



Abstract Book



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ABSTRACT BOOK

Cover photo: The insect on the ISCE logo is a moth, a young female *Erannis bajaria* (Geometridae), in calling posture, emitting her pheromone [(3Z,6Z,9Z)-3,6,9-octadecatriene and (3Z,6Z,9Z)-3,6,9-nonadecatriene, G. Szócs, W. Francke et al., unpublished] (photo L.Z. Nagy)

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Anthocyanins and its influence in the color of soybean flowers

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Soybean is an autogamous plant and thus allowing self-pollination. One of the factors for increasing productivity is the use of bees in pollination, attracted by chemical and visual stimuli. *Apis mellifera* is responsible for 80% of entomophilous pollination. The soybean flower uses three strategies, which directly influence the selectivity and attractiveness: aroma, flower colour and the nutritional value of nectar and pollen. Initially, the flower colour is discriminated from the green of the leaves, after the bee is guided by visual signals on the petals from distinct pigments in the flower tissue. Anthocyanins play a key role in the colour of soybean. Although more than 600 types of anthocyanins are described only a few are synthesized by individuals of each plant species. Likewise, few studies regarding floral characters refer to a closer relationship with the sensory capabilities of pollinators. They cite as an example the colour of flowers and most of them in qualitative terms. Thus, this work investigates the anthocyanins profile of white soybean and purple flowers as an attractiveness factor. After acid extraction, the anthocyanin profile was determined by UPLC-PDA, $\lambda=520$ nm, using Shield® (Waters) column. An average of 8 and 12 compounds was detected in extracts of white and purple flowers, respectively. The method developed for multi-detection of anthocyanins in soybean flowers had higher efficiency than those observed in the literature, in both qualitative and quantitative terms.

Keywords: UPLC-PDA, multi-detection method, extraction, separation and identification

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