

4th International Conference on Agriculture & Horticulture

July 13-15, 2015 Beijing, China

Effect of some amino acids, precursors and light conditions on callus growth and silymarin content of *Silybum marianum* L.

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Amino acids, precursor type and concentration, and light conditions were examined for their effects on milk thistle (*Silybum marianum* L.) callus growth and silymarin biosynthesis. Proline level at 10 mg/l seems to be the most suitable treatment for callus fresh weight under light and dark incubations. Also, proline at 10 mg/l added to MS medium resulted in the highest value of callus dry weight under light conditions, followed by caffeic acid at 50 mg/l. Precursor feeding with 10 mg/l phenylalanine recorded the highest accumulation of silymarin under dark and light conditions compared to other precursors (tyrosine and caffeic acid). Generally, in most treatments, light incubation slightly inhibited silymarin biosynthesis but recorded a stimulation effect on callus growth.

Biography

Nabil Mohamed Toaima is currently working at Al-Azhar University, Egypt.

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