

Research  
Paper

## Influence of phosphatic fertilizers, gypsum and sulphur on growth contributing characters of groundnut (*Arachis hypogaea* L.)

S.R. SALKE, A.A. SHAIKH AND N.D. DALAVI

See end of the article for authors' affiliations

Correspondence to :

**S.R. SALKE,**  
Division of Agricultural  
Extension, College of  
Agriculture, PUNE (M.S.)  
INDIA

### ABSTRACT

Field experiments were conducted at Agronomy farm, College of Agriculture, Pune during *Kharif* 2006 and 2007 to investigate the influence of phosphatic fertilizers, gypsum and sulphur on growth contributing characters of groundnut. Trials were conducted in a randomized block design with four replications and six treatments *viz.*, Absolute Control ( $T_1$ ), Single super phosphate + 5 t FYM/ha ( $T_2$ ), Diammonium phosphate + 5 t FYM/ha ( $T_3$ ), Rock phosphate + 5 t FYM/ha ( $T_4$ ), RDF + gypsum @ 500 kg/ha (250 kg gypsum/ha at the time of sowing and 250 kg gypsum/ha at the time of peg formation) + 5 t FYM/ha ( $T_5$ ) and RDF + elemental sulphur @ 30kg /ha + 5 t FYM/ha ( $T_6$ ). The results revealed that the growth contributing characters like plant height, plant spread, number of branches/plant, dry matter/plant and number of nodules/plant were significantly superior by the application of RDF + gypsum @ 500 kg/ha (250 kg gypsum/ha at the time of sowing and 250 kg gypsum/ha at the time of peg formation) + 5t FYM/ha.

Salke, S.R., Shaikh, A.A. and Dalavi, N.D. (2010). Influence of phosphatic fertilizers, gypsum and sulphur on growth contributing characters of groundnut (*Arachis hypogaea* L.), *Adv. Res. J. Crop Improv.*, 1 (2) : 106-111.

**Key words :** Phosphatic fertilizers, Gypsum, Sulphur, Groundnut

## INTRODUCTION

Groundnut is grown on a large scale in almost all the tropical and subtropical countries of the world. The most important groundnut growing countries are India, China, Nigeria, Sudan and U.S.A. In India its cultivation is mostly confined to the southern Indian states, *viz.*, Gujarat, Andhra Pradesh, Karnataka, Tamilnadu and Maharashtra. The other important states where it is grown are Madhya Pradesh, Rajasthan, Uttar Pradesh and Panjab. Major groundnut growing districts in Maharashtra are Dhule, Nasik, Jalgaon, Ahmednagar, Parbhani, Pune, Satara and Kolhapur.

Groundnut kernels are rich in vitamins A, B<sub>1</sub>, B<sub>2</sub> and E. Oil content in kernels is 43 to 49 per cent and protein content is 28 to 29.31 per cent. Groundnut cake is rich in protein content (46%) and is the best source of organic manure. The creepers are used as cattle feed and shells as fuel. Groundnut is not only used as edible oil but also used in manufacture of soap, hydrogenated vegetable oil, toilet requisites and used for culinary purpose as well. Therefore, groundnut crop plays an important role and

has got immense importance in the national economy of our country. With increase in population in geometric progression, the demand for vegetable oil in India has been steadily increasing more than 4% per annum where the rate of increase in production is only 2% per annum. Every year the gap between demand and supply of edible oil is going on increasing. Very meager information is available on calcium and sulphur requirement in groundnut hence, emphasis is given to nutrient management in groundnut.

## MATERIALS AND METHODS

The experiments were conducted during *Kharif* 2006 and 2007 at Agronomy farm, College of Agriculture, Pune (M.S.) The soils of experimental area were grouped under inceptisol order. The soil of the experimental area was medium black with 60-90cm depth, dominant type of clay mineral having high swell- shrink properties.

The experiments were conducted in Randomized Block Design with four replications. Phule Pragati ( JL-24) variety was used. There were six treatments consisting phosphatic fertilizers, gypsum and sulphur. The treatments