

Virus-free potato propagation in greenhouse conditions

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Abstract

Optimized seed-growing is one of the main approaches in increasing productivity of crops, including potatoes. To obtain high yields of potatoes, virus-free plants and appropriate agricultural methods, including fertilization regime, are used. Some aspects of virus-free potato propagation techniques and their profitability have not yet been studied in sufficient detail. Here, we investigated productivity of virus-free potato plants under different fertilization regimes in greenhouse conditions. Thirteen different options of fertilization regimes were tested, including different combinations of mineral, organic-mineral and microbiological fertilizers. The joint use of potassium-magnesium, organic-mineral fertilizer for potatoes, and Akvarin fertilizer resulted in maximal productivity per unit of greenhouse soil area, as well as the highest numbers of minibulbs and the greatest concentrations of protein and starch in bulbs. This option of fertilizing was also the most profitable, as its profitability made 226 %.

Keywords

Fertilizer, Minibulbs, Seed-growing, Virus-free potato