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## Effect of depodding ratio on occurrence of soybean green stem syndrome and seed weight change

Jin-Woo Bae, Hyeon-Jin Park, Byong-Won Lee, Sang-Ouk Shin, Won-Young Han, Jong-Min Ko and In-Youl Baek  
National Institute of Crop Science, Republic of Korea

**G**reen Stem Syndrome (GSS) is the delayed senescence of leaves and stem in soybean (*Glycine max.* L). When harvesting, GSS and normal plants at the same time, combines should be gummed up by green stem. If you delay the harvest until senescence of the stem, seed coat cracking and shattering rate will increase. In addition, increase of rainfall risk leads to deterioration of seed. Delayed stem senescence is associated with Source/Sink ratio. There are some factors that induce stress, like environment, disease and pest. With rising stress levels, especially from beginning bloom (R1) to full podstage (R4), floral abscission and pod shedding increases. As a result of pod reduction, Source/Sink ratio is increased and photosynthetic products remain in the stem, not seed. This study supposes pod shedding as pod removal and investigates occurrence of GSS in harvesting season. Seed of Daewonkong was sown on June 10. Treatment was done to change pod removal ratio (0~50%) in beginning seedstage (R5). Since October 8<sup>th</sup> (R7, beginning maturity stage) was observed by four times, every ten days interval. The higher rate of pod removal increased incidence of delayed stem senescence. Suitable harvesting time is October 28<sup>th</sup>, then 50% pod removal treatment plot has 81.3% incidence of GSS. Last investigated time is November 7<sup>th</sup>, then 50% pod removal has 52.0% incidence. Control, 0% pod removal, occurs only 9.4%. Further, the higher pod removal increased 100-seed weight, but there is no relationship between seed disease, like purple stain, brown spot, phomopsis and immature seeds.

### Biography

Jin-Woo Bae is doing Master's degree from Pusan National University and is a member of NICS (National Institute of Crop Science). He is working in crop production technology research division of NICS and studying labor saving cultivation of soybean. He joined the company in 2012 and is currently looking for his majors. He is interested in ripening and senescence physiology.

[bjw0409@korea.kr](mailto:bjw0409@korea.kr)

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