

## **Economic effectiveness of nitrogen fertilizer application in agriculture**

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### **Abstract**

© Medwell Journals, 2016. The efficiency of different types of nitrogen fertilizers used in agriculture is analyzed and the main forms of their production by the chemical industry are considered. The data on production dynamics of mineral fertilizers and their price change in Russia from 2009-2011 is provided. The fertilizers production conditions in the world and their consumption in agricultural industry, wherein Russia represents 9% of the global operating capacities of ammonia production (the third place in the world after China and the USA) are analyzed. Main nitrogen fertilizers produced by the industry are characterized and assessed. The researchers offer new forms of nitrogen fertilizers such as Urea-Formaldehyde Fertilizer (UFF) characterized as slowly-soluble and well absorbed by plants during the growing season and thus guaranteeing financial benefits. The slowly-soluble nitrogen fertilizer developed by the researchers positively affects the quality of crops at single application in spring (increases the amount of gluten in a spring wheat grain, decreases the amount of nitrates in green fodders). Such fertilizers increase the safety of pine seedlings sprout and do not demand additional fertilization in summer, thus reducing the material costs and increasing economic efficiency.

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### **Keywords**

Ammonium nitrate, Dose, Nitrogen fertilizer, Plants, Production of mineral fertilizers, Urea, Urea-Formaldehyde Fertilizer UFF