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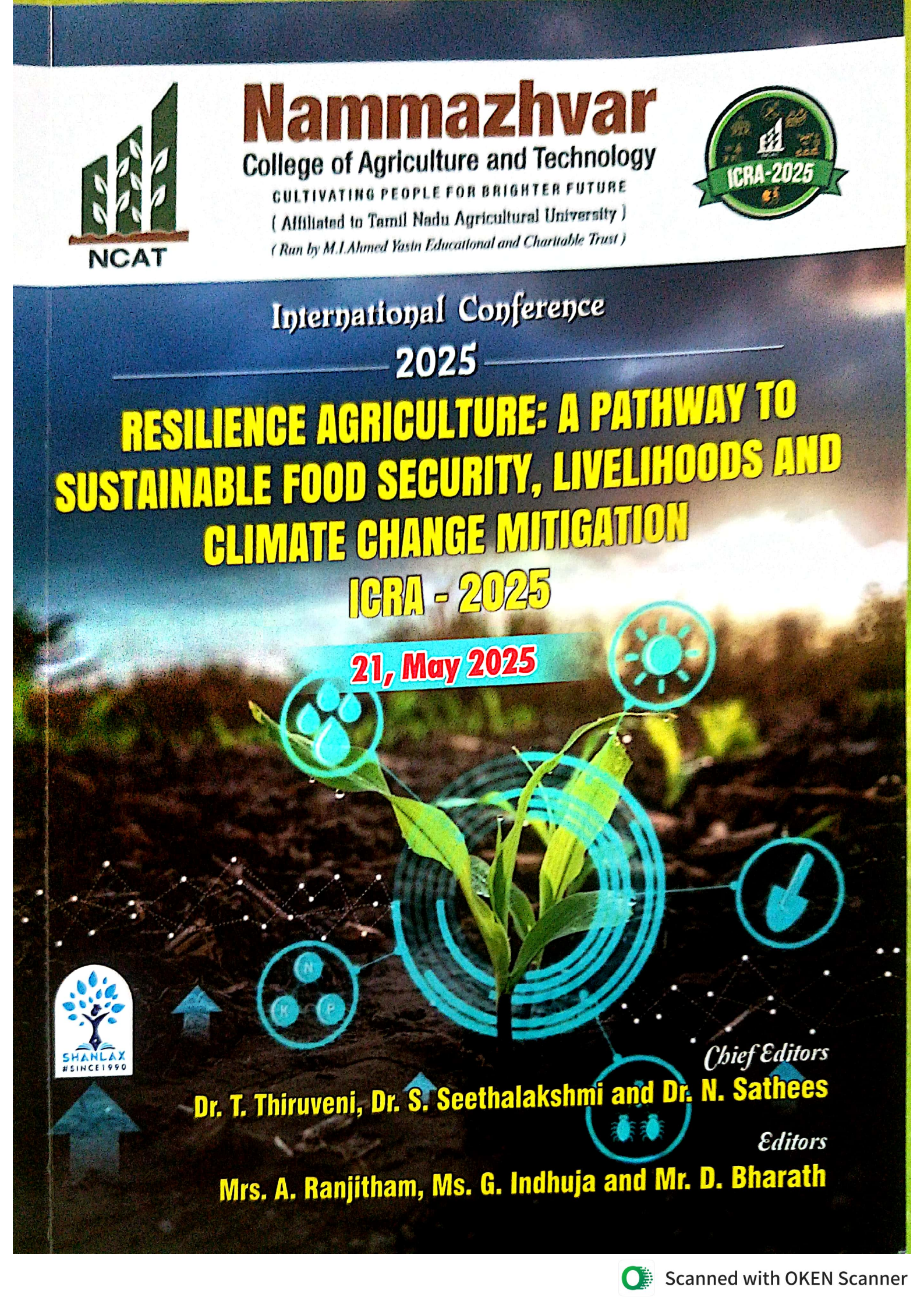

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ABSTRACTS

EFFECT OF DIFFERENT BANANA PEEL AQUEOUS EXTRACTS ON GERMINATION AND SEEDLING GROWTH OF BLACK GRAM (*VIGNA MUNGO.*)

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Abstract

Banana peel, a major by-product of banana consumption and processing, poses environmental challenges when disposed of untreated. However, its rich nutrient profile offers potential agricultural benefits. This study investigates the effects of aqueous extracts from different varieties of banana peels *viz.*, Morris, Rasthali, Green, Nendran, and Red bananas on the germination and seedling growth of Black gram. Aqueous extracts at 5% and 10% concentrations were prepared and applied in a controlled germination setup, with distilled water serving as control. The parameters observed included germination percentage, root and shoot length, number of leaves, fresh and dry weight, and vigor indices. Results showed varied responses among treatments, with 5% extracts generally promoting better growth than 10% concentrations. Notably, the Morris Banana Peel 5% extract significantly enhanced root length and total plant length, while Rasthali and Red Banana Peel extracts showed high shoot growth and biomass accumulation. Response Index analysis confirmed a predominance of positive effects across treatments, supporting banana peel aqueous extract as a promising organic supplement to enhance Black gram growth. The findings advocate for sustainable utilization of banana peel waste in agricultural practices.

Keywords: *Banana Peel Aqueous Extracts, Black gram, Germination percentage and Vigour Indices.*