

EPIC harvest Cultivars

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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

HARVEST OUTPUT FILES

ACM

output file stored in 'EPIC0810'

?

ACY

output file stored in 'EPIC0810'

?

OUTPUT TABLE

SELECT SCENARIO

assign scenario/cultivar to each grid based on:

- lowest harvest date shift
- highest simulated yield

CULTIVARS REVIEW

cultivars

Table 1: Cultivars of spring barley

runid	PLN_JUL	HRV_JUL	LVP	sow_dat	PLN_MON	PLN_DAY	hrv_dat	HRV_MON	HRV_DAY
s1a	79	201	122	320	3	20	720	7	20
s1b	84	206	122	325	3	25	725	7	25
s1c	89	211	122	330	3	30	730	7	30
s2a	69	181	112	310	3	10	630	6	30
s2b	74	186	112	315	3	15	705	7	5
s2c	79	191	112	320	3	20	710	7	10
s3a	100	212	112	410	4	10	731	7	31
s3b	105	217	112	415	4	15	805	8	5
s3c	110	222	112	420	4	20	810	8	10
s4a	60	181	121	301	3	1	630	6	30
s4b	64	186	122	305	3	5	705	7	5
s4c	69	191	122	310	3	10	710	7	10
s5a	91	212	121	401	4	1	731	7	31
s5b	94	217	123	404	4	4	805	8	5
s5c	100	222	122	410	4	10	810	8	10

map yield for all scenarios

descriptive statistics

descriptive statistics for each grid calculated from all 15 cultivars

FINAL SELECT

criteria:

- highest yield
- lowest IHVD shift
- lowest IPLD shift

working DF: **dat__shft**

IHVD + IPLD

IPLD and IHVD dates shifted compared to the dates given by cultivar setup

calculate the shift

sum IPLD and IHVD shift

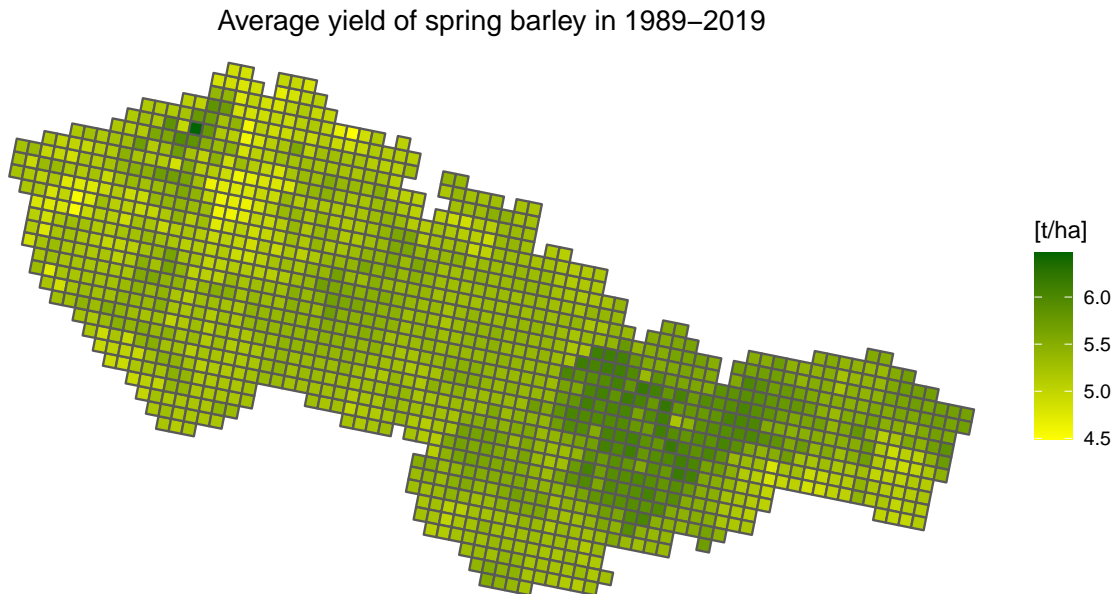
picks scenario with the lowest number of days

selected:

