

## عنوان مقاله:

اثر تنش خشکی در مراحل مختلف نمو بر برخی پارامترهای رشدی و فیتوشیمیایی گیاه مفرح (*Nepeta crispa* L).

## محل انتشار:

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## خلاصه مقاله:

The phenological stage in which the abiotic stress occurs is effective in determining the content of secondary metabolites in medicinal plants. This research deals with the effects of imposing drought stress at different phenological stages on growth and some physiological and phytochemical responses of *Nepeta crispa* L as a split plot design in Bu-Ali Sina University during ۲۰۱۹. Drought stress at three levels, including mild, moderate, and severe stress (with ۸۰%, ۶۰%, and ۴۰% of field capacity, respectively) has been applied at two phenological stages (seedling establishment stage with ۶ true leaves and pre-flowering stages). Results from statistical analysis show that drought stress has had a significant effect on all evaluated growth traits and phytochemical parameters of the plant including proline content, relative water content (RWC) of leaves, total phenols, flavonoids, tannins, antioxidant activities, and phenolic acids. Imposing drought stress at both phenological stages reduce plant growth, decreasing chlorophyll content and RWC. However, production of phenolic compounds and phenolic acids (including rosmarinic, chlorogenic and caffeic acids) at high level and accumulation of proline through imposing drought stress reduce the adverse effects of stress and increase the medicinal properties of the *Nepeta crispa*. Also, the effect of drought stress imposing at pre-flowering stage has been greater than its application in the seedling establishment stage. According to the results, it is recommended to impose moderate drought stress at pre-flowering stage to increase biosynthesis of some phytochemical compounds in *Nepeta crispa* medicinal plants.

## کلمات کلیدی:

اسیدهای فنولیک، پرولین، تانن ها، ترکیبات فنلی، فعالیت آنتی اکسیدانی

## لینک ثابت مقاله در پایگاه سیویلیکا:

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