عنوان مقاله:

Effect of Foliar Application of Plant Extracts on the Growth Behavior and Quality of Evening Primrose (Oenothera biennis L.)

محل انتشار:

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خلاصه مقاله:

The indeterminate behavior of evening primrose is a frequent limitation in its cultivation. Controlling the final growth of plants at a certain stage is important. In the present experiment, different plant extracts were compared functionally with cycocel at different times of application. The experiment was performed as a factorial experiment based on a randomized complete block design with three replications. Treatments included normal water (control), cycocel (zero and ۱۰۰ ppm), walnut (Juglans regia L.) leaf extract (zero and ۲۵%), oak fruit extract (Quercus castaneifolia L.) (zero and ۲۵%), and cotton capsule extract (Gossypium hirsutum L.) (zero and ۲۵%). Evaluations were made on the seeds, oil yield and yield-components. The foliar application significantly reduced stem length (۴۳-۸۰%) and plant height (۱۳-۳۳%), but increased the percentage of oils (۱۸.۷۵%) and free fatty acids (۶۷.۵%). The highest oil content (۳۵%) occurred in response to a combination of walnut, oak, cotton extracts, and cycocel. The highest amount of free fatty acids (۲۳%) indicated more immature seeds and was obtained under the treatment of cotton extract. Natural extracts increased the oil percentage, but reduced the free fatty acid percentage and the stem length. It seems that further studies in this regard can help control non-terminal growth of evening primrose without having a need for breeding programs.

کلمات کلیدی:

Free fatty acids, medicinal plants, oil percentage, plant for plant, Plant extract