ASPECTS CONCERNING THE EVOLUTION OF CULTURE SYSTEMS AND CULTURE TECHNOLOGIES OF GREENHOUSE VEGETABLES

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SUMMARY

The orientation of population towards a more balanced food determined the increase of vegetable products rate in daily ration. This aspect determined a significant increase of world vegetables production as well as a permanent diversification of cultivated assortment.

Starting with 1975-1980 years, greenhouse cultures sector had a dramatic evolution because during a 15-20 years period the gravity of thermal energy costs increases from 15-20% at 50-60% from the total costs [2]. After a short stagnation period regarding greenhouses’ construction and after adoption of some energy saving measures, two trends appeared: extension of vegetable cultures in more warm zones, tropical, subtropical and Mediterranean zones; modernization of greenhouse constructions as well as the practice of some new systems and technologies of culture, which have to assure a considerable increase of yield. Thus, protected cultures extended very much in Mediterranean basin while in the great greenhouse vegetables producing countries (Holland, France, England, Belgium) through the improvement of culture systems, in a relative short time, the yield per warm unit surface was doubled or even tripled. Regarding the improvement of culture systems and technologies of culture of greenhouse vegetables at world level, it can be found the extension of soilless culture using different substrates (rock wool, polyurethane, coir fibers and peat) supplied with nutritive solutions or on nutrient film (NFT). Soilless cultures have a series of advantages such as: rigorously and scheduled control of mineral nutrition and water supply, a better control of pest and diseases, thermal energy saving due to the elimination of soil steam disinfection, elimination of soil tillage [3].

The preoccupation regarding the change of culture systems are still in the beginning stage in Romania especially because of the high costs of installations and equipments required for the new culture systems. In the scientific research existed preoccupations concerning the system of culture in containers (sacks or growing bags) using as substrates local available materials (peat, forest compost). The researches undertook in the frame of vegetable growing Department at USAMV Cluj-Napoca for greenhouse tomatoes cultivated on organic substrate (80% peat and 20% long duration follow soil+well decomposed manure) discovered a significant increase of early yield while for total yield 15-16 kg/m² were obtained, in a culture cycle from January till July [1].

BIBLIOGRAPHY