Optimization of Fertilizer Rates for Wheat Crop using Fuzzy Expert System

Abstract

In this work it is proposed to provide proper nutrition to soil, which is very essential for satisfactory crop growth and production. The use of soil tests can help us to determine the status of available nutrients in soil, this paper aims at calculating required amount of NPK fertilizers for soil accordingly NPK levels actually found during soil test. Applying fuzzy based rules in a fuzzy expert system we here are developing fertilizer recommendations needed to achieve optimum crop production. Efficient application of the correct amounts of fertilizers for the supply of the nutrients is an important part of achieving profitable yields. The profit potential for farmers depends on producing enough crops per acre to keep production costs below the selling price. Moreover optimizing fertilizer will help us preventing environmental effects like water pollution and health effects.

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Index Terms

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Keywords

NPK  Fuzzy Expert System  Fertilizers  Crop production.