



**DSSAT**  
FOUNDATION

# Introdução ao Sistema DSSAT

**1100222 e LEB5048**

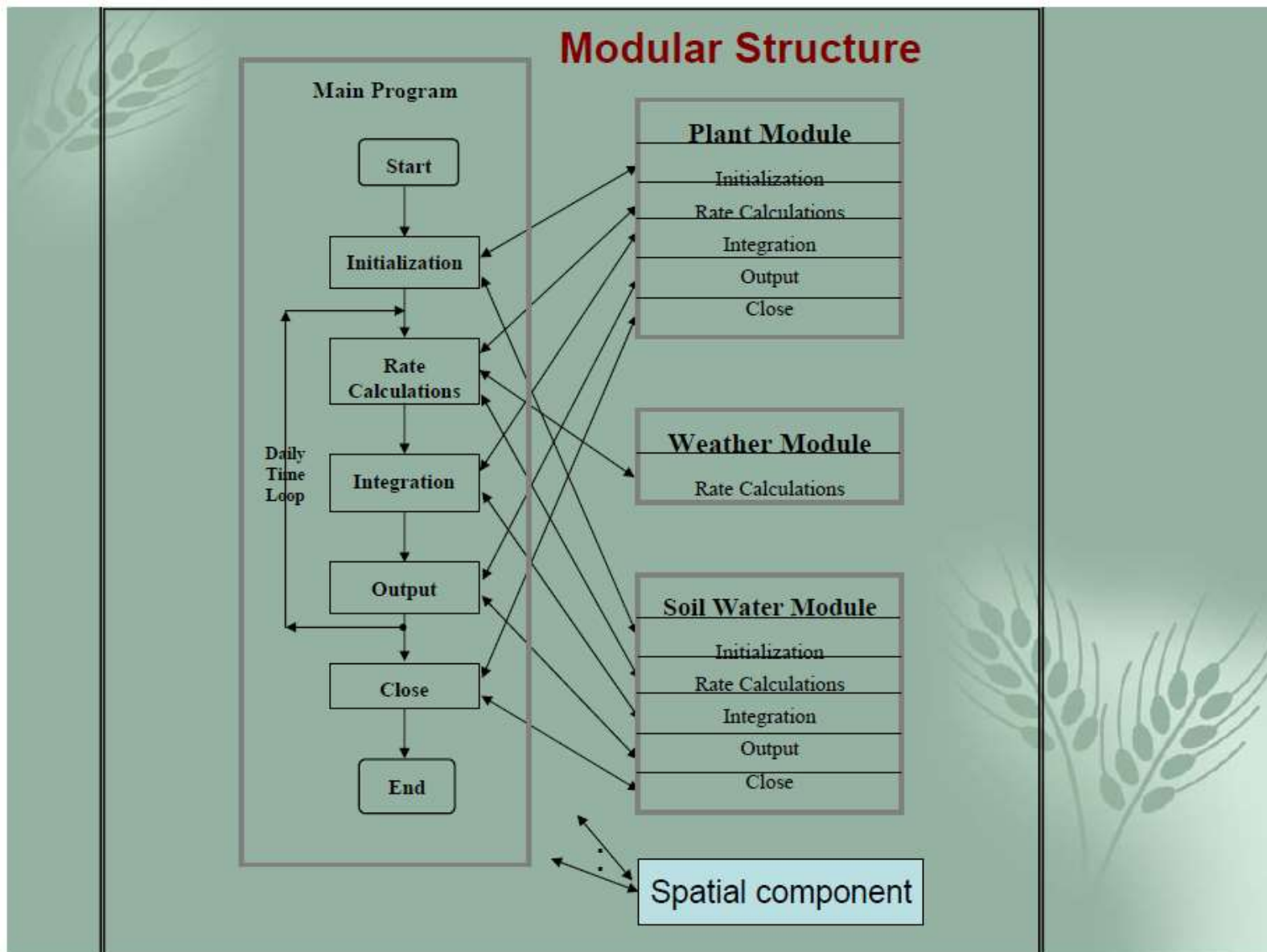
**Modelagem do crescimento de culturas**

