



Effect of levels of fertigation on growth and yield of bird-of-paradise [*Strelitzia reginae* Ait.]

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ABSTRACT

Bird-of-Paradise is indigenous to South Africa. The genus *Strelitzia* belongs to the family Strelitziaceae, the species *Strelitzia reginae* is commonly known as bird-of-paradise, the name comes from the remarkably shaped and coloured flower cluster, like the crested head of a bird. An experiment was conducted to know the effect of different levels of fertigation and irrigation through drip on the vegetative growth and flower production of bird-of-paradise during 2008-09 at Precision Farming Development Center, UAS, GKVK, Bangalore. 80, 100 and 120 per cent recommended dose of fertilizers (16:11:6g NPK/plant/month) were provided through fertigation in splits at monthly interval along with 8 and 12 litres of water per day per plant for 12 months. Higher fertigation level T₆ { 120 per cent recommended dose of fertilizer + 12 litres of water/day/plant } recorded higher plant height (113.26 cm), leaf length (85.70 cm), number of leaves per plant (12.75), early emergence of inflorescence (24.66 days), early flower initiation (20 days), maximum number of inflorescence per plant per month (2.72), maximum number of florets per inflorescence (4.33).

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Key words : Bird-of-Paradise, Inflorescence, Strelitziaceae, Drip irrigation and Fertigation

Bird-of-Paradise (*Strelitzia reginae* Ait.) is an evergreen perennial herbaceous plant, grown in the regions having moderate subtropical climate. The brilliant colours and unusual appearance of the flowers have made it exceptionally popular as cut flower. Therefore, the crop is cultivated in many parts of the world in order to produce cut flowers for both domestic and international markets. The major producing countries of bird-of-paradise on commercial scale are USA, Israel and South Africa. Bird-of-Paradise occupies a pride of place in the garden and is an important choice for landscaping. In the background of an herbaceous border, in front of a shrubbery or along the side of a tank or lily pool, a highly delightful effect is developed when it is in flowering. It can also be grown in pots and boxes.

Bird-of-Paradise is indigenous to South Africa. The species *Strelitzia reginae* is commonly known as bird-of-paradise, the name comes from the remarkably shaped and coloured flower cluster, like the crested head of a bird. The genus *Strelitzia* belongs to the family Strelitziaceae. The plants are rhizomatous, sometimes with erect woody stem. The leaves are large, long petioled, scape is terminal or in the upper axils, short, exerted from

the sheathes of the leaves. The bracts are large spathe like, boat shaped, acuminate and solitary at the end of the scape, slightly distant, perianth long exerted. The sepals are free, long and carinate. The petals look dissimilar. The stamens are five in number and the ovary is three celled with many seeds. The morphology of inflorescence, leaves, stem, root system, fruit and seeds of this species have been described and illustrated by Szendel *et al.* (1976).

The genus *Strelitzia* includes about five species. They are *S. nugusta*, *S. reginae*, *S. kewensis*, *S. nicoli* and *S. candida*. *Strelitzia reginae* is very popular flowering species growing upto a height of 90 cm, the leaf stalk is about 45 cm long with the same length of leaf blade. The flowers with orange sepals and purple petals are very brilliant, emerging from the purplish spathes on a stem about 90 cm long.

Fertigation permits application of various fertilized formulations directly at the site of concentration of active roots and it is thus reported to improve the efficiency of nutrients and reduce their requirements besides increasing plant growth and yield of horticulture crops.