

Producing Fertilizers of Increased Environmental and Agrochemical Efficiency via Application of Plant-available Inorganic Coatings

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Abstract : Reduction of inefficient losses of nutrients when using mineral fertilizers is a very important and urgent challenge, which is of both economic and environmental significance. The loss of nutrients to the environment leads to the release of greenhouse gases, eutrophication of water bodies, soil salinization and degradation, and other undesirable phenomena. This report focuses on slow and controlled release fertilizers produced through the application of inorganic coatings, which make the released nutrients plant-available. There are shown the advantages of these fertilizers their improved physical and chemical properties, as well as the effect of the coatings on yield growth and on the degree of nutrient efficiency. This type of fertilizers is an alternative to other polymer-coated fertilizers and is more ecofriendly. The production method is protected by the Russian patent.

Keywords : coatings, controlled release, fertilizer, nutrients, nutrient efficiency, yield increase

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