

Effect of different organic liquid formulations on growth and yield of Soybean (2nd Year).

Objective: To confirm the best organic liquid formulation to enhance the growth & yield of Soybean crop.

Introduction: Soybean (*Glycine max* (L.) Merrill.) is one of the most important oil seed crop of the world which also has tremendous importance



as a food legume. Soy oil finds a variety of uses for domestic and industrial purposes besides its use in several food preparations and animal feed. Among modern agricultural commodities, soybean [*Glycine max* (L.) Merrill] has a prominent place as the world's most important seed legume, which contributes 25 per cent to the global vegetable oil production, about two thirds of the world's protein concentrate for livestock feeding and is a valuable ingredient in formulated feeds for poultry and fish. Currently the crop is grown in 103 million ha globally with an annual production of 261 million tons and average productivity of 2533 kg per ha. In Maharashtra, soybean is cultivated on an area of 3.8 M ha with production of 3.07 m ton with second rank in India. Soybean (*Glycine max*) is one of the most important and fastest growing oil-bearing crops in the world. Because of its high protein and oil content, and other attributes such as its beneficial

effects on soil fertility, several attempts were made in the past to popularize soybean cultivation in India.

The origin of soybean's introduction into India is not known, but it probably came from China through the Himalayan Mountains centuries ago. Some believe that it was also brought in via Burma by traders from Indonesia. As a result, soybean has been traditionally grown on a small scale in Himachal Pradesh, the Kumaon Hills of Uttar Pradesh (now Uttaranchal), eastern Bengal, the Khasi Hills, Manipur, the Naga Hills, and parts of central India covering Madhya Pradesh.

Treatments:

Crop	: Soybean
Variety	: JS-9560
Experiment Layout	: RBD
No. of Replications	: Four
Spacing	: 30 cm x 15 cm
Plot size	: 2.25 m X 2.25 m
Date of Sowing	: 03/01/2023

Treatment details:

Treat. No.	Treatment Details
T1	Jeevamrut @ 10%
T2	Panchgavya @ 10%
T3	Vermiwash @ 10%
T4	Cowdung wash@ 10%
T5	Cow urin@ 10%
T6	Control

Methodology:

A field experiment was carried out to find out the best organic liquid formulation to enhance the growth & yield of Soybean crop during *Rabi* season of 2022 at ASPEE Foundation, Tansa Farm, Palghar, Maharashtra. Five different organic liquid formulations along with control were tried in Randomized block design with four replications.

As per treatments spraying of organic substances carried out periodically. Observations of plant height, number of branches per plant, number of pods per plant, seeds per pod, test weight, seed & straw yield were recorded.

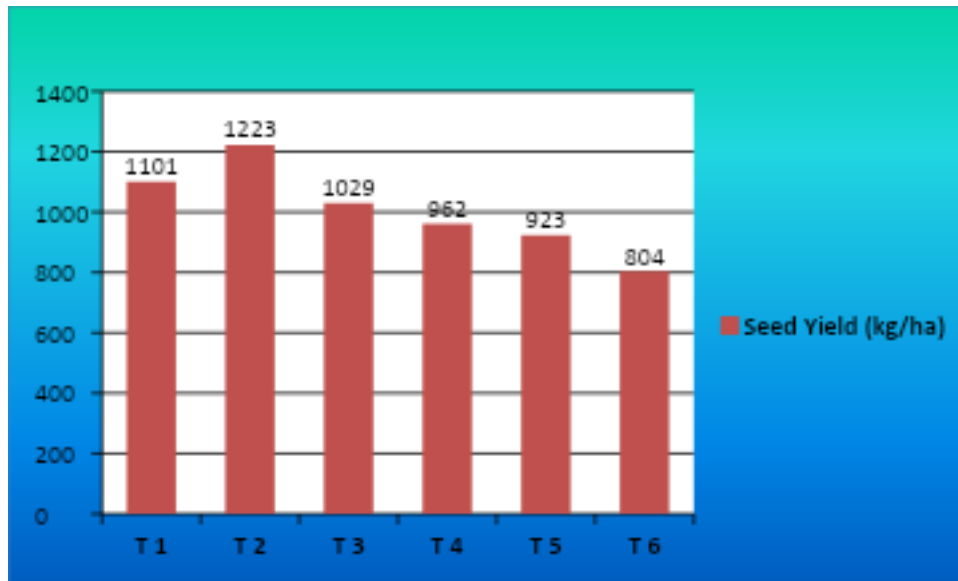
Layout:



Results

The plant growth parameters viz., plant height (38.34 cm) and no. of branches per plant (9.6) were markedly influenced by spraying of organic amendment applied in Soybean. The maximum value of these parameters was recorded with treatment T2 (Panchgavya @ 10%). This treatment also shows the higher value for yield parameters like no. of pods per plant (29), no. of seeds per pod (5.35), test weight (14.07 g), seeds yield (1223 kg/ha) and straw yield (2144 kg/ha).

Graph



Conclusion

From the comparative study of different organic liquid formulation it was confirm that Soybean with variety (JS-9560) gave higher returns under north konkan coastal zone of Maharashtra. From the data it is very clear that application of Panchgavya @ 10% recorded higher soybean yield with variety JS-9560.