

## **DEVELOPMENT OF GROWING MEDIA FOR ORGANIC SEEDLING PRODUCTION FROM DOMESTIC RESOURCES**

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For organic producers, the growing medium must meet both the ecological regulations and the biological needs of the seedlings. At the same time, it must be affordable and environmentally sustainable. In Hungary, the most common growing media are peat and coco coir. Peat is one of the hard-to-renew organic materials, and coco coir is a by-product of coconut farming, shipped to Europe from the Far East for horticultural use. The main goal of the experiment is to develop commercial, compost-based (green waste, spent mushroom compost and vermicompost) peat-free universal growing medium(s) that can be used in organic farming. This study aims to create a growing medium for seedling production consisting of local, sustainable materials that can also be used in organic farming to raise quality seedlings. The research also covers the effect of the growing medium on the development of plants throughout the entire growing season.

Since 2021, we have conducted five experiments on growing seedlings using different organic materials. In all experiments landrace tomato species have been used. Plant development was monitored for six weeks, where germination rate, seedling height, the number of the true leaves and the plants' general condition were measured, soil's moisture content. In the summer of 2022, the seedlings were planted out to a non-irrigated field in Vas County. The documentation process was based on these measurements during the vegetation period: Plant height, SPAD measurement, amount of fruits/weight in grams, and average yield per root. Our conclusion is that certain experimental mixtures are not ideal for seedling production. Mixtures with 100 % one component have not performed better and will be further tested in next year's trials.