

Gibberellic acid application practices influence yield attributes of grapevine cultivar ‘Talizman’ in subtropics

Anil Kumar Acharya*, Durga Mani Gautam, Bhim Bahadur Khatri, Puspa Raj Poudel and Kishor Chandra Dahal

Institute of Agriculture and Animal Science, Tribhuvan University, Kathmandu, Nepal

* Email: acharyanilku@gmail.com ORCID: <https://orcid.org/0000-0003-0815-6352>

Receipt: 12.11.2025 Revised: 25.12.2025 Acceptance: 28.12.2025

DOI: <https://doi.org/10.53552/ijmfmap.12.1.2026.19-25>

License: [CC BY-NC 4.0 \(https://creativecommons.org/licenses/by-nc/4.0/\)](https://creativecommons.org/licenses/by-nc/4.0/)

Copyright: © The Author(s)

ABSTRACT

Ever increasing demand and imports are the scope for viticulture expansion in Nepal. This study aimed to assess the effect of exogenous GA₃ doses and at various stages of berry growth on berry yield, cluster weight and return fruitfulness in seedless cv. Talizman. Experiments were carried out in two factorial randomized complete block design during 2022-2025 in a commercial vineyard at Dhading, Nepal. Four concentrations of GA₃ (0, 10, 20 and 40 ppm) were applied at post-flowering, 4-5 mm berry size and both at post-flowering and 4-5 mm berry size stages. GA₃ 10 ppm applied at 4-5 mm berry size increased berry weight and cluster weight by 24.14% and 62.92% over control, respectively. The 76% and 56% variation in berry weight was explained by berry transversal and longitudinal diameter, respectively. Similarly, average berry weight and berry number in cluster contributed on 78% variation in cluster weight. Hence, increase on berry weight using GA₃ along with berry number significantly increase the vine yield.

Keywords: Berry yield, GA application, grape, Nepal