

Effect of Inflorescence Removal and Earthing-Up Times on Growth and Yield of Potato (*Solanum tuberosum* L.) at Jimma Southwestern Ethiopia

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Abstract : Potato is a high-potential food security crop in Ethiopia. However, the yield and productivity of the crop have been far below the world average. This is due to several factors, including appropriate agronomic practices, such as time of earthing-up and inflorescence management. A field experiment was conducted at Jimma, Southwest Ethiopia, during 2016/17 under irrigation to determine the effect of time of earthing-up and inflorescence removal on the growth, yield, and quality of potatoes. The treatments consisted of a time of earthing-up (no earthing-up, earthing-up at 15, 30, and 45 days after complete plant emergence) and inflorescence removal (inflorescence removed and not removed). Potato variety (Belete) was used for this experiment. A 2x4 factorial experiment was laid out with three replications. Data collected on the growth, yield, and quality components of potatoes were analyzed using SAS Version 9.3 statistical software. Inflorescence removal affected the majority of the growth and yield parameters, while the time of earthing-up affected all growth, yield, and quality (green tuber number) parameters. Earthing-up at 15 days in combination with inflorescence removal (at 60 days after complete plant emergence) gave better plant growth and maximum tuber yield of the Belete potato variety under irrigated conditions. Since the current research was conducted at one location, in one season, and with one potato cultivar (Belete), it would be advisable to repeat the experiment so as to arrive at a final conclusion and subsequent recommendation.

Keywords : Belete, earthing-up, inflorescence, yield

Conference Title : ICAH 2023 : International Conference on Agriculture and Horticulture

Conference Location : Montreal, Canada

Conference Dates : June 15-16, 2023