

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

- crop: WWHT
- crop ID: 10
- crop name: winter wheat
- seasonality: WIN
- WCY parameter: 1.12

HARVEST OUTPUT FILES (in progress)

ACM

output file stored in ‘EPIC0810’

?

ACY

output file stored in ‘EPIC0810’

?

OUTPUT TABLE

CULTIVARS REVIEW

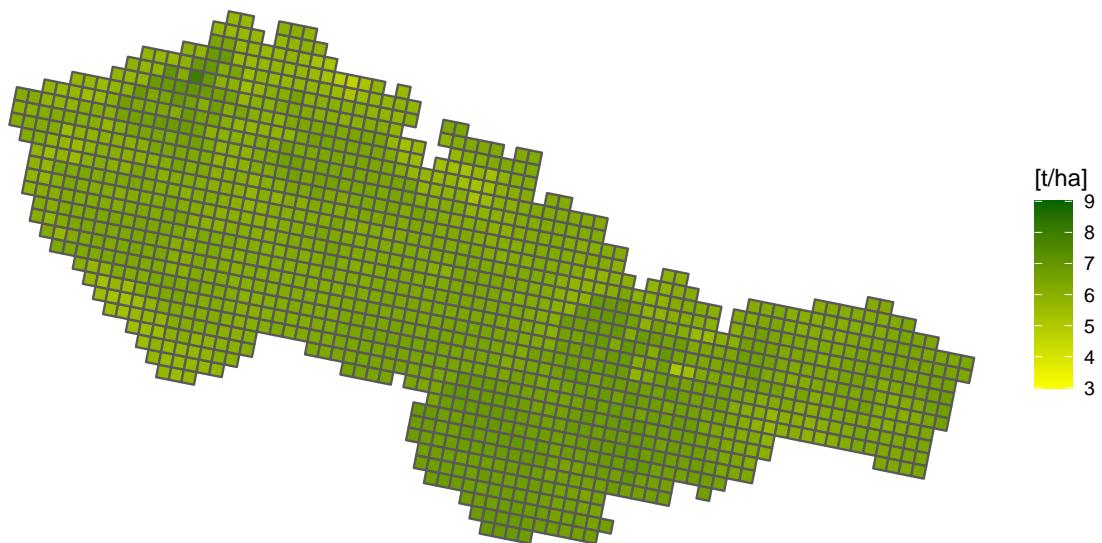
CULTIVARS

Table 1: Cultivars of winter wheat

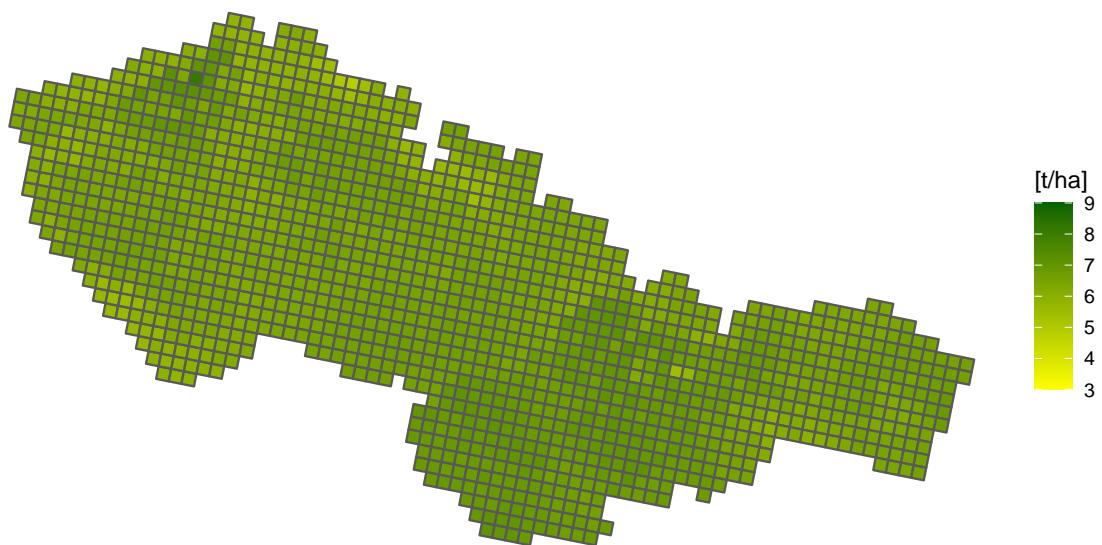
runid	PLN_JUL	HRV_JUL	LVP	sow_dat	PLN_MON	PLN_DAY	hrv_dat	HRV_MON	HRV_DAY
s1a	263	212	314	920	9	20	731	7	31
s1b	268	217	314	925	9	25	805	8	5
s1c	273	222	314	930	9	30	810	8	10
s2a	263	201	303	920	9	20	720	7	20
s2b	268	206	303	925	9	25	725	7	25
s2c	273	211	303	930	9	30	730	7	30
s3a	253	212	324	910	9	10	731	7	31
s3b	258	217	324	915	9	15	805	8	5
s3c	263	222	324	920	9	20	810	8	10
s4a	253	222	334	910	9	10	810	8	10
s4b	258	227	334	915	9	15	815	8	15
s4c	263	232	334	920	9	20	820	8	20
s5a	263	191	293	920	9	20	710	7	10
s5b	268	196	293	925	9	25	715	7	15
s5c	273	201	293	930	9	30	720	7	20

MAP YIELD FOR ALL SCENARIOS

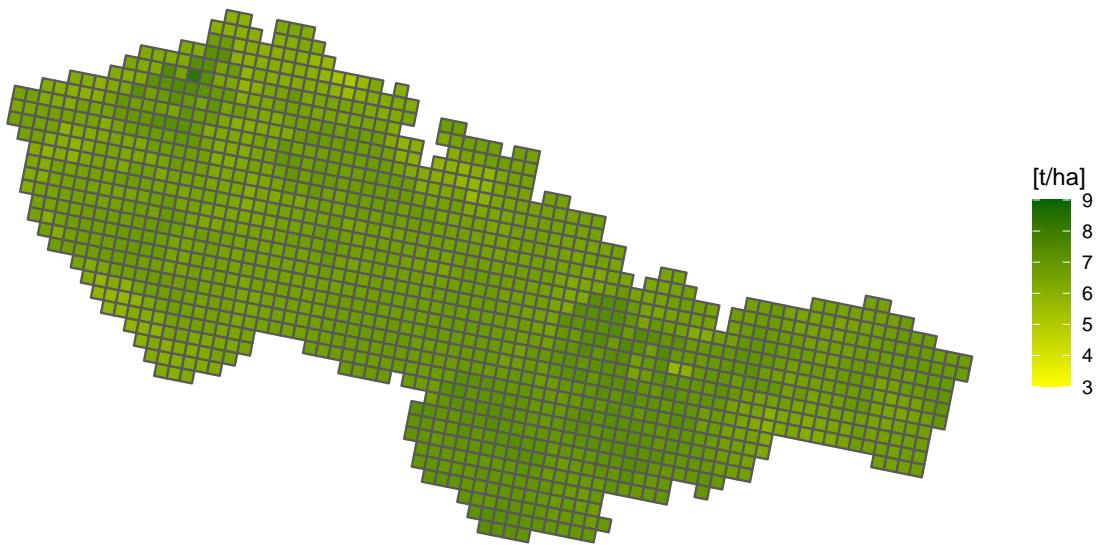
Average yield of winter wheat in 1989–2019 / scenario: s1a



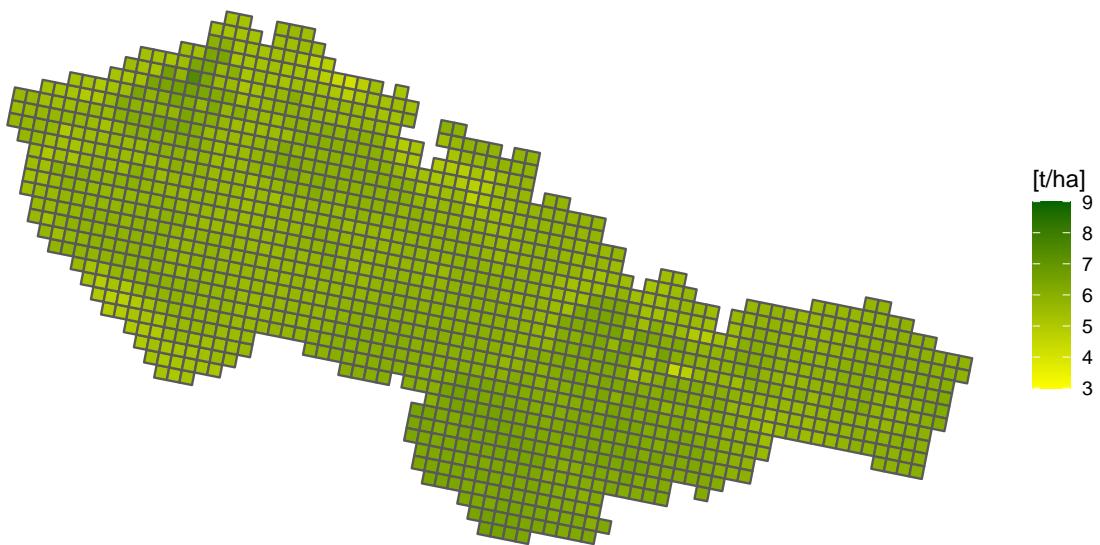
Average yield of winter wheat in 1989–2019 / scenario: s1b



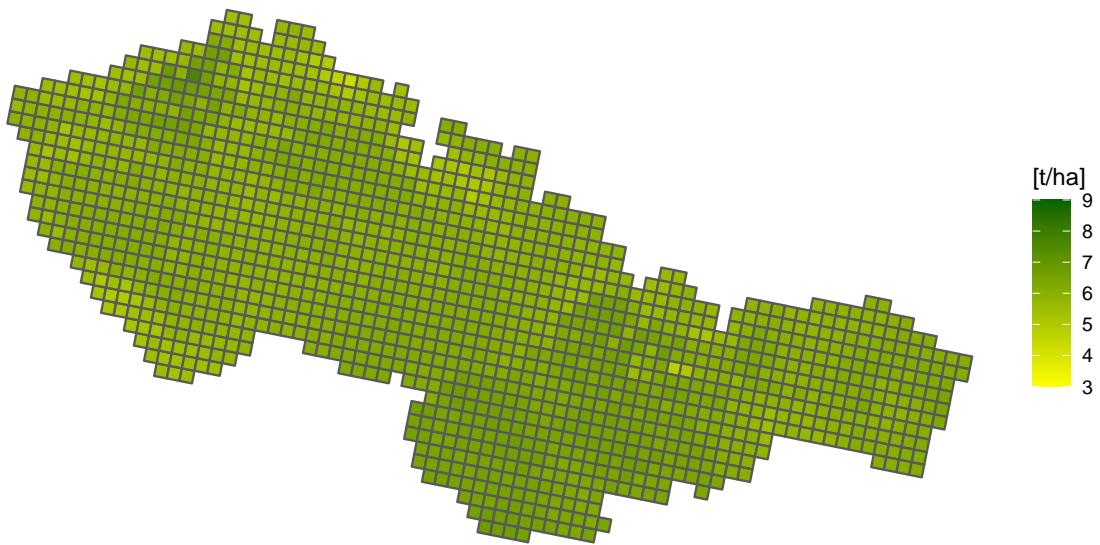
Average yield of winter wheat in 1989–2019 / scenario: s1c



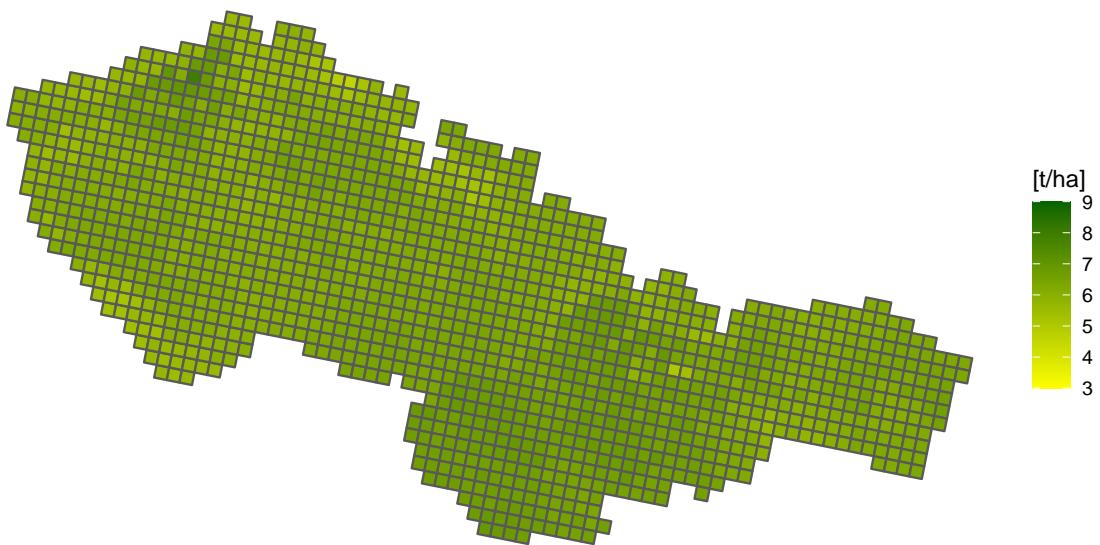
Average yield of winter wheat in 1989–2019 / scenario: s2a



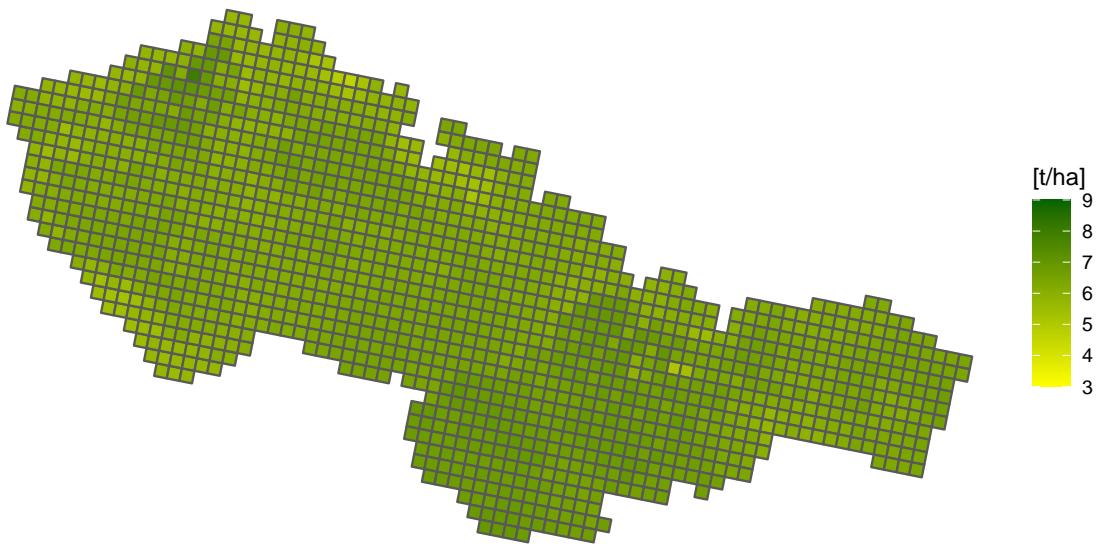
Average yield of winter wheat in 1989–2019 / scenario: s2b



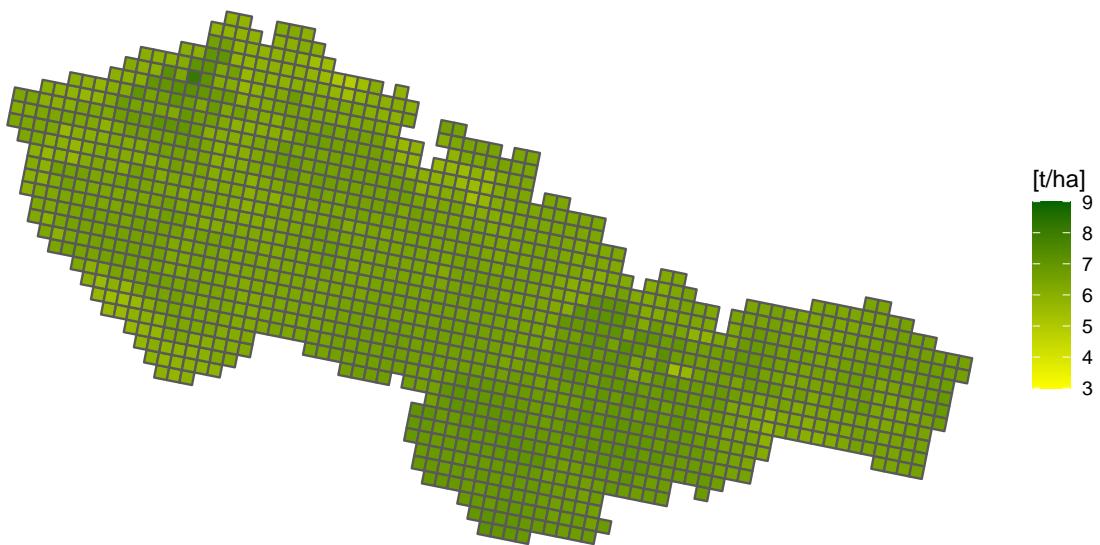
Average yield of winter wheat in 1989–2019 / scenario: s2c



