

Effect of different bio-stimulants on growth, quality and yield of Strawberry.

Objective: Find out the best bio-stimulants to enhance the growth & yield of strawberry crop.

Introduction:

The cultivated strawberry (*Fragaria x ananassa* Duch.) is one of the luscious and soft fruits of the world. It is a hybrid of two Native American species; *Fragaria chiloensis* and *Fragaria virginiana*, belongs to the Rosaceae family. All cultivated varieties are octaploid ($2n=56$). Botanically it is an aggregate fruit which is highly perishable in nature.

In temperate climate condition, its plants behave like a small perennial herb with shallow root system whereas in sub-tropical climate it behaves as annuals. Fruit of strawberry is a modified receptacle, one



seeded fruit or achenes which is located on the outer surface. Strawberry is non-climacteric fruit and fruits reach in full red stage within 28-30 days after anthesis, having the maximum fruit weight and size. Strawberry is grown throughout the world but the United States is the world's largest producer of strawberries, producing nearly 1.3 million metric tons in 2010 and accounting for 30 percent of the total world strawberry production.

In Palghar district strawberry cannot become very popular because of lack of knowledge. It is grown only in Mahabaleshwar. The continued introduction of strawberry cultivars to the market increases the need for reliable methods of identification and genetic diversity assessment. In Palghar district strawberry is a new crop to farmers or growers and its cultivation practices are very specific to

take commercially. Keeping these points in view the present investigation work was carried out in the field of ASPEE Foundation, Tansa Farm during Rabi 2022.

Treatments:

Crop	: Strawberry
Experiment Layout	: RBD
No. of Replications	: Three
Spacing	: 45 cm x 45 cm
Plot size	: 2.70 m X 1.80 m
Date of TP	: 12/11/2022

Treatment details:

Treat. No.	Treatment Details
T1	Novel prime organic liquid nutrient (1%)
T2	Novel prime organic liquid nutrient (2%)
T3	Vermiwash (1%)
T4	Vermiwash (2%)
T5	Cowurine (1%)
T6	Cowurine (2%)

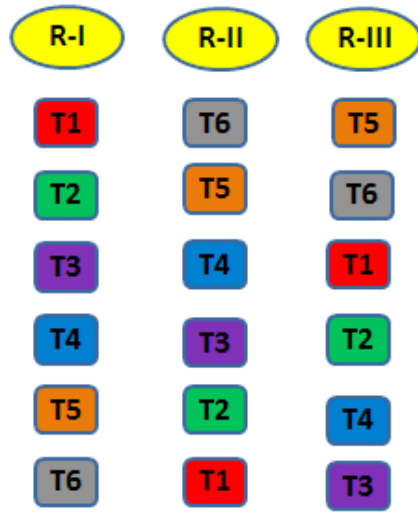
Methodology:

A field experiment was carried out to find out the best bio-stimulants to enhance the growth & yield of Strawberry crop during *Rabi* season of 2022 at ASPEE Foundation Farm, Tansa, Palghar, Maharashtra. Three different bio-stimulants were tried in Randomized block design with three replications.

As per treatments spraying of bio-stimulants carried out periodically. Observations of plant height, plant spread, number of leaves per plant, no. of runners per plant, number of flowers per plant, no. of berries per plant, fruit length, fruit weight & fruit yield were recorded.



Layout:



Results

The plant growth parameters viz., plant height (34.47 cm), plant spread (34.11 cm), number of leaves per plant (52.13), no. of runners per plant (8.47) were markedly influenced by spraying of Novel prime organic liquid nutrient (2%) applied in Strawberry. This treatment also shows the higher value for yield parameters like number of flowers per plant (24.53), no. of berries per plant (22.53), fruit length (4.28 cm), fruit weight (24.91 gm) and fruit yield (5418 kg/ha).

Graph



Conclusion

A comparative study of different bio-stimulants was done in Strawberry crop to obtain the higher returns under north konkan coastal zone of Maharashtra. From the data it is very clear that application of Novel prime organic liquid nutrient (2%) recorded higher Strawberry yield.