

EFFECT OF DIFFERENT MULCHES AND BIOFERTILIZERS ON QUALITATIVE AND QUANTITATIVE ATTRIBUTES OF TOMATO

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Abstract: The present studies were carried out at Experimental Farm of the Dr Y S Parmar U H F, Horticulture Research Station, Kandaghat, Solan, Himachal Pradesh during Kharif season of 2011 and 2012 to find out the effect of mulches and biofertilizers on different genotypes of tomato. The experiment was laid out in Split-Split Plot Design (SSPD) comprising of 27 treatments having combinations of three genotypes (V₁-Naveen 2000⁺, V₂-Sun-7711 and V₃-Solan Lalima), three mulches (M₀-No mulch, M₁-Pine needle mulch and M₂- black polyethylene) and three biofertilizers (B₀-recommended NPK, B₁-100 % NPK + *Azotobacter* (1g/plant) + PSB (1g/plant) and B₂-75 % NPK + *Azotobacter* (1g/plant) + PSB (1g/plant) replicated thrice. Among varieties, maximum yield was observed with the variety V₂ (Sun-7711), but the fruit quality characters were observed with the variety V₃ (Solan Lalima). Among the mulch materials the M₂ (Black polythene) and biofertilizers B₁ (100% NPK + *Azotobacter* (1g/plant) + PSB (1g/plant) were recorded to be the best regarding the fruit yield and quality. The first order interactions viz., varieties x mulch, biofertilizers x mulch and varieties x biofertilizers significantly affected most of the characters under study. Maximum fruit yield was obtained with treatment combinations of V₂M₂ (Sun-7711 applied with black polyethylene mulch), B₂M₂ (75% NPK + *Azotobacter* (1g/plant) + PSB (1g/plant) applied with black polyethylene mulch) and V₂B₂ (Sun-7711 with 75 % NPK + *Azotobacter* (1g/plant) + PSB (1g/plant)). Further in three factor interaction, the highest fruit yield (1037.33 q/ha) was obtained with the treatment combination of Sun-7711, 75% NPK + *Azotobacter* (1g/plant) + PSB (1g/plant) and black polyethylene mulch (V₂B₂M₂).

Keyword: Biofertilizers, Mulch, Genotypes, *Azotobacter*

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