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Research Paper

COMPARATIVE STUDY OF FOLIAR APPLICATION OF NUTRIENTS AND NUTRIENTS APPLIED WITH FERTIGATION IN RIDGE GOURD

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Abstract

Luffa actangula L (Common name) - Ridge Gourd Family - Cucurbitaceae. The experiment carried out in total 6 lines. In that first 3 lines we provided zinc, boron, calcium nitrate, 13:40:13, 00:52:34 through Drip (Fertigation). Another 3 lines we provided same content but different way that is foliar spraying, these were conducted to find out which of these system is more effective.

INTRODUCTION

Luffa acutangula L belongs to family cucurbitaceae is commonly known as ridge gourd and it is used as vegetable in Asian countries. It has different names in different language's like English (Ridge gourd, Angled lufa, Chinese okra, Dish-cloth gourd, ribbed lufa, silk gourd) Hindi (Jhimani, sankirah) Kannada (Kahire, Kahi heere, Naaga daali). The entire plant of *Luffa actangula* is medicinally important and used extensively in Indian traditional system of medicine from Ayurvedic point of view. Ridge gourd increases vata (the impulses principle necessary to mobilize the function of nervous system and kapha (the body fluid principle nutrients in to the arterial system). Experiment was made to study which system is more effective that is fertigation or Foliar spraying.

MATERIALS AND METHODS

The present research was accomplished at Nipani (Karnataka State) a field experiment was carried to study which system is more effective. Foliar spray/Fertigation. Minerals, Nutrients, water to the plant such as calcium nitrate, 13:40:13, Boron, 00:52:34, zinc boron.

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Line Number	Fertigation Method	Line Number	Foliar spraying
	Contents		Contents
1 st Line	00:52:34 (3gm) + Zinc bor	4 th Line	00:52:34 (3gm) + Zinc bor
2 nd line	Calcium Nitrate (2gm) + Boron	5 th Line	Calcium Nitrate (2gm) + Boron
3 rd line	13:40:13 (3gm) + Zinc (1gm)	6 th Line	13:40:13 (3gm) + Zinc (1gm)

Following are the are observations taken after 5 days of fertigation and foliar spraying as recorded in table no -1 viz. number of flowers and number of fruits

Observation Table 1

Line No.	Fertigation Method		Line No.	Foliar Spraying	
	No. of Fruits	No. of Flowers		No. of fruits	No. of flowers
1	133	270	4	205	422
2	125	300	5	180	300
3	131	280	6	163	313

Formulations are used for fertigation & spraying that is zinc, boron, calcium nitrate, 13:40:13. Fertigation was done for first 3 lines and then to other 3 lines the content was provided through foliar spraying. Same content was again given through fertigation and foliar spraying to record further more observations that are as follows –

Observation Table 2

Line No.	Fertigation Method		Line No.	Foliar Spraying	
	No. of Fruits	No. of Flowers		No. of fruits	No. of flowers
1	200	300	4	222	445
2	195	300	5	200	320
3	205	320	6	250	350

As after studying both of observations we have recorded, it has been clear that foliar spraying is more effective than that of Fertigation. As the lines having foliar spraying have more number of flowers and fruits.

RESULT & DISCUSSION

Foliar spray of 00:52:34, Zinc Boron, Calcium Nitrate, Boron, 13:40:13 improved growth of plants and increased number of flowers and number of fruits as recorded in table number 1 & 2. The observation concerning growth of *Luffa actangula* L in case of fertigation method found some what less effective than foliare spray. Foliar spray gives direct availability of nutrients. Also shows the earlier effect of nutrients. Results showed that maximum number of flowers and fruits are there due to treatment with 00:52:34, Zinc bor. Zinc is micronutrient needed by plant in small amount. 00:52:32 plays a role in improving color, taste and luster.

CONCLUSION

As the present investigation and experiment conducted in field of ridge gourd after application of RDF some farmers use practices like fertigation and foliar spray of nutrients for increase flower and fruit production. For that they generally use the micronutrients P & K. as per presented investigation proven foliar application of nutrients gives the better result than nutrient applied with fertigation. It can be srecommended to farms in nearby area and farmer can use this practice to increase production.

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