
Symposium | Symposium | S-01 - S-05

Climate Change and Advancing Rice Production in Asia

Chair: Jun-Ichi Sakagami (Kagoshima University, Japan)

2021年9月8日(水) 13:55 ~ 16:30 Plenary Room

14:20 ~ 14:40

[S-02]Maximizing Rice Production and Quality under Climate Change (Korea)

○Junhwan Kim, Wangyu Sang, Pyeong Shin, Jaekyeong Baek, Dongwon Kwon, Yunho Lee, ChungIl Cho, Myungchul Seo (National Institute of Crop Science, RDA, Korea)

The crop growth model, Oryza2000, was simulated to study the temporal and spatial change of the rice productivity of South Korea based on the RCP 8.5 climate change scenario. In general, the decline rate of early ecotype yield was the fastest, followed by the medium-late and the medium. Finally, it was predicted that more than 25% reduction in yield would occur in most areas by the end of the 21st century. The rice quality was evaluated indirectly through the 1000grain weight obtained from the crop growth simulation. The simulation result showed that the 1000grain weight change was similar to the change pattern of rice yield. For adaptation measures, we had tried to shift seeding date. Shifting seeding date was a strategy to avoid low grain filling rate at high temperatures. As a result, shifting of seeding date could delay the decreasing rate of yield as scenario. However, shifting of seeding date could not be a perfect countermeasure to keep current yield level because of uncertainty of solar radiation in future climate condition. Therefore, based on the simulated results, it is necessary to conduct an actual field test every 10 or 15 years