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Current Nematology, **29**(1) : 63–69, 2018 http://biovedjournal.org/

Effect of dried leaf/seed powder of test plants on plant growth parameters and fruit yield of tomato and population of *Meloidogyne incognita*

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Received February 25, 2018 and Accepted April 5, 2018

ABSTRACT : Six plants which were tested for their efficacy in powder form under field conditions against *M. incognita* infecting tomato. Shade dried leaves of calotropis, lantana, castor, neem and parthenium and seeds of duranta were powdered and used @ 150 g per m^2 15 days prior to transplanting. Best results in terms of plant growth, reduced juvenile count at termination, reduced gall index and improved fruit yields were recorded in plants raised in soil amended with neem leaf powder followed by calotropis treatment. However, vegetative growth in castor leaf powder treated plants remained stunted. This was despite the fact that minimum juvenile population and root gall index were recorded in this treatment. Still, the fruit yields attained in this treatment were not at par with that of neem treated plants. These observations are indicative of the fact that the nematode antagonistic principles (ricin and ricinin), though, most toxic to the test nematode either themselves hampered the plant growth or some other chemicals present in castor were responsible for stunted plant growth. Neem, on the other hand, possessed some active principle that enhanced the vegetative growth in addition to many anti-nematode compounds. Since all the control measures are adopted with the solo objective to achieve high crop yields, the referred test plants were also rated on the basis of crop yield attained in respective treatments. In this respect the order of efficacy was neem > calotropis > castor > lantana > parthenium > duranta powders.

Key Words : Tomato (*Solanum lycopersicum*), efficacy, calotropis, lantana, castor, neem, parthenium, duranta seed powder, growth, fruit yield, RKN population, *Meloidogyne incognita*.