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PROTEIN CONTENT OF PADDY GRAINS AS INFLUENCED BY SLOW RELEASE NITROGEN FERTILISERS

To study the effect of slow release nitrogen sources on the protein content of rice variety Jaya, an experiment was conducted at the Model Agro-nomic Research Station, Karamana during the second crop season of 1975—76. The fertilisers tried were ordinary urea containing 46 per cent nitrogen (S1), sulphur coated urea with 36.8 per cent nitrogen (S2), shellac coated urea containing 32 per cent nitrogen (S3), IBDU with 37 per cent nitrogen (S4), neem cake blended urea (S5) and AM treated urea (S6). In the case of S5, urea was mixed with neem cake powder at the rate of 15 per cent of its weight and kept for 48 hours. The neem cake was found to have a nitrogen content of 4.5 per cent. Adjustment in the amount of urea was made for nitrogen content of cake. In S6, urea was mixed with AM at the rate of 0.75 per cent of its weight and kept for 24 hours. Grain samples from each treatment were collected and analysed for nitrogen using the Micro kjeldahl method (Jackson, 1967). The protein content of the grain was calculated by multiplying the nitrogen percentage with the factor 6.25 (Simpson *et. al.* 1965).

The protein percentages in grains collected from S1, S2, S3, S4, S5, and S6, were 7.44, 8.51, 8.35, 8.22, 8.35 and 8.72 respectively. The slow release nitrogen sources increased the protein content of paddy grain. The maximum protein content in grain was obtained in AM treated urea followed by sulphur coated urea and neem cake blended urea. The lowest protein percentage was recorded by untreated urea. The availability and uptake of nitrogen were more in the later stages of plant growth in plots receiving slow release nitrogen sources and this might have caused the higher protein percentage of grains in these plots. Increase in protein content of grain with increase in nitrogen uptake has been reported by Ramanujam and Rao (1970). Higher protein content in grains of paddy receiving neem cake treated urea was reported by Arunachalam and Morachan (1974).

സംഗ്രഹം

മരച്ചീനി തോട്ടിൽ മാത്രം നൈട്രജൻ പ്രദാനം ചെയ്യുന്ന തരത്തിലുള്ള രാസവളങ്ങൾ നെൽച്ചെടികൾക്ക് ചേർക്കുമ്പോൾ നെൽപ്പറമ്പുകളിലെ മാംസ്യംഗുണത്തിന്റെ അളവ് എങ്ങനെ വ്യത്യാസപ്പെടുന്നു എന്നറിയുന്നതിനുവേണ്ടി ഒരു പരീക്ഷണം 1975-76 ൽ നടത്തുകയുണ്ടായി. ഈ പരീക്ഷണത്തിൽ, സാധാരണ 'ഊറിയ'യെ അപേക്ഷിച്ച്, മരച്ചീനിയിൽ നൈട്രജൻ പ്രദാനം

നം ചെയ്യുന്ന എല്ലാ രാസവളങ്ങളും നെൽണിയിലെ നൈട്രിഫിക്കേഷൻ പ്രക്രിയയെ തടയുന്നതായി കണ്ടു. എ. എം. അടങ്ങിയിട്ടുള്ള യൂറിയ ചേർത്തതിലായിരുന്നു മാംസ്യംഗത്തിന്റെ അളവ് ഏറ്റവും കൂടുതലായിരുന്നത്.

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