

Senegal Agricultural Statistics and Data Collection Visitor Program

Senegal

Yield Estimation & Forecasting

GLOBAL CHANGE & Earth Observations

MICHIGAN STATE UNIVERSITY

USDA Cochran Fellowship Program at CGCEO, Michigan State University
Sep 29-31, 2010

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Big Picture:

Production Modeling Method

Forecasting and early warning

Modeling system that simulates individual crop yields given soil, climate, and management practice information. It also allows simulation of different management and climate scenarios for best management practices.

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Senegal Production Modeling (Trial Runs)

Weather Station Data

Estimation based on global 2000 rates

Soil Database

Provided in field data

DNDC Model

Precipitation

Temperature

Nitrogen Deposition

Soil Organic Carbon

Clay Content

pH

Bulk Density

Planting Dates

Harvesting Dates

Fertilizer

Irrigation

Yield and total production

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Regions Containing Subset of 2009 Parcel Points

Parcel Points

DNDC Wx Stations

Regions

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