

Effect of composted rock phosphate with organic materials on yield, nutrient uptake and soil fertility after harvest of maize (*Zea mays* L.)

M.K. Mali, R.H. Meena and Gajanand Jat

Received November 19, 2017 and Accepted February 7, 2018

ABSTRACT : A field experiment was conducted at Instructional Farm, Rajasthan College of Agriculture, Udaipur during *Kharif* 2013 to study the effect of phosphorus rich compost on yield, nutrient uptake and nutrient status in soil after harvest of maize. Results revealed that application of various sources and levels of phosphorus (DAP, SSP and PRC incubate with and without PSB and vermiculture) significantly increased grain, stover and biological yield of maize was recorded under treatment 25% RDP through PRC+Vermiculture + PSB + 75% RDP through DAP by 107.55, 82.56 and 91.96%, respectively over control. Similarly, uptake of nitrogen, phosphorus and potassium by crop was significantly higher with the application of 25% RDP through PRC+Vermiculture + PSB + 75% RDP through DAP by 159.56, 177.58 and 141.51%, respectively over control. However, maximum available nitrogen, phosphorus and potassium in soil were recorded under treatment 100% RDP through PRC+Vermiculture+PSB after harvest of maize crop as compared to all other treatments.

Key Words : Composted rock phosphate, DAP, SSP, PSB, vermiculture, yield, fertility, maize (*Zea mays*).