Climate change scenarios in the subtropical Brazil: possible adaptations through Research and Development of crop germoplasm

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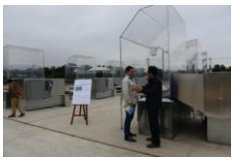
Abstract - The environmental and social impacts of global climate change are one of the greatest challenges facing the human race. Climate changes are expected to have a large impact on both natural and agricultural ecosystems (e.g., Costa and Foley, 2000; Miles et al., 2004; Wang, 2005) along the present century. Most of the evaluations of the potential impacts of these changes over agriculture have considered only the mean climatic changes (usually only temperature and precipitation, or even global average changes); e.g., Alexandrov and Hoogenboom, 2000**;** Felkner et al., 2009. However, crop development is affected not only by the mean atmospheric conditions, but also by the frequency of extreme events such as frost, heat waves, floods, and droughts (e.g., Baigorria et al., 2007; Dubrovsky et al., 2000a). Therefore, consider climate change by its global average and assume that the present statistical (distribution) of the observed climate variables will not change may be not the best approach. Climate model projections show that not only the average but also the distribution of the climate variables are going to change and these changes are variable in time and space. In my presentation I am going to present some evidences, related with the above topics, and discusses the important topics that may be relevant to the Research and Development of crop germplasm in the context of climate change.

Photos: Technical Visit to Agriculture Research Center for Climate Change. NIHHS, RDA, 27th March



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