

Effect of Grafting and Rain Shelter Technologies on Performance of Tomato (*Lycopersicum esculentum* Mill.)

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Abstract : During the rainy season, the tomato plants are vulnerable to various diseases. A disease that attacks the leaves of tomato plants (foliar diseases) such as late blight (*Phytophthora infestans*) and spotting bacteria (bacterial spot / *Xanthomonas* sp.) In addition, there is a disease that attacks the roots such as fusarium and bacterial wilt. If not immediately anticipated, it will decrease the quality and quantity of crop yields. In fact, it can lead to crop failure. The aim of this research is to know the production of tomato grafting by using Timoty and CLN 3024 tomatoes at rain shelter during rainy season in lowland. Data were analyzed using analysis of variance and tested further by Least Significant Difference (LSD) level of 5 %. The parameters measured were plant height (cm), stem diameter (cm), number of fruit space, canopy extended, number of branches, number of productive branches, and the number of stem segments. The results show at the beginning of growth until the end of the treatment without grafting with relative rain shelter displays the highest plant height. This was followed by extensive crop canopy. For tomato grafting and non-grafting using rain shelter able to produce the number of branches and number of productive branches at most. While at the end of the growth in the number of productive branches generated as much. Highest production of tomatoes produced by tomato dig rafting to use the shelter.

Keywords : field trail, wet and dry season, production, diseases, rain shelter

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