7.0. SUMMARY AND CONCLUSION

The results of the present study are summarised as follows:

- The biofertilizer effect of sea grass compost in Paddy seedlings *(Oryza sativa)* on the primary and secondary roots, shoot growth parameters, pigments and biochemical constituents in paddy, brinjal and tomato plants were analysed. It reveals that, the maximum root length was found maximum in seagrass compost prepared with salt tolerant earthworm when compared with the normal earthworm and control.

- The average root biomass was found maximum in seagrass compost prepared with agricultural earthworm (1.16g) when compared with the saline tolerant earthworm. The maximum shoot height was found maximum in seagrass compost prepared with agricultural earthworm (44.4cm) when compared with the saline tolerant earthworm (Fig.37.83) and in control (42.4cm).

- The maximum shoot biomass was found maximum in seagrass compost prepared with agricultural earthworm (8.35g) when compared with the saline tolerant earthworm (1.791g) and in control (2.639g).

- The maximum average number of straw was found maximum in seagrass compost prepared with agricultural earthworm (17) when compared with the saline tolerant earthworm (16) and in control (14.8).

- The level of total chlorophyll was found maximum in seagrass compost prepared with agricultural earthworm (0.049mg.g^{-1}) when compared with the saline tolerant earthworm (0.015 mg.g^{-1}) and in control (0.016 mg.g^{-1}).

- The level of total chlorophyll-*a* was found maximum in seagrass compost prepared with agricultural earthworm (0.017mg.g^{-1}) when compared with the saline tolerant earthworm (0.009mg.g^{-1}) and in control (0.006 mg.g^{-1}).

- The level of total chlorophyll-*b* was found maximum in seagrass compost prepared with agricultural earthworm (0.032mg.g^{-1}) when compared with the saline tolerant earthworm (0.006mg.g^{-1}).

- The level of carotenoid was found maximum in seagrass compost prepared with agricultural earthworm (3.755mg.g^{-1}) when compared with the saline tolerant earthworm (0.276mg.g^{-1}) and in control (0.083 mg.g^{-1}).

- The biofertiliser effect of seagrass compost on the yield of gains in paddy seedlings reveals that, the grain yield was found maximum in seagrass compost prepared with agricultural earthworm (453g) when compared with the saline tolerant earthworm (422g) and in control (206g).

- The biofertiliser effect of seagrass compost on the level of carbohydrate in root and straw in paddy seedlings reveals that, the level was found maximum in seagrass compost prepared with agricultural earthworm in root (3.593mg.g^{-1}) and straw (5.587mg.g^{-1}) respectively when compared with the saline tolerant earthworm in root (2.369mg.g^{-1}) and straw (3.311mg.g^{-1}) and in control root (3.361mg.g^{-1}) and straw (1.251mg.g^{-1}).

- The biofertiliser effect of seagrass compost on the level of protein in root and straw in paddy seedlings reveals that, the level was found maximum in seagrass compost prepared with agricultural earthworm in root (9.384mg.g^{-1}) and straw (17.153mg.g^{-1}) respectively when compared with the saline tolerant earthworm in root (0.00mg.g^{-1}) and straw (9.999mg.g^{-1}) and in control root (5.692mg.g^{-1}) and straw (13.768mg.g^{-1}).

- The biofertiliser effect of seagrass compost on the level of aminoacids in root and straw in paddy seedlings reveals that, the level was found maximum in seagrass compost prepared with agricultural earthworm in root (1.53mg.g^{-1}) and straw (2.052mg.g^{-1}) respectively when compared with the saline tolerant earthworm in root (2.034mg.g^{-1}) and straw (1.872mg.g^{-1}) and in control root (0.018mg.g^{-1}) and straw (0.036mg.g^{-1}).

