



Research Paper

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Economics of production of tomato grown in Kashmir region under different sources of plant nutrients

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ABSTRACT : An experiment was laid at the experimental field of Division of Vegetable Science, SKUAST-Kashmir, Shalimar Srinagar Jammu & Kashmir, during *Kharif* 2009 and *Kharif* 2010. The economic analysis of tomato production grown in Kashmir region showed net capital investment varied with different treatments in tomato cultivation. Results obtained proved T₄ treatment (PM : 7 t ha⁻¹), registered highest net return followed by T₃ treatment (SM : 32 t ha⁻¹). Lowest return was observed with treatment T₁₂ (Control). The reason may be low cost of cultivation associated with poultry manure and higher yield which is possibly because of narrow C/N ratio, more availability of nutrients which boosts the yield of tomato.

KEY WORDS : Tomato, Economics, Organic Manures, Inorganic nutrients

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Tomato (*Lycopersicon esculentum* Mill) belongs to family Solanaceae, is an annual vegetable crop grown throughout the world and ranks second in importance after potato. The tomato is believed to have been originated in Central Africa and South America (Vavilov, 1951). In India it is an introduced crop and in being grown on an area of 371.7000 hectare with an annual production of 10260.6000 metric tonnes (Anonymous, 2008). In Jammu and Kashmir states, tomato is grown on an area of 1.7000 ha with an annual production of 37000 metric tonnes (Anonymous, 2008). Tomato is a highly nutritious vegetable besides having medical importance that is why it is referred to as protective food. For enhancing the yield and quality application of adequate quantities of plant nutrients is a pre-requisite which can be met both from organic as well as inorganic sources. Inadequate or imbalanced nutrient supply is one of the major factor responsible for low production. Substitution of high analysis fertilizers like urea and diammonium phosphate for increasing crop productivity or inadequate use of organic manures have rendered Indian soils deficient in macro and micro nutrients (Acharya and Mandal, 2002).

With rapid increase in population, the demand for the

crop has significantly increased, leading to extensive use of chemical fertilisers for supply of plant nutrients without any consideration for soil health, which is a critical factor for realising sustainable yield of any vegetable crop. Besides, this the residual effects of chemical fertilizers on environment, underground water, soil microflora, vegetable and vegetable products is a matter of concern, as some of the residues like nitrates enter the human body and are carcinogenic. Thus, there is an urgent need to utilise other sources of plant nutrients for sustainable and safe tomato production. The answer lies in the use of organic manures which have a potential to provide primary, secondary and micronutrients besides building a strong organic matter base resulting in improvement of soil structure and sustainable vegetable production devoid of most of the harmful residues and the vegetables produced are preferred for their flavour, taste, lusture, nutritive value and being sold at premium prices. But organic sources of plant nutrients supply nutrients in slow manner and thus it is essential to use both organic and inorganic plant nutrients in integrated form which has proved superior than individual sources with respect to growth, yield and quality in different vegetable crops (Malewar *et al.*, 1998,