

**PA-114**

## Comparison of Pollen Morphology Responded by High Temperature in Adzuki Bean (*Vigna angularis*) and Mung Bean (*Vigna radiata*)

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### [Abstract]

Plant reproduction associated with crop yields is highly vulnerable to global climate change components such as high and cold temperatures. The objectives of this study were to determine the effects of season-high exposure to temperature treatments in pollen morphology on Adzuki bean (*V. angularis*) and Mung bean (*V. radiata*). *V. angularis* and *V. radiata* were treated at high temperatures in the high temperature gradient greenhouse designed to cause temperature deviation. The pollen shapes treated at high temperature were compared by an electron scanning microscope. As a result, it was confirmed that the number of abnormal pollens morphology at high temperature was the least in *V. radiata*, and *V. angularis* was vulnerable to high temperatures. Also, it was found that the number of abnormal pollen morphology at T4 (Con +5~6°C) varied according to the cultivars of *V. angularis*. Therefore, the differences in *Vigna* species or cultivars with thermo-tolerance in pollen morphology to high temperature are projected to occur in the changeable future climate.

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