Lag Period of Pod Growth in Late Maturing Soybean. (C02-zheng184631-Poster)

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Abstract:

An interesting physiological characteristic of pod set in soybean (Glycine max L. Merr.) is that pod growth begins several days after the flower opens, compared with more immediate growth in other beans. We investigated the effect of genotypes, fruiting position, assimilate supply and photoperiod on the length of lag period (LP, days from flower opening to pod growing beyond 10 mm in length). Soybean plants (five cultivars) were grown in greenhouse and field in 2001 in Japan, and the treatments were applied when the plants began flowering. The lengths of pods from 20 flowers which opened on the same day and the same position were measured every other day. The LP of pod growth varied from 5 to 16 days and it was longer for late cultivars. The LP of early flowers (primary raceme) was 15 days compared with 8 days for late flowers (secondary raceme). Short photoperiod (10h) shortened the LP by 3 (primary raceme) to 5 days (terminal raceme), but had no effect on secondary and tertiary racemes. Neither BA application or sink-removal treatments affected LP, even though both treatments were expected to stimulate pod growth.

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