

EFFECTS OF UNICONAZOLE ON THE FLOWERING OF 'TUONG DA XANH' MANGO (*MANGIFERA INDICA* L.) IN THE MEKONG DELTA, VIET NAM

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ABSTRACT

'Tuong Da Xanh' (TDX) is a mango cultivar (also known as 'Ba Mau' or 'Dai Loan') grown widely in the Mekong Delta, Viet Nam particularly in Gieng islet, Cho Moi district, An Giang province. Similar to other cultivars, off-season flowering of TDX is implemented by collar drenching of Paclobutrazol (PBZ) which is used as a flower bud initiation agent, followed by foliar application(s) of Thiourea or KNO_3 to induce flowering. However, PBZ residue has been reported to be able to remain for a long time in both soil and leaf. In addition, Thiourea has been long labelled as a carcinogen, thus banned from use in the USA and Australia. Therefore, it is of utmost importance to look for alternatives for these two chemicals. The aim of this study was to investigate the effects of Uniconazole (UCZ), as a replacement for PBZ, on the flowering of TDX mango. Results showed that UCZ applied either as collar drenching or foliar application is a good replacement for PBZ in terms of flowering rate and yield. Trees which were collar drenched with UCZ ($1.0 \text{ g a.i. m}^{-1}$ canopy diameter [c.d.]) followed by two sprays of KNO_3 (2.5% twice in one week) after 75 days, had flowering rates like those treated with PBZ $1.5 \text{ g a.i. m}^{-1}$ c.d. Similarly, for foliar application, the flowering rates of trees sprayed with 1,000, 1,500, and 2,000 ppm UCZ followed by bud breaking treatment using KNO_3 (2.5%, twice in one week) after 75 days was not significantly different to that of those treated with PBZ $1.5 \text{ g a.i. m}^{-1}$ c.d.

Keywords: bud break, Tuong da xanh (TDX) mango, paclobutrazol, uniconazole