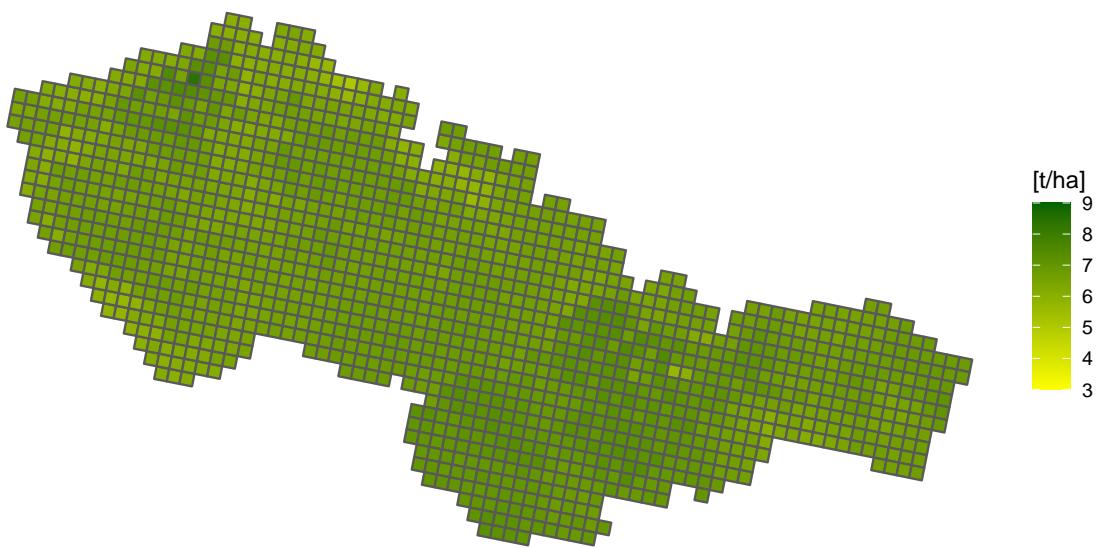
Average yield of winter wheat in 1989–2019 / scenario: s3a



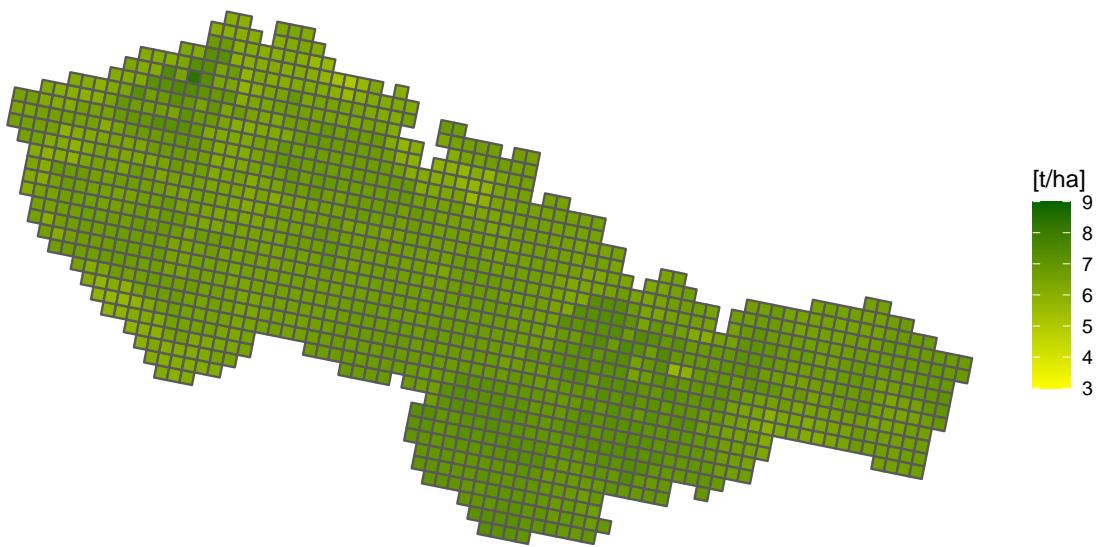
Average yield of winter wheat in 1989–2019 / scenario: s3b



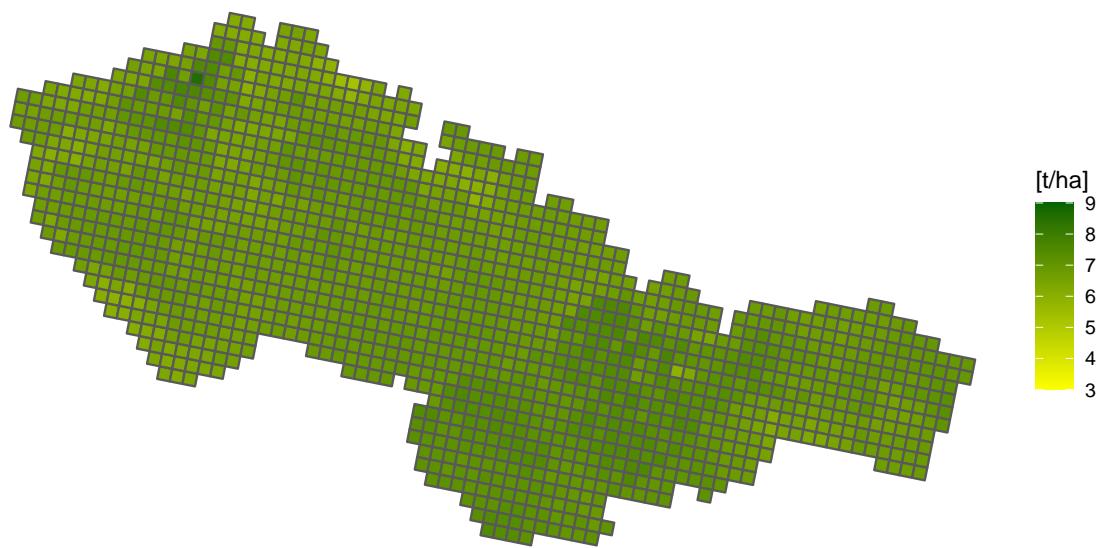
Average yield of winter wheat in 1989–2019 / scenario: s3c



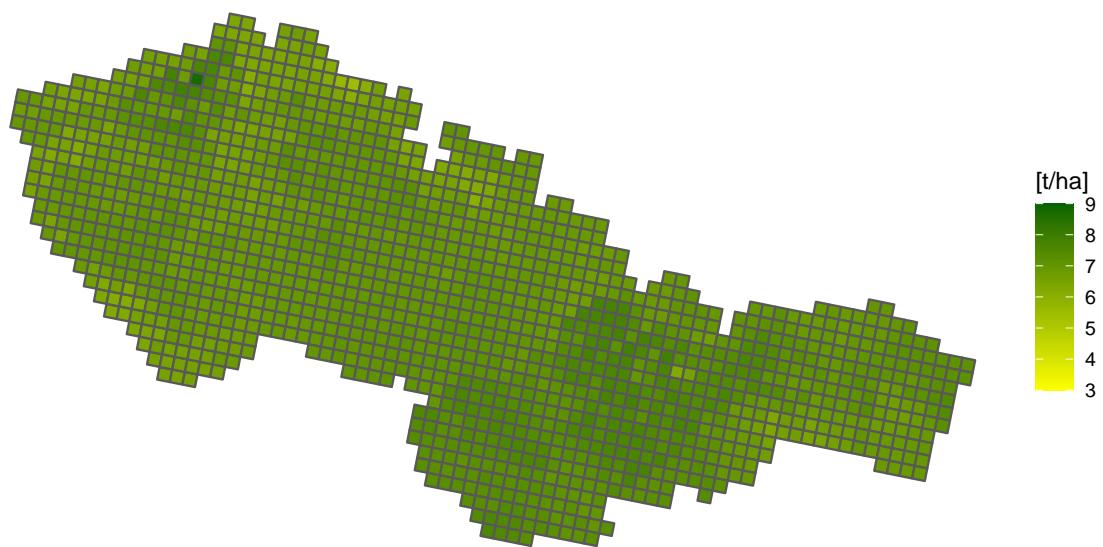
Average yield of winter wheat in 1989–2019 / scenario: s4a



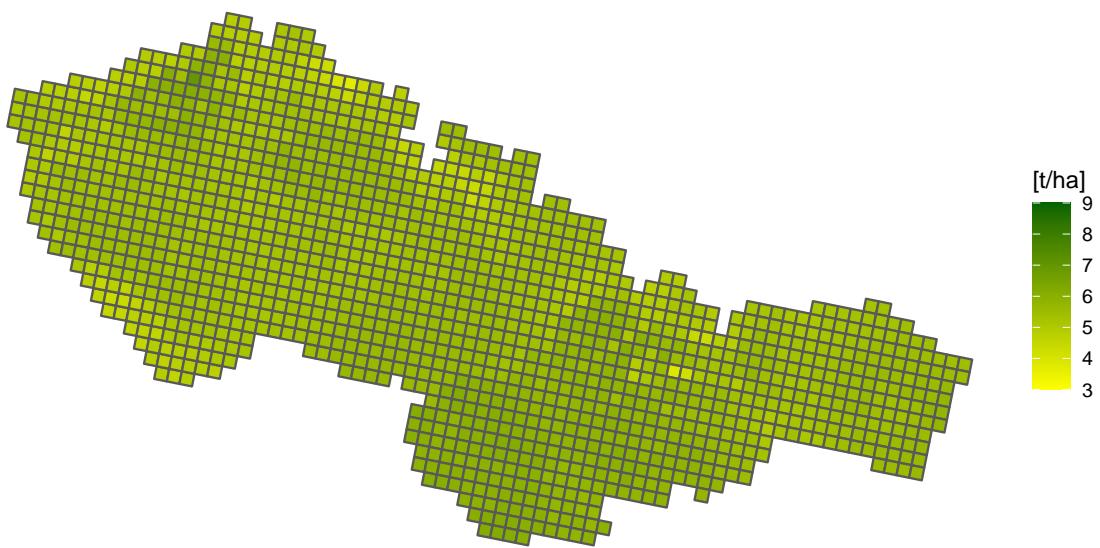
Average yield of winter wheat in 1989–2019 / scenario: s4b



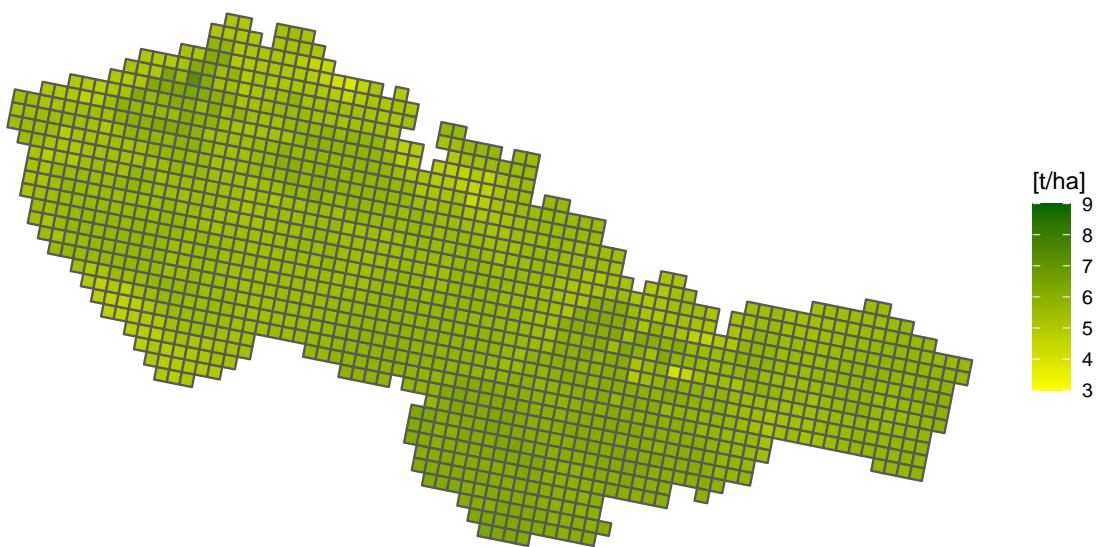
Average yield of winter wheat in 1989–2019 / scenario: s4c



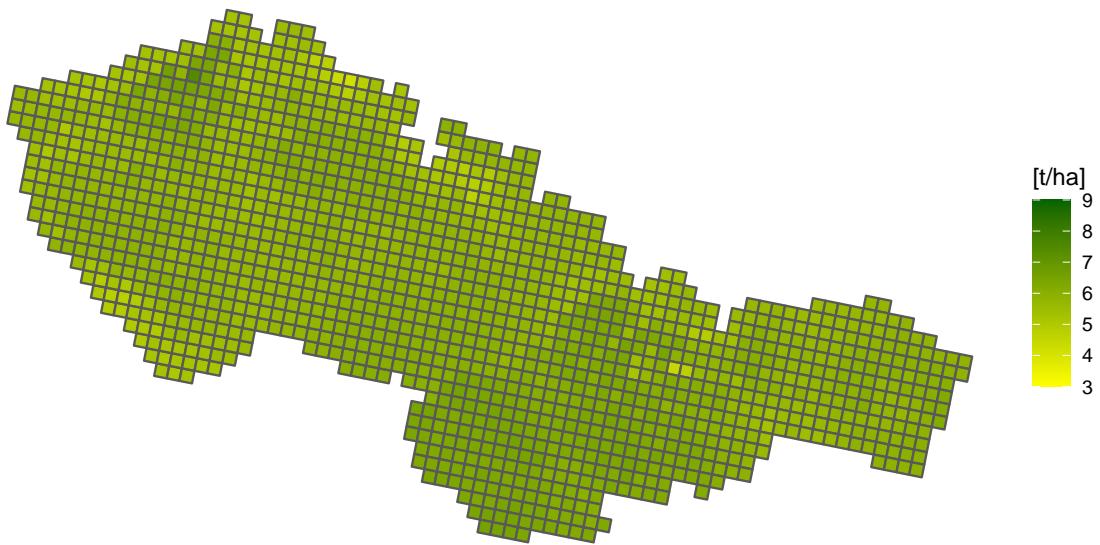
Average yield of winter wheat in 1989–2019 / scenario: s5a



Average yield of winter wheat in 1989–2019 / scenario: s5b



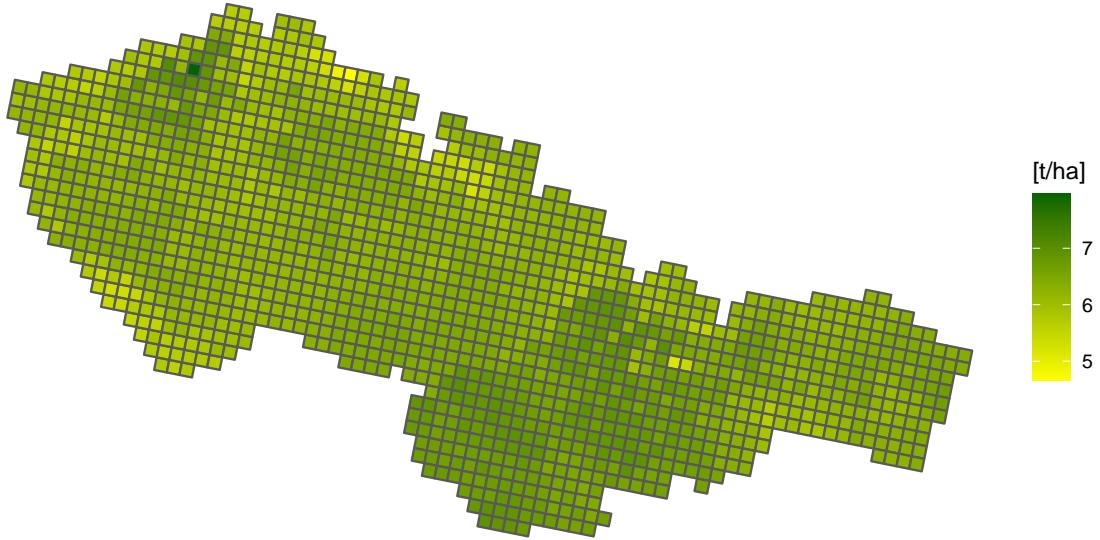
Average yield of winter wheat in 1989–2019 / scenario: s5c



