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Biologiques dans les régions arides et semis arides



**Comparison between production in greenhouse and field of tomato
(*lycopersicon esculentum mill*). Var: Marmande, var: Riogrande.**

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Abstract:

The aim of this study is comparison between production in greenhouse and in the field, and also comparison between the tomato of consumption: Marmande and industrial: Riogrande, to adapt to different environments and the best agricultural environment. The environmental factors that can markedly alter or reduce the nutritional quality and the production of plants. This factors causes dramatic losses for producers and consumers, which leads us to think of ways to improve the productivity of industrial tomato (Riogrand) and consumption (Marmande) in a study on the environmental determinism of secondary metabolism in tomato. Two varieties of tomato (*Solanum lycopersicum*) were used: (Riogrande is industrial variety, Marmande is consumption variety. Seeds of two varieties of tomatoes (*Solanum lycopersicum*) were sown in germination trays kept under greenhouse. Subsequently, The seedlings were transplanted to an experimental greenhouse and field in the city of Constantine situated in the east of Algeria when the plant reached 5 leaves. We were applied: Study after harvest of tomatoes directly, this study includes a production study: (Number of fruits in plant, weight of tomato fruit, Total weight of fruits in plant, height of plants and number of plants infected by diseases. The results obtained in the quantitative aspects were treated with Spss. The test performed is the two-factor ANOVA. Results showed a difference in production and height of plants and number of plants infected between tomatoes planted in green house and tomatoes planted in field. The field experience gave satisfactory results compared to the results of the experiment in green house, this is due of height of temperature and humidity.

Keywords: Tomato, the environmental conditions, green house, field