

[P1] Field Crop Production

Thu. Sep 9, 2021 12:15 PM - 2:00 PM Room 1 (Poster) (Field Crop Production)

12:15 PM - 1:00 PM

[P1-09]Effect of Climate on the Yield of 'Ilpum' Rice Cultivar in Gyeongbuk Province, South Korea over the Past 25 Years

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The aim of this study was to analyze the relationship between rice yield of 'Ilpum', the main rice cultivar in Gyeongbuk province, and climate elements in Daegu (southern plain area) and Andong (inland mountainous area) regions in Gyeongbuk, south Korea. Over the past 25 years, rice yield of 'Ilpum' cultivar has increased in both regions. The rice yield in the recent 5 years increased by about 13% and 20%, respectively, compared to that produced in the late 1990s in Daegu and the early 2000s in the Andong region. The number of panicles per hill and grain ripening rate significantly affected rice yield in 'Ilpum' cultivars in Daegu region. The relationship between heading date and rice yield had a negative significant correlation in Andong region. The air temperature is rising and sunshine duration is getting longer from the late 1990s to present in both regions. To understand the effect of climate factors on rice yield, the milled rice yield of 'Ilpum' cultivar produced over the past 25 years (1995-2019) at both locations, Daegu and Andong, were evaluated. The rice yields increased owing to long sunshine duration during the grain filling stage in both regions. In Andong, rising maximum temperature during the vegetative stage increased rice yield. Rising air temperature during reproductive stage also increase rice yield. Especially, long sunshine hours through whole rice growing period increased rice yield of this cultivar in Andong region.