

OPTIMIZED NUTRIENT AND CROP MANAGEMENT OPTIONS FOR ENHANCING PRODUCTIVITY OF SESAMUM UNDER RAINFED VERTISOL THROUGH FARMERS PARTICIPATORY APPROACH

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ABSTRACT

Sesamum (Sesamum indicum L.) is one of most important oil seed crop of India and grown in about 1.8 million hectares with a total production of 0.76 million tonnes and productivity of 422 kg/ha (FAI, 2011). The major constraint responsible for lower yield are inappropriate production technologies viz., low yielding local varieties, broadcast sowing, poor nutrient and weed management. The survey conducted at Virudhunagar district indicated that Sesamum is grown as late sown catch crop or crop grown in residual moisture in marginal black cotton soil without major nutrient application. The past researches also reported that the yield of Sesamum can be increased by 21 to 53% with adoption of improved crop management technologies. In this context, Front Line Demonstrations (FLD) were conducted by Krishi Vigyan Kendra, Tamil Nadu Agricultural University, Aruppukottai, at 30 locations in Virudhunagar district during Rabi 2011-12, to demonstrate optimized nutrient and crop management packages for maximizing the Sesamum productivity under rainfed vertisol conditions through Farmers Participatory Approach. The optimized nutrient and crop management includes, improved Sesamum variety TMV 7, line sowing, seed treatment, application of single super phosphate as EFYM, recommended dose of fertilizer (17:13:13 N:P:K kg ha⁻¹) along with MnSO₄ and 25 per cent additional dose of N for low N status, were demonstrated as a package. An average, 690 kg ha⁻¹ of Sesamum yield was recorded in demonstrated field which was 71 per cent higher than local check plot (404 kg ha⁻¹). The results from the Sesamum FLDs clearly inferred that the location specific optimized crop nutrient management package was superior to farmer practice in Sesamum growth, yield and economics and the package can be adopted to increase the Sesamum productivity under rainfed vertisol condition of Virudhunagar district.

KEYWORDS: Sesamum , Optimized Nutrient and Crop Management , Rainfed , Vertisol

Received: Dec 23, 2015; **Accepted:** Jan 06, 2016; **Published:** Jan 21, 2016; **Paper Id.:** IJASRFEB201619