

## عنوان مقاله:

Effect of Water Stress on Yield and Yield Components of Cumin (*Cuminum cyminum* L.) Ecotypes

## محل انتشار:

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## خلاصه مقاله:

Cumin (*Cuminum cyminum* L.) is one of the most important herbs and medicinal plants that allocate main part of medicinal plant export in Iran. This investigation was conducted to study the effects of drought stress on important agronomic traits of different cumin ecotypes from the major cumin cultivation of the country. Forty-nine ecotypes from different regions of Iran were planted in a simple lattice design layout with two replications in drought stress and non-stress conditions during two years (۲۰۱۲ and ۲۰۱۳). Characteristics including number of umbels per plant, number of seeds per umbel, seed weight, harvest index and seed yield were evaluated. The combined analysis of variance showed significant differences among genotypes, among environments and the genotypes × environment interactions. The low irrigation (soil water supply at ۳۰% field capacity) after flowering stage decreased the value of all traits but at different extent. The highest adverse effect was related to the seed yield. In average of both years, water shortage decreased seed yield about ۳۳.۶ percent. Moreover, ۱۰۰۰ seed weight was affected by the environmental condition at the lowest extent (۳.۸ percent). Also, based on means comparison, the highest and the lowest seed yield on the average of two years belonged to ecotypes from North Khorasan-Baneh in the normal condition (۱۰۵.۰۷ g.m-۲) and North Khorasan-Esfaraieen under low irrigated condition (۲۰.۵۳ g.m-۲), respectively. Considering all evaluated traits under both conditions, ecotypes from North-Khorasan (Baneh) and Semnan (Shahmirzad) are proposed as good candidate ecotypes to further research in future.

## کلمات کلیدی:

Cumin, Seed Yield, Water Stress, Yield Components

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