

## Effect of weed control methods on quality of China aster flower [*Callistephus chinensis* (L.) Nees]

C. VINAYKUMAR\* AND J.V. NARAYANA GOWDA

Division of Horticulture, University of Agricultural Sciences, G.K.V.K., BENGALURU (KARNATAKA) INDIA

### ABSTRACT

China aster is one of the important commercial flower crop in India, but the quality of flower is not meeting the required standard. Weeds are one of the main limiting factors for the poor quality; so now-a-days herbicides are integral part of intensive agriculture. The present investigation was taken up to know the effect of different weed management practices on quality of China aster flower. Hand weeding thrice took less number of days for 50% of flowering besides increasing the stalk length, diameter of flower and fresh weight of flower, which was at par with oxyfluorfen 0.1kg a.i/ha followed by earthing up at 35 DAT. Unweeded control showed poor performance in all the flower quality parameters mentioned above. Besides controlling weeds effectively and increasing the yields, the herbicides also increased the quality of China aster flower.

Vinaykumar, C. and Gowda, J.V. Narayana (2011). Effect of weed control methods on quality of China aster flower [*Callistephus chinensis* (L.) Nees]. *Internat. J. agric. Sci.*, 7(1): 109-112.

**Key words :** China aster, Vase life, Herbicides, Flower, Diameter, Stalk length

### INTRODUCTION

China aster [*Callistephus chinensis* (L.) Ness] a member of the family *Asteraceae*, is one of the important commercial flower crops of our country. It is also an important commercial flower crop of Siberia, Russia, Japan, North America, Switzerland and Europe. It is native to China and has spread to Europe and other tropical countries during 1731 AD.

Aster can be grown successfully in open conditions. Its flowers are used for various purposes. Cut asters last long and are used in vases and flower decoration. It is also used in the preparation of bouquets, garlands, etc. It is very popular as a bedding plant and they are also used to grow as potted plants. Dwarf types are suitable for edges and used as herbaceous border plant in parks and gardens.

The science of weed control has advanced considerably during the past two decades. A number of herbicides have become available in the market for control of weeds in flower crops. However, detailed information on this choice of herbicides, their appropriate dosage and time of application is not fully available to the farmers usage. Considering the economic importance of China aster, the present study was taken up with the following objective.

### MATERIALS AND METHODS

The studies were conducted in floriculture division

at Division of Horticulture, University of Agricultural Science, GKVK, Bangalore, during 2001-2002 using China aster var. Kamin. The soil was red sandy loam in nature. The experimental design was RCBD with three replications. The raised nursery beds were sown in lines and covered with a layer of soil and watered regularly with rose can. Four weeks old healthy and uniform seedlings were transplanted in well-prepared plots of 2.1x2.1 m<sup>2</sup>, at a distance of 30 x 30 cm recommendations and three cultural practices along with unweeded control were compared.

The details of the treatments were as follows: T<sub>1</sub>: Unweeded control (Weedy Check), T<sub>2</sub>: Hand Weeding at 30, 60, 90, DAT, T<sub>3</sub>: Trifluralin (48 E.C) 1.25 kg a.i. ha<sup>-1</sup> pre-emergent on 3 DAT, T<sub>4</sub>: Trifluralin (48 E.C) 1.00kg a.i. ha<sup>-1</sup> pre-emergent on 3 DAT, T<sub>5</sub>: Trifluralin (48 E.C) 0.75 kg a.i. ha<sup>-1</sup> 3 DAT followed by earthing up at 35 DAT, T<sub>6</sub>: Pendimethalin (30 E.C) 1.25kg a.i. ha<sup>-1</sup> pre-emergent on 3 DAT, T<sub>7</sub>: Pendimethalin (30 E.C) 1.00kg a.i. ha<sup>-1</sup> pre-emergent on 3 DAT, T<sub>8</sub>: Pendimethalin (30 E.C) 0.75kg a.i. ha<sup>-1</sup> 3 DAT followed by earthing up at 35 DAT, T<sub>9</sub>: Metolachlor (50 E.C) 1.50 kg a.i. ha<sup>-1</sup> pre-emergent on 3 DAT, T<sub>10</sub>: Metolachlor (50 E.C) 1.25 kg a.i. ha<sup>-1</sup> pre-emergent on 3 DAT, T<sub>11</sub>: Metolachlor (50 E.C) 1.00 kg a.i. ha<sup>-1</sup> 3 DAT followed by earthing up at 35 DAT, T<sub>12</sub>: Oxyfluorfen (23.5 E.C) 0.15 kg a.i. ha<sup>-1</sup> pre-emergent on 3 DAT, T<sub>13</sub>: Oxyfluorfen (23.5 E.C) 0.12 kg a.i. ha<sup>-1</sup> pre-emergent on 3 DAT and T<sub>14</sub>: Oxyfluorfen (23.5 E.C) 0.10 kg a.i. ha<sup>-1</sup> pre-emergent on 3 DAT