Entry No. IRRC-0367

Category	: International Rice Research Conference
Select Theme	: Climate change and environmental sustainability
Endorsement email	:
Keyword 1	: Climate smart agriculture
Keyword 2	: Scaling up and out
Keyword 3	:
Title of Entry	: Determining Best Suited Areas For Hybrid Seed Production With Geographic Information System And Climate Model
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Select only one type of presentation	: 15 minute oral presentation
Abstract	: Policy makers need to consider best suited areas for hybrid seed production that depend on factors such as season, location, parental lines involved, row ratio, extent of synchronization of flowering of parents, supplementary pollination, etc. We chose to harness Geographic Information System and Climate model to determine best suited areas for hybrid seed production. An attempt was made to find the most appropriate locations across India with prevailing climatic conditions where hybrid seed production currently exists. In India, the dry season were found to be better than the wet season for hybrid seed production. Existing locations for hybrid seed production were examined for ascertaining local weather requirements. Grid-wise weather data were collected for 1995-2005 and temperatures were estimated for the year 2020 using ClimGen climate model. Thessien polygons were generated for each point using the spatial interpolation method of the ArcGIS package. This map was overlaid with a district-level digital database of India. District-wise data on maximum, minimum, and mean temperatures, relative humidity, wind speed and differences in day and night temperatures were computed for the year 2020. About 0.50 million hectare additional area was identified with this technique by filtering districts for favourable conditions during flowering time for the year 2020. Similar methodology can be applied in other Asian countries for determining the best suited areas for hybrid seed production.

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