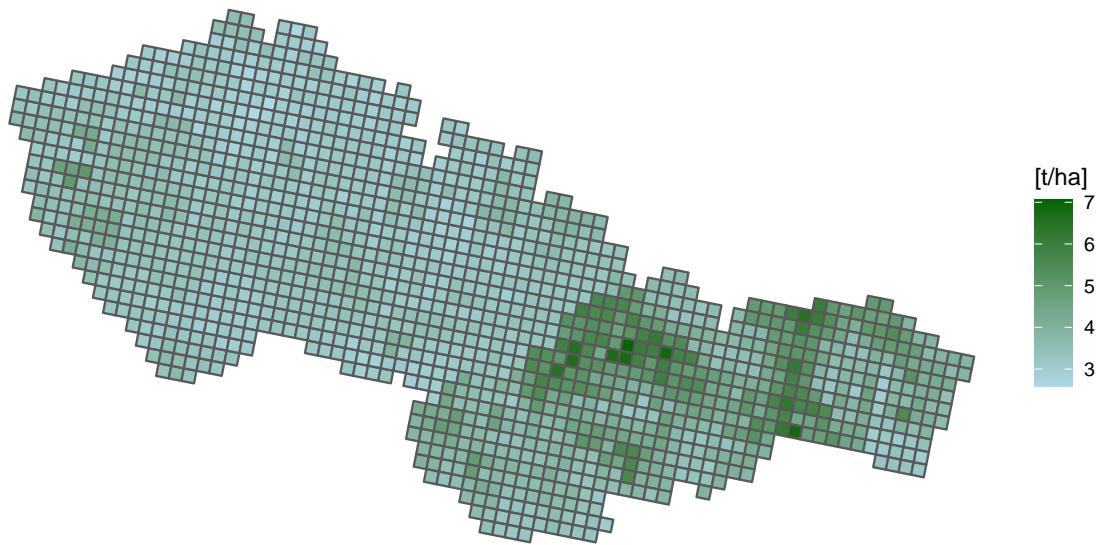
DESCRIPTIVE STATISTICS

descriptive statistics for each grid calculated from all 15 cultivars

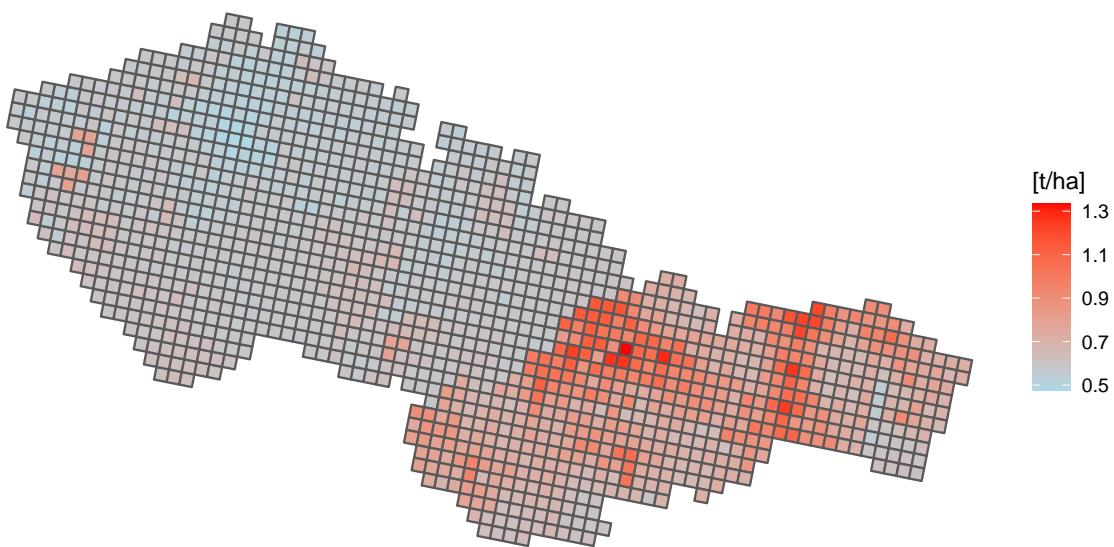
Mean simulated yield



Range of simulated yield



Standard deviation of simulated yield



PLANTING, GERMINATION AND HARVEST DATE SHIFTS

criteria:

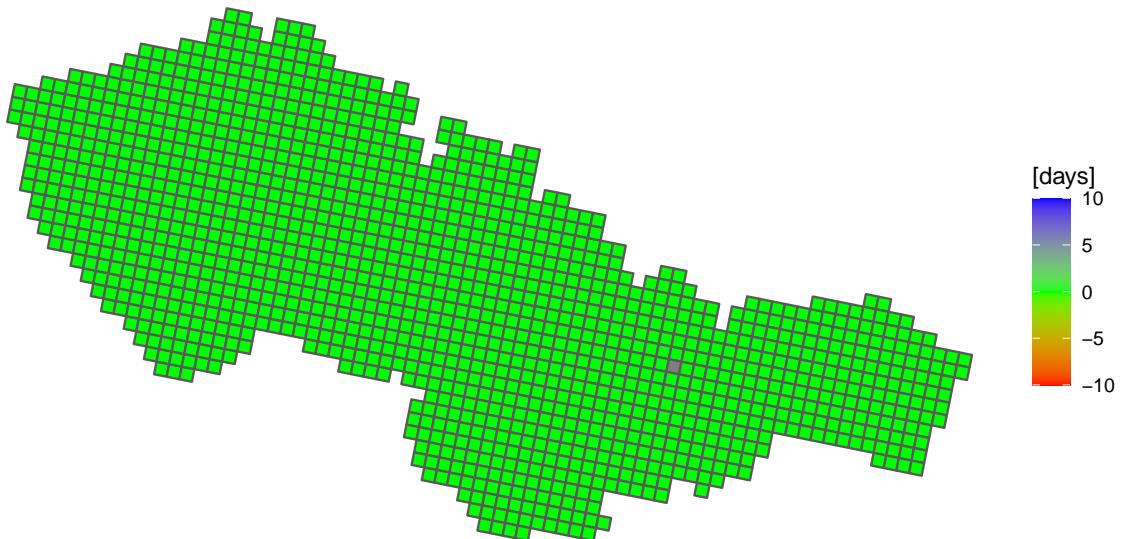
- given IPLD and IPLD shift (0-2; 3-10; >10)
- IP LD and IGMD shift (0-5; 5-10; >10)
- given IHVD and IHVD shift (0-7; 7-14; >14)

working DF: **shifts**

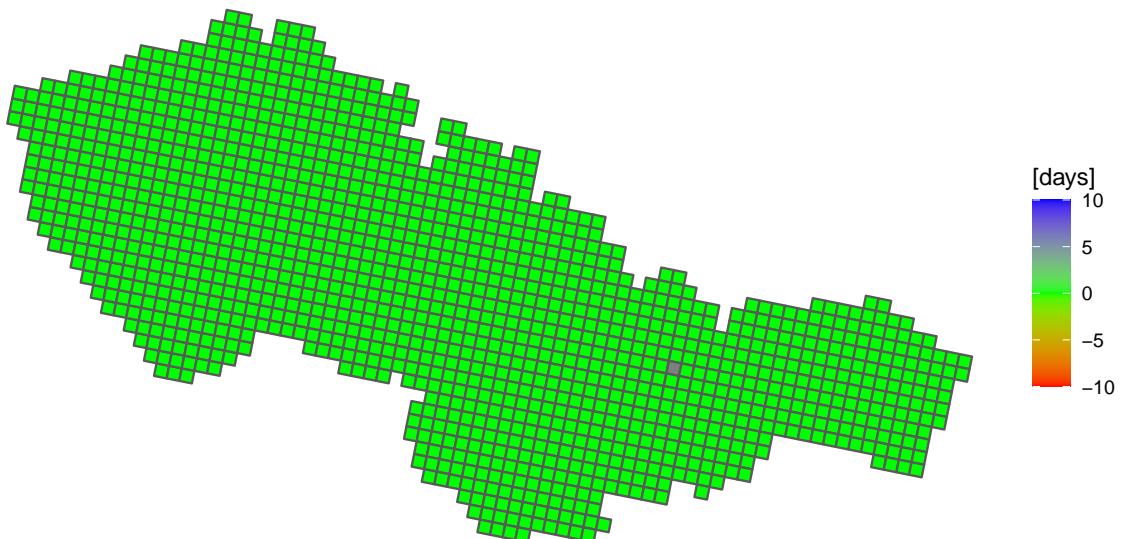
working DF: **avg_shifts**

IPLD

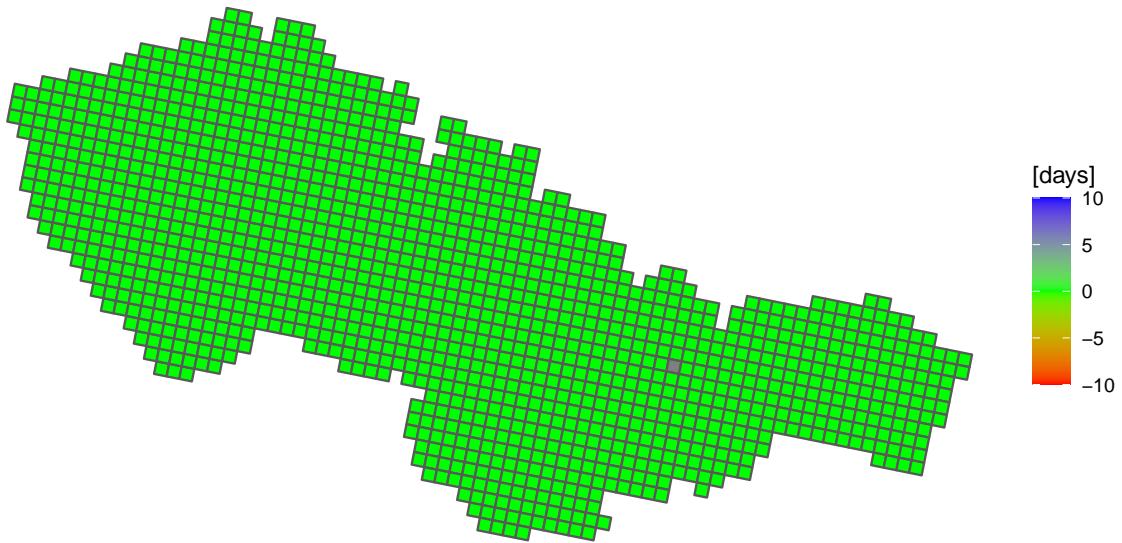
Average shift of given IPLD and actual IPLD for winter wheat / scenario: s1a



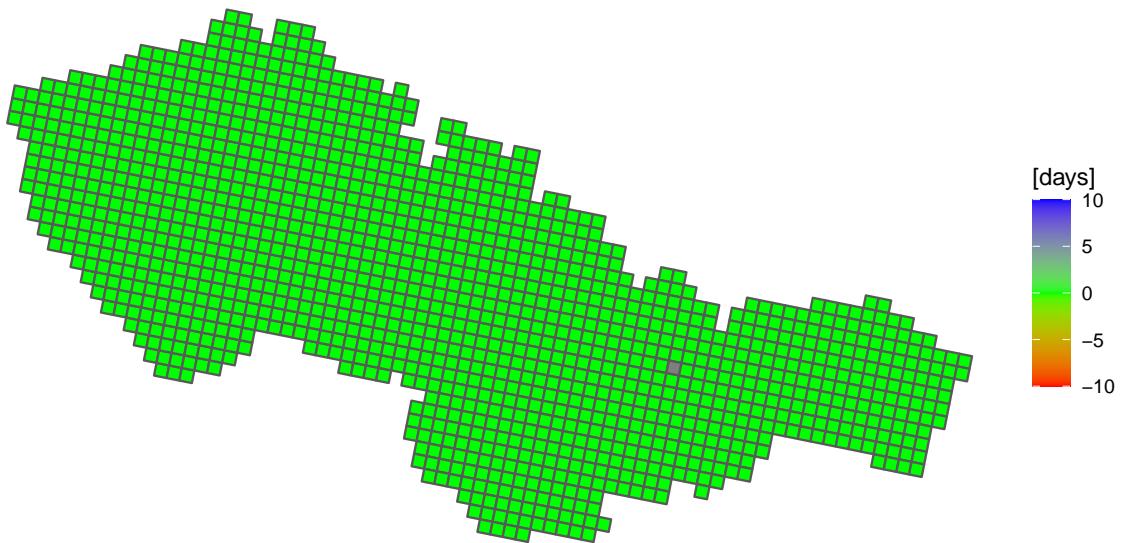
Average shift of given IPLD and actual IPLD for winter wheat / scenario: s1b



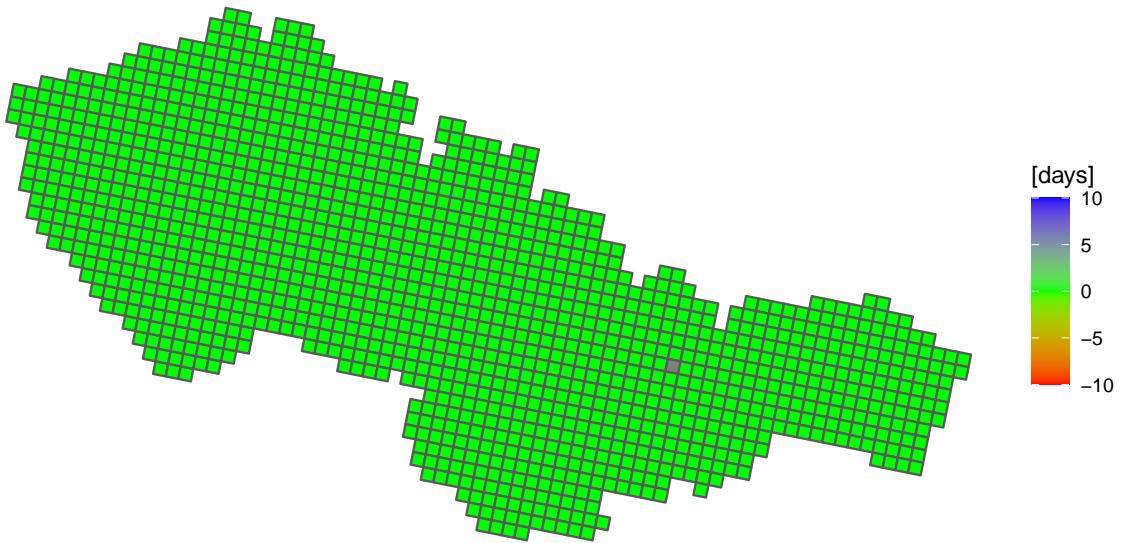
Average shift of given IPLD and actual IPLD for winter wheat / scenario: s1c



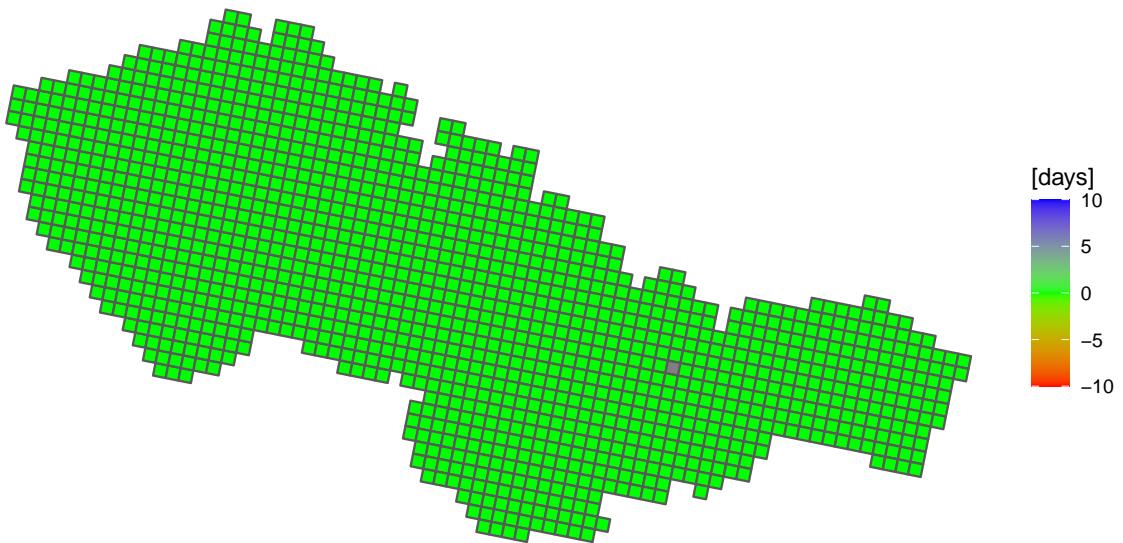
Average shift of given IPLD and actual IPLD for winter wheat / scenario: s2a



