International Journal of Agricultural Sciences
Volume 9 | Issue 2| June, 2013 | 701-705

RESEARCH PAPER

Correlation co-efficient and regression study in summer greengram showing effects of phosphorus and sulphur on growth, yield attributes, yield, nutrient content and uptake, quality parameters and soil fertility

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Abstract : Field experiment was conducted at Krishi Vigyan Kendra, Dungarpur (Rajasthan) during summer, 2010 and 2011 on sandy clay loam soil to study correlation coefficient and regression equation showing relationship between phosphorus, sulphur (independent variable X) and on growth, yield attributes, yield, nutrients uptake, quality parameters and soil fertility (dependent variables Y) on the mean basis. The results revealed that positive and significant correlation between P levels (kg ha^{-1}) and plant height and dry matter accumulation at harvest, LAI and chlorophyll content at flower initiation stage, pods/plant, seeds/plant, 1000-seed weight, grain yield, stover yield, biological yield, protein content in grain, protein yield, N content in grain, N content in stover, P content in grain, P content in stover, K content in grain, K content in stover, S content in grain, NPK and S uptake, available N and P status in soil after harvest the crop. Similarly, S levels (kg ha^{-1}) resulted positive and significant correlation with respect to plant height and dry matter accumulation at harvest, LAI at flower initiation stage, branches/plant, pods/plant, seeds/plant, 1000-seed weight, grain yield, stover yield, biological yield, protein content in grain, protein yield, N content in grain, K content in grain, K content in stover, S content in grain, S content in stover, NPK and S uptake by crop, available PK and S status in soil after harvest the crop whereas chlorophyll content at flower initiation stage were found non significant.

Key Words : Greengram, Correlation co-efficient, Regression, Phosphorus, Sulphur

View Point Article : Bairwa, R.K., Nepalia, V., Balai, C.M. and Meena, H.P. (2013). Correlation co-efficient and regression study in summer greengram showing effects of phosphorus and sulphur on growth, yield attributes, yield, nutrient content and uptake, quality parameters and soil fertility. *Internat. J. agric. Sci.*, **9**(2): 701-705.

Article History : Received : 21.01.2013**; Revised :** 09.04.2013**; Accepted :** 10.05.2013

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