- Biofertilizer effect of seagrass compost on tomato seedlings *(Lycopersicon lycopersicum)* were analysed. The biofertiliser effect of seagrass compost on the maximum shoot length was found maximum in seagrass compost prepared with agricultural earthworm (35cm) when compared with the saline tolerant earthworm (26.25cm) and in control (5.5cm).

- The biofertiliser effect of seagrass compost on the maximum root biomass was found maximum in seagrass compost prepared with saline tolerant earthworm (0.571g) when compared with the agricultural earthworm (0.309g) and in control (0.3g).

- The biofertiliser effect of seagrass compost on the maximum shoot height reveals that, it was found maximum in seagrass compost prepared with agricultural earthworm (36cm) when

compared with the saline tolerant earthworm (33.5cm) and in control (13cm).

- The biofertiliser effect of seagrass compost on the maximum shoot biomass reveals that, it was found maximum in seagrass compost prepared with saline tolerant earthworm (2.239g) when compared with the agricultural earthworm (1.145g) and in control (0.031g).

- The biofertiliser effect of seagrass compost on the average number of leaf reveals that, it was found maximum in seagrass compost prepared with agricultural earthworm (16.5) when compared with the saline tolerant earthworm (13.5) and in control (5).

- The biofertiliser effect of seagrass compost on the level of total chlorophyll reveals that, it was found maximum in seagrass compost prepared with agricultural earthworm ($0.034 g.g^{-1}$) when compared with the saline tolerant earthworm ($0.02 g.g^{-1}$) and in control ($0.032 g.g^{-1}$).

- The biofertiliser effect of seagrass compost on the level of chlorophyll –*a* reveals that, it was found maximum in seagrass compost prepared with agricultural earthworm ($0.025 g.g^{-1}$) when

compared with the saline tolerant earthworm (0.011g.g^{-1}) and in control (0.021g.g^{-1}).

- The biofertiliser effect of seagrass compost on the level of chlorophyll-*b* reveals that, it was found maximum in seagrass compost prepared with agricultural earthworm (0.014 mg.g^{-1}) when compared with the saline tolerant earthworm (0.009 mg.g^{-1}422g) and in control (0.01 mg.g^{-1}).

- The biofertiliser effect of seagrass compost on the level of carotenoid reveals that, it was found maximum in seagrass compost prepared with agricultural earthworm (7.928 mg.g^{-1}) when compared with the saline tolerant earthworm (1.13 mg.g^{-1}) and in control (0.49 mg.g^{-1}).

- The biofertiliser effect of seagrass compost on the fruit yield reveals that, it was found maximum in seagrass compost prepared with agricultural earthworm (2) when compared with the saline tolerant earthworm (1) and in control (0).

- The biofertiliser effect of seagrass compost on the level of carbohydrate in root and straw in tomato seedlings reveals that, the level was found maximum in seagrass compost prepared with salt tolerant earthworm in straw (7.152mg.g^{-1}) when compared with the agricultural earthworm in root (0.303mg.g^{-1})

when compared with the control root (0.232mg.g^{-1}) and straw (1.68mg.g^{-1}).

- The biofertiliser effect of seagrass compost on the level of protein in root and straw in tomato seedlings reveals that, the level was found maximum in seagrass compost prepared with agricultural earthworm in root (6.076mg.g^{-1}) and found maximum in straw (36.69mg.g^{-1}) in saline tolerant earthworm when compared with the control root (0.018mg.g^{-1}) and straw (0.036mg.g^{-1}).

- The biofertiliser effect of seagrass compost on the level of total aminoacids in root and straw in tomato seedlings reveals that, the level was found maximum in seagrass compost prepared with salt tolerant earthworm in root (0.99mg.g^{-1}) and in straw (3.402mg.g^{-1}) respectively in saline tolerant earthworm in root when compared with the control root (0.018mg.g^{-1}) and straw (0.036mg.g^{-1}).

