

INFLUENCE OF LIGHT INTENSITY AND VARIOUS
AGRICULTURAL MEDIA ON THE SEEDLING PRODUCTION
FOR SOME VEGETABLE CROPS

BY

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ABSTRACT

Two groups of experiments were carried out during the fall and winter seasons of 1991/1992 and 1992/1993 years. Four vegetable crops i.e. tomato cv. Dombo, pepper cv. Gedeon, cucumber cv. Katia and cantaloupe cv. Galia were used. The first group of experiments was performed to study the influence of four light intensities i.e, 100%, 65%, 49% and 37% of sun light on seedlings production. Seeds of the mentioned crops were sown in seedling trays contained peat moss and vermiculite (1:1 v/v).

Results revealed that decreasing light intensity caused a decrease / an increase of seed germination vigor and germination rate respectively for all tested crops.

Increasing shading level led also to a decrease in net assimilation rate, chlorophyll content, nitrogen content and total carbohydrates of produced seedlings.

The second group of experiments aimed to study the effect of seven various growing media on the seedling production of the

mentioned vegetables. Results showed that mixing peat moss with vermiculite or fine red bricks powder or foam increased seed germination vigor. The highest dry weight of the seedling was recorded with the PV media contained peat moss:vermiculite 1:1, while the lowest was obtained by using red bricks powder alone.

Net assimilation rate (NAR) high value was obtained in the PV media followed by PS (peat moss : sand 1:1). The lowest NAR value was detected in case of sowing seed in red bricks powder alone. Cultivation seeds in PV media led to obtain seedlings with high nitrogen and high chlorophyll contents.

However, the highest total carbohydrates content of seedling was detected in case of using VS media (vermiculite:sand 1:1) followed by the PV medium.

Key Words

*Vegetable seedlings Production
Light intensities and growing media .*

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INTRODUCTION