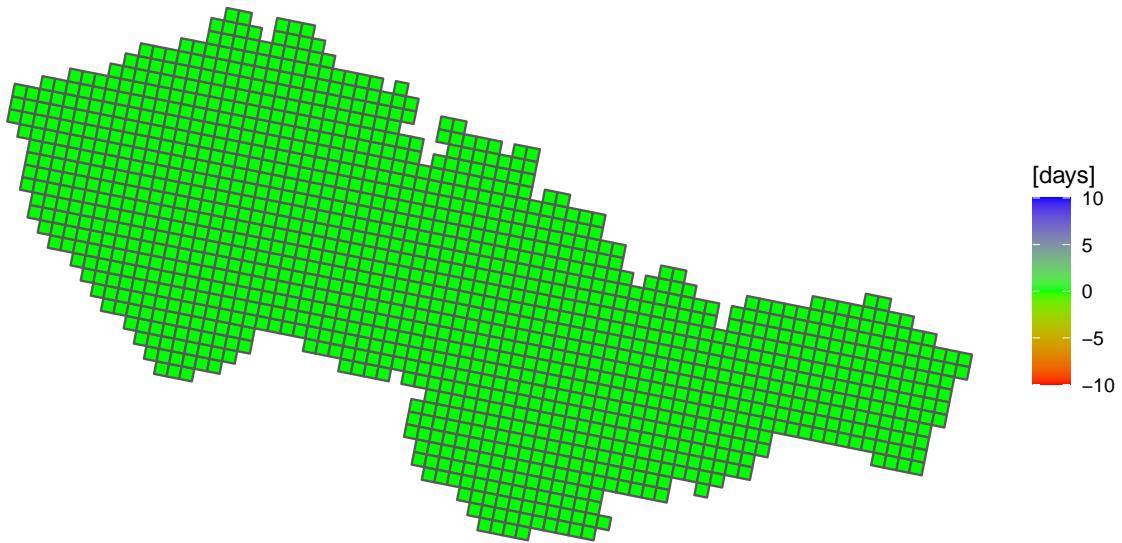
Average shift of given IPLD and actual IPLD for winter wheat / scenario: s2b



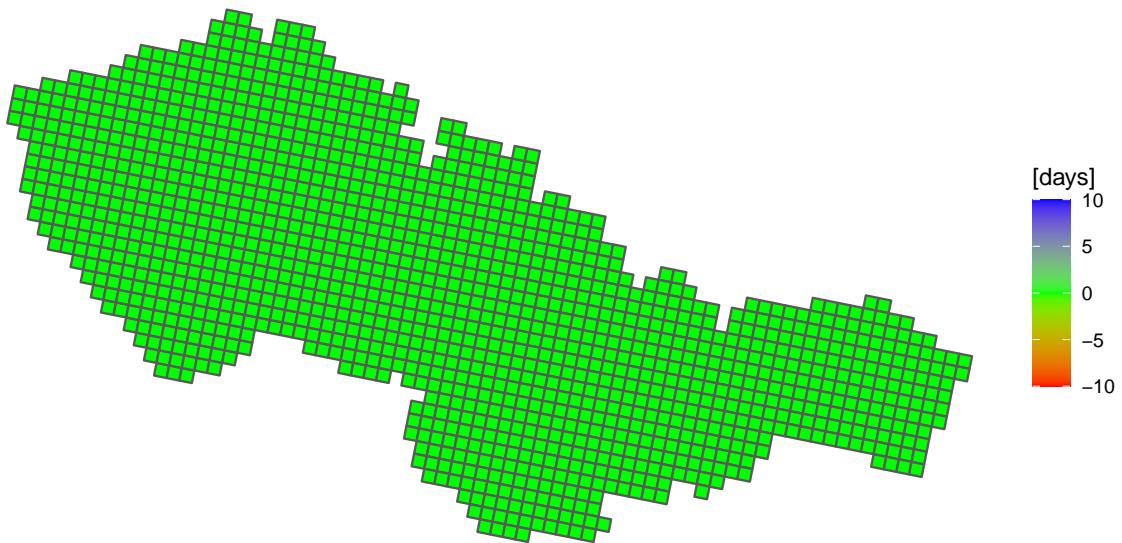
Average shift of given IPLD and actual IPLD for winter wheat / scenario: s2c



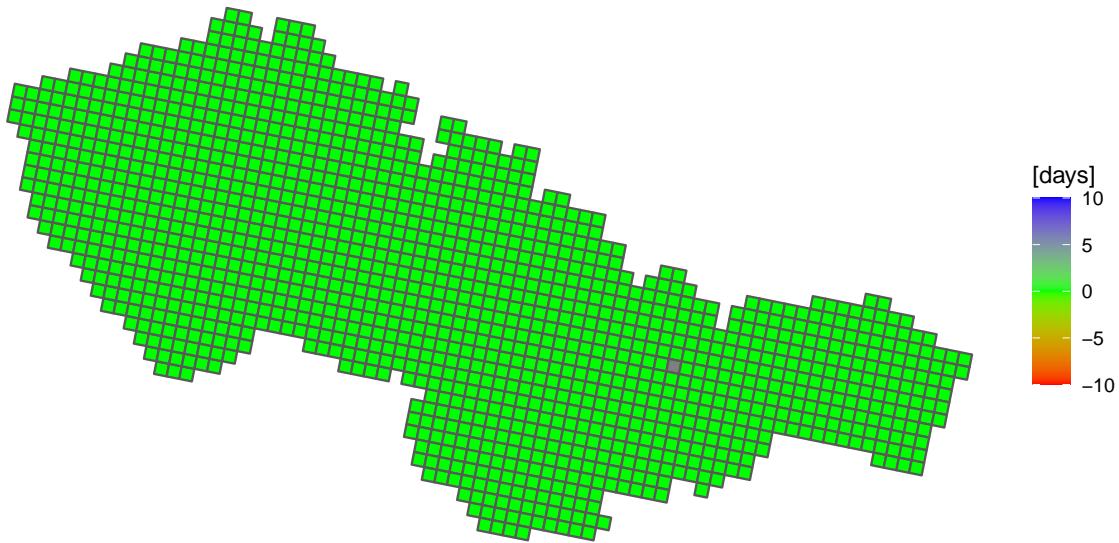
Average shift of given IPLD and actual IPLD for winter wheat / scenario: s3a



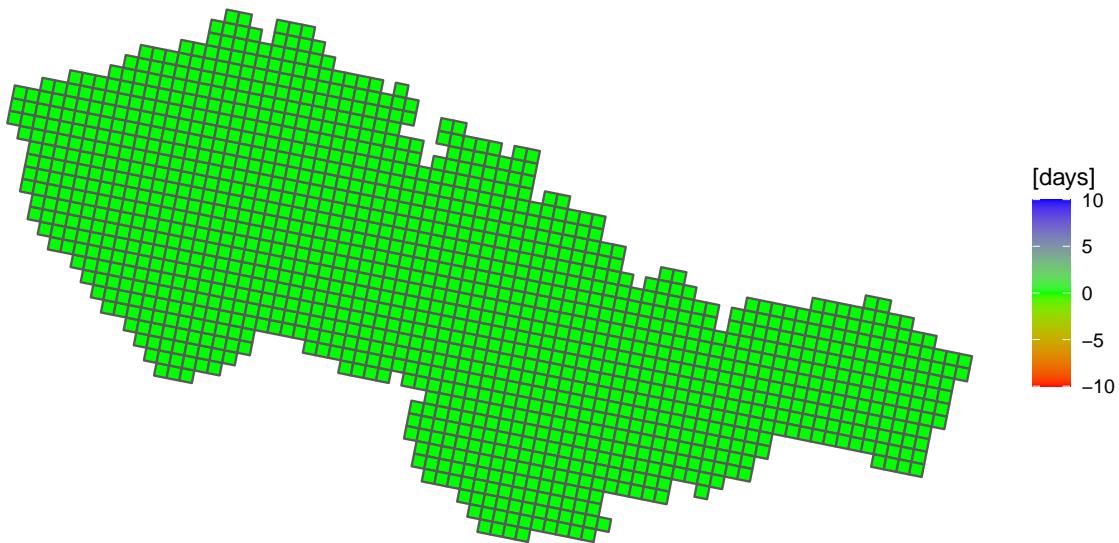
Average shift of given IPLD and actual IPLD for winter wheat / scenario: s3b



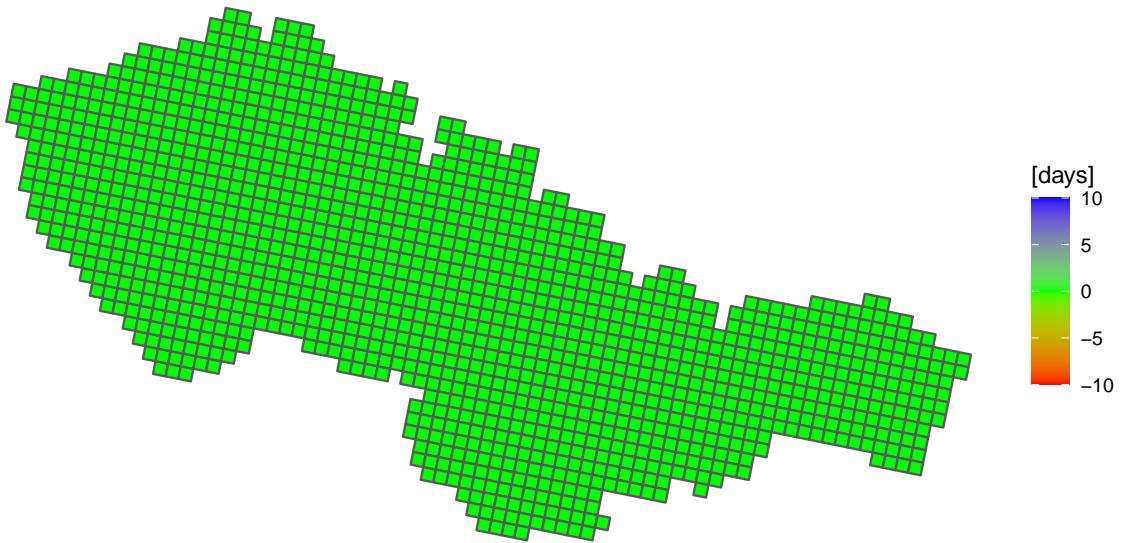
Average shift of given IPLD and actual IPLD for winter wheat / scenario: s3c



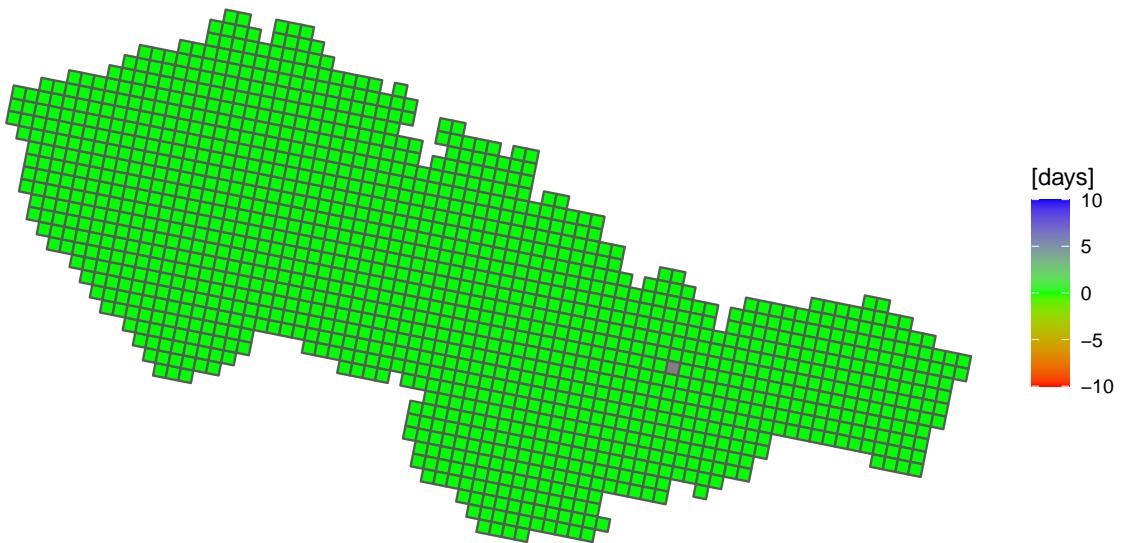
Average shift of given IPLD and actual IPLD for winter wheat / scenario: s4a



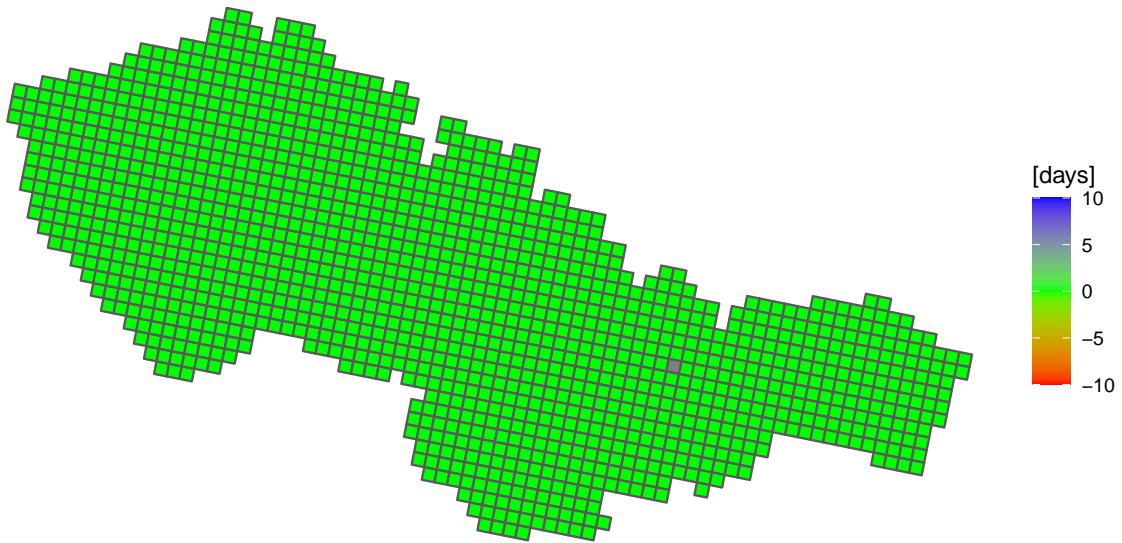
Average shift of given IPLD and actual IPLD for winter wheat / scenario: s4b



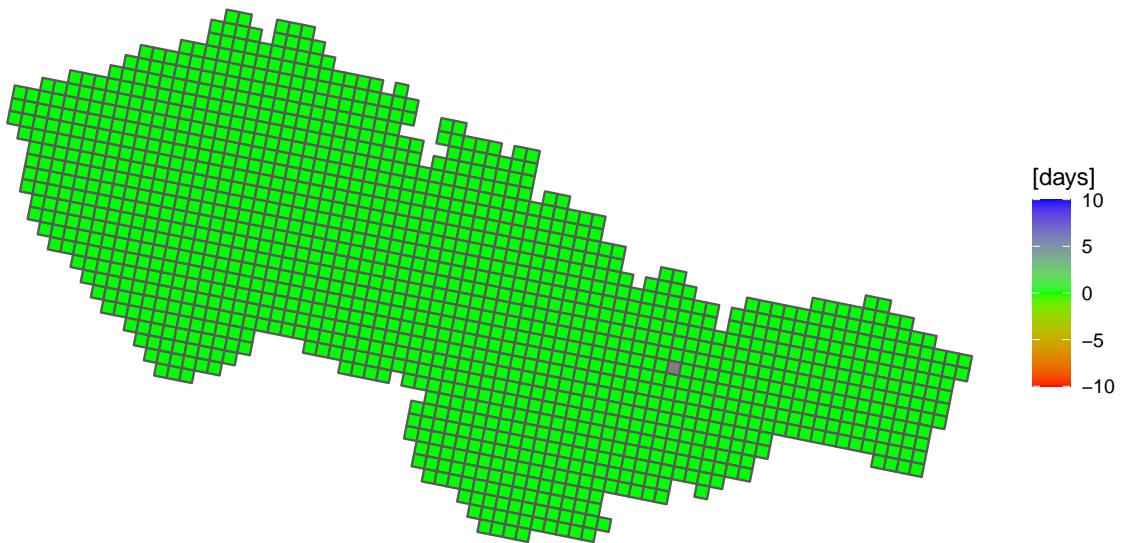
Average shift of given IPLD and actual IPLD for winter wheat / scenario: s4c



