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BIOEFFICACY OF MICROBIAL ANTAGONIST NIPRO (*TRICHODERMA VIRIDE*) AND SU-MONA (*PSEUDOMONAS FLUORESCENS*)

ABSTRACT

In recent times sugar beet is considered as an alternative crop to sugarcane which can offer all year round operations to sugar industry in India. With a promising future due to higher brix value, lower consumption of water and its versatile utilisation as compared to sugarcane, the focus on its pest management is an important aspect to make the cultivation more viable. The increasing awareness of adverse effect of chemical pesticide has made the growers' expectation high on biocontrol products. Apart from sustainability in cultivation use of bio inputs also ensures that the by products of sugar beet in form of cattle feed are safe for consumption. Therefore the focus of these studies was to standardise a package of practice for cultivating sugarbeet utilising biopesticides and pheromones. The tropical sugarbeet is affected by collar rot *Sclerotium rolfsii* which has a potential to cause 50% of the crop loss. The suppression of this soil borne pathogen was evaluated using commercially available formulations NIPROT TM (*Trichoderma viride*) and Su-Mona TM (*Pseudomonas fluorescens*) by studying the dosage, extent of suppression of pathogens in the three consecutive crops grown in 1.5 acre of land. The applications were made cost effective using enriched farmyard manure and seed coating. A need for additional drenching was evaluated when pathogen level was high. While disease incidence increased from 4.4% to 27.32% the suppression of pathogen was achieved upto 84.5% in subsequent trials. A staggered pattern was followed harvesting the crop at 75, 95 and 135 days to correlate the yield of the crop with disease incidence, CCS and brix with time of harvest. With non significant impact of the extended period on the yield and CCS, a early harvest was highly found suitable. A average size of tuber attained in 95 days with required CCS is achieved at low rate of disease incidence. The cost benefit of sugar beet cultivation with bio-intensive crop protection was found to be 1: 11.92. Other pest which can infest tropical sugar beet were also noted.

BIO-EFFICACITE DES ANTAGONISTES BACTERIENS NIPRO (*TRICHODERMA VIRIDE*) ET SU-MONA (*PSEUDOMAS FLUORESCENS*)

RÉSUMÉ

French abstract not available.

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KURZFASSUNG

German abstract not available.
