CHAPTER 6

Overall conclusions

According to the results of two experiments which examined: (1) the effects of season and harvesting time on senescence in pak-choi and (2) the effects of vacuum cooling on delay senescence of organic pak-choi in winter, summer, and rainy seasons, the overall conclusions include:

1. After storage pak-choi for 3 days, the season affected all parameters, reducing sugar and total sugar contents, glucosinolate, vitamin C, crude fiber, leaf color, weight loss, respiration rate and ethylene production. While the harvesting time only affected respiration rate, reducing sugar, total sugar, glucosinolate and vitamin C contents. The interaction of both factors affected reducing sugar and total sugar contents, glucosinolate, respiration rate and ethylene production.

2. The results suggested that time of the day for harvesting in each season should be done in the morning or evening. Because the produce had low respiration, especially in the evening, vegetable had high storage substance, sugar content, that can be extend produce shelf life if stored at suitable temperature. In addition, pak-choi should be harvest in the morning for high glucosinolate content.

3. Vacuum cooling reduced the rate of respiration, vacuum cooled pak-choi had two times lower respiration rate than non-vacuum cooled samples. In addition, the vacuum cooling extended the shelf life by one-fold compared to non-vacuum cooled produce and this cooling method delayed the deterioration or senescence of organic pak-choi in winter and summer.