

HOME

About Journal@rchive

Journal List

Journal/
Society Search

GO

News



Science Links Japan

JST Japan Science and Technology Agency

Japanese journal of crop science

The Crop Science Society of Japan [Info](#) [Link](#)[TOP](#) > [Journal List](#) > [Available Issues](#) > [Table of Contents](#) > [Abstract](#)

ONLINE ISSN: 1349-0990

PRINT ISSN: 0011-1848

Japanese journal of crop science

Vol.67 , No.2(1998)pp.208-215

[\[Full-text PDF \(1062K\) \]](#) [\[References \]](#)

Effect of the Application of Rice Bran on the Carbohydrate Metabolism in Leaves and Stems of Rice Variety Hitomebore Cultured with the Practice of No Nitrogen Application at Basal Dressing Accompanied with Sparse Planting

Mitsugu HIRANO, Mihoko SUGIYAMA, Yohko HATAKEYAMA, Eiki KURODA and Takao MURATA

- 1) Fac.of Agr., Iwate Univ.
- 2) Fac.of Agr., Iwate Univ.
- 3) Fac.of Agr., Iwate Univ.
- 4) Fac.of Agr., Iwate Univ.
- 5) Fac.of Agr., Iwate Univ.

[Published: 1998/06/05]

[Released: 2008/02/14]

Abstract:

Hitomebore, a rice variety, was cultured in 1996 using standard practice(CON) and the practice of no nitrogen application at basal dressing accompanied with sparse planting(BNo).Raw rice bran at 120g^{m⁻²}(RB1)and 240g^{m⁻²}(RB2)was added to the practical regime of BNo, respectively, at basal dressing. The yield in each experimental plot was not significantly different.Although the small amount of rice bran had only a slight effect on the growth of rice plants, the dry weight and nitrogen content of leaves increased after the panicle formation stage in the RB2 plot and exceeded those in the CON plot at the ripening stage.The decrease in stem weight at the ripening stage was faster and larger in the lower part of the stems, below the 3rd internodes, than in the upper part of the stems.At the booting stage, sucrose content in both leaves and stems was apparently higher in sparse planting plots than in the CON plot.At the ripening stage, sucrose content decreased initially and reincreased to the maximum in the middle of the ripening stage.Sucrose content in the upper part of the stems was not so different among the various plots and it rapidly increased early in the ripening stage.On the contrary, sucrose content in the lower part of the stems was clearly different among the plots and reached a maximum earlier than that in the upper part of the stems.Starch content in stems was smaller in the CON plot than in the other plots.The content of non-structural carbohydrate in the lower part of the stems changed faster and larger than that in the upper part of the stems.

Keywords:

Booting Stage, Hitomebore, No nitrogen application at basal dressing, Non-structural carbohydrate, Rice bran, Ripening stage, Sparse planting, Sucrose content.

[[Full-text PDF \(1062K\)](#)] [[References](#)]

Copyright© Crop Science Society of Japan

[Access Policy](#)

[Privacy Policy](#)

[Link Policy](#)

[Contact](#)

[Amendment Policy](#)

Japan Science and Technology Agency

