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Pod Dehiscence in Soybean : Assessing Methods and Varietal Difference

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Abstract: The varietal difference of pod dehiscence in 25 soybean cultivars consisting of 16 Japanese and 9 Thai cultivars was examined at 3, 5, 7, 14, 21, 28 and 35 days after placing in a desiccator (desiccator method) and 2, 4 and 7 hrs after placing in an oven at 60°C (oven-dried method). The cultivars examined were divided into susceptible and resistant groups according to the degree of pod dehiscence. Most of the Japanese cultivars (excepting Suzuotome) and NS1 were susceptible while most of the Thai cultivars (excepting NS1) and Suzuotome were resistant to dehiscence. The degrees of pod dehiscence measured by the desiccator and oven-dried methods were nearly the same, and the moisture content of the pods not dehisced was always higher than that of the dehisced pod. The effect of ambient humidity on pod dehiscence was examined in five soybean cultivars SJ5, Shirotae, Tamahomare, CM60 and Fukuyutaka. When the pods were exposed to 15 or 25% relative humidity (RH), the pods of susceptible cultivars, Shirotae, Tamahomare and Fukuyutaka, started to dehisce at 24 hrs after the start of the treatment, but those of resistant cultivars, SJ5 and CM60, did not dehisce for 72 hrs. None of the cultivars dehisced under 50 and 60% RH. These results revealed that placing the pods in the desiccator for 14 days (desiccator method) or exposing the pods to 60°C for 7 hrs in an oven (oven-dried method) were useful methods for checking the degree of dehiscence.

Keywords: [Desiccator method](#), [Moisture content](#), [Oven-dried method](#), [Pod dehiscence](#), [Relative humidity](#), [Soybean](#), [Strain gauge method](#), [Varietal difference](#)

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