

Feeding Behavior of the Bean Bug, *Riptortus clavatus*
(Thunberg) (Hemiptera: Alydidae), on Seeds of a
Resistant Variety of Mungbean
(*Vigna radiata* L. Wilczek)

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Seeds of a mungbean variety, Jangannokdu, have antibiosis to the bean bug, *Riptortus clavatus* (Thunberg), which most nymphs die when fed on seeds, while the insects survive and normally develop into adults when supplied with seeds of another mungbean variety, Gyeongseonnokdu. To clarify the resistant mechanism of seeds of Jangannokdu against the bean bug, therefore, three kinds of behaviors in feeding on seeds of the two mungbean varieties, which are the dabbing behavior that the insect taps seed surface with its stylets, the feeding behavior that the insect inserts its stylets into seeds and sucks nutrients, and the feeding period, were observed in detail.

When fed on coat-removed seeds of Jangannokdu, most insects died at the second instar nymphal stage to show that the seedcoat of the mungbean variety didn't have any barriers to the feeding of the insect. When seeds of each mungbean variety were supplied to the 2nd instar nymph at a rate of one insect per seed for two hours in a petri-dish, the number of nymphs that showed dabbing and feeding behaviors was similar between the two varieties. When the behaviors were observed for 6 hours, the average of feeding period per nymph on Gyeongseonnokdu was a bit longer than that on Jangannokdu, but didn't give a significant difference. The feeding period that was observed in the 5th instar nymph didn't show any difference between the two varieties either. However, the feeding amount of the nymphs on Gyeongseonnokdu was bigger than that on Jangannokdu, and the survival rate of the nymphs on seeds of Gyeongseonnokdu was much higher than that on Jangannokdu. The results indicated that *R. clavatus* could successfully insert its stylets into seeds of Jangannokdu, but they could hardly suck nutrients from the seeds.