

Physiological response of soybean (*Glycine max*) as influenced by integrated nutrient management practices

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ABSTRACT

Attempt has been made to study the physiological response of soybean in terms of photosynthetic rate, CO₂ concentration, stomatal conductance, transpiration rate, stomatal resistance, leaf temperature and absorbed photosynthetically active radiation as influenced by integrated nutrient management practices. The experiment on soybean crop was conducted at Rahuri, Dist. Ahmednagar (MS) during *Kharif* season of 2014-15 and 2015-16 with treatments comprising of different doses of N supplied through FYM, vermicompost and neem cake. Results indicated that the photosynthetic rate, stomatal conductance, transpiration rate and absorbed photosynthetically active radiation varied significantly due to treatments as well as with stage of the crop. These parameters were highest under chemical fertilizer treatment but at par with treatments having 50 per cent N through FYM and VC. The lowest values were observed in treatments having neem cakes application. Among the three dates of observation, these parameters were highest at 56 DAS. Leaf temperature was not affected by the treatments.

Keywords : Soybean, photosynthetic rate, CO₂ concentration, stomatal conductance, transpiration rate, stomatal resistance.