

FERTILIZER AS AN ADAPTIVE STRATEGY TO DROUGHT: AN ANALYSIS ON INDIAN DISTRICTS

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ABSTRACT

Drought is one of the worst climate induced problem affected throughout the world. It is also seen that drought causes decrease in the agricultural productivity. Initial analysis shows that proportion of drought years to no drought years are increasing. The per hectare fertilizer consumption have been increased through years, but there is regional variation. The study also shows that per hectare fertilizer application is also increasing in the country. This study examines the relationship between drought induced fertilizer consumption using a fixed effect panel model of 313 districts in Indian districts between the periods of 1966 -2015. Results suggest a positive relationship between water availability and fertilizer consumption. The inclusion of cold and hot drought into the model shows that, the hot drought will increase the fertilizer application whereas the cold drought will reduce the fertilizer application. The effect of drought intensity on fertilizer application shows that, initially the fertilizer application will increase with the intensity and then decrease. Irrigation which is a widely used adaptation strategy against drought can increase the fertilizer consumption in a drought affected period.