RESEARCH ARTICLE

ASSESS THE EFFECT OF DIFFERENT DATES OF TRANSPLANTING AND MULCHING ON YIELD AND ECONOMICS OF TOMATO (*LYCOPERSICON ESCULENTUM* MILL.)

Saurabh Tomar, A.K. Dubey, Jagendra Pratap Singh, Mahendra Chaudhary and Ajay Singh*

Department of Horticulture, Chandra Shekhar Azad University of Agriculture & Technology Kanpur 208002 (U.P.) India
**Department of Agril.Economics, Narendra Dev University of Agriculture & Technology Kumarganj, Faizabad (U.P.) India*
Email: chaudhary.csa@gmail.com

Received-02.08.2018, Revised-25.08.2018

Abstract: The present study was conducted during two consecutive Rabi seasons of 2016-17 and 2017-18 with aim to find out the effect of transplanting dates and mulching on fruit yield, yield parameters and economics of treatments of tomato cv. Azad T-6. The study was consisted four different dates of transplanting (D_1-15th October, D_2-31st October, D_3-15th November and D_4-30th November) and four treatments of mulch (M_1-Black polyethylene, M_2- White polyethylene, M_3- Bio Mulch (Paddy straw) and M_4-control) the experiments were laid out in Factorial Randomized Block Design. The study revealed that the crop transplanted on 30th October produced and mulching with bio mulch paddy straw produced maximum number of fruits per plant, average fruit weight and marketable fruit yield and Un-marketable fruit total yield during both the years, respectively. The crop planted on 30th October and application of bio-mulch found economic as compared to other treatments. Maximum benefit cost ratio was calculated with crop planted on 30th October and grown with bio mulch during both the years.

Keywords: Tomato. Different dates of planting, Mulching, Fruit yield, Net return

REFERENCES

Anonymous (2016). Statewise Area and Production of Vegetable for the year 2016-17. *Indian Horticulture Database-2014*. National Horticulture Board, Gurgaon, Haryana. pp: 283.

Baijukya, F. P., de Ridder, N. and Giller, K. E. (2006) 'Nitrogen Release from Decomposing Residues of Leguminous Cover Crops and their Effect on Maize Yield on Depleted Soils of Bukoba District, Tanzania', Plant and Soil, **279**(1), pp. 77-93

Choudhary, V.K., Bhambri, M.C., Pandey N. and Sharma, H.G. (2012). Effect of drip irrigation and mulches on physiological parameters, soil temperature, picking patterns and yield in capsicum (*Capsicum annuum* L.). *Archives of Agronomy and Soil Science*, **58**(3): 277-292.

Dzomeku, I.K., Mahunu, G.K., Bayorbor, T.B. and Obeng-Danso, P. (2009). Effects of mulching on weed control and yield of hot pepper and tomato in the Guinea Savannah zone. *Ghana Journal of Horticulture*, **7**: 53-61.

Gandhi, N. and Bains, G.S. (2006). Effect of mulching and date of transplanting on yield contributing characters of tomato. *Journal of Research* PAU, India, **43**: 6-9.

Hooda, R.S., Singh, J., Malik, Y.S. and Batra, V.K. (1999). Influence of direct seeding transplanting time and mulching on tomato yield. *Vegetable Science*, **26**: 140-42.

Hossain, M.F., Ara, N., Uddin, M.S., Islam, M.R. and Kaisar, M.O. (2014). Effect of sowing dates on fruit setting and yield of tomato genotypes. *Journal of Agricultural Research*, **52**(4): 547-553.

Kadam, D., Deore, B. and Chaudhari, S. (1991). Effects of sowing date and staking on yield of tomato (*Lycopersicon esculentum* Miller). *Indian Agriculturist*, **33**: 225-230.

More, S.J., Gohil, J.H., Bhanderi, D.R., Patil, S.J. and Tekale, G.S. (2014). Productivity and profitability of tomato (*Lycopersicon esculentum* Mill.) influenced by various transplanting dates and mulches. *Trends in Biosciences*, **7**(17): 2376-2381.

Norman, J.C., Opata, J. and Ofori, E. (2011). Growth and yield of okra and hot pepper as affected by mulching. *Ghana Journal of Horticulture*, **9**: 35-42.

Peyvast, G.H. (2001). Study of some quality and quantity factors of tomato. *Journal of Vegetable Crop Production*, **10**: 15-22.

Shrivastava, P., Parikh, M., Sawani, N. and Raman, S. (1994) 'Effect of drip irrigation and mulching on tomato yield', Agricultural Water Management, 25(2), pp. 179-184

Singh, R. and Kumar, S. (2005). Effect of transplanting time and mulching on growth and yield of tomato. *Indian Journal of Horticulture*, **62**(4): 350-353.

*Corresponding Author