

## عنوان مقاله:

Assessing the impact of environmental aspects, land use, and R&D policies on peri-urban agriculture using a system dynamics approach

## محل انتشار:

دوفصلنامه بهینه سازی در مهندسی صنایع, دوره 15, شماره 2 (سال: 1401)

تعداد صفحات اصل مقاله: 19

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## خلاصه مقاله:

Today, attention to the social and environmental aspects in addition to the economic aspect has become one of the main concerns of global organizations defending the environment and human societies, and urbanization. Also, profitability is raised as a key component in the robustness of various sectors including agricultural production. In this research, we investigate the impact of some policies and environmental aspects such as land use, pruning decisions, and research and development (R&D) on the profitability of citrus production, in the long run, using the system dynamics (SDs) model. The main contribution of this study is considering several key assumptions simultaneously in an integrated dynamics model such as the solar effect, R&D policy, pesticide effect, harvesting condition, and prune effect which is neglected or less noticed in the literature. For validation, the model's behavior is compared with collected historical observations. Statistical analysis shows that the simulated model is consistent with historical patterns. To further investigate, the Monte Carlo simulation for sensitive variables of the proposed model is implemented and finally, the model under different scenarios is examined. Various simulations have shown that changes in maximum economic yield, citrus price, and R&D policy are three important and effective agents to achieve the best performance in this sector. Also, the obtained results can help agricultural managers and the application of these interventionist policies can lead to an increase in producers' income and citrus production.

## کلمات کلیدی:

System dynamics modeling, R&D interventions, Citrus production, Simulation, Land-use policy

## لینک ثابت مقاله در پایگاه سیویلیکا:

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