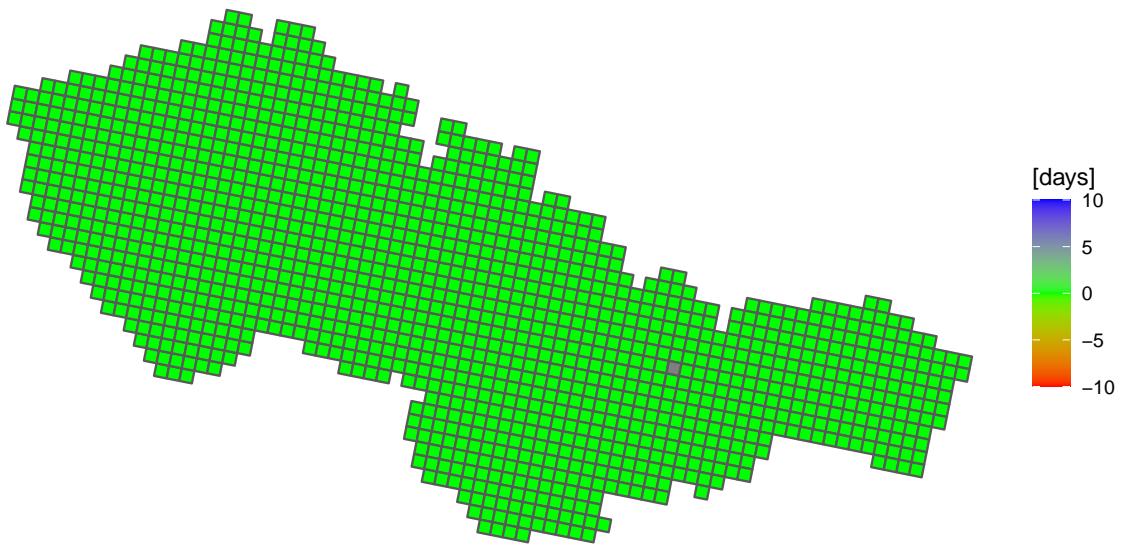
Average shift of given IPLD and actual IPLD for winter wheat / scenario: s5a



Average shift of given IPLD and actual IPLD for winter wheat / scenario: s5b

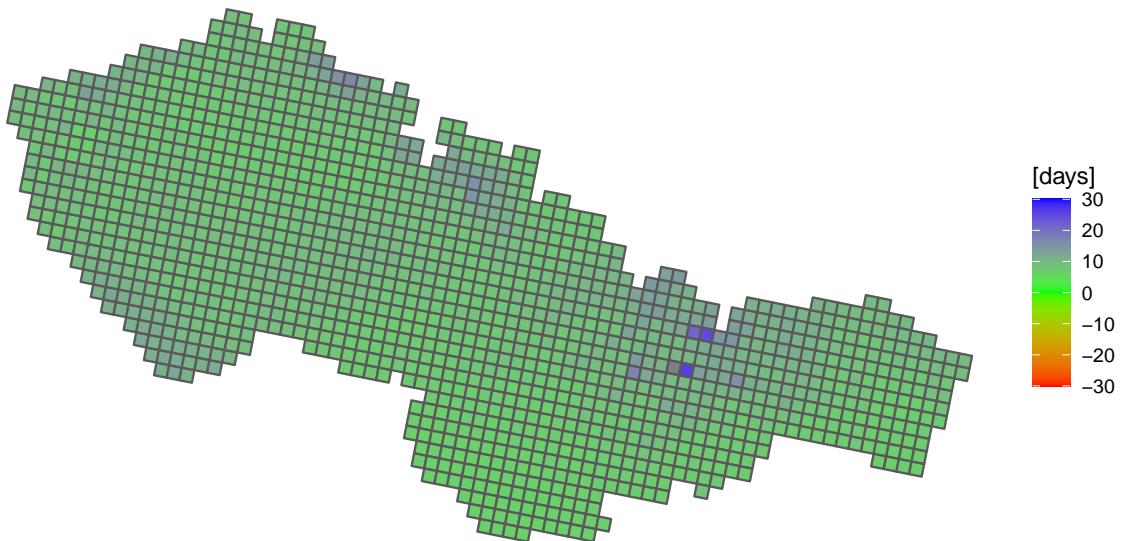


Average shift of given IPLD and actual IPLD for winter wheat / scenario: s5c

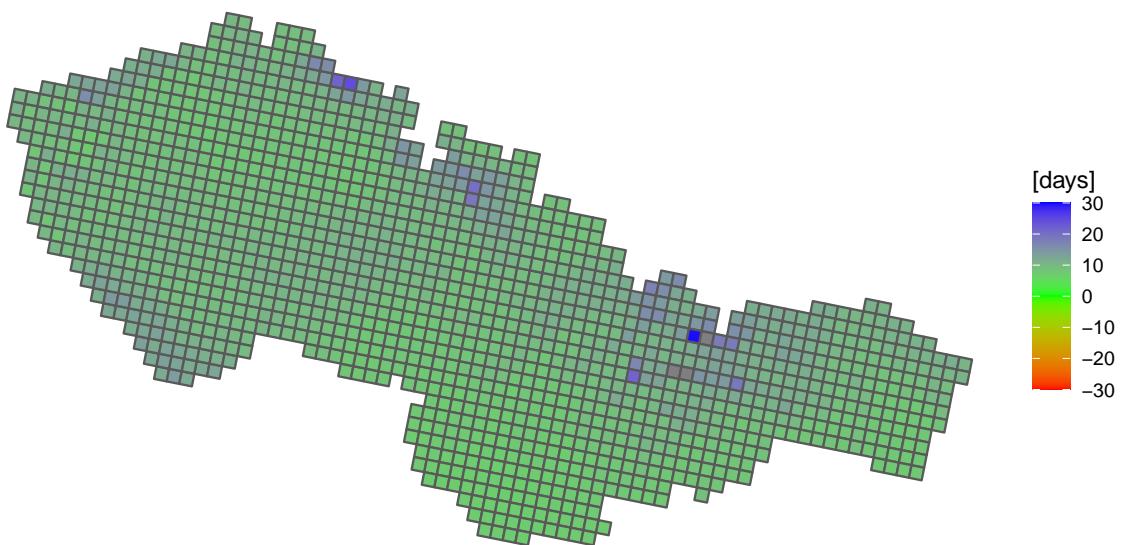


IGMD

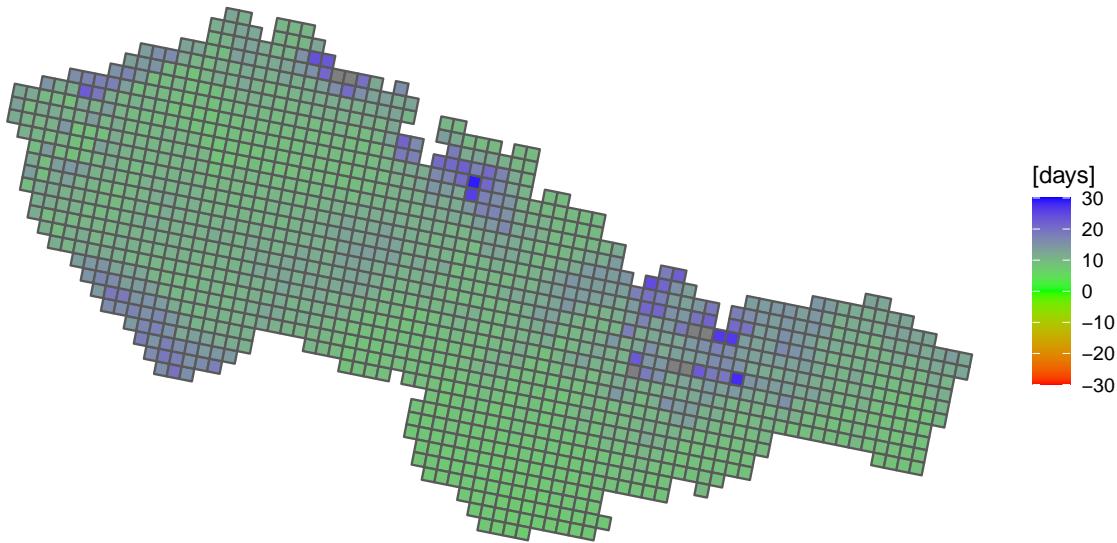
Average shift of IGMD from IPLD for winter wheat / scenario: s1a



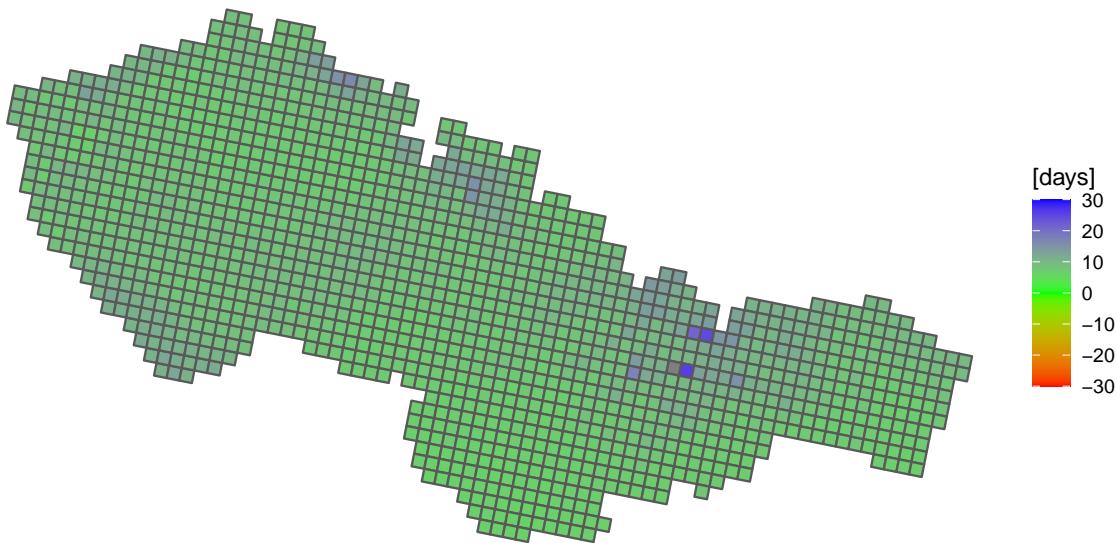
Average shift of IGMD from IPLD for winter wheat / scenario: s1b



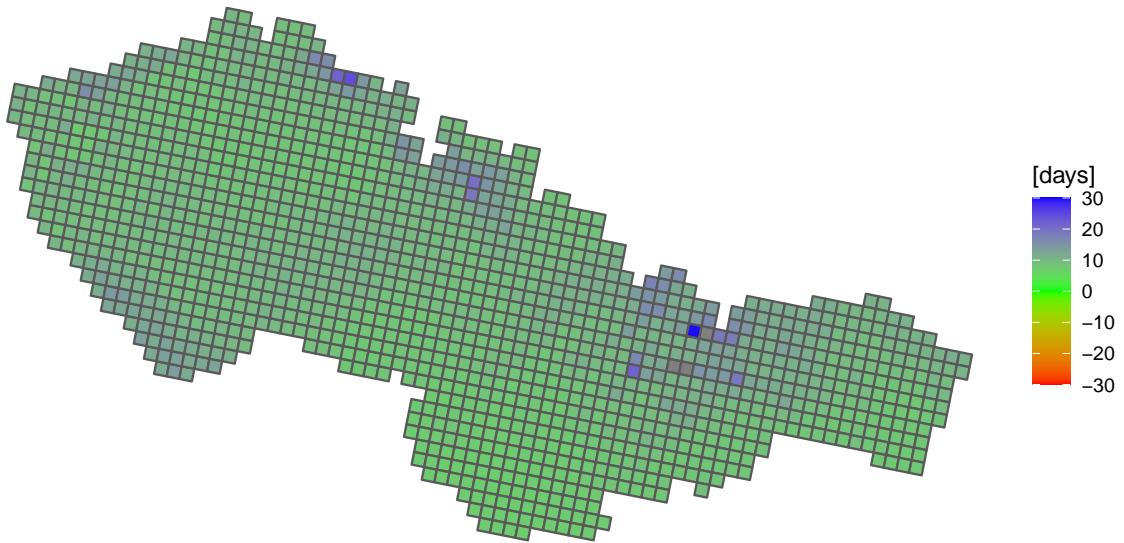
Average shift of IGMD from IPLD for winter wheat / scenario: s1c



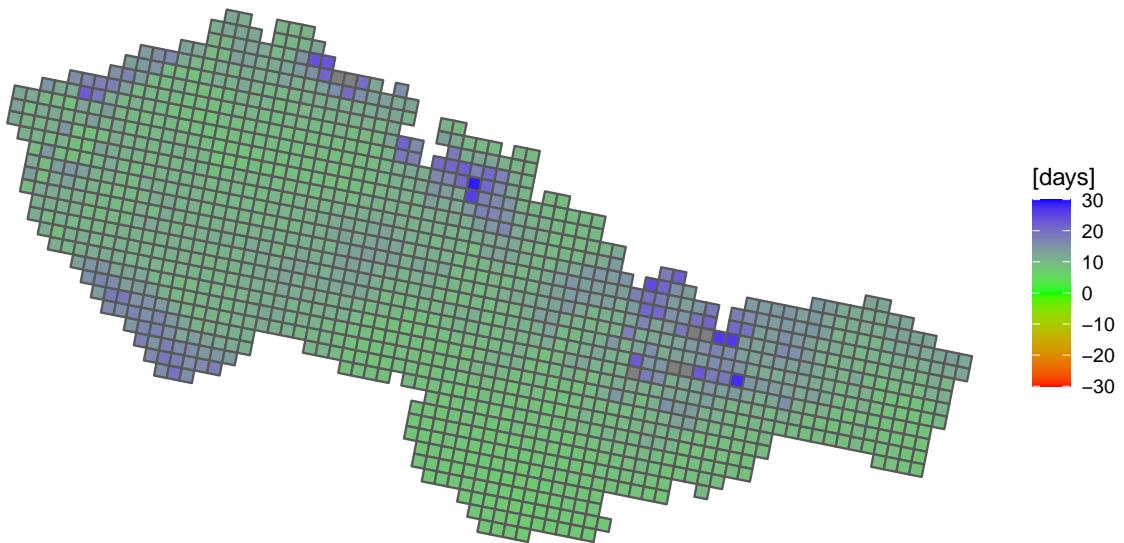
Average shift of IGMD from IPLD for winter wheat / scenario: s2a



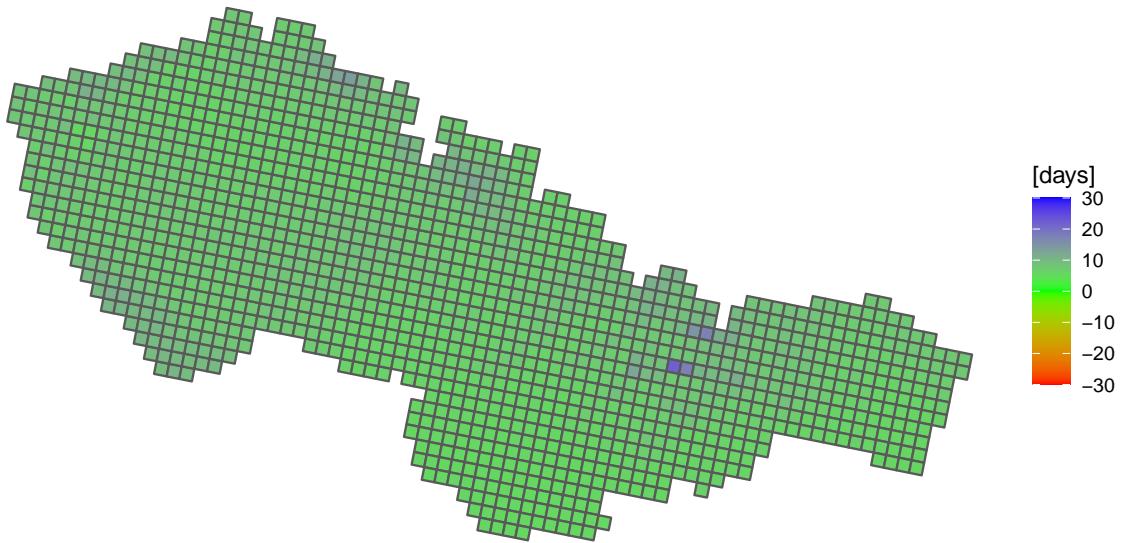
Average shift of IGMD from IPLD for winter wheat / scenario: s2b



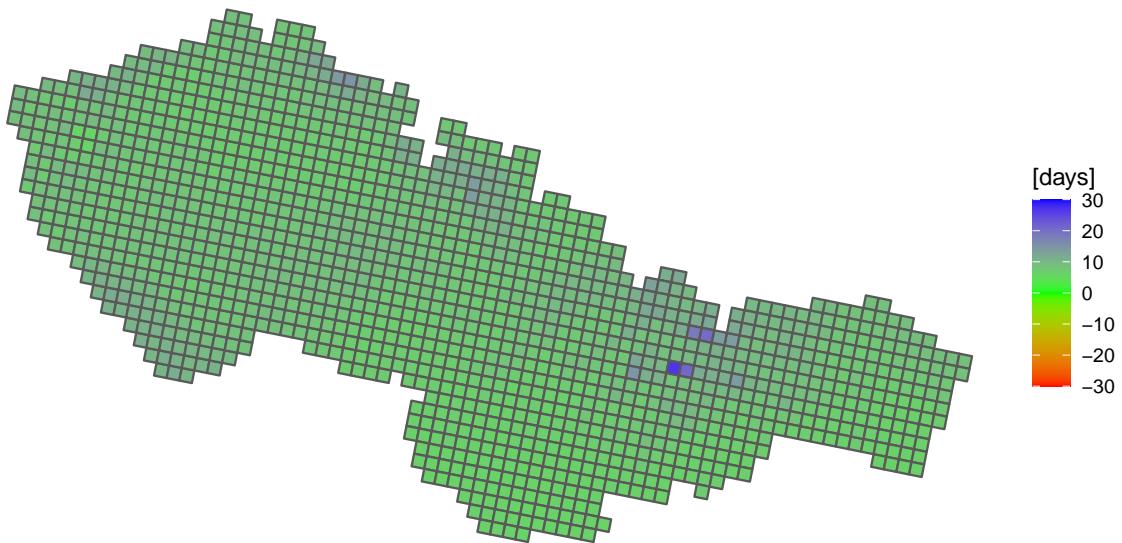
Average shift of IGMD from IPLD for winter wheat / scenario: s2c



