

Effect of nitrogen, phosphorus and potash on growth, yield and yield attributing traits in garlic (*Allium sativum* L.) cv. AGRIFOUND WHITE

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SUMMARY

The present experiment was carried out entitled effect of nitrogen, phosphorus and potash on growth, yield and yield attributing traits in garlic (*Allium sativum* L.) cv. AGRIFOUND WHITE at Horticulture Research Farm, Department of Applied Plant Science (Horticulture), Babasaheb Bhimrao Ambedkar University (A Central University), Vidya-Vihar, Rae Bareilly Road, Lucknow-226025 (U.P.) India. The experiment was carried out during the *Rabi* season of the year 2008-2009. The experiment being conducted under Randomized Block Design with three replications. There were nine treatment combinations of nitrogen, phosphorus and potash were used. The observations were recorded on 12 characters *viz.*, height of plant (cm), no. of leaves/plant, length of leaves (cm), width of leaves (cm), diameter of stem (cm), no. of cloves/bulb, length of cloves/bulb (cm), neck thickness of bulb (cm), weight of bulb (g), no. of bulbs/kg and bulb yield/plot (kg). From different treatment combinations of NPK, it can be concluded that treatment T₇ (recommended dose of NPK 120:80:60) was found for all the fruits in respect of higher bulb yield.

Key Words : Nitrogen, Phosphorus, Potash, Garlic

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Garlic (*Allium sativum* L.) belongs to the family Alliaceae and second most important bulb crops after onion. It contains 2n = 16. It is very hardy vegetable crop and is grown throughout country. Madhya Pradesh is the leading state in garlic production contributing more than 31 per cent area and 30 per cent production. The garlic growing states are Gujarat, Maharashtra, Uttar Pradesh and Andhra Pradesh of garlic in the world and India ranks second in area and third in production. Garlic is used as spice and condiment. It has higher

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nutritive value than other bulbs crops. It is used in different preparation to care against sore throat and lingering stomach diseases sore eyes and earaches. It reduces the cholesterol level in the blood. The foliage of garlic is flattered rather than hallow like that of the onion. A colourless, odourless, water-soluble amino acid known as *alliin* is present in uninjured garlic. On injury of the cells an enzyme alliance comes in contact with *alliin* and causes its break down in to sulphur containing product *allicin*. Alliums are the antibacterial substance of garlic and has the typical odour of fresh garlic. It is unstable and breaks down into the strong smelling constituents of garlic oil. The *alliin* of *Allium sativum* contains an allyl radical from which is derived the pungent diallyl disulphide of garlic oil and possibly also other allyl products observed. Garlic contains 0.1-0.4 per cent essential oil. The chief constituents of the are diallyl disulfide (60%), diallyl trisulfide (20%), allyl-propyl disulfide (6%) a small quantity of diethyl disulfide and