

Monsoon forecasting method to help out farmers

Natasha McDowell

Source: [SciDev.Net](#)

Crop yields in south Asia could improve thanks to a new method of forecasting monsoon-season weather, scientists announced yesterday at the annual meeting of the American Association for the Advancement of Science ([AAAS](#)).

A trial of the technique across a one million square kilometre area of Bangladesh's Ganges river delta during last year's monsoon gave 20- to 25-day forecasts of rainfall. The predictions closely mirrored actual rainfall, says Peter Webster of the Georgia Institute of Technology, who led the study.

"Forecasting weather a few days in advance is not particularly useful for agriculture. What is needed is a 20- to 25-day forecast," says Webster.

He claims that his forecasting method has the "potential to create a new green revolution", one that will not demand the large amounts of pesticides and fertilisers that characterised the first. The rationale is that farmers will be better equipped to make decisions on planting times, water management practices, and other factors that affect crop production.

The forecasting technique is essentially statistical, but depends on knowledge of atmosphere and ocean dynamics, which produce monsoon variability on a monthly basis. Webster says it can be applied to the rainy season of any monsoon region and takes account of changes in rainfall related to temporary events such as El Niño.

For example, Webster says that if the new technique had been in place last year — an El Niño year - the timing of a month-long break in monsoon rains could have been predicted, enabling farmers to delay planting. Instead, US\$6 billion-worth of crops was lost in the Ganges valley.

Webster has helped to set up an organisation called Climate Forecasting Applications in Bangladesh ([CFAB](#)), which aims to make forecasts available to agricultural and other government officials in Bangladesh. And another version of the forecast, for flood prediction, is being planned.

But others are sceptical about Webster's ambitions. -It is difficult for me to believe that such a forecast will solve so many problems,- says Sulochana Gadgil, an atmospheric scientist at the Indian Institute of Science in Bangalore.

Last update: 3/20/2006 by [Carlos Ereño](#)