

[P4] Crop Genetics and Physiology

2021年9月9日(木) 12:15 ~ 14:00 Room 4 (Poster) (Crop Genetics and Physiology)

12:15 ~ 13:00

[P4-31]Heat Stress Impact on Heading and Ripening in Major Korean Rice Variety

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Heat stress is one of big stress in rice cultivation. Even mean temperature is gradually increasing and extremely high temperature even is also increasing in Korea. In these condition, the understanding of heat stress impact on rice is important to harvest stable yield and quality. Therefore, we checked heat stress impact on rice flowering, heading and ripening stage using major Korean varieties. To check flowering characters of rice, we used 11 Korean varieties. After cultivation under natural condition until heading, the pots were transported in green house which temperature was controlled. Until 30 degree of mean temperature, the flowering time did not changed. However, in 33 degree of mean temperature, flowering time changed earlier than other temperature condition. Fertility also changed under 33 degree, significantly reduced. Under 33 degree, anther viability and germination rate were significantly reduced. In high temperature condition, heading time also changed. The growth days from transplanting to heading reduced about 3.5 days under 1 degree of mean temperature changed. In ripening stage, heat stress impact on 1000 brown rice weight, rice quality and protein content. 1000 brown rice weight was reduced about 0.02 g according to 1 degree of mean temperature. The bigger rice showed more reduction in heat stress. And head rice rate was reduced about 5% and immature rice rate was increased about 1.9% by 1 degree of mean temperature.