

Temperature and humidity is also an important factor for plant growth and development. Humidity and temperature optimal for a type of plant is not always the optimal temperature and humidity for the other plants. Temperatures above or below that result in less photosynthesis leading to reduced growth. Respiration is also temperature dependent. Respiration uses the products of photosynthesis and as temperature increases 10°C the rate of respiration doubles. Moderate temperatures maximize photosynthesis while maintaining moderate respiration. Temperature also affects nutrient uptake (Roper, 2006). In contrast Franklin and Cross (1948) examined the relationship of temperature and yield. Temperature had little effect on Massachusetts cranberry yields.

Sunlight effect on the synthesis of the nutrients contained in plant tissue. Through photosynthesis, sunlight can help the formation of nutrients in plant tissue. Energy arrives in the form of sunlight and stays as plant tissue or organic material (Roper, 2006). Synthesis activity of the nutrients also vary depending on the amount of sunlight on plants. This affects the nature of the plant generated. Radiation, light intensity and quality greatly affect the quality of fruit at harvest time. Fruit exposed to direct sunlight has a smaller weight, organic acids and fruit liquid fewer than the shaded fruit. Spacing variations also affect the quality of fruits and vegetables. When the plants were grown increasingly tight, the less taste sweet fruit, as well as on vegetables in the form of leaf, the leaf is wider and thinner.

3. Water

Water content in plants has a direct effect on cell turgor, and cell hydration level which is then known to affect the hardness of fruits and vegetables. Stress resulting from lack of water during the development of the field can also cause a reduction in the size of the product, such as in grain crops and citrus. This is particularly important influence on the level of violence in leafy vegetables. The availability of water is also a factor which greatly affect the taste of fruits and vegetables. Insufficient water at any growth stage will reduce yield and fruit quality. Tomato is most sensitive to water deficit during flowering, somewhat sensitive immediately after transplanting and during fruit development, and least sensitive during vegetative growth. Because indeterminate varieties flower and form fruit continuously, they are always sensitive to water deficits (Hanson et al., 2001).

4. Nutrient

Nutrients also greatly affect plant growth which in turn affect the taste of fruit and vegetables produced. Both plant nutrients from the soil fertility level of existing or granted in the form of fertilizer is the most decisive factor to the outcome. Fertilizing with major elements such as N, P, K and Ca affect the internal quality of fruit. Nitrogen fertilizer is applied to achieve and maintain tissue sufficiency. When vines have a sufficient N concentration, nitrogen will not limit yields. Understanding the changes nitrogen makes to yield components should help growers manage nitrogen application. When N fertilizer is applied to overcome a deficiency vine growth and yield increase. Adequate N results in more fruit and larger fruit (Roper, 2006).

5. Plant growth regulators

Plant growth regulators especially gibberellins (GAs) are known to promote plant growth, germinate seed and response toward environmental stresses (Hedden and Kamiya, 1997). GAs has also been reported to promote synthesis of flavonoids, as studies had shown that an increase in anthocyanin synthesis by GA3 promoted levels of flavonoid-specific mRNAs (Weiss et al., 1990). Salicylic acid plays an important role in defense mechanism