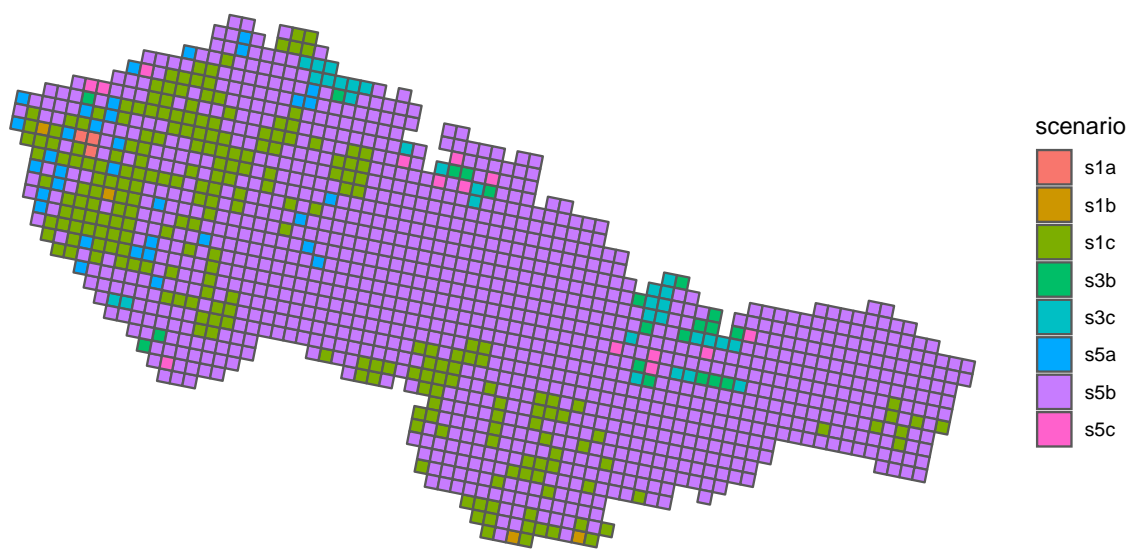
```
##  s1a  s1b  s1c  s3b  s3c  s5a  s5b  s5c
##   3   4  237   20   30   34 1080   14
```

Table 2: Selected cultivars of spring barley

runid	PLN_JUL	HRV_JUL	LVP	sow_dat	PLN_MON	PLN_DAY	hrv_dat	HRV_MON	HRV_DAY
s1a	79	201	122	320	3	20	720	7	20
s1b	84	206	122	325	3	25	725	7	25
s1c	89	211	122	330	3	30	730	7	30
s3b	105	217	112	415	4	15	805	8	5
s3c	110	222	112	420	4	20	810	8	10
s5a	91	212	121	401	4	1	731	7	31
s5b	94	217	123	404	4	4	805	8	5
s5c	100	222	122	410	4	10	810	8	10



Selected planting scenarios for spring barley



YIELD + IHVD

scenario with the lowest IHVD shift and highest yield

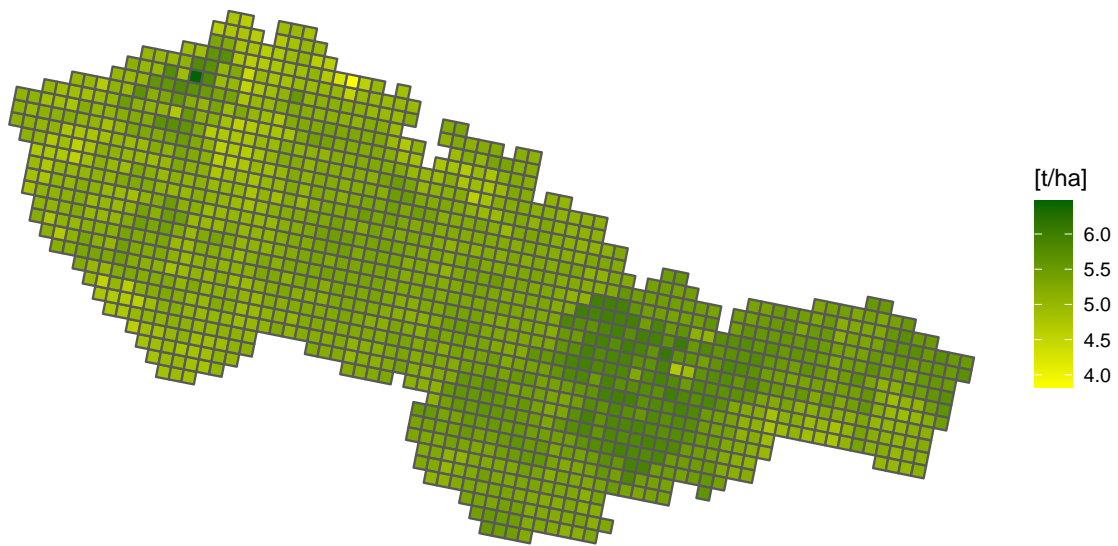
selected:

```
## s1a s1b s1c s5a s5b
##  20 267 972  14 149
```

Table 3: Selected cultivars of spring barley

runid	PLN_JUL	HRV_JUL	LVP	sow_dat	PLN_MON	PLN_DAY	hrv_dat	HRV_MON	HRV_DAY
s1a	79	201	122	320	3	20	720	7	20
s1b	84	206	122	325	3	25	725	7	25
s1c	89	211	122	330	3	30	730	7	30
s5a	91	212	121	401	4	1	731	7	31
s5b	94	217	123	404	4	4	805	8	5

Average yield of spring barley in 1989–2019



Selected planting scenarios for spring barley

