

STRESS INDUCED BIOCHEMICAL ALTERATION OF PROLINE IN PIGEONPEA - SMALL MILLETS - PEANUT BASED RAINFED CROPPING SYSTEM

N. KRISHNAPRABU¹, C. SWAMINATHAN², V. SWAMINATHAN³, K. BALAKRISHNAN⁴ & K. BASKAR⁵

^{1,2}Department of Agronomy, Agricultural College and Research Institute, Madurai, Tamil Nadu, India

³Department of Horticulture, Agricultural College and Research Institute, Madurai, Tamil Nadu, India

⁴Department of Seed Science and Technology, Agricultural College and Research Institute, Madurai, Tamil Nadu, India

⁵Department of Soils and Environment, Agricultural College and Research Institute, Madurai, Tamil Nadu, India

Tamil Nadu Agricultural University, Tamil Nadu, India

ABSTRACT

A field experiment was conducted during the *rabi* season of 2015 - 2016 at Dry land Agricultural Research Station, TNAU, Chettinad, Tamil Nadu. There were 45 combinations comprising of different cropping system, nutrient management and stress management practices with 2 replications. Results indicated that Pigeon pea + foxtail millet + Groundnut (1:2:1) + 100% RDF for base crop + foliar spray of 2% DAP +1% KCl + foliar spray of PPFM @500 ml ha⁻¹ were significantly higher proline content in pigeon pea (52.85 and 64.85 mg g⁻¹ FW), small millets (12.05 and 12.65 mg g⁻¹ FW) and peanut (3.15, 3.45 mg g⁻¹ FW) for both pre flowering and flowering stage of the crops.

KEYWORDS: Proline, Stress management, Nutrient management, Cropping system