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## Effect of zinc on grading, quality and yield of potato (*Solanum tuberosum*) in Bangladesh

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Mahmud, N. U.<sup>1</sup>, Ferdous, Z.<sup>2\*</sup>, Ullah, H.<sup>3</sup>, Ahmed, N. U.<sup>4</sup>, Molla, S. H.<sup>2</sup> and Anwar, M.<sup>5</sup>

<sup>1</sup>Soil Science Division, Regional Agricultural Research Station, Bangladesh Agricultural Research Institute, Jessore, Bangladesh; <sup>2</sup>On-Farm Research Division, Bangladesh Agricultural Research Institute, Agricultural Research Station, Alamnagar, Rangpur, Bangladesh; <sup>3</sup>Department of Food, Agriculture and Bioresources, School of Environment, Resources and Development, Asian Institute of Technology, Klong Luang, Pathum Thani 12120, Thailand; <sup>4</sup>Tuber Crops Research Sub-Station, Bangladesh Agricultural Research Institute, Munshiganj, Bangladesh; <sup>5</sup>On-Farm Research Division, Bangladesh Agricultural Research Institute, Shyampur, Rajshahi, Bangladesh.

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**Abstract** Application of Zn fertilizer at 4 kg ha<sup>-1</sup> recorded significantly at tuber yield of potato. Total yield of tuber ha<sup>-1</sup> were also changed significantly ( $P \leq .05$ ) with the levels of Zn fertilization. In Munshigonj, the highest yield (31.07 t ha<sup>-1</sup>) was obtained from plots treated with 4 kg Zn ha<sup>-1</sup> along with the soil test based (STB) fertilizer and the lowest yield (27.44t ha<sup>-1</sup>) was obtained with 0 kg Zn ha<sup>-1</sup> plus the STB fertilizer. Similar results were obtained in Rangpur. Soil application of Zn resulted in a significant increase of tuber yield with an increase of Zn concentration in potato. The effect of Zn on tuber yield and Zn concentration in tuber greatly depends on the dose of Zn fertilizer. It can be concluded that soil application of 4 kg Zn ha<sup>-1</sup> along with STB fertilizer should be encouraged to maintain sustainable production of potato in Bangladesh. Tuber grading was also significantly affected by Zn application. The highest number of tubers > 55 mm in diameter (A grade) was with the dose of 4 kg Zn ha<sup>-1</sup> in both the locations, which was 51 % and 70 % higher over the control in both locations, respectively. In both the locations, the maximum number of C grade tuber (> 28 mm in diameter) was recorded at the control. The findings revealed that the increase in yield was shown the cumulative effect to increase the number of large sized tubers.

**Keywords:** Quality potato, Yield of potato, Zinc performance

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\*Corresponding Author: Md. Zannatul Ferdous, Email: [zferdous80@gmail.com](mailto:zferdous80@gmail.com)