

Studies on uptake of nitrogen and phosphorus by daisy (*Aster amellus* L.) as influenced by graded levels of nitrogen and phosphorous

V.S. PATIL, B.I. BIDARI, B. BASAVARAJ AND C. M. POLESHI

Accepted : August, 2009

See end of the article for authors' affiliations

Correspondence to:

B.I. BIDARI

Department of Soil
Sciences and Agricultural
Chemistry, College of
Agriculture, University of
Agricultural Sciences,
DHARWAD
(KARNATAKA) INDIA

ABSTRACT

The uptake of nitrogen and phosphorus increased with increase in the level of nitrogen and phosphorus in daisy (*Aster amellus* L.) upto 200 kg ha⁻¹ and 125 kg ha⁻¹, respectively. The highest nitrogen and phosphorus uptake were recorded by N₃ and P₃ levels individually and in combination. However, the flower yield in terms of number of flower spikes per plant was the highest with N₂ and P₂ levels.

Key words : Daisy, Nitrogen, Phosphorus, Uptake

Demand for traditional flowers is well established in India and demand for modern flowers is increasing both in domestic as well as in foreign markets. The people are asking for newer, rare and different types of cut flowers for various day-to-day uses. Particularly for vases which contain various types of flowers and few rare and unorthodox flowers will easily catch the eye of onlookers for its novelty other than routine. Such new flowers need standardization of their production technology to get higher yields of excellent quality flowers and popularity among consumers.

There are so many such potential flower crops and daisy (*Aster amellus* L.) is one among them. Although, daisy is being grown here and there in small areas all over Karnataka and different parts of India for various purposes, there is paucity of scientific information pertaining to its commercial cultivation. The present study was carried out with an objective of finding out the effect of nutrition on growth parameters of the crop. In the absence of scientific information with regard to agro-techniques like appropriate nutrient schedule involving different nutrients, it becomes difficult to reckon and realize the objective of higher flower production in *Aster amellus* L. Hence, manipulation of agronomic practices to achieve optimum source sink relationship that would augment higher flower production with optimum plant nutrition is very important.

The successful crop production depends upon agro-climatic conditions, crop management, agronomic and

socio-economic factors. Yield is the resultant of interaction between several intrinsic mechanisms and the external environment. Crop does require nutrients for its sustained growth and development. There have been several reports of direct relationship of balanced nutrition with the crop yield. The requirement of appropriate nutrient doses depends on soil and plant type, their reaction and intrinsic hunger for different nutrients which varies with the stage of crop growth and development. Such information on flower production particularly in daisy has not been well documented. In line with this, with the increasing realization about the profitably sustainable flower industry, it has become very much necessary to establish appropriate nutrient requirements for a commercial flower crop like daisy, which has low inputs and management demands as well as wider adaptability. The efforts in this direction to determine the appropriate nutrient combination in which the higher daisy flower production could be observed under transitional belt of Dharwad in Karnataka state have not been made. The meagre information as evidenced from the literature survey made to initiate investigations on the evaluation of different nutrients and their combinations on nutrient uptake and potential flower production in daisy has compelled to take up the present work.

MATERIALS AND METHODS

The present investigation was undertaken in the Main Agricultural Research Station, UAS, Dharwad, during