THE DEPARTMENT OF MATHEMATICAL SCIENCES PROUDLY PRESENTS

COLLOQUIUM

SPRING 2014

Bayesian analysis of a linear mixed model to measure the impact of climate change on the yield of common bean for the year 2030 worldwide.

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With:

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ABSTRACT

We studied the impact of climate change on the yield of common bean (*Phaseolus vulgaris L.*). The analysis was performed by country incorporating projections of future climate for the periods of cultivation of beans presented in the crop calendars of Sacks (2010). We modeled future climate by country using the model of Tebaldi and Sansó (2008) and estimated the joint predictive distribution of temperature and precipitation. Then, we studied the impact of temperature and precipitation on the yield of bean using a Bayesian analysis of a linear mixed model. The results indicate that the predicted increase in temperature will have a negative impact on the yield of beans in most countries by 2030.

Monzón Building, Room 201, 10:45 AM
Refreshments will be served
15 minutes before the colloquium, M213