

Integrated Nutrient Management in Muskmelon.

Objective: Find out the best combination (organic+inorganic) to enhance the growth & yield of Muskmelon crop.



Introduction:

Muskmelon (*Cucumis melo* L.) is a popular and an important vegetable crop, grown as “Dessert Crop” throughout the warmer region of the world which is now grown in temperate regions also. In India, it is popular in Northern states such as Uttar Pradesh, Punjab, Rajasthan and Madhya Pradesh. Muskmelon (2n=24) belongs to the family Cucurbitaceae, commonly known as cucurbits. Muskmelon is said to be native of Tropical Africa with secondary Centre's of origin Central Asia comprising some parts of Southern Russia, Iran, Afghanistan and North-West India. Muskmelon is a good source of vitamins and minerals. Apart from this for every 100 g edible portion, melon provides 26-41 calorie energy, 0.6-1.0 g protein, 5-10 mg calcium, 0.2-0.4 mg iron, 8.17 mg magnesium and 7.39 mg Phosphorus.

Organic manures and chemical fertilizers are the important components of integrated nutrient management. There is a need to seek alternative nutrient sources which could be cheap and eco-friendly so that farmers

may be able to reduce the investment on chemical fertilizers along with maintaining good soil environment conditions leading to ecological sustainable farming.

Treatments:

Crop	: Muskmelon
Variety	: Madhumita
Experiment Layout	: RBD
No. of Replications	: Three
Spacing	: 90 cm x 45 cm
Plot size	: 4.5 m X 2.7 m
Date of sowing	: 05/12/2022

Treatment details:

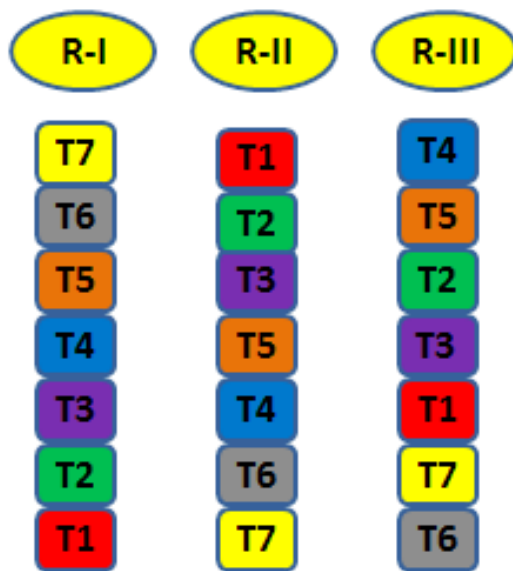
Treat. No.	Treatment Details
T1	FYM @ 5 t/ha + 100% RDF
T2	Biocompost @ 5 t/ha + 100% RDF
T3	Vermicompost @ 2 t/ha + 100% RDF
T4	FYM @ 5 t/ha + 75% RDF + 1% NOVEL prime organic liquid nutrient
T5	Biocompost @ 5 t/ha + 75% RDF + 1% NOVEL prime organic liquid nutrient
T6	Vermicompost @ 5 t/ha + 75% RDF + 1% NOVEL prime organic liquid nutrient
T7	100% RDF

Methodology:

A field experiment was carried out to find out the best organic+inorganic formulation to enhance the growth & yield of muskmelon crop during *Rabi* season of 2022 at ASPEE Foundation, Tansa Fram, Palghar, Maharashtra. Seven different organic+inorganic formulations along with control were tried in Randomized block design with three replications.

As per treatments spraying of organic substances carried out periodically. Observations of vine length, number of leaves per plant, leaf length, days to 50% flowering, no. of fruits per plant, fruit length, fruit width and fruit weight were recorded.

Layout:



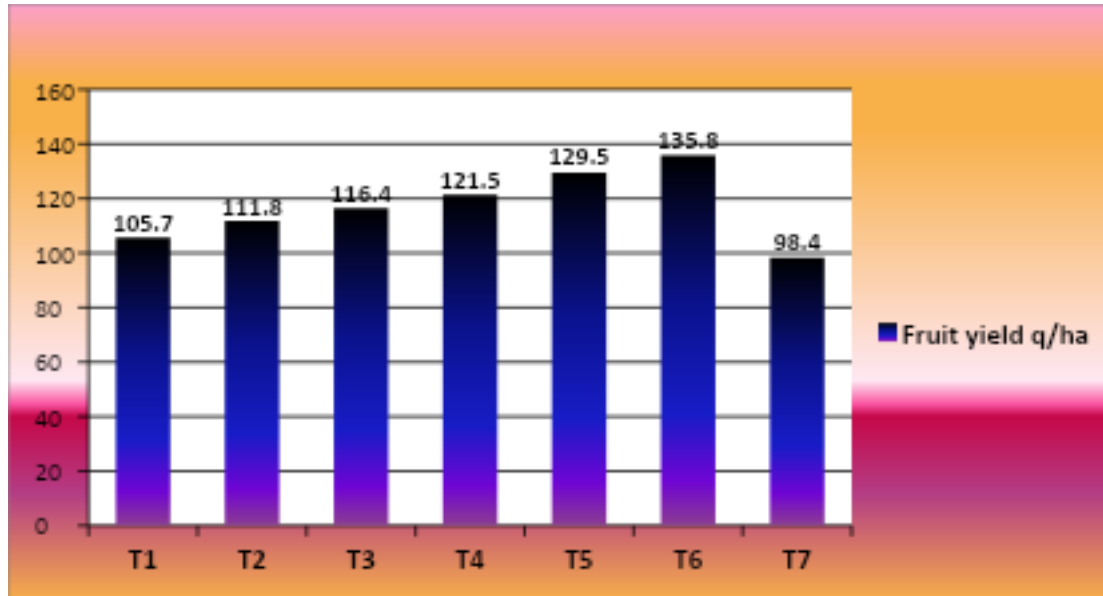
Results

The plant growth parameters viz., Vine length (206.4 cm), no. of leaves per plant (97.12) and leaf length (16.2 cm) were markedly influenced by application of Vermicompost @ 5 t/ha + 75% RDF + 1% NOVEL prime organic liquid nutrient in Muskmelon.

The maximum value of these parameters was recorded with treatment T6 (Vermicompost @ 5 t/ha + 75% RDF + 1% NOVEL prime organic liquid nutrient). This treatment also shows the higher value for yield parameters

like no. of fruits per plant (4.14), fruit weight (0.75 kg), fruit yield (1.39 kg/plant) and fruit yield (135.8 q/ha).

Graph



Conclusion

From the data it can be concluded that integrated nutrient management approach showed variations in Muskmelon growth & yield. From the data it is very clear that application of Vermicompost @ 5 t/ha + 75% RDF + 1% NOVEL prime organic liquid nutrient recorded higher muskmelon yield with variety madhumita.