

INTEGRATED CONTROL OF PLANT-PARASITIC NEMATODES AND FUNGI ON BARLEY AND OKRA WITH INTERCROPPING, ORGANIC AMENDMENTS AND PLOUGHING

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Abstract

An experiment was conducted to study the effect of intercropping of barley with rocket-salad, use of organic amendment with leaves and oil-cakes of neem and castor, inorganic fertilizer, carbofuran and ploughing on the population of plant-parasitic nematodes and frequency of soil-borne fungi and growth of barley and okra. Combined effect of intercropping of barley with rocket-salad, organic amendment with oil cakes and leaves of neem and castor, inorganic fertilizer, carbofuran and ploughing showed significant reduction in the population of plant-parasitic nematodes, frequency of pathogenic rhizospheric fungi with increase in the frequency of saprophytic rhizospheric fungi. Highest reduction in nematode population was found in carbofuran treated beds followed by beds treated with neem cake, castor cake, neem leaf, castor leaf and inorganic fertilizer as compared to untreated beds. However, highest reduction in pathogenic rhizospheric fungi and increase in saprophytic rhizospheric fungi was found in neem cake treated beds followed by other treatments. Similarly, greatest improvement in yield and plant growth was found in neem cake treated beds followed by other treatment in both normal and deep ploughed fields. Deep ploughing proved effective than normal ploughing. Greatest reduction in nematode population and frequency of soil-borne rhizospheric pathogenic fungi and increase in frequency of saprophytic fungi was found in plants grown from beds treated with neem cake in the preceding season followed by plant grown in beds treated with castor cake, neem leaf, castor leaf carbofuran, respectively in both normal and deep ploughed fields. Similarly, plant growth and yield of okra was more in beds treated with neem cake in the preceding season followed by other treatments.