Short Communication
Range Mgmt. & Agroforestry 43 (2) : 340-344, 2022
ISSN 0971-2070

Effect of nano nitrogen application on yield, nutrient uptake and profitability in fodder oat (*Avena sativa* L.) under north western Haryana condition

Rajesh[1], Rakesh Kumar[1], Hardev Ram[1], Rajesh Kumar Meena[1], Manoj Kumar*[2], Anil Kumar Verma[3], Sunil Kumar[3], Govind Makrana[1], Dinesh Kumar[1] and Prabhu Lal Jat[1]

[1]ICAR-National Dairy Research Institute, Karnal-132001, India
[2]ICAR-AICRP on Pearl Millet, Agriculture University, Jodhpur-342304, India
[3]ICAR-Indian Agricultural Research Institute, New Delhi-110012, India
*Corresponding author e-mail: mkagro86@gmail.com
Received: 1st October, 2021 Accepted: 8th September, 2022

Abstract

A field experiment was conducted to study the effect of nano nitrogen application on yield, nutrient content and farm profitability in fodder oat (*Avena sativa* L.). Oat variety (Kent) was grown at Research Farm of Agronomy Section, ICAR-National Dairy Research Institute, Karnal during *Rabi* season of 2020. The experiment was laid out in a randomized block design with six different treatment combinations comprising of different levels of urea and nano fertilizer as follows: T_1 = control (no nitrogen), T_2 = 100% RDN through urea, T_3 = 75% N through urea + 25% N through nano nitrogen, T_4 = 50% N through urea + 50% N through nano nitrogen, T_5 = 25% N through urea + 75% N through nano nitrogen, T_6 = 100% RDN through nano nitrogen. The results revealed that application of 100% RDN through urea (T_2) recorded highest green fodder yield (57.25 t/ha), total N, P and K uptake and net monetary returns *viz*., gross return, net return and B: C ratio by dry fodder of oats crop. Thus, study could not establish the superiority of nano nitrogen in getting higher yield, profitability and nutrient uptakes in fodder oat.

Keywords: Fodder yield, Nano nitrogen, Oats, Profitability, Urea nitrogen