Abstract

The condensation of urea and furfural was carried out in an acid medium using absolute ethanol as solvent. 13 C HMR 1 H and IR spectroscopy showed that the only product obtained, independently of the initial molar ratio of urea-furfural used, is difurfurilidentriurea (DFTU). Three treatments in maize culture were applied with DFTU (25 % of nitrogen): 100, 80 and 60 kg.ha⁻¹, one with urea (120 kg.ha⁻¹, 46 % of nitrogen) and a test. Significant differences among treatments are not observed in the traditional growth parameters, even in the one where urea was applied that has a bigger nitrogen percentage compared with DFTU. The application of DFTU has a positive influence on the determined soil properties.

Keywords

Key words, urea, furfural, condensation, fertilizer.