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Safety Date Fruits for Human Being as Affected by Nitrogen Fertilization Applications in Egypt

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Abstract : This study was conducted during three seasons 2010, 2011 and 2012 on Zahhloul date palm cultivar grown in calcareous soil, Alexandria governorate, Egypt. The palms received recommended dose of mineral N only or plus different rates of organic N with or without bio fertilizer to study the effect of such treatments on date palm yield and fruit nitrate and nitrite content due to its negative influence on human, animal and environment. The obtained results clarified that all used treatments of organic and bio fertilizers were effective in improving date palm yield and decreased fruit content of NO2 and NO3 in comparison with 100 % mineral N. It was also noticed that combined treatments of 50 % mineral N + 50 % organic manure with bio fertilizer is the superior treatments for increasing the values of yield and decreasing its content of NO2 and NO3. Hence, it could be concluded that, minimizing the use of chemical nitrogen fertilizer to half of recommended dose through addition of 50 % mineral N + 50 % organic manure with bio fertilizer and also, the utilization of organic and bio fertilizers is considered as a promising alternative for chemical fertilizers to avoid pollution and reduce the costs of mineral fertilizers.

Keywords : organic and bio fertilizers, mineral fertilizer, nitrate, nitrite, zaghloul date palm cv
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