Internat. J. Agric. Sci. Vol.4 No.1 January, 2008 : 124-127

Performance of groundnut genotypes as influenced by levels of NPK and growth regulators

C.B. KABADAGI*, R.A. SETTY AND A.P. BIRADAR
Regional Agricultural Research Station, UAS, BIJAPUR (KARNATAKA) INDIA

ABSTRACT

The experiment was conducted at University of Agricultural Sciences, Raichur in *rabi*/summer season of 1997-98 under irrigation. The experiment was laid out in split-split plot design and replicated three times. The treatments consisting of two groundnut genotypes (R-9251 and K-134) as main plot treatments, three levels of NPK (F1 :25:75:25, F2:31.25:93.25:31.25 and F3: 37.5: 112.5:37.5 KPK kg/ha) as sub plot treatments and two growth regulators (Brassinolide @ 125 ml/ha and Triacontanol @ 200 ml/ha) with water spray as check in sub-sub plot treatments. Among the ground nut genotypes R-9251 has given the significantly higher yield of (1867 kg/ha) compared to the K- 134 (1506 kg/ha). Incase of fertilizer levels, no significant difference was observed due to the increasing NPK levels from 25:75:25 to 37.5: 112.5:37.5 kg/ha. As per the growth regulators is concerned triacontanol given the higher yield of (1803 kg/ha) compare to the brassinollide (1742 kg/ha) and found significantly superior over the water spray (1508 kg/ha). Similar trend was observed in all the yield attributing characters.

Key words : Groundnut, Genotypes, Nitrogen, Phosphorus, Potash, Growth regulators.

INTRODUCTION

Groundnut is one of the important oilseed crops of India, ranks first in area and production among the oilseed crops. Next to food crops oil seeds claim the highest share in the countries gross sown area. Vegetable oil are needed both for edible and non edible purposes. It is an important input in some of the important industries it provides employment to many peoples. Oil seed provides principal commercial crops of India. It provides oils and fats, apart from forming an essential part of human diet. Serves as an important raw material for manufacture of soaps, paints and warnesis, hair oils, lubricants, textiles auxiliaries, pharmaceuticals etc. In the field itself it also acts as a erosion resisting crop, it fixes the atmospheric nitrogen by root nodules, there by it improves the soil fertility and it also provides green manure for the succeeding crop. Among the several limiting factors for successful groundnut production, use of high yielding varieties with optimum dose of nutrients play important role in increasing the production. In recent years, growth harmones also have shown improving the yield by way of improving the physiological activities of the plant. (Kelaiya *et al*., 1991) An experiment was conducted at Agricultural College, Raichur during *rabi*/summer season of 1997-98 under irrigation to know the response of groundnut genotypes to levels of NPK and growth regulators.

MATERIALS AND METHODS

The experiment was conducted at University of Agricultural Sciences Raichur in *rabi*/summer season of 1997-98 under irrigation the experiment was laid out in split-split plot design and replicated three times. The treatments consisting of two groundnut genotypes (R-9251 and K-134) as main plot treatments, three levels of NPK (Fl:25:75:25, F2:31.25:93.25:31.25 and F3: 37.5:112.5:37.5 KPK kg/ha) as sub plot treatments and two growth regulators (Brassinolide @ 125 ml/ha and Triacontanol @ 200 ml/ha) with water spray as check in sub-sub plot treatments.

The land was prepared by ploughing once with wooden plough followed by two harrowings to bring the soil to fine tilth all the stubbles and weeds were removed from the experimental area to facilitate good germination of seedlings. Then the layout of the experiment was made. The seeds were treated with captan @ 2.0 g/kg of seeds to control the seed borne diseases. The crop was sown on 12/12/1997 with a spacing of 30XI0 cm. Entire dose of all the fertilizers, *viz.*, Nitrogen, Phosphorus and Potash were applied at the time of sowing and growth regulater was sprayed at 30 and 45 days after sowing. Soon after the sowing first irrigation was given, during early stages of crop growth the irrigation was given at 12-15 days interval, while during later stages irrigation was given at 8-10 days interval. Keeping in view of height is not

* Author for correspondence.