**(Ray et al., 2019)** have tried to determine the influence of observed climate change on the yields of the world's top 10 crops. They examined the top 10 worldwide crops and where they are usually gathered worldwide; however, not all crops are harvested everywhere and every year. They utilized two datasets to perform the research. Climate and weather are one factor, while agricultural yields and harvested regions are another. The study was focused on historical precipitation and temperature change effects on agricultural output and food security. The results suggested that crop production had dropped in general due to climate change, while there were some outliers. Similar differences may be found in various crops and areas across the world. They reveal the fundamental differences in agricultural growth circumstances, which might vary from agro-meteorological to crop management. Compared to the more homogenous patterns of temperature changes, precipitation variations are significantly more diverse in their tendencies and thus represented well utilizing time series analysis per political unit. The findings show that climate change has already had an impact on the worldwide production of the ten most important crops, as well as the production of edible food calories in individual nations and internationally.

**(Parry, Rosenzweig, Iglesias, Livermore, & Fischer, 2004)** have analyzed the worldwide effects of connected socio-economic and climatic scenarios on food yields, output, and hunger risk. According to the researchers, their study has two key components: first, they estimate agricultural yield responses to greenhouse gas-induced climate change, and second, they model the agro-economic repercussions of possible crop yield changes. Correlation coefficients were used to examine the relationships between crop production and temperature and precipitation anomalies across crop growing seasons. According to their findings, the Special Report on Emissions Scenarios (SRES) results in lower agricultural yields in developing nations and higher crops in wealthy countries. The most significant crop losses are seen due to the massive increase in global temperatures, both locally and internationally. Climate change improves rich countries' production in general, offsetting predicted decreases in poorer countries. While global production appears to be stable, regional differences in crop production are likely to become more pronounced over time, resulting in a significant polarization of effects, with substantial increases in the risk of hunger among the poorer countries, particularly in scenarios where inequality increases.