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# Impacts of Glyphosate Application on Pre-Harvest Fruit Drop in ‘Valencia’ Citrus Add Trees

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*Figure: Citrus fruit damage due to spray contact from glyphosate application (Image credit: Mongi Zekri, UF/IFAS)*

Glyphosate is a widely utilized and essential weed management tool in citrus groves for controlling emerged weeds throughout the year. However, extensive and non-judicious application of glyphosate has drawn increasing concerns about its inadvertent effects on citrus, mainly linked to its possible impacts on pre-harvest fruit drop. Hence, we investigated the effect of applying glyphosate in the tree rows near the fruit harvesting window on fruit drop and yield in ‘Valencia’ sweet orange. In this

two-year study, the glyphosate application in citrus groves during early spring, close to fruit harvest in ‘Valencia’ citrus, did not cause any significant effect on the pre-harvest fruit drop. However, a slight reduction in fruit detachment force (FDF), an indicator of fruit holding force to the bearing branch, was observed in trees located in the glyphosate-treated plots. Our findings suggest that by avoiding early spring season sprays of glyphosate close to harvesting date (e.g., within ten weeks of

harvest), in late spring maturing citrus varieties like ‘Valencia,’ the yield safety of glyphosate-based herbicide programs could be possibly ensured. Additionally, adopting proper herbicide application practices such as maintaining a safe spray boom distance and carefully positioning the angle of off-center (OC) spray nozzles to prevent any potential glyphosate spray contact with the citrus fruit, foliage, and trunk will also help enhance the crop-safe use of glyphosate in citrus.

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