

Author:  [ADVANCED](#)

 Volume  Page 

 Keyword:  
  

[TOP](#) > [Available Issues](#) > [Table of Contents](#) > [Abstract](#)

ONLINE ISSN : 1349-1008

PRINT ISSN : 1343-943X

**Plant Production Science**

Vol. 7 (2004) , No. 4 456-462


[\[PDF \(544K\)\]](#) [\[References\]](#)

## Analysis of the Number of Spikelets per Panicle on the Main Stems, Primary and Secondary Tillers of Different Rice Genotypes Grown under the Conventional and Nitrogen-Free Basal Dressing Accompanied with Sparse Planting Density Practices

[Pham Quang Duy](#)<sup>1)</sup>, [Daisuke Tanaka](#)<sup>1)</sup>, [Akira Abe](#)<sup>2)</sup>, [Satoru Sagawa](#)<sup>1)</sup> and [Eiki Kuroda](#)<sup>1)</sup>

1) Faculty of Agriculture, Iwate University

2) Iwate Agricultural Research Center

(Received: February 24, 2003)

**Abstract:** The number and development of spikelets on a panicle directly affect the grain yield. In this study, we examined the differences among various rice cultivars in the number of spikelets per panicle ( $NSP^{-1}$ ) on the main stems (MS), primary tillers (PT) and secondary tillers (ST), and in the numbers of spikelets on the primary and secondary rachis branches. The difference among cultivars in the responses of these characteristics to the practice of nitrogen-free basal dressing accompanied with sparse planting density (BNo) was also elucidated. The results showed that  $NSP^{-1}$  varied with the tiller position on a plant, and it was highest on MS followed by PT and ST in this order in all cultivars.  $NSP^{-1}$  on all MS, PT and ST also varied with the cultivar, and was larger in the cultivars of the panicle-weight type than in those of the panicle-number type. The difference between MS and ST in  $NSP^{-1}$  was larger in the cultivars of the panicle-weight type than in those of the panicle-number type.  $NSP^{-1}$  was larger in BNo than in the conventional cultivation (CONT) in most cultivars. The difference between BNo and CONT in  $NSP^{-1}$  varied with the tiller position on a plant and with the earliness of the cultivar, but did not clearly vary with the plant type of the cultivar. It was larger in the panicle on ST than on MS or PT, and was larger in the late-maturing cultivars than in the early- and medium-maturing ones. The larger  $NSP^{-1}$  on MS or PT compared with ST, in the cultivars of the panicle-weight type compared with those of

the panicle-number type, and in BNo compared with CONT was mainly attributed to the increased number of spikelets on secondary rachis branches.

**Keywords:** [Cultivation practices](#), [Main stems](#), [Number of Spikelets](#), [Primary tillers](#), [Rice cultivars](#), [Secondary tillers](#)

[\[PDF \(544K\)\]](#) [\[References\]](#)



Download Meta of Article [\[Help\]](#)

[RIS](#)

[BibTeX](#)

To cite this article:

Pham Quang Duy, Daisuke Tanaka, Akira Abe, Satoru Sagawa and Eiki Kuroda: "Analysis of the Number of Spikelets per Panicle on the Main Stems, Primary and Secondary Tillers of Different Rice Genotypes Grown under the Conventional and Nitrogen-Free Basal Dressing Accompanied with Sparse Planting Density Practices". *Plant Production Science*, Vol. **7**, pp.456-462 (2004) .

---

doi:10.1626/pps.7.456

JOI JST.JSTAGE/pps/7.456

Copyright (c) 2005 by The Crop Science Society of Japan

---



---

[Japan Science and Technology Information Aggregator, Electronic](#)

