# Straw mulching in Bitter gourd: Enhancing Resilience in Climate Change

1. **Introduction:** Almost 60 thousand hectare area after Aman rice is remaining fallow in Tripura. These fallow lands with diverse soil types and climatic conditions are suitable for growing cool season vegetable profitably during post rainy-season. The residual moisture left in the soil at the time of rice harvest will be sufficient to raise short-season crops. Further, by use of short duration and high yielding varieties of vegetables allowing rice to vacate fields in September-October, the traditional rice-fallow cropping can be converted into the rice-vegetable system. Bitter gourd is one of most suitable and remunerative crops, but productivity of the crop is low due to moisture stress. Therefore, the sustainable management of soil moisture in rice fallow land requires knowledge of the site-specific mulching. By this, it offers an excellent opportunity to grow bitter gourd with conserved moisture and augment vegetable production through horizontal expansion. Thus, demonstration on paddy straw mulching in bitter gourd was carried out at farmers field to conserve and utilized residual soil moisture and enhanced the farmers income..

2. **Intervention:** Bitter gourd is one of the emerging crop for farmers of Methirmia village of Dhalai district (NICRA village) Tripura. The farmers have scaled up depending on season and land suitability in little upland areas up to 15 ha, not in every year since 2015. Climate change impacts on agriculture are being witnessed all over the world, but countries like India are more vulnerable in view of large population depending on agriculture and excessive pressure on natural resources. Therefore, there is a need to use modern science combined with indigenous knowledge of farmers to enhance the resilience of Indian agriculture to climate change.

3. **Output and Outcome:** With the adoption this technology farmers got a net average income of Rs 96000/-ha for straw mulching in bitter gourd crop cultivation with investment of Rs. 14000/- ha.

4. **Impact:** The farmers are happy with the technology because crop was protected from moisture stress during September to February. Thus, more number of famers come forward to adopt this climate resilient technology for bitter gourd cultivation in fallow lands.