



Plant Production Science

The Crop Science Society of Japan

[Available Issues](#) | [Japanese](#) >> [Publisher Site](#)

Author: [ADVANCED](#) | Volume Page

Keyword: |



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

ONLINE ISSN : 1349-1008

PRINT ISSN : 1343-943X

Plant Production Science

Vol. 10 (2007) , No. 3 286-291



[\[PDF \(692K\)\]](#) [\[References\]](#)

Effect of Light Quality on Developmental Rate of Wheat under Continuous Light at a Constant Temperature

[Shin-ya Kasajima](#)¹⁾, [Naoto Inoue](#)¹⁾²⁾, [Rezwanul Mahmud](#)¹⁾, [Kaori Fujita](#)²⁾ and [Masakazu Kato](#)²⁾

1) Interdisciplinary Graduate School of Science and Technology, Shinshu University

2) The Graduate School of Agricultural Science, Gifu University

(Received: April 10, 2006)

Abstract: The developmental rate of wheat was investigated under continuous light of eight different qualities (in eight plots) obtained by combining three out of four different kinds of fluorescent lamps (white, blue, purplish red and ultraviolet-A) at a constant temperature of 20°C. A Japanese spring wheat var. Norin 61 and a winter wheat var. Shun-yo were used. The number of days from seeding to heading varied extensively with the variety and the light quality. The first heading was observed in the plot under three white fluorescent lamps (W + W + W) at 37 and 81 days after seeding in Norin 61 and Shun-yo, respectively. The developmental rate in both cultivars was significantly correlated with the ratio of energy in 500-550 nm range (green light) and 600-700 nm range (red light) to that in the whole spectral range (250-1,000 nm). These results suggest that green and red lights play important roles in the regulation of the developmental rate independent of photoperiodism and vernalization.

Keywords: [Developmental rate](#), [Green light](#), [Heading time](#), [Light quality](#), [Red light](#), [Wheat](#)



[\[PDF \(692K\)\]](#) [\[References\]](#)

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

To cite this article:

Shin-ya Kasajima, Naoto Inoue, Rezwanul Mahmud, Kaori Fujita and Masakazu Kato:
“Effect of Light Quality on Developmental Rate of Wheat under Continuous Light at a
Constant Temperature”. *Plant Production Science*, Vol. **10**, pp.286-291 (2007) .

doi:10.1626/pps.10.286

JOI JST.JSTAGE/pps/10.286

Copyright (c) 2007 by The Crop Science Society of Japan



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

