



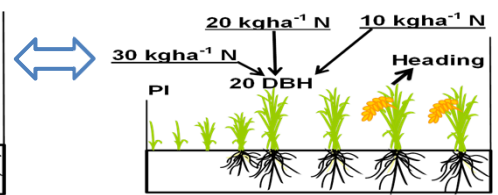
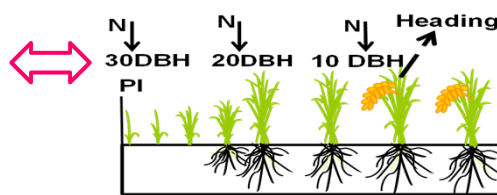
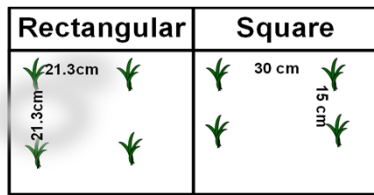
403. Agronomic Characters of Rice Cultivation with reference to Topdressed N efficiency



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Introduction



Photosynthesis, nutrient & water absorption root space

Sink size, Rice yield

Increase N absorption by rice and N mineralization

OBJECTIVE: To investigate how N topdressing performance over planting patterns, timing and rate conditions affected the rice yield without disturbance?

Materials and Methods :

Soil type : Sandy loam clay
 Location : Yamagata, University Experiment Farm
 Variety : Sasanishiki

Sampling time : Heading and maturity stages
 Experimental design: RCD
 Replication : 4
 Measurement of Yield: Brown rice yield
 Data analysis : STATCEL-2 Software, Tukey-Kramer

Treatments :

1. Planting patterns

- Rectangular(30 cm x15 cm)
- Square (21.3 cm x21.3 cm)

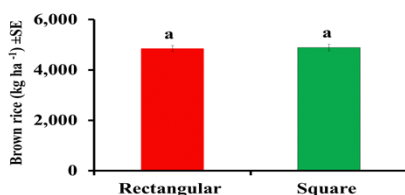
2. Topdressing timing

- 10 days before heading,
- 20 days before heading,
- 30 days before heading.

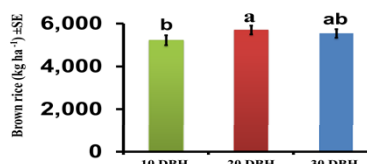
2. Topdressing rate

- 10 kg/ha (LN),
- 20 kg/ha (SN),
- 30 kg/ha (HN)..

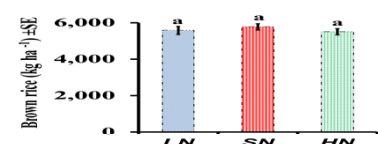
RESULTS :



1. No difference in rice yield was observed between rectangular and square planting.

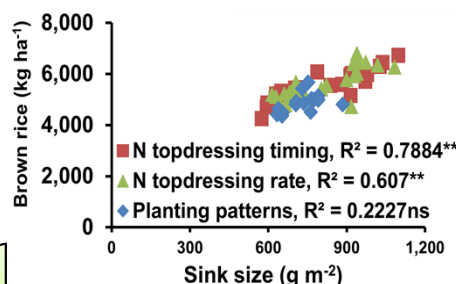


1. Significant difference in 20DBH compared with 10 DBH.
2. No difference in 10DBH and 30DBH, and between 30 DBH and 20 DBH.



1. No difference in rice yield was observed among the topdressing N rates of 10, 20, and 30 kg ha⁻¹.

Discussion

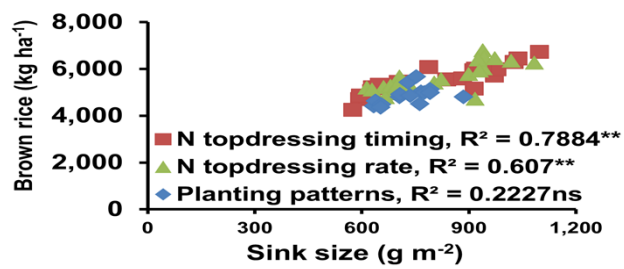


1. Sink size was most linear correlated with rice yield.
2. Sink size was more regulated by N topdressing timing condition.

Conclusion

1. Both planting patterns can be adopted based on agricultural practices .
2. N topdressing timing from 30 to 20 DBH was most suitable for increasing yield.
3. 10 kg ha⁻¹ was enough amount to get the maximum rice yield.

Discussion



Conclusion