International Journal of Forestry and Crop Improvement
Volume **3** | Issue 2 | December, 2012 | 86-91

Research Article

Effect of foliar application of plant nutrients on crop growth, flowering parameters and seed yield on sorghum hybrid cv. SHD-9704 (*Sorghum bicolor*)

SHARNKUMAR, MERWADE, VISHALKUMAR AND GNYANDEV

ABSTRACT : The present investigation was undertaken during 2007 and 2008 at the Main Agricultural Research Station, University of Agricultural Sciences, Dharwad, during *Rabi* season in 2007-08 and *Kharif* season in 2008 and their pooled data on effect of planting ratios on crop growth. flowering parameters and seed yield on sorghum hybrid cv. SHD-9704 (*Sorghum bicolor*).The foliar application of urea @ 2 per cent (N_3) recorded numerically more plant height (115.42 cm) at harvest, leaf number (9.87), leaf area (3244 cm^2) and leaf area index (4.81) at 75 DAS compared to water spray (N_0) (105.08 cm, 9.40, 3007 cm^2 and 4.45) except for crop maturity where water spray control (N_0) treatment recorded relatively more number of days (91.31 days) for days to crop maturity and less (88.55 days) in urea spray @ 2 per cent (N_3).Number of days for flower primordial initiation and 50 per cent flowering were relatively less (34.86 and 64.18 days, respectively) in 2 per cent urea spray (N_3) than control (N_0) (36.74 and 66.63 days, respectively).The higher harvest index, ear length, ear width, ear weight, number of seeds per ear, seed setting percentage, seed weight per ear and hybrid seed yield per hectare were significantly higher (0.163, 28.60 cm, 4.36 cm, 33.26 g, 394.50, 34.23 per cent, 13.41 g and 5.27 q/ha, respectively) in foliar spray of urea @ 2 per cent (N_3) and least in foliar spray of water (N_0) (0.119, 23.09 cm, 3.75 cm, 26.95 g, 287.71, 24.92 per cent, 9.83 g and 4.28 q/ha, respectively).

KEY WORDS : Sorghum, Plant nutrients, Growth, Flowering parameter, Seed yield

How to cite this Article : Sharnkumar, Merwade, Vishalkumar and Gnyandev (2012).Effect of foliar application of plant nutrients on crop growth, flowering parameters and seed yield on sorghum hybrid cv. SHD-9704 (*Sorghum bicolor*), *Internat. J. Forestry & Crop Improv.*, **3** (2) : 86-91.

Article Chronical : Received : *12.06.2012;* Revised : *05.08.2012;* Accepted : *15.09.2012*

INTRODUCTION

Sorghum [*Sorghum bicolor* (L.)Moench] commonly known as 'jowar', is the fifth most important cereal crop in the world next to wheat, rice, maize and barley. It is a staple food crop for more than 300 million people of Asia and Africa continents. India has the largest share (32.50%) of world sorghum area and ranks second in production after USA. In India, it is cultivated on about 7.93 million hectare area with annual production of 7.78 million tonnes and productivity of 981 kg per ha (Anonymous, 2008). The major sorghum growing states in India are Maharashtra, Karnataka, Andhra Pradesh, Madhya Pradesh, Rajasthan and Tamil Nadu. In India, Karnataka state is one of the important sorghum growing states and stands second in area and production after Maharashtra. In Karnataka, it accounts for 1.38 million hectare area and production of 1.62 million tonnes with average productivity of 1192 kg per ha (Anonymous, 2009). About 50 per cent of people in Karnataka depend on sorghum as a staple food crop particularly in Northern Karnataka *viz.*, Bijapur, Dharwad, Belgaum, Raichur, Gulbarga, Bellary and Mysore.The plant nutrients like urea and GA_3 are known to be potential chemical to enhance seed crop productivity of sorghum hybrid by modifying morphological and physiological characteristics in enhancing source to sink relationship ultimately realizing higher yield of quality hybrid seeds. Since sorghum is a nitro positive

MEMBERS OF RESEARCH FORUM

Address of the Correspondence :
SHARNKUMAR, Department of Seed Science and Technology, University of Agricultural Science, DHARWAD (KARNATAKA) INDIA
Email : aosharankumar@gmail.com

Address of the Coopted Authors :
MERWADE, VISHALKUMAR AND GNYANDEV, Department of Seed Science and Technology, University of Agricultural Science, DHARWAD (KARNATAKA) INDIA