

## Reflective Effect of Mango Variety and Fenarimol Fungicide on Powdery Mildew Disease Incidence and Fungicide Residues Persistence in Mango Fruits

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**F**OUR FAMOUS Egyptian mango varieties (Zebda, Improved Alphonso, Fajri Kalan, and Langara) were evaluated for their susceptibility to powdery mildew (*Oidium mangiferae* Berthet) during 2005 and 2006 growing seasons. In addition, the reflective effect of mango variety and Rubigan fungicide (12% fenarimol EC) on the incidence of powdery mildew and fungicide residues in mango fruit with special reference to pre-harvest interval (PHI) were evaluated. Trees from all varieties in one part of the orchard were did not receive any disease control procedure and weekly inspected for infection with powdery mildew disease. Results showed that Langara was found to be the most resistant variety followed by Zebda. When Rubigan was applied as foliage spray (30 ml/100 liters) to control the powdery mildew disease at the rest part of the orchard, it was highly effective against the disease on Zebda and Langara varieties, but less efficacy was found on Fajri Kalan and Improved Alphonso varieties. A positive correlation was found between the variety resistance grades and the fungicide efficacy. Assessment of fenarimol fungicide residues periodically in the mango fruits showed that, highest amount of residues after an hour of application were found in Zebda followed by Fajri Kalan (0.09 and 0.08 mg/kg, respectively), while least amount was found in fruits of Langara variety (0.02 mg/kg). Improved Alphonso showed moderate amount (0.06 mg/kg). No fungicide residues were detected after three days of application in Langara, and after five days of application in Fajri Kalan and Improved Alphonso, whereas, it was required 7 days to disappear from Zebda variety.  $Lt_{50}$  was very short, it ranged from 24 to 48 hours in the different varieties; that was reflected on the PHI since it ranged from one day for Langara variety to 4 days for Zebda variety.

**Keywords:** Mango variety, Rubigan, Fenarimol, Powdery mildew, fungicide residues.

Mango (*Mangifera indica* L.) is one of the finest fruits and the most important fruit crops in tropical and subtropical areas of the world. Increasing commercial acreage and improved handling methods and shipping throughout the world have