht/kilogram on practice of technology in order that the general practice was 3.72 baht, 72.44 baht and 37.53 baht, respectively. (4) The control of *phytophthora* sp., causal agent of avocado damping off by phosphoric acid mix to the dolomite by painted around bark tree and top on ground 1 meter 3 times.

Keywords: Plant cropping, Chemical decreasing, Bio-Product, Pakloy