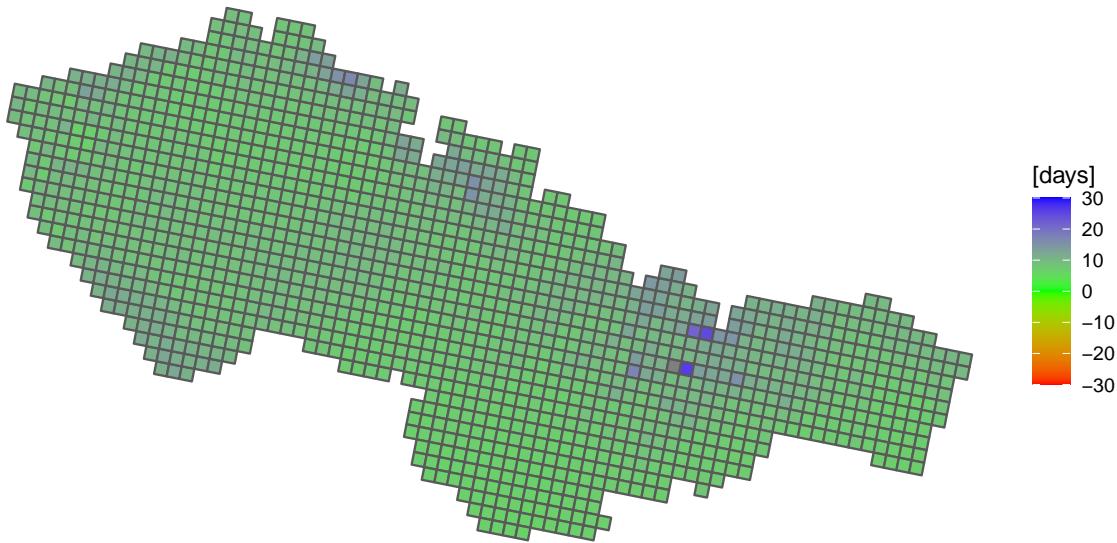
Average shift of IGMD from IPLD for winter wheat / scenario: s3a



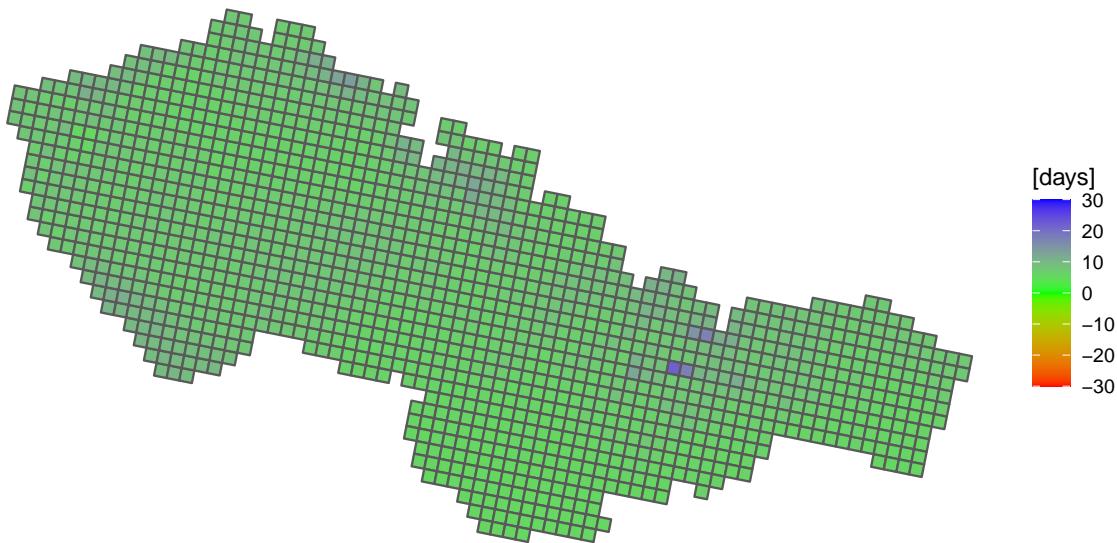
Average shift of IGMD from IPLD for winter wheat / scenario: s3b



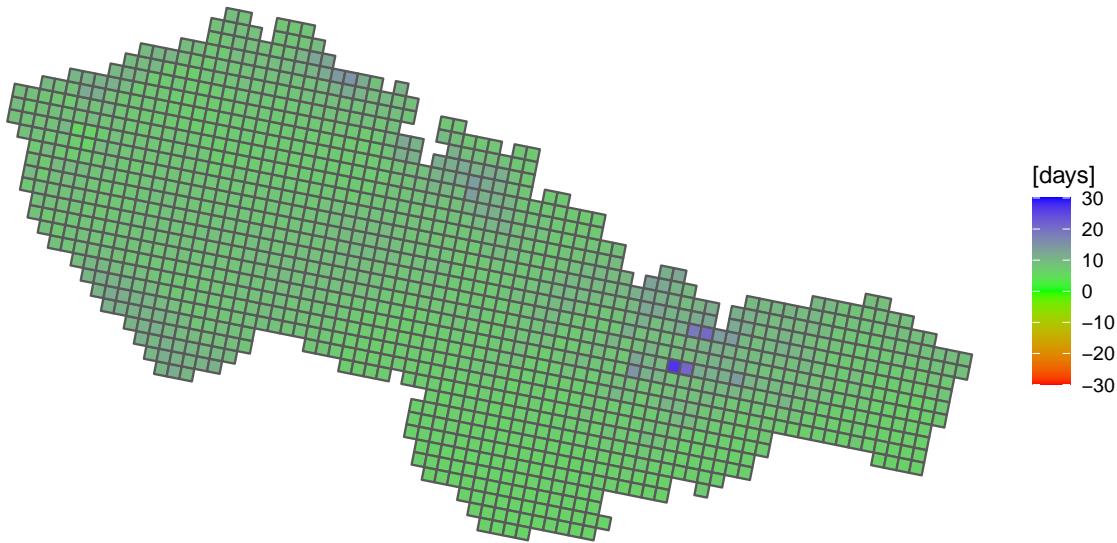
Average shift of IGMD from IPLD for winter wheat / scenario: s3c



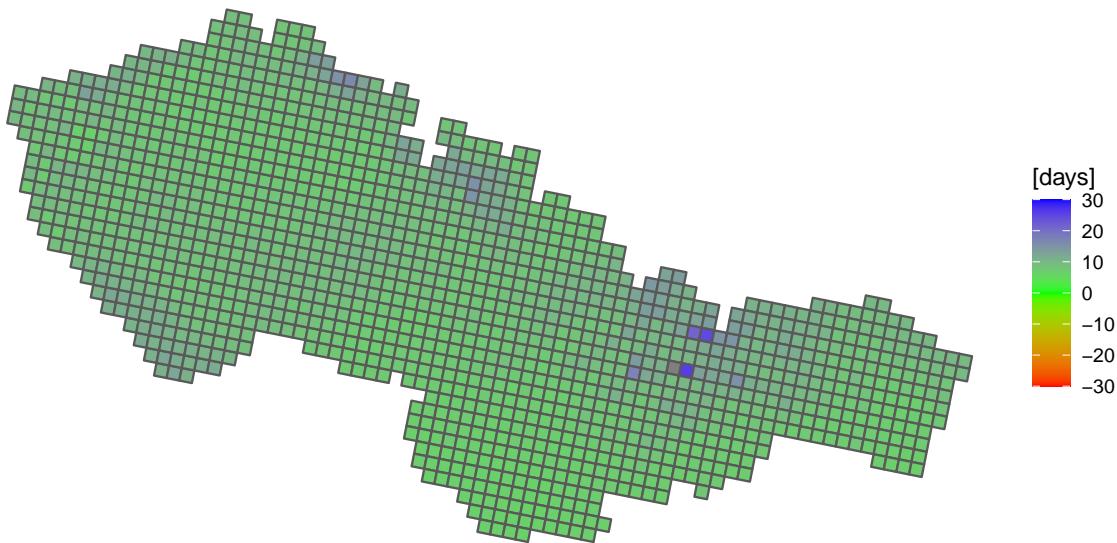
Average shift of IGMD from IPLD for winter wheat / scenario: s4a



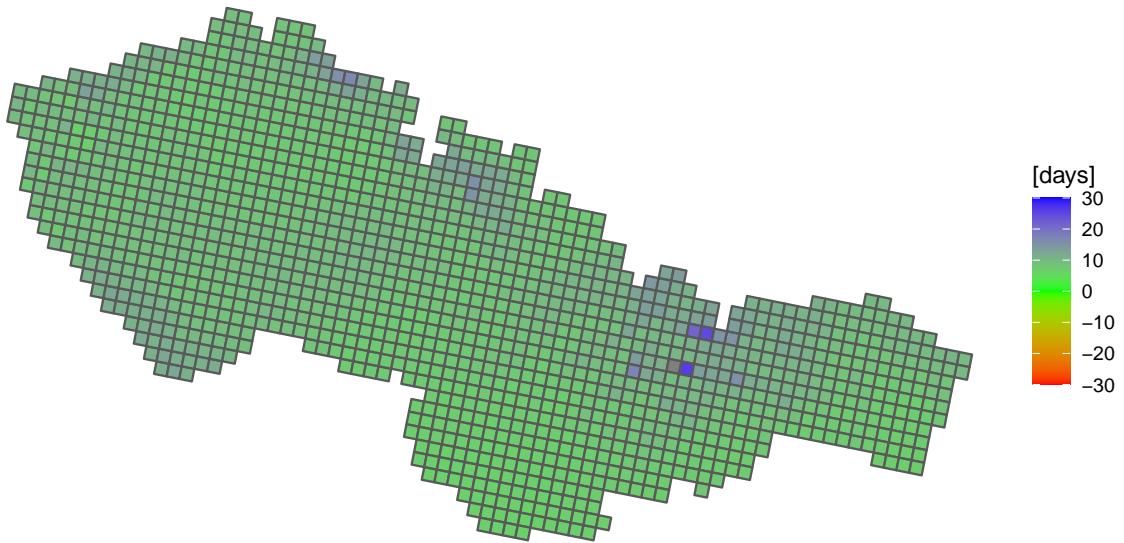
Average shift of IGMD from IPLD for winter wheat / scenario: s4b



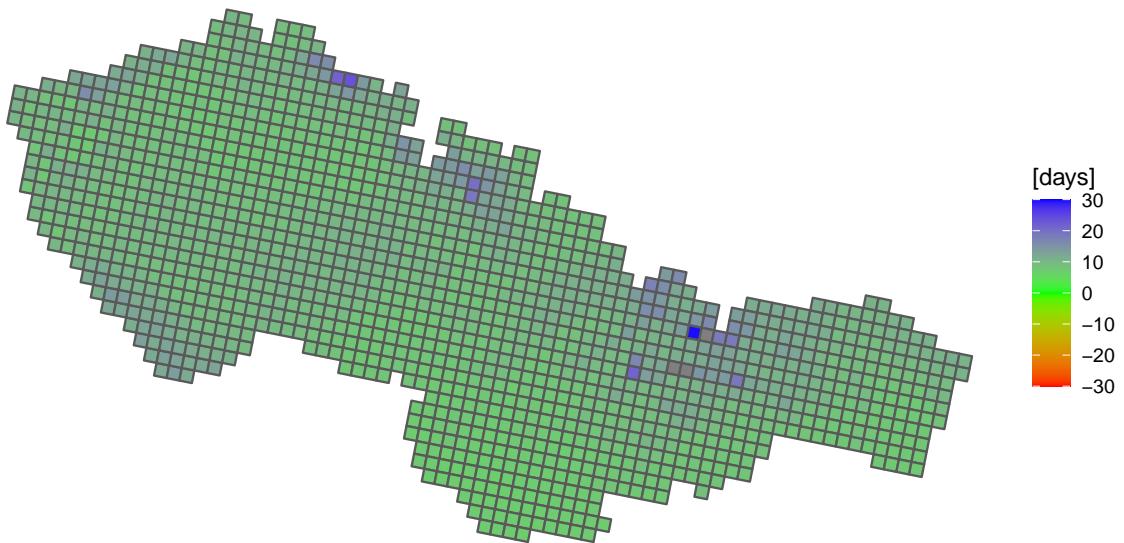
Average shift of IGMD from IPLD for winter wheat / scenario: s4c



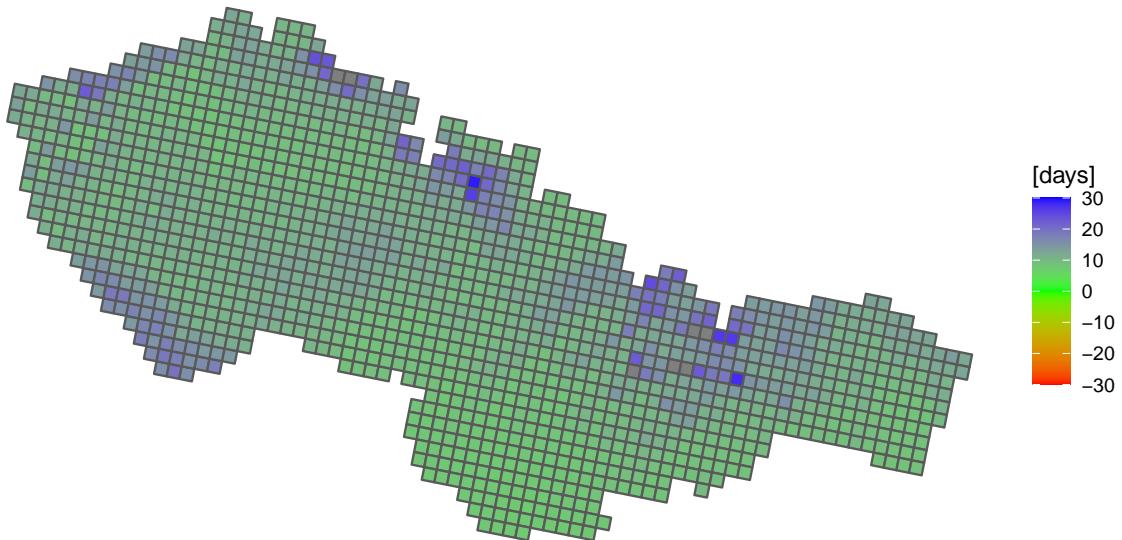
Average shift of IGMD from IPLD for winter wheat / scenario: s5a



