

## عنوان مقاله:

A review on partial root-zone drying irrigation

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## خلاصه مقاله:

Available fresh water resources are subjected to an ever-increasing pressure due to extensive agricultural water demand for irrigated lands. A long-term perspective in shortage of fresh water resources, especially in arid and semi-arid area, highlights an urgent solution for innovative irrigation strategy and agricultural water management. This paper is a review on the wide applications of the partial root-zone drying irrigation (PRD) on diverse plant species. The PRD irrigation is a novel improvement of deficit irrigation in which half of the root zone is irrigated alternatively in scheduled irrigation events. In the last decade, scientists across the world, especially from arid to semi-arid countries, have extensively evaluated this irrigation as a water-saving irrigation strategy on agronomic and horticultural plants. This review paper focuses on the physiological and morphological aspects of PRD on plants and its ultimate impact on yield and water productivity. Overall, under limited water resources where water is precious, PRD is a viable irrigation option to increase water productivity while margining the yield, rather than only increasing the economic yield without concerning the value of water in limited water environments.

## کلمات کلیدی:

Partial root-zone drying irrigation, Full irrigation, Water productivity, Field crops, Vegetables, Trees

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