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NATIONAL RESEARCH CENTRE FOR BANANA

**(Indian Council of Agricultural Research)**

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 Date: 10.09.2024

To,

Editor-in-Chief,

Madras Agricultural Journal.

Sub: Sending manuscript for considering publication - reg,

Dear Madam/Sir,

Warm Greetings!

We are herewith enclosing the manuscript entitled “**A Simple, Rapid and Cost-effective Protocol for Species Identification of Plant Parasitic Nematodes by PCR based Downstream Application**” for publishing in your esteemed journal.

**(a) Author verification:**

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 **(b) Significance of the Work:**

Plant parasitic nematodes are tiny, aquatic, obligate biotrophic worms that primarily impact below-ground parts of plants. Accurate identification of nematode species is crucial for assessing the global distribution of economically significant nematode pests and devising effective management strategies. Traditional methods of species-level identification rely on morphometric data, but this approach is becoming outdated due to a shortage of nematode taxonomists and the advent of molecular tools. In recent years, molecular techniques have gained popularity for nematode species identification. However, obtaining sufficient high-quality genomic DNA from nematodes is challenging due to their microscopic size, the need for a large number of nematodes, and the presence of multi-species nematode communities in the plant rhizosphere. Therefore, there is a pressing need to develop a rapid, cost-effective, and efficient protocol for identifying species using single or few nematode through molecular approaches. In this study, we have successfully developed and standardized a protocol that involves the direct use of one or a few nematodes for genomic DNA amplification through PCR. This innovative approach eliminates the need for isolating, storing, and maintaining nematode DNA samples, streamlining the identification process and making it more accessible and practical.

**(c) Originality of the manuscript:**

* We are ensuring that the submitted manuscript is original, unpublished and not under simultaneous consideration by another journal.
* We are looking forward to receive a favourable reply regarding our submission. We would be pleased to answer back any further questions and comments that you may have.
* We have no conflicts of interest to disclose
* Thank you for your consideration of this manuscript.

Sincerely

C.Anuradha

**A Simple, Rapid and Cost-effective Protocol for Species Identification of Plant Parasitic Nematodes** by **PCR based Downstream Application**

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