

Economic Analysis, Growth and Yield of Grafting Tomato Varieties for *Solanum torvum* as a Rootstock

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Abstract : Tomato (*Lycopersicon esculentum* Mill.) is potential vegetables to develop, because it has high economic value and has the potential to be exported. There is a decrease in tomato productivity due to unfavorable growth conditions such as bacterial wilt, fusarium wilt, high humidity, high temperature and inappropriate production technology. Grafting technology is one alternative technology. In addition to being able to control the disease in the soil, grafting is also able to increase the growth and yield of production. Besides, it is also necessary to know the economic benefits if using grafting technology. A promising eggplant rootstock for tomato grafting is *Solanum torvum*. *S. torvum* is selected as a rootstock with high compatibility. The purpose of this research is to know the effect of grafting several varieties of tomatoes with *Solanum torvum* as a rootstock. The experiment was conducted in Agricultural Extension Center Pare. Experimental Garden of Pare Kediri sub-district from July to early December 2016. The materials used were tomato Cervo varieties, Karina, Timoty, and *Solanum torvum*. Economic analysis, growth, and yield including plant height, number of leaves, percentage of disease and tomato production were used as performance measures. The study showed that grafting tomato Timoty scion with *Solanum torvum* as rootstock had higher production. Financially, grafting tomato Timoty and Cervo scion had higher profit about. 28,6% and 16,3% compared to Timoty and Cervo variety treatment without grafting.

Keywords : grafting technology, economic analysis, growth, yield of tomato, *Solanum torvum*

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