

A CROP FORECASTING PROGRAM FOR BRAZIL USING
EARTH OBSERVATION SATELLITE DATA

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It is well known that most of the developing countries, including Brazil, are having difficulties meeting their energy and food needs. As an attempt to deal with such difficulties, Brazil has been making heavy investments in agriculture. In this context, crop forecasting systems play a major role as effective tools for agriculture related policy making.

As a result, INPE (Brazilian Institute for Space Research) is engaged in a program that aims at the development of reliable, accurate and timely forecasting systems for several crops, based on satellite data.

With regard to energy, sugar cane has proved to be extremely important in alcohol production, and that is the reason why INPE has decided to start its program with the development of a sugar cane crop forecasting system. INPE's prior experience in estimating sugar cane acreage in the state of São Paulo, through visual interpretation of LANDSAT images, has encouraged such a decision.

Other crops such as soybeans and corn will be considered in later developments.

The crop production estimation will be attained through the independent estimation of acreage and yield. Satellite data will be

extensively used in these systems: LANDSAT (3 and "D") images in the process of estimating crop acreage and, in addition to that, there exists a research effort to use data from meteorological satellite images which are relevant for estimating crop yield.

A description of the system and the results already obtained will be presented.