



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



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# **DATABASES FOR MODEL PARAMETERS**

**Reference: *E-AGRI D32.2***

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## DOCUMENT CONTROL

### Signatures

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### Change record

Release	Date	Pages	Description	Editor(s)/Reviewer(s)
1.0	17/07/2013	5	This document refers to the databases of model parameters (rice), represented by xml files (one for each of the three crop models).	Roberto Confalonieri / Qinghan Dong

## DESCRIPTION

### Reference files:

- D32.2 CropSys.xml (Crop parameter file for the CropSys model)
- D32.2 WARM.xml (Crop parameter file for the WARM model)
- D32.2 WOFOST.xml (Crop parameter file for the WOFOST model)

The database of model parameters contains the values of all the parameters of the BiOMA models CropSys, WARM and WOFOST, as resulting from the calibration/validation activities performed within WP32 and presented in the deliverables D32.3.

Each of the three xml files contains:

- A general section on the description of the parameter set, including
  - namespace
  - name of the parameter set
  - URL for exploring the ontology on a browser
  - a brief description of the parameter set

*[example: CropSys parameters]*

```
- <Description>  
  <NameSpace>JRC.IPSC.MARS.Crop.CropML.Interfaces</NameSpace>  
  <TypeName>CropSysPotentialParameters</TypeName>  
  <URL>http://www.apesimulator.org/OntologyBrowser.aspx</URL>  
  <ParameterKey>CropName</ParameterKey>  
  <Description>CropSys Parameters class for potential growth</Description>  
</Description>
```

- A section with the ontology of each parameter (VarInfo), including
  - parameter name
  - parameter description
  - maximum value of the parameter
  - minimum value of the parameter
  - default value for the parameter
  - parameter type
  - parameter units
  - URL for ontology on a browser (not mandatory)

*[example: VarInfo for the CropSys parameter PhotoInhibition]*

```
- <VarInfo name="PhotoInhibition">  
  <Description>Day length to inhibit flowering</Description>  
  <MaxValue>24</MaxValue>  
  <MinValue>1</MinValue>  
  <DeafaultValue>14</DeafaultValue>  
  <Type>double</Type>  
  <Units>hour</Units>  
  <URL>http://</URL>  
</VarInfo>
```

- A section with the values (i) of all the parameters for which VarInfo have been provided (ii) for all the groups of varieties for which a parameter set has been calibrated/validated, including:
  - the name of the parameter set
  - a description for the parameter set
  - the parameter name
  - the parameter value

*[example: value for the CropSyst parameter PhotoInhibition]*

```
- <KeyValue name="Rice_Japonica">  
  <Description>"E-AGRI FP7 project"</Description>  
  - <Parameter name="PhotoInhibition">  
    <Value>1</Value>  
  </Parameter>
```

All the parameter files can be explored, edited, etc. via the application MPE (Models Parameter Editor; <http://agsys.cra-cin.it/Tools/MPE/help/>) (Figure 1).

MPE is a generic parameter editor, and can be used as a stand alone application or as a GUI (Graphical User's Interface) component, as in BiOMA.

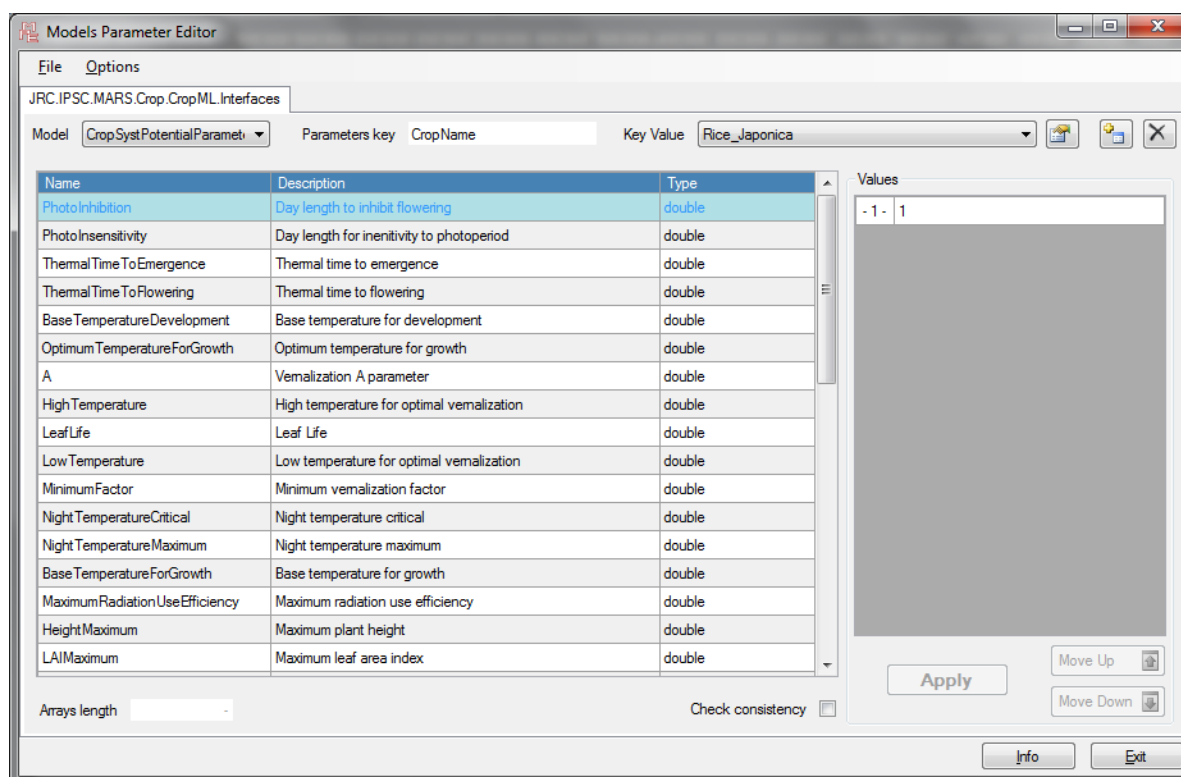


Figure 1. Graphical User's Interface of the MPE (Models Parameter Editor) application.