- Biofertilizer effect of seagrass compost on brinjal seedlings *(Solanum melongena)* were analyzed. The biofertiliser effect of seagrass compost on the maximum shoot length was found maximum in seagrass compost prepared with agricultural earthworm (16.63cm) when compared with the saline tolerant earthworm (15.57cm) and in control (5.56cm).

- The biofertiliser effect of seagrass compost on the average root biomass reveals that, it was found maximum in seagrass compost prepared with saline tolerant earthworm (1.393g) when compared with the agricultural earthworm (0.67) and in control (1.292).

- The biofertiliser effect of seagrass compost on the average shoot height reveals that, it was found maximum in seagrass compost prepared with saline tolerant earthworm (14.13cm) when compared with the agricultural earthworm (13.58cm) and in control (8.96cm).

- The biofertiliser effect of seagrass compost on the average shoot biomass reveals that, it was found maximum in seagrass compost prepared with saline tolerant earthworm (3.651) when compared with the agricultural earthworm (2.379) and in control (2.506).

- The biofertiliser effect of seagrass compost on the maximum average leaf area reveals that, it was found maximum in seagrass compost prepared with saline tolerant earthworm (16.37cm^2) when compared with the agricultural earthworm (15.09 cm^2) and in control (15.62 cm^2).

- The biofertiliser effect of seagrass compost on the level of total chlorophyll reveals that, it was found maximum in seagrass compost prepared with agricultural earthworm (0.024mg.g^{-1}) and saline tolerant earthworm (0.024mg.g^{-1}) than in control (0.022mg.g^{-1}0).

- The biofertiliser effect of seagrass compost on the level of chlorophyll-*a* reveals that, it was found maximum in seagrass compost prepared with the agricultural earthworm (0.012mg.g^{-1}) when compared with the saline tolerant earthworm (0.016mg.g^{-1}) and in control (0.01mg.g^{-1}).

- The biofertiliser effect of seagrass compost on the maximum chlorophyll-*b* reveals that, it was found maximum in in control (0.011mg.g^{-1}) but found minimum in seagrass compost prepared with saline tolerant earthworm (0.008mg.g^{-1}) and agricultural earthworm (0.007mg.g^{-1})

- The biofertiliser effect of seagrass compost on the level of carotenoid reveals that, it was found maximum in seagrass compost prepared with agricultural earthworm (2.95mg.g^{-1}) when compared with the saline tolerant earthworm (2.521mg.g^{-1}) and in control (0.437mg.g^{-1}).

- The biofertiliser effect of seagrass compost on the average number of primary root reveals that, it was found maximum in control (26) followed by seagrass compost prepared with agricultural earthworm (23) and saline tolerant earthworm (18). The biofertiliser effect of seagrass compost on the average number of secondary root in brinjal seedlings reveals that, it was found maximum in control (1291) than in seagrass compost prepared with agricultural earthworm (1166) and saline tolerant earthworm (808) and in control (1291).

- The biofertiliser effect of seagrass compost on the level of total carbohydrate in root and leaf in brinjal seedlings reveals that, the level was found maximum in leaf samples in control (14.482mg.g^{-1}) but in root samples the seagrass compost prepared with salt tolerant earthworm (11.058mg.g^{-1}).

- The biofertiliser effect of seagrass compost on the level of total protein in root and leaf in brinjal seedlings reveals that, the level was found maximum in leaf obtained from control (112.995mg.g^{-1}) but in root the seagrass compost prepared with salt tolerant earthworm was found maximum (28.229mg.g^{-1}).

- The biofertiliser effect of seagrass compost on the level of total aminoacids in root and leaf in tomato seedlings reveals that, the

level was found maximum in seagrass compost prepared with salt tolerant earthworm in leaf (16.074mg.g^{-1}) and in root (2.214mg.g^{-1}) respectively.

- It is concluded from the present study that, the seagrass vermicompost generated with the saline tolerant earthworm species were found better choice of biofertiliser for tomato and brinjal plants but the seagrass vermicompost generated with the agricultural earthworm is better choice for paddy crop plants.