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Title: Effect of Global Warming on production of rice in the Country.

SHRI B. MAHTAB (CUTTACK): Sir, just now I heard Mr. Francis George telling us about the non-availability of food grains, especially rice in Kerala.

I would draw the attention of this House and also of the Government, through you, to another alarming situation that is arising in our country relating to global warming.[\[m90\]](#)

Sir, global warming has cast a dark shadow over food availability in the coming years even as the country has begun to feel the increasing pressure of rising demand and stagnating production of food. Eastern India, which is considered key to the country's sustained food security accounting for about 63 per cent of total rice-growing area, is set to be seriously affected as the effects of climate change would be most perceptible on production and Orissa is projected to fare the worst.

By the year 2020 when the average temperature levels are expected to rise by around one degree and the ambient carbon dioxide concentration going up to 400 ppm (parts per million volume), the yield fall is estimated to be over nine percent only in Orissa. In other States like West Bengal, Bihar, Chhattisgarh, Assam and Uttar Pradesh the decline would be between five to one percent.

The scientists at Central Rice Research Institute which is in Cuttack have analysed the situation and have forecasted the magnitude of the problem in the making. Ten sites – Bhubaneswar and Cuttack in Orissa, Kalyani and Chinsurah in West Bengal, Jorhat in Assam, Faizabad in Uttar Pradesh, Jabalpur in Madhya Pradesh, Pusa in Bihar and Raipur in Chhattisgarh were included in the analysis. The decline in rice yield has been found to be mainly due to the increase in the temperature. Flowering of rice is greatly affected by prevailing temperature.

Therefore, there is a need for intervention by scientist community who should endeavour to breed rice varieties that would adapt to high temperatures. I urge upon the Government to support such projects and come out with rice varieties with tolerance of at least two degree Celsius above average temperature which can give yield benefits to the farmers.