



## RESEARCH PAPER

# Effect of sowing windows and nitrogen levels on growth and fodder yield of ryegrass (*Lolium multiflorum*) under South Eastern Rajasthan

Harphool Meena\*, Manoj<sup>1</sup>, Rajendra K. Yadav, Shankar Lal Yadav, R.K. Bairwa<sup>2</sup>, Madhu Lata Bhaskar and Pratap Singh  
Agricultural Research Station (Agriculture University), Ummadganj, Kota (Rajasthan) India  
(Email : [hpagron@rediffmail.com](mailto:hpagron@rediffmail.com))

**Abstract :** An experiment conducted at Agricultural Research Station Ummadganj, Kota, Rajasthan during *Rabi* (2018-19 and 2019-20). The experiment was laid-out in split plot design with four replications having sixteen treatment combinations of four sowing windows (25<sup>th</sup> October, 05<sup>th</sup> November, 15<sup>th</sup> November and 25<sup>th</sup> November) allocated in main plot and four nitrogen levels (100, 125, 150 and 200 % RDN) in sub plot. Significantly higher leaf weight/10 plants (g) and 10 plant's stem weight (g) of ryegrass were noted when the sowing occurred on November 05<sup>th</sup> during first cutting at 45, second cutting at 75, third cutting at 105 and fourth cutting at 135 DAS over sowing of ryegrass on 15<sup>th</sup> and 25<sup>th</sup> November, respectively. Ryegrass sown on 05<sup>th</sup> November had a significantly higher green and dry fodder yield (1184 and 224 q/ha) than sown on 15<sup>th</sup> and 25<sup>th</sup> November. However, it was found at par with sown on 25<sup>th</sup> October sowing (1145 and 220 q/ha). Under 150 % RDN application at 45, 75, 105, and 135 DAS sowing on 5<sup>th</sup> November, the maximum leaf weight (g) and stem weight (g) of ryegrass were measured over application of 100% RDN and 125% RDN. Application of 150% RDN gave significantly higher green and dry fodder yield (1112 and 202 q/ha) over application of 100 and 125% RDN, but it was found at par with application of 200% RDN (1121 and 205 q/ha) green and dry fodder yield in the pooled analysis.

**Key Words :** Nitrogen, Ryegrass, Sowing windows, Growth, Yield

**View Point Article :** Meena, Harphool, Manoj, Yadav, Rajendra K., Yadav, Shankar Lal, Bairwa, R.K., Bhaskar, Madhu Lata and Singh, Pratap (2023). Effect of sowing windows and nitrogen levels on growth and fodder yield of ryegrass (*Lolium multiflorum*) under South Eastern Rajasthan. *Internat. J. agric. Sci.*, **19** (2) : 463-468, DOI:10.15740/HAS/IJAS/19.2/463-468. Copyright@2023: Hind Agri-Horticultural Society.

**Article History :** Received : 27.02.2023; Revised : 17.03.2023; Accepted : 18.04.2023

---

**\*Author for correspondence:**

<sup>1</sup>Departemnt of Soil Science and Agricultural Chemistry, Sri Karan Narendra Agriculture University, Jobner (Rajasthan) India

<sup>2</sup>Krishi Vigyan Kendra (Agriculture University), Borkheda, Kota (Rajasthan) India