Analysis for Drought Resilience of Monoculture on Climate Change

SeungKwon JUNG (1), HyunJoong KANG (1), and SeungJin MAENG (2)
(1) HECOREA, Seoul, South Korea, (2) Chungbuk National University, Cheongju, South Korea

Damage occur frequently around the world on climate change, and Korea is no exception. Drought of natural disasters caused by climate change is having a significant impact on crops. Therefore, established for adaptation measures of drought are needed. Recently resilience concept is based on the study to analyze the natural disaster has conducted actively. Uses a different definition for each researcher because of the complexity of resilience concept on the studies of the natural disaster and commonly contains the meaning of "Ability to resist changes in pressure by external force."

In this study, the cabbage-growing areas in the Chungcheong utilizing Statistical Annual Report(2013) from past 2007 to 2012 were analyzed by region per unit area yield of Chinese cabbage. Determination of the occurrence and intensity of the drought were utilizing SPEI(Standardized Precipitation Evapotranspiration). Configure the drought scenario was based on the result that SPEI index, cabbage yield per unit area (kg/10a) analyzed the regional drought resilience for a single crop by comparison. As a result, the average Chinese cabbage yield per unit area is the same when drought occurs Cheongyang, YeSan, SeoSan, Asan, GongJu, CheongJu came out in the order, Chungnam Chinese cabbage yield (kg / 10a) was higher than 10% of the value of Chungbuk in Republic of Korea.

Acknowledgement

This research was supported by a grant (12-TI-C01) from Advanced Water Management Research Program funded by Ministry of Land, Infrastructure and Transport of Korean government.