

REALIZATION OF DIFFERENT TYPES OF FOLIAR FERTILIZERS BASED ON EXTRACTIONS FROM PEAT

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Abstract. Peat are a recent sediment on bogs, composed in its majority of crop residues with conserved morphological structure generally, but passed through a chemical and physical process whose result is enrichment in humic substances. Humic substances from peat are mineralized very quickly releasing humates and nutritional elements for plants. So, peat is a valuable organic fertilizer used for crop fertilization, especially into horticulture. Recent methods allow the treatment of peat with alkaline solutions for extract, with low-cost, some humic acids and nutrients that they contain. These extracts sprayed on the plants at a rate of 5-10 l/ha by 2-3 applications during the season growing provide important yield increases.

Keywords: peat, humates, nutritional elements

Introduction

Scientific progress in increasing awareness of the role of humic substances in the development of soil fertility and reducing negative effects on the quality and quantity of humus in the cultivated soils, including those intensively chemically fertilized, stimulated the scientific research concern in various countries for creating new types of humic fertilizers that ensure optimum nutritive satisfaction and amelioration of soil humus (Dorneanu A. și col. 2007).

A main category of raw materials for the production of humic fertilizers at the industrial quantities in our Romania is the peat that is widespread in various humid places especially in hilly and mountainous areas.

It is estimated a peat volume available for the production of humic fertilizer over 80 million m³ (Pop E., 1960 Davidescu et al., 1969).

Academician Emil Pop in his monumental work „Peat swamps in Romania”, in 1960, defined the peat as being a recent sediment mostly composed from vegetal residues maintaining, in general, conserved the morphological structure of plant residues, but passed through a physical and chemical process (process of peat formation) whose main result is a relative enrichment in carbon.

There are two categories of peat important for the production of fertilizers: eutrophic and oligotrophic.

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