



Influența suporturilor multicomponente de tip hidrogel asupra germinației și dezvoltării plantelor decorative

MIHĂILESCU Camelia - Universitatea Tehnică „Gh. Asachi” Iași

DUMITRESCU Anca - Institutul de Chimie Macromoleculară „P.Poni”, Iași

SIMIONESCU B.C. - Universitatea Tehnică „Gh. Asachi” Iași

Multicomponent absorbent networks of hydrogel type represent a last generation materials with tree-dimensional structure and have a high capacity of swelling. The applications on these materials penetrated last years in food, pharmaceutical, electrotechnical and electronic industries, in biomaterials and environment protection domains.

In agriculture, hydrogels are especially used in soil improvement and to increase the efficiency of agrochemical treatments. Hydrogel applications in agriculture differ according to soil type, geographic area and plant types. Often, hydrogels may be mixed with soil particles, especially sandy particles, to increase water retention capacity. The repeated water absorption improves soil aeration. Hydrogel presence in soil contributes to reduce the erosion produced by wind and water, stabilizes river silts, and contributes to the growth of biomass production. The relationship plant - agroclimatic factors, of high complexity for culture plants, becomes simple for decorative plants. In this last case, the specific microclimate suffers minor variations and the soil support, through its characteristics, becomes the most significant factor with influence on vegetation and plants development.

The paper studies the influence of two types of artificial supports (soil - hydrogel and cotton - hydrogel); the influence of polyacrylamide based-hydrogels on vegetation of some decorative plants was tested. The experimental observations were registered in time, for periods extending from one month to a year. The development of plants on artificial supports evolved better than witness plants. The registered images make evident differences as concerns highness, branches, leafy and flowers number. Also, it was been found that hydrogels with raised values of initial swelling degree stimulate germination and development of decorative plants.