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Effect of different levels of NPK on growth, yield and yield attributes of gaillardia (*Gaillardia pulchella*) cv. LOCAL DOUBLE

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Abstract : The results of the experiment indicated that, application of nitrogen @ 300 and 200 kg N/ha significantly improved growth parameters viz., plant height, number of branches per plant and leaf area and yield attributes viz., weight of 10 flowers and diameter of flower, which resultantly gave higher flower yield over control. The results showed that, phosphorus fertilization @ 100 and 75 kg P₂O₅/ha recorded significantly higher values of growth characters viz., plant height, number of branches per plant and leaf area as well as yield attributes viz., weight of 10 flowers and diameter of flower and ultimately higher flower yield over control. The results revealed that, application of potash @ 75 kg K₂O/ha significantly improved growth characters viz., plant height, number of branches per plant and leaf area as well as yield with attributing characters like weight of 10 flowers, which eventually gave higher flower yield over control.

Key words : Gaillardia, NPK Levels, Growth, Yield

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Gaillardia (*Gaillardia pulchella* var. *Lorenziana*) is popularly known as blanket flower, belongs to the family Asteraceae (Compositae), is a flowering annual cultivated for its attractive yellow colour flowers for varied uses like for cut flowers, for making garlands, veni, floral decorations and required on weddings, religious and other ceremonial and social occasions.. It is a native of the Central and Western United States. The plants are bushy and bloom continuously for a long time. There are about twelve species, out of which *Gaillardia pulchella* and *Gaillardia aristata* are of horticultural importance. The most important cultivated variety is *Lorenziana*, which belongs to annuals with double flowers of very attractive colours comprise of bright yellow, purple, cream yellow or orange, scarlet, copper or bronze. The successful production of gaillardia depends upon many factors like soil fertility, irrigation, plant density, plant protection measures, etc., but manurial schedule plays major role in crop production. Soil fertility map of Gujarat state indicates that, our soil is medium to low in nitrogen, medium in phosphorus and rich in potash (Anonymous, 1978). The

crop grown in such soils without fertilization usually suffers from nutrient deficiency and the application of fertilizers, becomes an essential tool to boost up the yield. It is evident from the literature that, very little research work has been carried out, to study the response of gaillardia to different levels of nitrogen, phosphorus and potash on growth, yield and quality and their uptake, in the Gujarat state and particularly in vallies of mountain Girnar in Junagadh district of South Saurashtra region. Thus, arriving at an optimum dose of nitrogen, phosphorus and potash, is expected to result in increasing the gaillardia flower production. Keeping the above factors in view, an attempt was made, to study the response of gaillardia to different levels of nitrogen, phosphorus and potassium.

RESEARCH METHODS

A field experiment entitled “Effect of different levels of NPK on growth, yield and yield attributes of gaillardia (*Gaillardia pulchella*) cv. LOCAL DOUBLE”, was conducted at Instructional Farm, Department of