Average shift of IGMD from IPLD for winter wheat / scenario: s5b

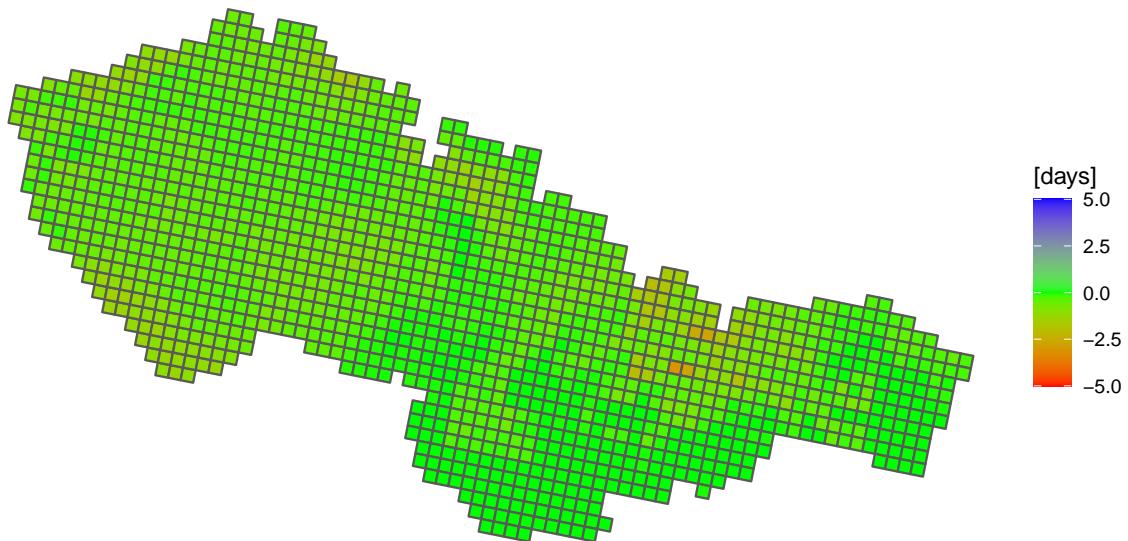


Average shift of IGMD from IPLD for winter wheat / scenario: s5c

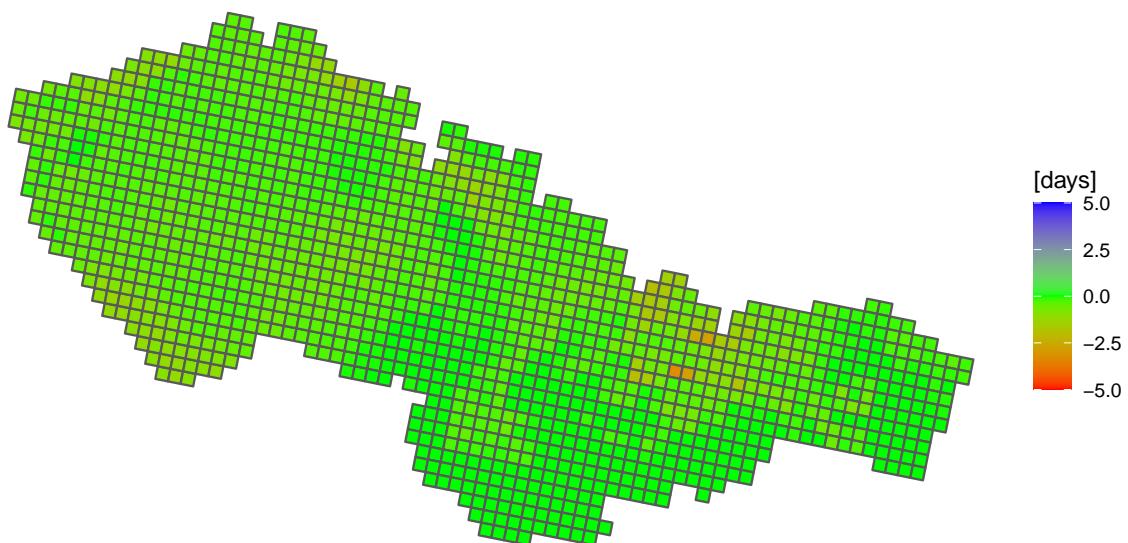


IHVD

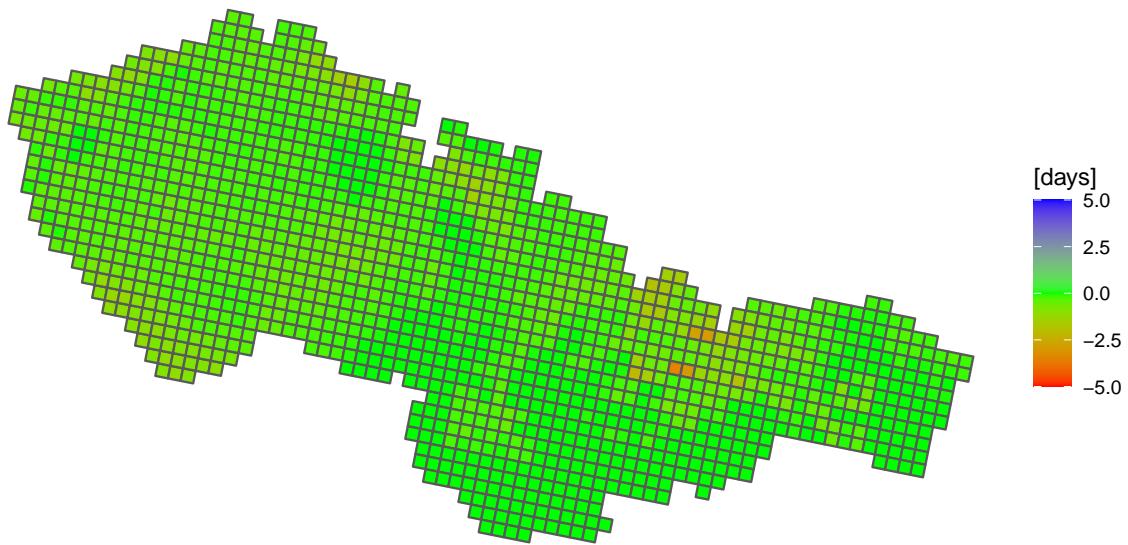
Average shift of given IHVD and actual IHVD for winter wheat / scenario: s1a



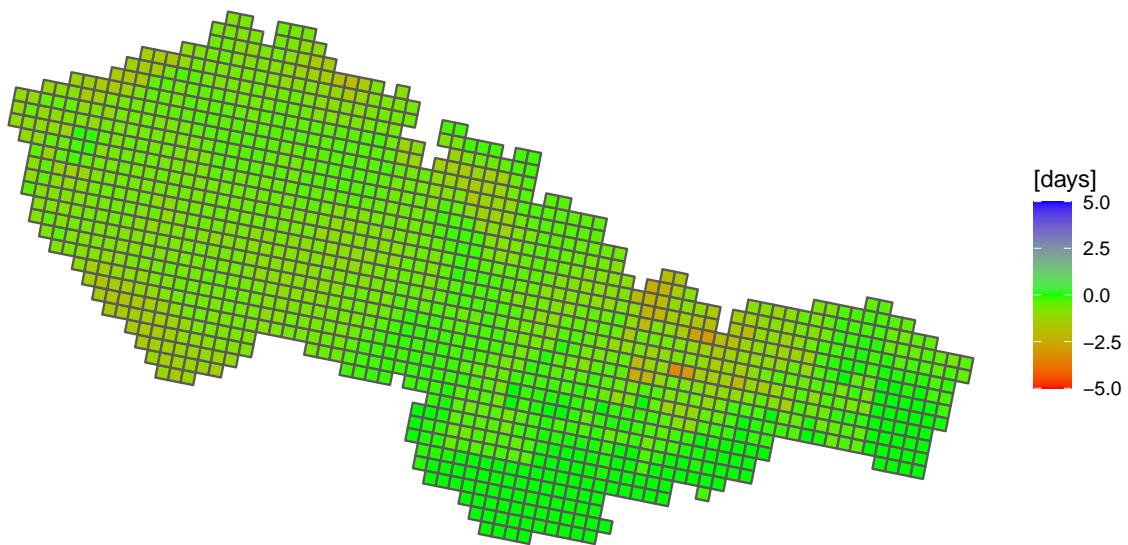
Average shift of given IHVD and actual IHVD for winter wheat / scenario: s1b



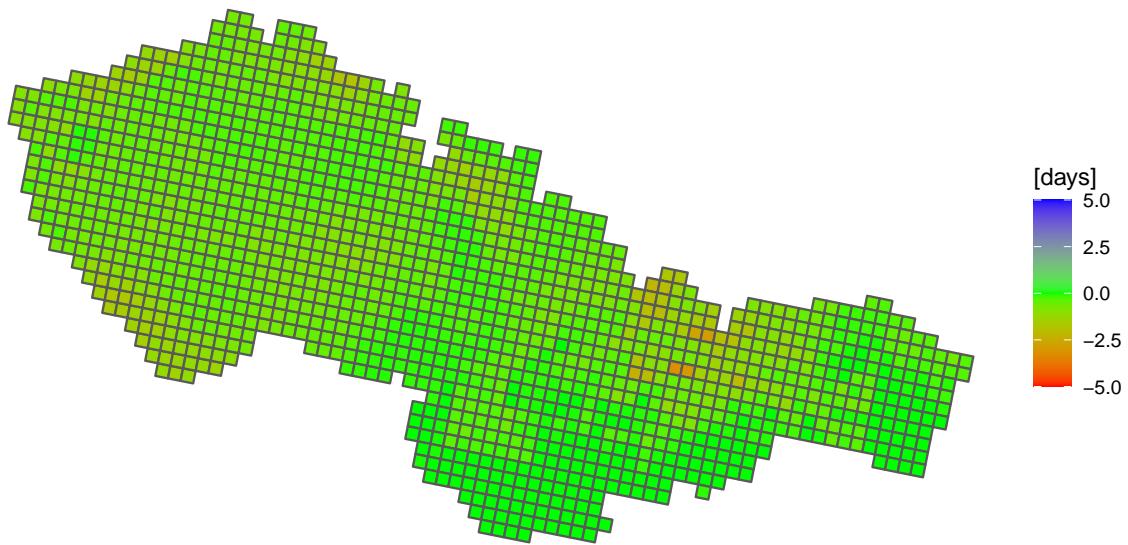
Average shift of given IHVD and actual IHVD for winter wheat / scenario: s1c



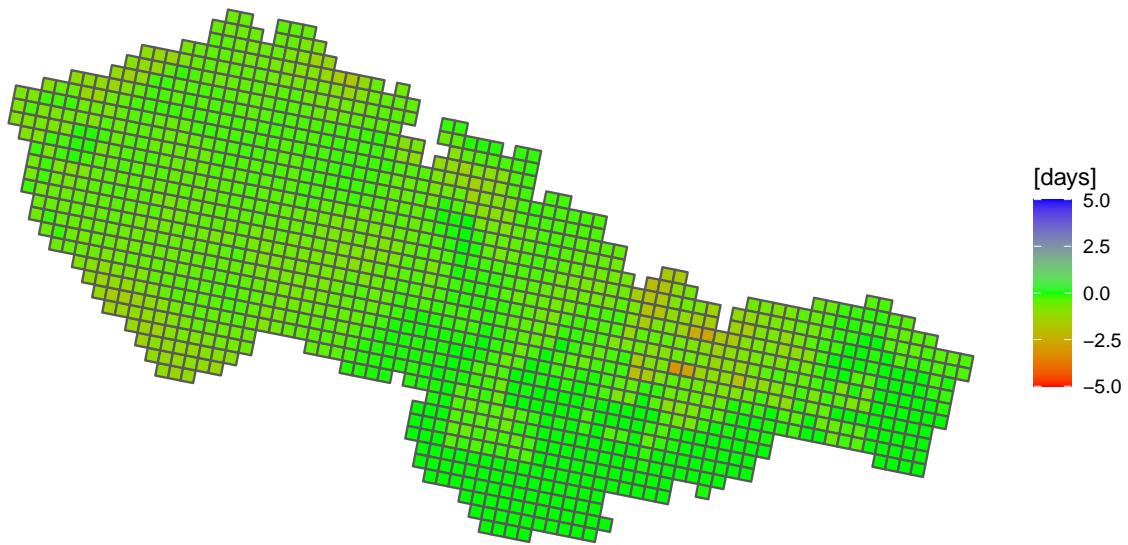
Average shift of given IHVD and actual IHVD for winter wheat / scenario: s2a



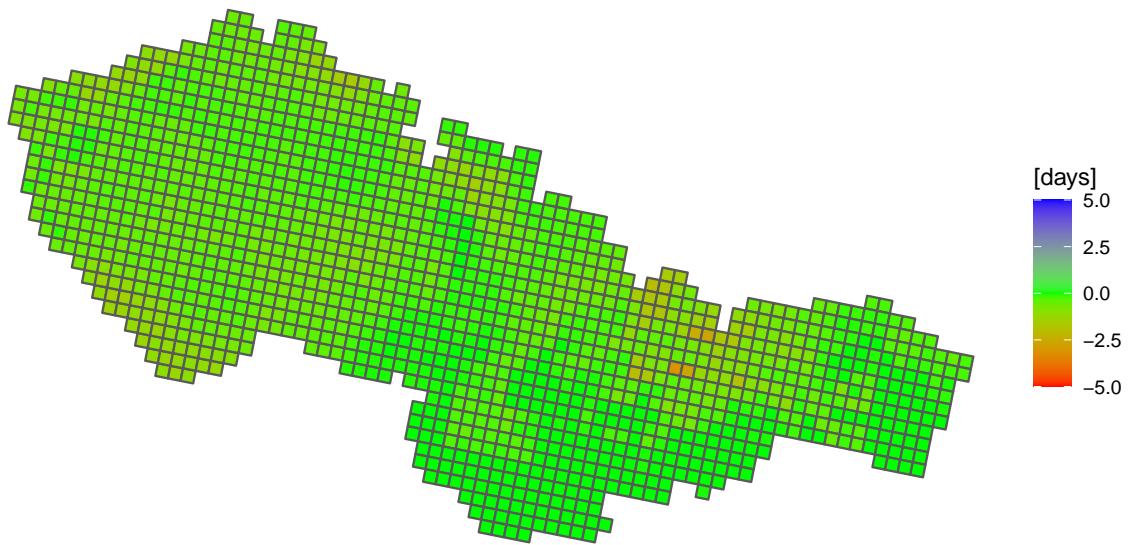
Average shift of given IHVD and actual IHVD for winter wheat / scenario: s2b



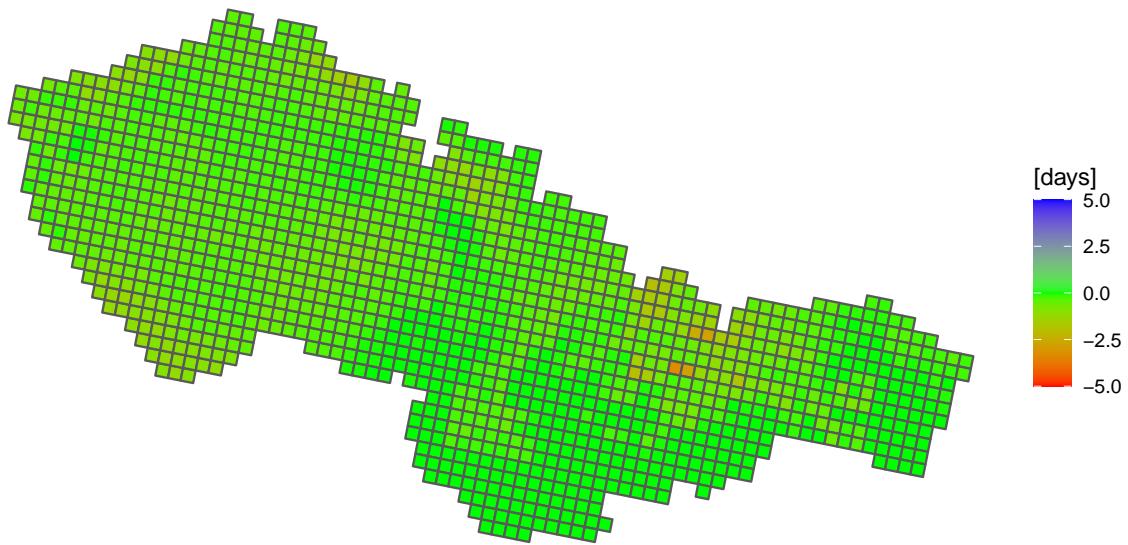
Average shift of given IHVD and actual IHVD for winter wheat / scenario: s2c



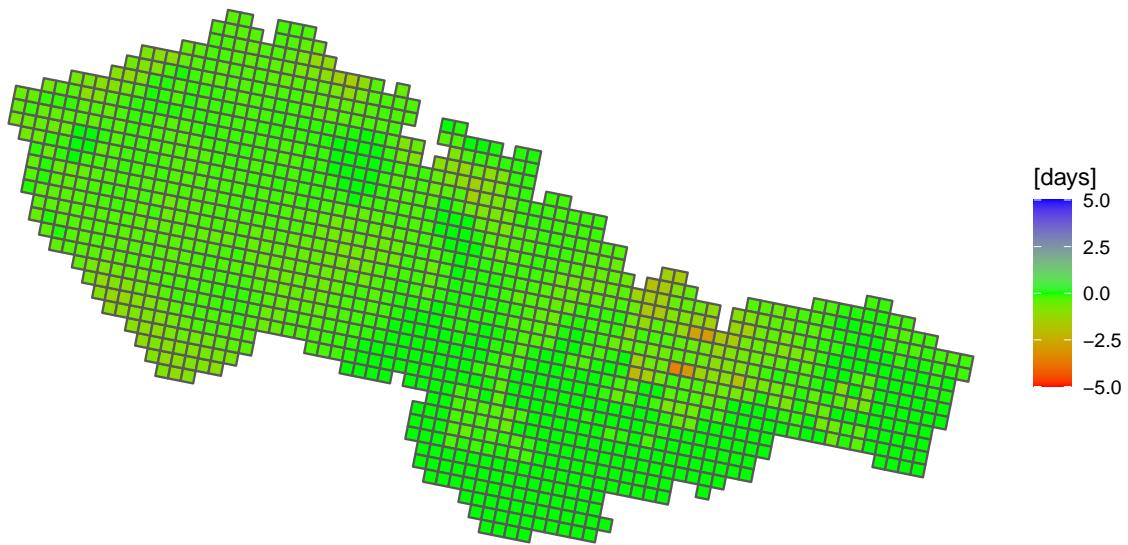
Average shift of given IHVD and actual IHVD for winter wheat / scenario: s3a



