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Title: Vase Life Extension and Chlorophyll Fluorescence Yield of Bougainvillea Flower as Influenced by Ethanol to Attain Maximum Environmental Beautification as Ornamental Components

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Abstract: The study was conducted to investigate the effect of ethanol at different concentrations (ET) on bougainvillea flower longevity and delay senescence in storage condition. The treatments were water control, 2% ET, 4% ET, 8% ET, 10% ET, 20% ET, 30% ET, 40% ET, 50% ET and 70% ET. Flower longevity was 2 days more in 4, 8% and 10% ethanol than water control and other concentrations of ethanol. Petal wilting and senescence were occurred 2 days later in 4, 8 and 10% ET than in water control. Percent petal's color changed was later in water 4, 8% and 10% than in control, 2, 20, 30, 40, 50 and 70% ET. Chlorophyll fluorescence intensity (photosynthetic yield) followed by time (ms) at different ethanol concentrations was higher in 4, 8 and 10% ET than in water control and other concentrations. Fo (lower fluorescence) was lower in 4, 8 and 10% ET than in water and other concentrations. However, Fm and Fv [(higher fluorescence and relative variable fluorescence (Fm-Fo)] were higher in 4, 8 and 10% ET than in other ET concentrations. Fv/Fm (quantum yield or photosynthetic yield) was higher in 4, 8 and 10% ET than in other ET concentrations. The result showed flower vase life was significantly affected by ethanol concentrations and longevity was higher in 4, 8 and 10% ethanol than in water control and other concentrations.