

Author: [ADVANCED](#)Volume Page Keyword: 
[TOP](#) > [Available Issues](#) > [Table of Contents](#) > [Abstract](#)

ONLINE ISSN : 1349-1008

PRINT ISSN : 1343-943X

Plant Production Science

Vol. 6 (2003) , No. 4 235-242


[\[Image PDF \(635K\)\]](#) [\[References\]](#)

Influence of Day Length before and after the Start of Anthesis on the Growth, Flowering and Seed-Setting in Common Buckwheat (*Fagopyrum esculentum* Moench)

[Hiroyasu Michiyama](#)¹⁾, [Masamichi Arikuni](#)¹⁾, [Tatsuya Hirano](#)¹⁾ and [Hisayoshi Hayashi](#)²⁾

1) Faculty of Agriculture, Meijo University

2) Institute of Agriculture and Forestry, University of Tsukuba

(Received: October 1, 2002)

Abstract: The influence of day length before and after the start of anthesis on the growth, flowering process, and seed-setting of common buckwheat (*Fagopyrum esculentum* Moench) was investigated to determine the effect of day length at various growth stages. Exposure to long days (15 h in 2001 and 16 h in 2000) made the node position of the first flower higher, delayed the start of anthesis, decreased the rate of successive flowering, increased the number of nodes and flower clusters on the main stem, and prolonged the main stem elongation period. It increased the number of flowers per flower cluster, but decreased the seed-setting ratio and the number of seeds. The critical day length varied with the cultivar and the growth parameter. ‘Miyazakizairai’ (autumn eco-type) showed significantly greater responses to long days than ‘Shinanonatsusoba’ (summer eco-type). The day length before the start of anthesis significantly influenced on the main stem elongation and flowering process thereafter. This suggests that the day length is a more critical factor for the differentiation than the growth of the flower bud. The seed-setting ratio was influenced both by day lengths before and after the start of anthesis. The 15 h day length before the start of anthesis and around 12 h day length thereafter increased the number of double and multiple clusters in ‘Shinanonatsusoba’ and long clusters in ‘Miyazakizairai’, resulting in an increase in the number of seeds per cluster. Day length did not influence either the form or weight of seeds.

Keywords: [Anthesis](#), [Common buckwheat](#), [Day length](#), [Fagopyrum esculentum Moench](#), [Growth](#), [Seed-setting](#)



[\[Image PDF \(635K\)\]](#) [\[References\]](#)

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

[RIS](#)

[BibTeX](#)

To cite this article:

Hiroyasu Michiyama, Masamichi Arikuni, Tatsuya Hirano and Hisayoshi Hayashi: "Influence of Day Length before and after the Start of Anthesis on the Growth, Flowering and Seed-Setting in Common Buckwheat (*Fagopyrum esculentum* Moench)". Plant Production Science, Vol. **6**, pp.235-242 (2003) .

doi:10.1626/pp.6.235

JOI JST.JSTAGE/pp.6.235

Copyright (c) 2004 by The Crop Science Society of Japan



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