**Prof Quirijn de Jong van Lier**

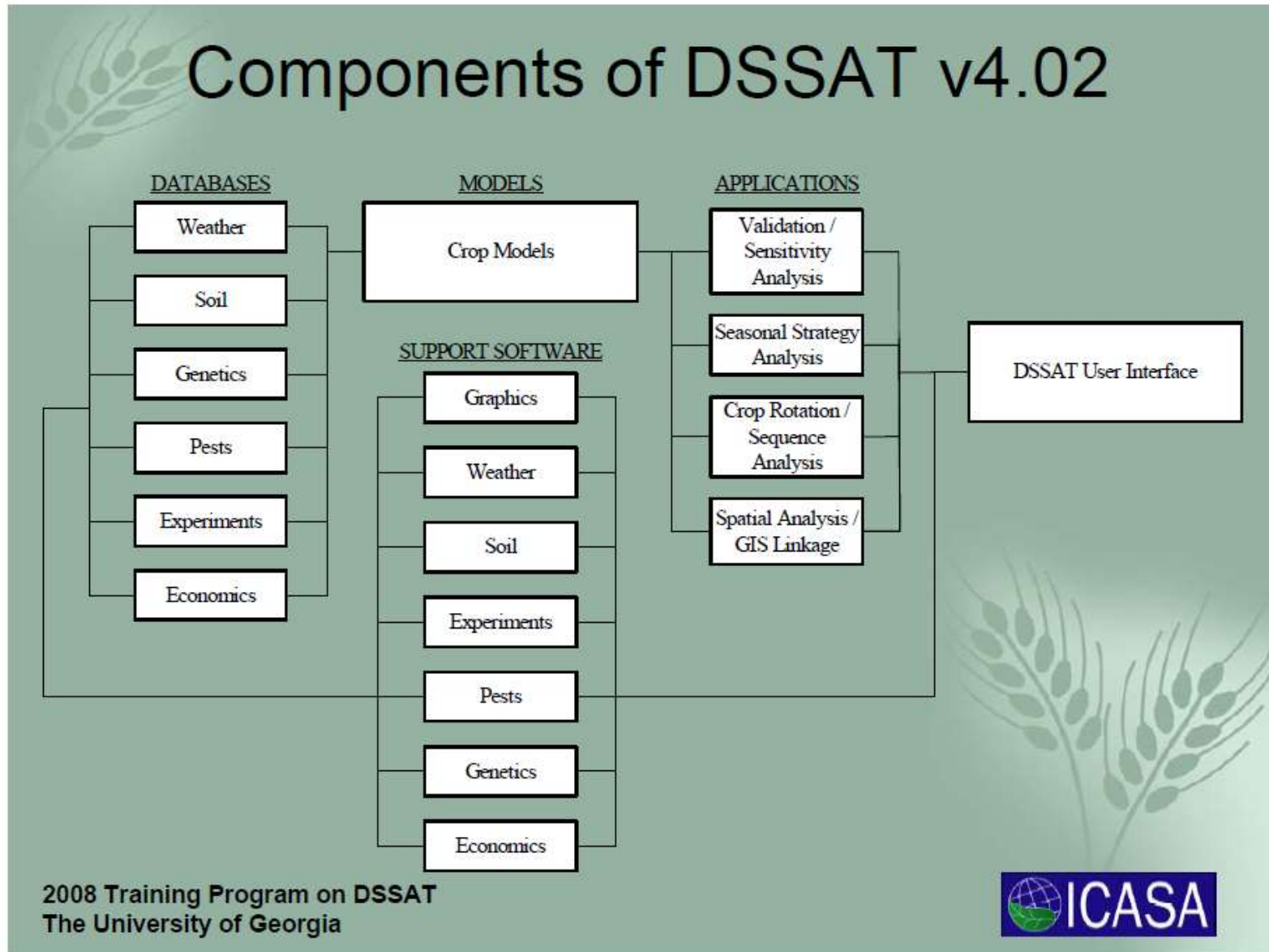
**Prof Fábio R Marin**



# Estrutura do DSSAT



# Componentes do DSSAT



# Ferramentas do DSSAT

## DSSAT v4.5

### - Data Management Tools -

- XBuild - Input Crop Management Information in Standard Format
- SBuild – Create and Edit Soil Profiles
- GBuild – Display Graphs of Simulated and Observed Data, Compute Statistics
- ATCreate – Create and Edit Observations from Experiments, Formatted Correctly
- WeatherMan - Assist Users in Cleaning, Formatting, Generating Weather Data
- ICSim – Introductory Tool to Demonstrate Potential Yield Concepts



# Ferramentas do DSSAT

## **DSSAT v4.5** **- Analysis Tools -**

- Sensitivity Analysis - Vary Soil, Weather, Management, or Variety Characteristics for Insight
- Seasonal Analysis - Multiple Year Simulations to Evaluate Uncertainty in Biophysical and Economic Responses
- Rotation/Sequence Analysis – Long-term simulations to analyze changes in productivity and soil conditions associated with cropping systems
- Spatial Analysis - Define Spatially Variable Soil, Weather, Management Characteristics Across a Field or Region for Analysis



# Interface do DSSAT

DSSAT Version 4.5.0.0

File Data Model Documentation Help

New

Tools

Selector

- Crops
  - Cereals
  - Legumes
  - Root Crops
  - Oil Crops
  - Vegetables
  - Fiber
  - Forages
  - SugarEnergy
  - Napier Grass
  - Sugarcane
  - Switch Grass
- Fruit Crops
- Various

