



**Crop Monitoring as an
E-agricultural tool in
Developing Countries**



GROUND INFORMATION DATABASE

Reference: *E-AGRI D31.2*

Author(s): Wang Zhiming, Roberto Confalonieri

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DOCUMENT CONTROL

Signatures

Author(s) : Wang Zhiming, Roberto Confalonieri

Reviewer(s) : Qinghan Dong

Approver(s) :

Issuing authority :

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Release	Date	Pages	Description	Editor(s)/Reviewer(s)
1.0	28/06/2013	5	This document refers to the Ground information database (D31.2 Ground information database.xlsx).	Wang Zhiming, Roberto Confalonieri Qinghan Dong

DESCRIPTION

Reference file:

D31.2 Ground information database.xlsx

The ground information database refers to two years of observations performed in nine experimental sites.

The database contains all the data collected and all the related metadata that have been used to calibrate and validate the models WARM, CropSyst and WOFOST for rice simulations in Jiangsu.

The data were collected by the Jiangsu Academy of Agricultural Sciences.

The file is organized in four sheets:

- General information (1);
- Fertilization (2);
- Phenology variables (3);
- Growth variables (4),

each represented by tables designed to maximize the possibility of exploring the data via pivot tables.

General information

The General information sheet contains all the information on the experimental sites, and has six fields:

- Location code
 - SD1
 - SD2
 - Sd3
 - Sd4
 - Sd5
 - Sd6
 - Sd7
 - Sd8
 - Sd9;
- Location
 - Shatou, Hanjiang
 - Yiling, Jiangdu
 - Fanchuan, Jiangdu

- Lincheng, Xinghua
 - Changrong, Xinghua
 - Xiaji, Baoying
 - Tugou, Jinhu
 - Dailou, Jinhu
 - Zhuba, Hongze;
- Administrative region
 - Yangzhou
 - Yangzhou
 - Yangzhou
 - Taizhou
 - Taizhou
 - Yangzhou
 - Huaian
 - Huaian
 - Huaian;
- Year
 - 2011
 - 2012;
- Variable/parameter
 - Latitude (°)
 - Longitude (°)
 - pH
 - Soil organic matter (g kg⁻¹)
 - Total N (g kg⁻¹)
 - Available N (g kg⁻¹)
 - Available P (g kg⁻¹)
 - Available K (g kg⁻¹)
 - Texture
 - Cultivar
 - Cultivation method;
- Value.

Fertilization

The Fertilization sheet includes details on fertilization dates, amounts, and on the fertilizer type. It is organized in five fields:

- Location code;
- Year;
- Fertilization day of the year;
- Fertilizer type;

- Amount (kg ha^{-1}).

Phenology variables

The Phenology variables sheet contains all the phenological observations. It is organized in four fields:

- Location code;
- Phenological stage
 - Sowing
 - Emergence
 - Transplanting
 - Booting
 - Flowering
 - Physiological maturity;
- Year;
- Day of the year.

Growth variables

The Growth variables sheet contains all the observations related to crop growth, i.e., biomass accumulation, partitioning of assimilates, leaf area evolution. It is organized in five fields:

- Location code;
- Year;
- Day of the year;
- Variable
 - Plant height (cm)
 - Leaf age
 - Plant density (10^6 ha^{-1})
 - Leaf area index ($\text{m}^2 \text{ m}^{-2}$)
 - Stems dry weight (kg ha^{-1})
 - Leaves dry weight (kg ha^{-1})
 - Ears dry weight (kg ha^{-1})
 - Aboveground biomass (kg ha^{-1})
 - Seed-setting rate (%)
 - Theoretical yield (t ha^{-1});
- Value.