EPIC run Cultivars

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Contents

INITIAL SETUP

paths

```
path_in <- "c:/Users/krizovak/Documents/__EPIC__/R/"

path_met <- "C:/Users/krizovak/Documents/__EPIC__/R/_tables/v3_czsk/"
path_tab <- "c:/Users/krizovak/Documents/__EPIC__/R/_tables/"
path_shp <- "c:/Users/krizovak/Documents/__EPIC__/R/_shapefiles/"

path_out <- "c:/Users/krizovak/Documents/__EPIC__/R/_cultivarRESULTS/"
```

time period

```
period <- 1989:2019
```

crop params

- crop: BARL

- crop ID: 14

- seasonality: SPG

- basal temperature: 0

- optimal temperature: 15

CROP CALENDAR

BARL_crop_cal

contains information about

- crop and cropid

- planting and harvest days for specific cultivars (also julian)

file necessary for:

- ?

```
##     PLN_DAY PLN_MON PLN_JUL HRV_DAY HRV_MON HRV_JUL CROPID CROP
## 1        20       3      79      20       7     201     14 BARL
## 2        25       3      84      25       7     206     14 BARL
## 3        30       3      89      30       7     211     14 BARL
## 4        10       3      69      30       6     181     14 BARL
## 5        15       3      74       5       7     186     14 BARL
## 6        20       3      79      10       7     191     14 BARL
```

```
## 7         10       4      100      31       7      212     14 BARL
## 8         15       4      105       5       8      217     14 BARL
## 9         20       4      110      10       8      222     14 BARL
## 10         1       3       60      30       6      181     14 BARL
## 11         5       3       64       5       7      186     14 BARL
## 12        10       3       69      10       7      191     14 BARL
## 13         1       4       91      31       7      212     14 BARL
## 14         4       4       94       5       8      217     14 BARL
## 15        10       4      100      10       8      222     14 BARL
```

CALCULATING PHU FROM DLY FILES

calculates optimal PHU (potential heat units) for each cultivar

required parameters: **tbs** and **top**

PHU CALENDAR

BARL_phu_cal

EPIC INPUT FILES

```
# create directories
dir.create (paste0(path_out, crop, "/epicrun"), showWarnings = FALSE)
dir.create (paste0(path_out, crop, "/OPSC"), showWarnings = FALSE)
dir.create (paste0(path_out, crop, "/PARM"), showWarnings = FALSE)
dir.create (paste0(path_out, crop, "/_simulated"), showWarnings = FALSE)
```

2 PRINT

files that needs to be uploaded to MS Access projects and print in Visual Basic

OPC

BARL_OPSC_cultivars_2print.txt
operation schedules
necessary table: *OPSC_Param_SVK13.txt*

EPICRUN

BARL_epicrun_cultivars_2print.txt
EPICRUN for initial calibrations runs works with only 1 SIT and SOL file for all grids

- *SIT*

- CZ: 119
  - SK: 6135

- *SOL*

  - CZ: 10
  - SK: 7

- *OPC* created for each 'runid' (runid 167 = 167.opc)

- *DLY* created for each 'runid' (runid 167 = 167.dly) / same for WP1

- *WINDID* set as 1 for each 'runid'

PARMFILES

BARL_PARM_cultivars_2print.txt

?

necessary table: *CZ_PARM0810tab_v0.txt*

4 EPIC

files ready to be used by EPIC

OPSCCOM

OPSCCOM.dat

?

```
##    colname nlevels position width digits exp
## 1    runid       0        1     5      0   0
## 2     file   21424        8     9      0   0
```

SITECOM

SITECOM.dat

?

```
##    colname nlevels position width digits exp
## 1    runid       0        1     5      0   0
## 2     file       2        8     8      0   0
```

SOILCOM

SOILCOM.dat

?

```
##    colname nlevels position width digits exp
## 1    runid       0        1     5      0   0
## 2     file       2        8     6      0   0
```