THE IMPORTANCE OF PEPPER (*CAPSICUM ANNUM L.*) GRAFTING IN HUNGARY

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Sweet pepper (*Capsicum annuum L.)* holds substantial economic value globally. Grafting serves as an efficient technique within intensive vegetable cultivation, ensuring consistent quality and yield. Despite its benefits, the utilization of grafted seedlings in pepper farming is less prevalent compared to other vegetable types. Selecting a suitable rootstock can positively impact production and mitigate environmental pressures. Grafting involves the fusion of two or more living plant parts, enabling them to develop as a unified plant. This practice is commonly employed to diminish susceptibility to soil-borne pathogens and enhance resilience against abiotic stressors like temperature extremes, salinity, and waterlogging. In Hungary today, grafting is used for the propagation of six vegetable species (melons, cucumbers, tomatoes, peppers, and eggplants). Grafting offers both advantages and disadvantages: Monoculture cultivation has contaminated our soils to such an extent that growers are left with two choices: either to switch to soilless cultivation or to plant grafted crops. Inoculation not only protects against soil-borne pathogens and pests, but also increases the cold and heat tolerance of the root system of the graft compared to the autochthonous plant, which can lead to earlier planting and even earlier harvesting. Other benefits of grafting are that it can regulate the growth of the noble, increase the size of the fruit and thus the yield average, and even affect the nutritional value of the fruit. A major disadvantage of this technique, apart from the increased manual labour required, is that two seeds are needed for this method of propagation, which further increases the cost of seedling production. Furthermore, there is a risk of incompatibility between the rootstock and the seedling. Grafted peppers are mostly cultivated in a greenhouse for five to six months, and fruits are harvested continuously in green and unripe form. Some greenhouse pepper growers noted that the fruit length of grafted peppers is shorter or longer than non-grafted peppers, depending on rootstock genotypes.