EFFECT OF SPLIT APPLICATION OF JEEVAMRUTHA ON GROWTH AND YIELD OF RADISH (*Raphanus sativus* L.)

BY

ACHCHI MOHAMED MOHAMED SANOOS

DEPARTMENT OF CROP SCIENCE

FACULTY OF AGRICULTURE

EASTERN UNIVERSITY

SRI LANKA

2019

ABSTRACT

Soil application of fermented liquid Jeevamrutha to radish crop helps in reducing the loss of nutrients by leaching, soil fixation and volatilization. This ultimately increases the availability of nutrients at the point of absorption in the sandy regosole. An experiment was conducted at Crop Farm, Eastern University Sri Lanka to study the effect of split application of Jeevamrutha on the growth and yield of radish. The experiment was laid out in a Completely Randomized Design. Treatments were Recommended fertilizer (T_1), 10 tones/ha compost and 1500 ℓ/ha of Jeevamrutha as a basal (T_2), 10 tons/ha compost and 750 ℓ/ha of Jeevamrutha as a basal with 750 ℓ/ha of Jeevamrutha at 10 days after sowing (T_3), 10 tons/ha compost and 500 ℓ/ha of Jeevamrutha as a basal with 500 ℓ/ha of Jeevamrutha at 10 and 20 days after sowing (T_4) and 10 tons/ha compost and 375 ℓ/ha of Jeevamrutha as a basal with 375 ℓ/ha of Jeevamrutha at 10, 20 and 30 days after sowing (T_5).

The study revealed that tuberous root diameter and length were significantly ($P<0.05$) varied at harvest. The highest root diameter and length of 3.59 cm and 23.60 cm were noted in T_4. Further fresh weight of leaf was high in T_1 (42.3 g) and T_1 was not differing with tested treatments except T_2. The highest root weight of 90.64 g was noted in T_4 at 7th week after sowing. Further, total marketable yield per ha showed significant difference ($P<0.05$) at 7th week after sowing and it was high in T_1 (43.86 tons/ha) followed by T_4 (42.88 tons/ha). However, there were no significant variations between T_1 and T_4.

Present study concluded that 10 tons/ha compost and 500ℓ/ha Jeevamrutha as a basal with 500ℓ/ha of Jeevamrutha at 10 and 20 days after sowing would be the most suitable split application to obtain higher growth and yield of radish.

TABLE OF CONTENTS