

## عنوان مقاله:

Assessment of genetic diversity and photosynthetic pigments among wild populations of Yellow Flag (Iris pseudacorus)

## محل انتشار:

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## نویسندگان:

Nayyereh Ghorbani - *Department of Horticultural Sciences, Faculty of Agriculture and Natural Resources, University of Mohaghegh Ardabili, Ardabil, Iran*

Esmail Chamani - *Department of Horticultural Sciences, Faculty of Agriculture and Natural Resources, University of Mohaghegh Ardabili, Ardabil, Iran*

Ali akbar Shokouhian - *Department of Horticultural Sciences, Faculty of Agriculture and Natural Resources, University of Mohaghegh Ardabili, Ardabil, Iran*

seyyedeh sanaz Ramezanzpour - *Biotechnology department of Gorgan Agricultural Sciences and Natural Resources University, Gorgan, Iran*

Hassan Soltanlou - , *Biotechnology department of Gorgan Agricultural Sciences and Natural Resources University, Gorgan, Iran*

## خلاصه مقاله:

Yellow flag (Iris pseudacorus) is a native plant with ornamental and medicinal properties in horticulture science. 16 ecotypes of I. pseudacorus species were collected and classified into three populations based on geographical location in the current study. The genetic diversity of I. pseudacorus was assayed using 16 ISSR markers. Photosynthetic pigments, including chlorophyll a, chlorophyll b, total chlorophyll, and carotenoids, were measured by the spectrophotometry method. The primers generated 174 scalable bars ranging in size from 100-1200 bp. The polymorphism percentage of all primers was 100%. The primers ISSR\_55 produced the most bands (234 bands in total), the highest marker index, and the highest amount of polymorphic information content (PIC). Primer ISSR-13 is in second place with a total PIC of 0.84. Also, the data obtained from the scoring tapes were analyzed by parsing the original coordinates. The analysis results showed that the first, second, and third components contained 29.88%, 21.24%, and 16.52% of the information, respectively. The results showed that genetic diversity within populations (97%) is more significant than diversity among populations (3%). The spectrophotometry results showed photosynthetic pigments obtained in the Q (Jouybar) location with the highest sunlight. Our results indicated that ISSR markers revealed the genetic relationships of Yellow flag samples for different agro-ecological adaptations. ISSR is a superb molecular tool to research the genetic variability of I. pseudacorus.

## کلمات کلیدی:

Chlorophyll, Flower, ISSR, Location, Marker

