

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.1(1998)pp.85-90

[\[Full-text PDF \(1078K\) \]](#) [\[References \]](#)

Differentiation and Developmental Stages of Floral Organs as Influenced by Nodal Position on the Stem and Raceme Order in a Determinate Type of Soybean

Kuniyuki SAITOH, Sachiko ISOBE and Toshiro KURODA

1) Fac.of Agr., Okayama Univ.

2) Fac.of Agr., Okayama Univ.

3) Fac.of Agr., Okayama Univ.

[Received: 1997/08/11]

[Published: 1998/03/05]

[Released: 2008/02/14]

Abstract:

Microscopic observations of floral organs were needed to clarify the determining process of soybean yield. As previous studies have classified the development of floral organs into many stages, we tried to provide a simple classification by dividing the development into 9 stages through referencing the appearance and formation of organs, pre-differentiation(I), floral differentiation(II), bract formation(III), petal formation(IV), stamen formation (V), pistil formation(VI), ovule anther formation(VII), pollen-embryo sac formation (VIII), and flowering(IX). The floral organs were differentiated at the same time on different nodes of the stem irrespective of the vegetative leaf growth on each node. In a node, the floral organs were differentiated from the 1st to the 2nd and 3rd order raceme. Within a plant, the floral organs were differentiated at first on the axil of the main stem accompanied by primary branches at the 4th-10th nodes from the base(2nd order raceme). As the subsequent progress of developmental stage was delayed or rested, flowering within a plant progressed according to raceme order, from the 1st to the 2nd and 3rd order raceme. The floral differentiation of the terminal and the 1st (basal)raceme, and 2nd and 3rd(upper)racemes were observed before the beginning of the flowering period. In spite of the basal raceme developing rapidly at the same time, the upper raceme was differentiated and developed separately among nodes for a long time. In conclusion, the number of floral organs on the basal raceme were determined before the beginning of the flowering period and that on the upper raceme during the flowering period.

Keywords:

Developmental stage of floral organ, Floral differentiation, Light microscope, Morphogenesis, Number of flowering buds, Raceme order, Soybean

[\[Full-text PDF \(1078K\) \]](#) [\[References \]](#)

[Access Policy](#)

[Privacy Policy](#)

[Link Policy](#)

[Contact](#)

[Amendment Policy](#)

Japan Science and Technology Agency

