

is very important to protect the safety and quality losses at harvest until the product is used. The principle is the main purpose of post-harvest handling is important to understand the characteristics of postharvest products as raw plant products that are still alive and still continue the functions of metabolism. An understanding of the nature and effect of product harvest handling practices are very important to do the best compromise to maintain the optimum condition of the product. So to get the optimal form of compromise, several important considerations must be considered as physiological considerations, physical, pathological, environmental and economic conditions. The objective of this paper is to study the optimizing of crop bioactive compounds by management and post-harvest handling arrangements.

## **Factors Affecting To Crop Bioactive Compounds**

### *Habitat*

Habitat is closely related to the quality, content of active compounds, and physical form or morphology of plants. Several types of spices will provide optimal results if planted in soil less argillaceous and will not give satisfactory results if planted in sandy soil that is porous. Carrots grown on muck soils do not hold up as well in storage as carrots grown on lighter, upland soils. Lettuce harvested during a period of rain does not ship well and product losses are increased (Bachmann and Earles, 2000). Farm management skills combined with site-specific effects contributed to high lycopene levels, and the choice of variety significantly influenced the content of bioactive compounds, particularly ascorbic acid and total phenolics (Uroszek, 2009).

Effect of soil on fruit and vegetables appearance include: texture, drainage and reactions in soil and nutrient availability. Poor drainage conditions will result in lack of oxygen in the soil and will have an impact on the appearance of organ storage in the soil. Damage due to contamination of pollutants also have significant effect on the appearance of fruits and vegetables. It is known that increasing of pollutant concentration is high enough, can mentebabkan deviate color formation and damage to the surface of horticultural products. For example, a high fluorine substances can cause unwanted discoloration of peaches, substance ozone can cause the appearance of mottled substance in the leaves of spinach and nitrogen dioxide can cause the occurrence of creases on the outskirts of leaf lettuce.

### *Season and climate*

Effect of season on agricultural output in general, including medicinal plants, is very far. Season closely related to temperature, light, and humidity can affect the physical factors, chemical, and biological occurring within the plant. Therefore, the influence of season was not much different from the above factors. Medicinal plants that grow in the dry season generally have a content of active substances is higher when compared with medicinal plants in the rainy season. Morzuch et al (1983) created a regression model using 79 years of yield and climate data to predict yield based on technological advances and climate. He found that 98% of the variability in yield was explained by technological advances and only 2% was related to climate. Precipitation, snow cover, estimates of potential evapotranspiration, and available soil moisture are apparently of little importance (Roper, 2006).