

EGU2020-20804, updated on 06 Dec 2021  
<https://doi.org/10.5194/egusphere-egu2020-20804>  
EGU General Assembly 2020  
© Author(s) 2021. This work is distributed under  
the Creative Commons Attribution 4.0 License.



## Estimation of corn harvest date in South Korea based on the accumulated temperature

**Jina Hur**, Kyo-Moon Shim, Yongseok Kim, and Sera Jo

National Institute of Agricultural Sciences, Climate Change and Agroecology Division, Korea, Republic of (hjn586@korea.kr)

This study was estimated harvest date of corn in South Korea based on the temperature index called the accumulated temperature. The accumulated temperature was calculated using observed daily mean temperature. We assumed a unified seeding date, 5 April, across the South Korea. The daily mean temperatures from 61 weather stations provided by the Korean Meteorological Administration were obtained for the period 2009-2018 (10 years). We used 1,650°C as the criterion of the accumulated temperature to identify harvest date of corn for early-cultivated variety. The accumulated temperature over the most areas generally meted the criterion (1,650°C) in early July. In case of 2018, 66% area of Gang-won province, major corn producer, become suitable to harvest corn in July, peaking in the middle July (51%). The harvest date has been accelerating due to increase in daily mean temperature during the recent 10 years. This study infers that changes in farming activities are needed through reflecting the environmental change.

### Acknowledgements

: This study was carried out with the support of “Research Program for Agricultural Science & Technology Development (Project No. PJ014882)”, National Institute of Agricultural Sciences, Rural Development Administration, Republic of Korea.