Applications

- Seasonal
- Sequence
- Spatial

Data

- Soil
- Weather
- Genetics
- Economics
- Pests
- Standard Data

Experiments Data Outputs

#	Experiment	Description	Modified
1	AG010701.SCX	JUAZERO AGROVALE	15:09:48, Fri, 23 Sep 2011
2	AGR7245.SCX	AGMIP RB72454 CANEGRO FOR ISSCT 2012 -	10:57:24, Wed, 4 Apr 2012
3	CSAT0601.SCX	EBAT0601SC VALIDACAO - APARECIDA DO TABOADO...	14:55:24, Mon, 22 Mar 2010
4	CSC00701.SCX	EXPERIMENTO USINA CORURIFE - EMBRAPA CPATC - CA	11:43:44, Wed, 5 Oct 2011
5	CSP0401.SCX	EBP0401SC EXPERIMENT DATASET 1 - PIRACICABA - S...	13:23:40, Wed, 24 Mar 2010
6	CSUN0701.SCX	EBUN0701SC EXPERIMENTO COMVAP - CASUPRO	18:40:50, Mon, 22 Mar 2010
7	EB750701.SCX	PARAMETRIZACAO RB7515	19:54:44, Thu, 3 Nov 2011
8	EB750702.SCX	PARAMETRIZACAO RB7515	17:30:02, Wed, 29 Jan 2014
9	EB750703.SCX	PARAMETRIZACAO RB7515 - Teste Chupibase	6:30:58, Tue, 2 Jul 2013
10	EB751503.SCX	PARAMETRIZACAO RB7515 NC0376	23:15:22, Tue, 10 Sep 2013
11	EB832847.SCX	XPERIMENT DATASET FOR RB83 2847 - PIRACICABA	18:46:14, Fri, 7 Oct 2011
12	EBAT0601.SCX	VALIDACAO - APARECIDA DO TABOADO-MS	11:16:42, Wed, 5 Oct 2011
13	EBCL0401.SCX	EXPERIMENT COLINA - SP	11:45:08, Wed, 5 Oct 2011
14	EBCO0701.SCX	EXPERIMENTO USINA CORURIFE - EMBRAPA CPATC - C...	17:09:08, Thu, 26 Jul 2012
15	EBJA0201.SCX	EXPERIMENTO BRX DE 7 VARIEDADES - CANEGRO	20:13:10, Thu, 4 Feb 2010

Treatments

ESALQ

# Soil Variables

```

*EBMZ850001  SCS          -99      300 LATOSSOLO VERMELHO AMARELLO
@SITE          COUNTRY          LAT      LONG SCS FAMILY
  CPAC          BRASIL          -15.59  -47.7 CLAYEY, OXIDIC, ISOTHERMIC ANIONIC ACRUSTOX
@ SCOM  SALB  SLU1  SLDR  SLRO  SLNF  SLPF  SMHB  SMPX  SMKE
   RY    .14   7.1   .5    76    1    1  IB001  IB001  IB001
@  SLB  SLMH  SLLL  SDUL  SSAT  SRGF  SSKS  SBDM  SLOC  SLCL  SLSI  SLCF  SLNI  SLHW  SLHB  SCEC  SADC
  15   -99   .191  .349  .389    1   -99   .93  1.81  -99  -99  -99  -99  5.9  -99  -99  0
  30   -99   .237  .339  .367    .2  -99  1.03  1.45  -99  -99  -99  -99  5.3  -99  -99  0
  45   -99   .25   .329  .371    .2  -99  1.01  1.2   -99  -99  -99  -99  5.2  -99  -99  0
  60   -99   .256  .329  .385    .2  -99   .95  1.03  -99  -99  -99  -99  4.8  -99  -99  .4
  75   -99   .263  .327  .389    .2  -99   .93   .81  -99  -99  -99  -99  4.5  -99  -99  .8
  90   -99   .266   .32  .394    .2  -99   .91   .76  -99  -99  -99  -99  4.7  -99  -99  1
 300   -99   .266   .32  .394    .2  -99   .91   .76  -99  -99  -99  -99  4.7  -99  -99  1

```

Pasta c:\dssat46\soil\



# Weather files

```
1 *WEATHER DATA : Clanton, Alabama
2
3 @ INSI      LAT      LONG  ELEV  TAV  AMP  REFHT  WNDHT
4   ALCL    32.480  -86.380  185  16.5  10.3  1.00  1.00
5 @DATE  SRAD  TMAX  TMIN  RAIN
6 56001   8.2   9.0  -9.0   0.0
7 56002  12.9  14.0  -8.0   0.0
8 56003  11.8  16.0   1.0   0.0
9 56004  14.9  19.0   0.0   0.0
0 56005  15.0  14.0  -6.0   0.0
1 56006  15.0  20.0  -5.0   0.0
2 56007  15.1  22.0   2.0   0.0
3 56008  14.9  13.0  -4.0   0.0
4 56009   6.1   8.0  -5.0   0.0
5 56010   8.1   8.0  -5.0   0.0
6 56011  13.6   8.0  -4.0   0.0
7 56012  15.4   8.0   2.0   0.0
```





# Apresentação das ferramentas

- Soil
- Weather
- Genetics
- xBuild

