









Modelación agroclimática con ORYZA(v3.0)

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Practica 2. Simulación Potencial con ORYZA (v3.0)

Archivos requeridos para simulación potencial:

Name	Type
 control	DAT File
 ORYZA3	Application
 reruns	RER File
 standard.crp	CRP File
 standard.exp	EXP File
 standard.sol	SOL File
 TEST1.015	015 File
 TEST1.016	016 File

Datos del experimento:

- Año = 2015
- Día de siembra: 156
- Día de emergencia: 165
- Día Inicio Panícula: 213
- Día de Floración: 250
- Día de Cosecha: 287
- Arroz Irrigado
- Siembra directa
- Densidad de siembra: 90 plantas/m²

Procedimiento para configurar una simulación potencial:

1. Abra el archivo **control.DAT**, asegúrese de que estén disponibles y correctamente escritos los nombres de los archivos:

```
control.dat
1 CONTROLFILE = 'control.dat'
2 STRUN = 0
3 ENDRUN = 72
4 FILEON = 'res.dat' ! Output file
5 FILEOL = 'model.log' ! Log file
6 FILEIR = 'reruns.rer' ! Rerun file
7 FILEIT = 'standard.exp' ! Experiment file
8 FILEI1 = 'standard.crp' ! Crop file
9 FILEI2 = 'standard.sol' ! Soil file
10
```

2. Abra el archivo experimental – *standard.exp* –:

- Agregue la información que considere necesaria, por ejemplo, Su nombre, institución, etc

```
standard.exp
1  *-----*
2  * EXPERIMENTAL DATA FILE *
3  * *
4  * File name      : (user defined) *
5  * Crop          : (user defined) *
6  * Year/Season   : (user defined) *
7  * Additional info : (user defined) *
8  *-----*
```

- Configure el ambiente a producción potencial.

PRODENV = 'POTENTIAL'

WATBAL = 'PADDY'

NITROENV = 'POTENTIAL'

ETMOD = 'PRIESTLY TAYLOR'

```
standard.exp
10 *-----*
11 * 1. Selection of modes of running *
12 *-----*
13 *-- RUNMODE: mode of running ORYZA
14 RUNMODE = 'EXPERIMENT' ! ORYZA simulates particular experiment
15 *RUNMODE = 'EXPLORATION' ! ORYZA used for exploration
16
17 *-- PRODENV is Water production situation setting
18 PRODENV = 'POTENTIAL' ! Potential production
19 *PRODENV = 'WATER BALANCE' ! Production may be water-limited
20
21 *-- WATBAL is choice of water balance
22 * needs only be given when PRODENV = 'WATER BALANCE'
23 WATBAL = 'PADDY' ! PADDY water balance (for lowland soils)
24 *WATBAL = 'SAHEL' ! SAHEL water balance (for freely draining upland soils)
25 *WATBAL = 'SAWAH' ! SAWAH water balance (for lowland or upland soils)
26 *WATBAL = 'LOWBAL' ! LOWBAL water balance (for lowland soils)
27 *WATBAL = 'SOILPF' ! SOILPF water balance (Soil water tension read from file)
28
29 *-- NITROENV is Nitrogen production situation setting
30 NITROENV = 'POTENTIAL' ! Potential production
31 *NITROENV = 'NITROGEN BALANCE' ! Production may be nitrogen-limited
32
33
34 *-- ETMOD is method for evapotranspiration calculation:
35 *ETMOD = 'PENMAN' ! Penman-based (Van Kraalingen& Stol,1996)
36 ETMOD = 'PRIESTLY TAYLOR' ! Priestly-Taylor (")
37 *ETMOD = 'MAKKINK' ! Makkink (Van Kraalingen&Stol, 1996)
```

- Defina los tiempos de inicio de simulación, fecha de siembra.

```
standard.exp
39 *-----*
40 * 2. Timer data for simulation *
41 *-----*
42 IYEAR = 2015 ! Start year of simulation (year)
43 STTIME = 156. ! Start time (day number)
44 FINTIM = 1000. ! Finish time (days after start)
45 DELT = 1. ! Time step (day)
```

- Modifique la variable CNTR con el nombre/ID de sus datos climáticos.

```

standard.exp
48 *-----*
49 * 3. Weather station and climatic data for simulation *
50 *-----*
51 WTRDIR = 1 ! Directory of weather data
52 CNTR = 'TEST' ! Country code
53 ISIN = 1 ! Station code

```

- Configure los datos de establecimiento del cultivo, Siembra directa y datos de emergencia:

```

standard.exp
117 *-----*
118 * 4. Establishment data *
119 *-----*
120 *-- ESTAB is method of establishment: 'TRANSPLANT' or 'DIRECT-SEED'
121 *ESTAB='TRANSPLANT'
122 ESTAB='DIRECT-SEED'
123
124 * Transplanting date May 25 (145), 2001; sowing date April 15;
125 * 50% emergence April 29 (119)
126 EMD = 165 ! Day of emergence (either direct, or in seed-bed)
127 EMYR = 2015 ! Year of emergence
128 SBDUR = 0 ! Seed-bed duration (days between emerging and transplanting)
129

```

- Ingrese la información de densidad de siembra, NPLDS.

```

standard.exp
130 *-----*
131 * 5. Management parameters *
132 *-----*
133 NPLH = 2.0 ! Number of plants per hill
134 NH = 33.0 ! Number of hills/m2 (13 x 27 cm)
135 NPLSR = 1000 ! Number of plants in seed-bed (???)
136 NPLDS = 90. ! Number of plants/m2 direct-seeded
137

```

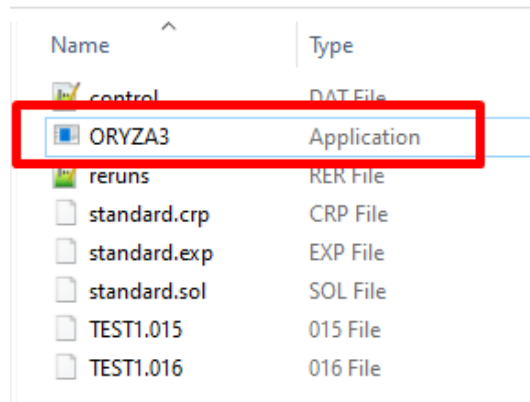
- Modifique la información fenológica de su experimento:

```

standard.exp
279 *-----*
280 * 8. Measured data for model calibration and comparison *
281 * And option to force measured LAI during simulation *
282 * (instead of using simulated values) *
283 *-----*
284 * Observed phenology: only required if program DRATES is run!!
285 IDOYTR = 0 * Day of transplanting (give 0 if direct-seeded)
286 IYRTR = 0 ! Year of transplanting (give 0 if direct-seeded)
287 IDOYPI = 213 !* Day of panicle initiation (estimated as same day as
288 !* jointing)
289 IYRPI = 2015 !* Year of panicle initiation
290 IDOYFL = 250 !* Day of flowering
291 IYRFL = 2015 !* Year of flowering
292 IDOYM = 280 !* Day of maturity (estimated as 7 d before harvest)
293 IYRM = 2015 !* Year of maturity
294

```

- Guarde los cambios del archivo experimental.
- Diríjase a la carpeta de trabajo y ejecute el aplicativo **ORYZA3.exe**



- Explore los resultados en los archivos **op.dat** y **res.dat**

