

Abstract

# Effect of Mulch Materials and Nitrogen Source on the Performance of Tomato in the South-Western Coastal Area of Bangladesh <sup>†</sup>

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**Abstract:** The major cropping pattern in the South-western coastal area of Bangladesh is transplanted *aman* rice followed by fallow during the *rabi* season (November to March) and kharif-I (April–July) season. Crop production during *rabi* season is limited due to various ecological factors including soil salinity, lack of fresh irrigation water, short winter period, late harvest of previous *aman* rice, heavy clay soil etc. Tomato is a popular winter crop in that area which is mainly cultivated around homestead and ridges of fish pond, where soil salinity and tillage is not a major problem. An attempt was taken to grow tomato in Khulna district of Bangladesh after T. Aman rice harvest during 2018–19 in order to investigate tomato performance at different mulch materials and Nitrogen sources. The two factors experiment was carried out in randomized complete block design with three replications. Mulch materials viz. rice straw (M<sub>1</sub>), black polythene (M<sub>2</sub>) and no mulch (M<sub>3</sub>) were employed as factor one and nitrogen source viz. prilled urea (N<sub>1</sub>) and urea super granule (N<sub>2</sub>) were assigned as factor two. Results showed that there was no interaction effect of mulch and nitrogen treatments. Single effect of mulch and nitrogen treatments showed that highest fruit yield was found from rice straw (M<sub>1</sub>) (17.32 t ha<sup>-1</sup>) and prilled urea (N<sub>2</sub>) (15.64 t ha<sup>-1</sup>), respectively. So, tomato can be grown with rice straw mulch along with prilled urea for higher economic return (MBCR 2.24).

**Keywords:** tomato; mulch materials; source of nitrogen; yield

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