# AN ALTERNATIVE METHOD TO IMPROVE THE WATER-KEEPING CAPACITY OF SOILS IN TOMATO CULTIVATION

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Tomato is a nutrient dense food, being the fourth most popular vegetable in the world. It is cultivated in almost every country. In addition to its popularity it has significant benefits on human health.

A series of experiments have been made in order to find new methods to improve water management of tomato cultivation (diatomite, mycorrhiza, different irrigation methods). In present work it is presented the effect of diatomite mixed in soil on the quality and quantity of tomato yield under horticultural circumstances in flower pots.

Diatomite is a sedimentary rock which consists of fossilized remains of diatoms. Its wide use in industry, agriculture and human health is based on its several specific properties. One of this is the large surface area coupled with a small volume capable of absorbing and storing significant quantities of water.

The aim was to determine the effect of diatomite on germination, germ development, time and period of yield maturity, as well as on yield quantity. Beside the diatomite concentration (100 and 150 $g \cdot kg^{-1}$) was also examined on the same parameters. The results didn't confirm the differentiation of germination ability. However the heights of the germs were significantly higher in the treatments than in the control.

The main advantage of using diatomaceous earth was that the ripening period was shortened during the treatments, making it much more profitable for horticultural growers to grow in this way. Another main result was the significant higher yield mass in the treatments. The 150 $g \cdot kg^{-1}$ dose proved to be more efficacy than the 100 $g \cdot kg^{-1}$. According to the results the utilisation of diatomite in tomato cultivation shows more economic and cultivation advantage effects.