



Research Article

Growth, yield and quality parameters of sesamum (*Sesamum indicum* L.) as influenced by different levels of potash and sulphur

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Abstract : A field study was conducted during *Kharif* season of 2008 at college instructional farm, Junagadh Agricultural University, Junagadh to study the influence of different levels of potash and sulphur on growth, yield and quality of sesamum (*Sesamum indicum* L.). Three levels of potash and three levels of sulphur were tried. Among different potash levels, potash @ 50 Kg ha⁻¹ registered significantly higher plant height (94.71cm), number of branches per plant (3.43), seed yield (813 kg ha⁻¹), stover yield (1165 kg ha⁻¹), oil content (44.89 %) and protein content (27.82 %) over control. Similarly sulphur levels also recorded significant effect in increasing all these growth, yield and quality parameters. Sulphur @ 40 kg ha⁻¹ registered higher plant height (95.37 cm), number of branches per plant (3.47 g plant⁻¹), seed yield (804 kg ha⁻¹), stover yield (1146 kg ha⁻¹), oil content (45.46 %) and protein content (28.04 %) as compared to all other treatments.

Key Words : Sesamum, Potash, Sulphur, Seed yield, Stover yield, Oil content and protein content

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INTRODUCTION

Sesamum indicum L. (Syn. *Sesamum orientale* L.), which is known variously as sesamum, til, gingelly, simsim, gergelim etc. is one of the most important oilseed crop grown extensively in India. Sesamum is the oldest indigenous oil plant with longest history of its cultivation in India. India is still the world leader with the maximum production (25.8%) from the largest area (29.3%) and highest export (40%) of

sesamum in the world. India, China, Burma, Sudan, Pakistan and Mexico are the main sesamum producing countries of the world. In India, sesamum is an important edible oilseed crop, stands next to groundnut. It is cultivated in an area of about 17.2 lakh hectares with production of 8.00 lakh tonnes of seeds and productivity of 421 kg ha⁻¹. It is mainly grown in Gujarat, Uttar Pradesh, Madhya Pradesh, Karnataka, Orissa, Bihar, Jharkhand, Andhra Pradesh, Kerala and Tamil Nadu.

Fertilizers, even though comparatively a costly input of production are essential for securing higher yields. The prudent use of fertilizers with appropriate method and time of application are the prime importance in securing higher and economic yields. The potassium is one of the major plant nutrients for the growth and development of plants. The major functions are enzymes involved in photosynthesis, metabolism of carbohydrate and protein. The potassium is also improved crop quality and yield characteristics by increasing disease resistance in a number of crops. Sulphur as a plant nutrient can play a key role in augmenting the production and productivity of oilseeds in

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