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Commentary

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Different methods of pollination for enhancement of yield in tomatoes

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DESCRIPTION

The tomato is the most common and frequently utilised vegetable, with plants produced all over the world. Summer temperatures and relative humidity are ideal for increasing tomato output. Tomatoes rely on many pollination methods to increase productivity and improve the physicochemical qualities of their crop. Pollination in many agricultural areas has been diminished, as seen by the decline in sustainable agriculture achievement. Fruit colour is vital for fruit selecting and utilization, and it is regarded as the most important exterior trait for fruit selection and postharvest life.

This fruit colour influences the consumer's decision to purchase tomato fruits. Because chloroplasts are formed from chloroplasts, the appearance of red tomato fruit signifies the breakdown of chlorophyll as well as the formation of lycopene and other carotenoids. Tomatoes are used to make a variety of products, including paste, juice, and ketchup, which are consumed worldwide. Tomatoes are high in vitamins C and A and are used in a variety of cuisines. With the world's largest booming population, so does the need for vegetables. To meet the demand, more tomatoes must be grown in the field. The country's increased fast food output is also having a significant impact on tomato product demand. This trend is expected to continue in the foreseeable future, with the use of tomatoes increasing.

Tomato flowers are hermaphrodite, with a yellow corolla and anthers, and are tiny (1-2 cm in diameter). Tomato blooms feature five free stamens and anthers that form a cone around the stigma.

Tomatoes are grown in open fields during the summer season. They develop and mature in warm, light filled environments. Tomatoes are the most extensively consumed vegetable in the world, accounting for more than half of all vegetables farmed in fields and greenhouses. A lack of pollinators in an area can reduce tomato harvest. Birds, bats, honey bees, and insects that pollinate flowers play an important role in the pollination and development of most vegetables and fruits. Most crops would be unable to reproduce without the assistance of pollinators, resulting in significant reduction in yield for farmers. In reality, animal pollination is required by 90% of all blooming plants. Several insects provide vital ecological services to horticultural crops, such as control of pests and crop pollinating.

Open pollination was discovered to be a more efficient pollination approach. Open fertilization produced the highest yield, and the physicochemical qualities of the fruits were improved as compared to other approaches (wind and self-pollination). Fruits harvested from the open field weighed more than fruits picked from enclosed vines. The open field tomatoes also had larger and more shaped fruits. As a result, the tomatoes from the open field had more seeds. The fruit's life span was tested at 25°C, and the fruits from the open field had a longer shelf life based on daily observations. To attract insects, tomato blooms were clearly visible in the open pollination field. Tomatoes that are exposed have the best possibility of being pollinated by various means, such as wind and animals.