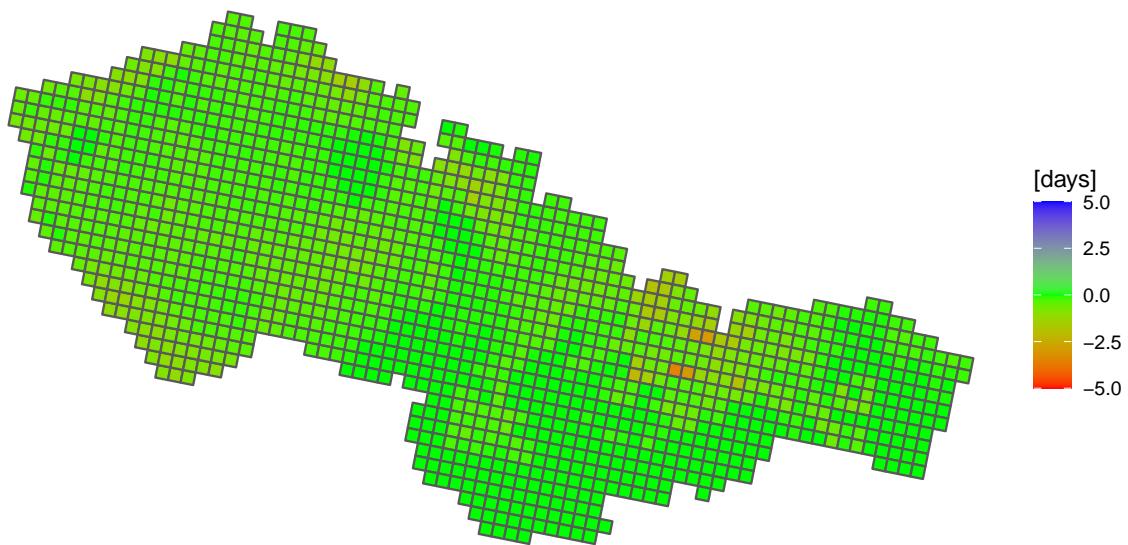
Average shift of given IHVD and actual IHVD for winter wheat / scenario: s3b



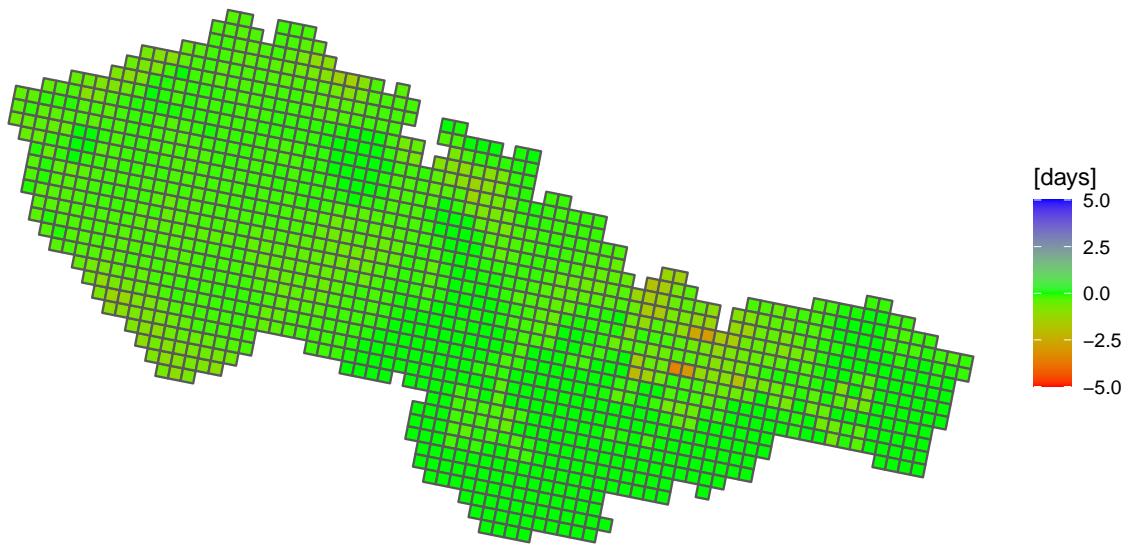
Average shift of given IHVD and actual IHVD for winter wheat / scenario: s3c



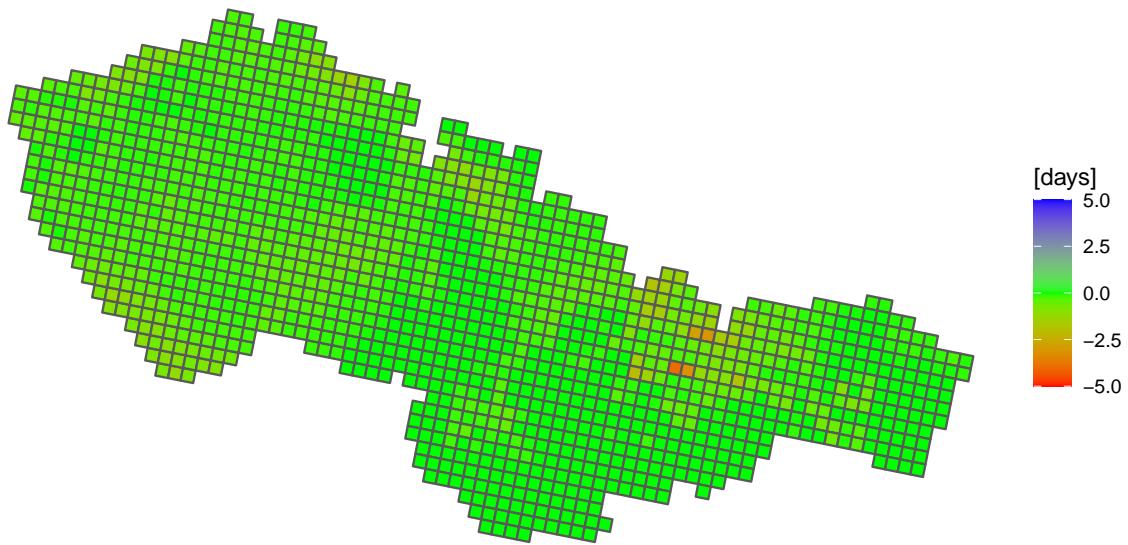
Average shift of given IHVD and actual IHVD for winter wheat / scenario: s4a



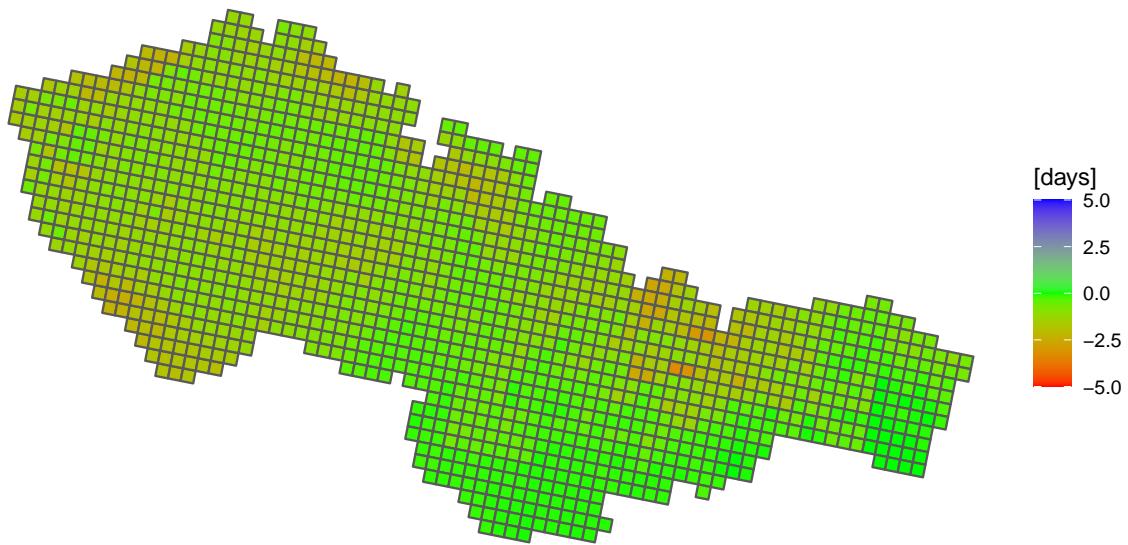
Average shift of given IHVD and actual IHVD for winter wheat / scenario: s4b



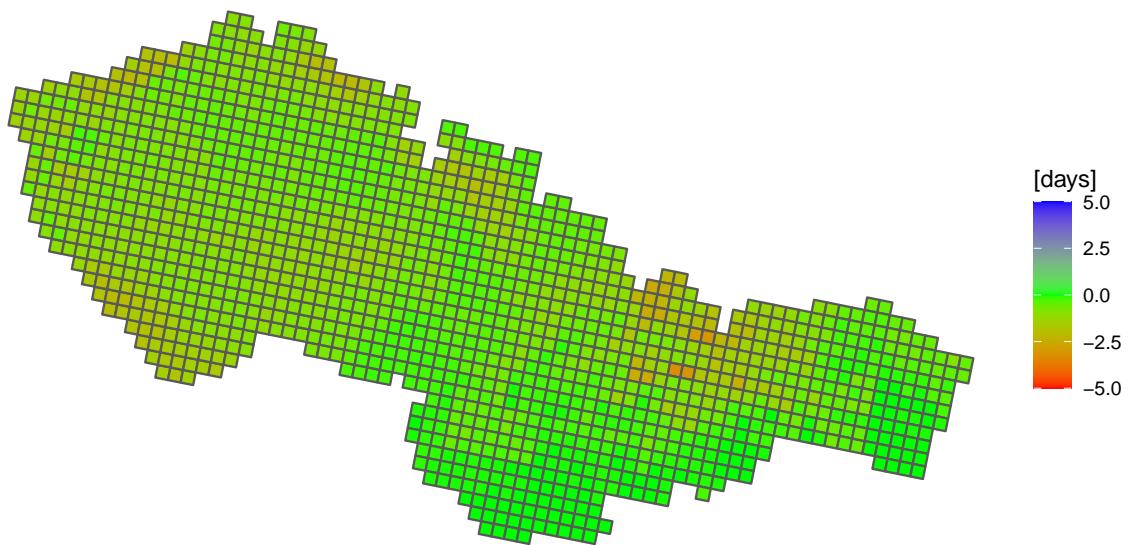
Average shift of given IHVD and actual IHVD for winter wheat / scenario: s4c



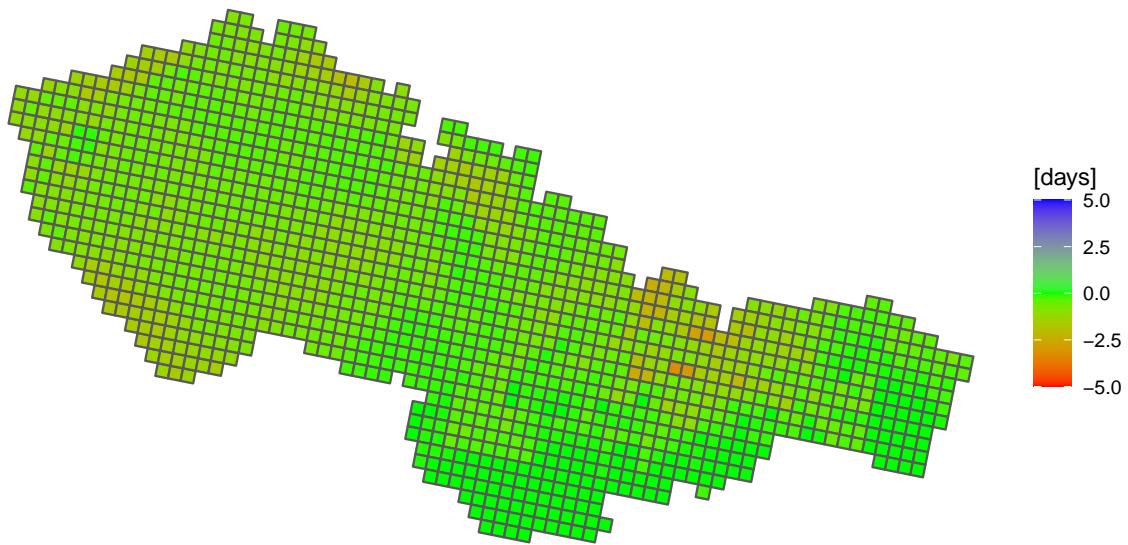
Average shift of given IHVD and actual IHVD for winter wheat / scenario: s5a



Average shift of given IHVD and actual IHVD for winter wheat / scenario: s5b



Average shift of given IHVD and actual IHVD for winter wheat / scenario: s5c



SELECTING SCENARIO

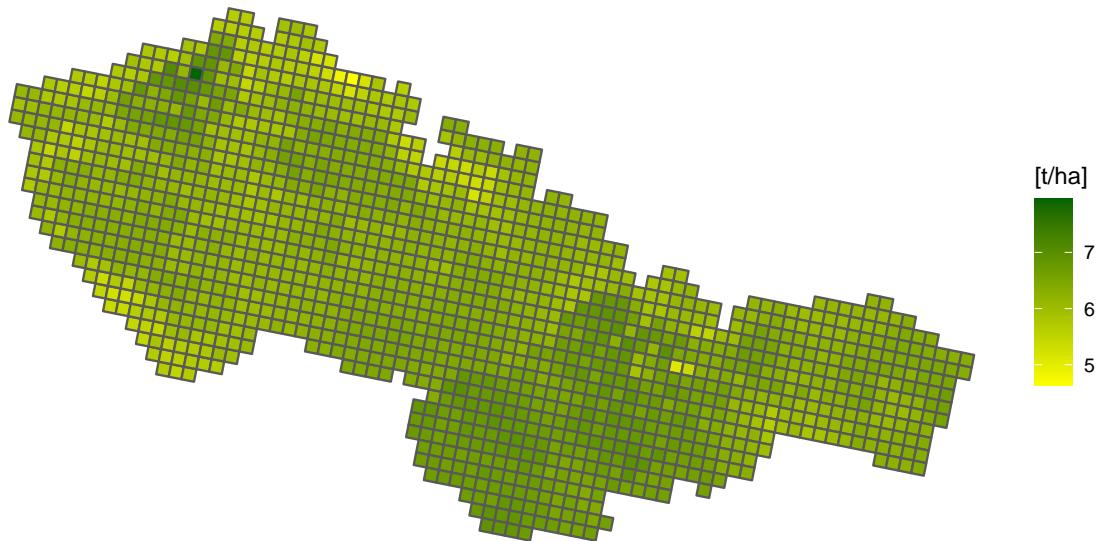
BASED ON IPLD

```
## s1a s3a  
## 1421 1
```

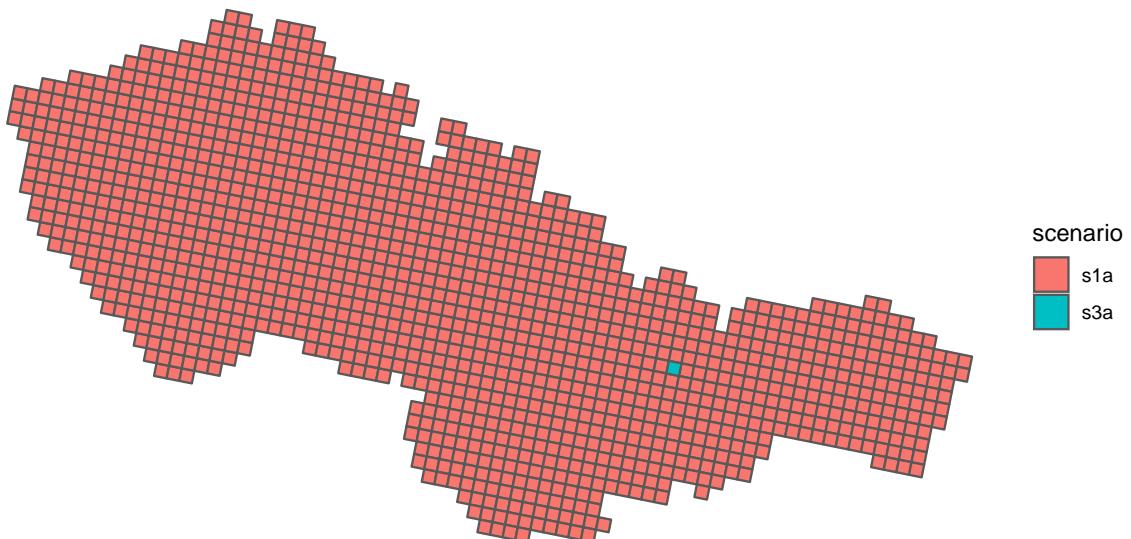
Table 2: Selected cultivars of winter wheat based on IPLD

runid	PLN_JUL	HRV_JUL	LVP	sow_dat	PLN_MONPLN_DAY	hrv_dat	HRV_MONHRV_DAY
s1a	263	212	314	920	9	20	731
s3a	253	212	324	910	9	10	731

Average yield of winter wheat in 1989–2019



Selected planting scenarios for winter wheat based on IPLD



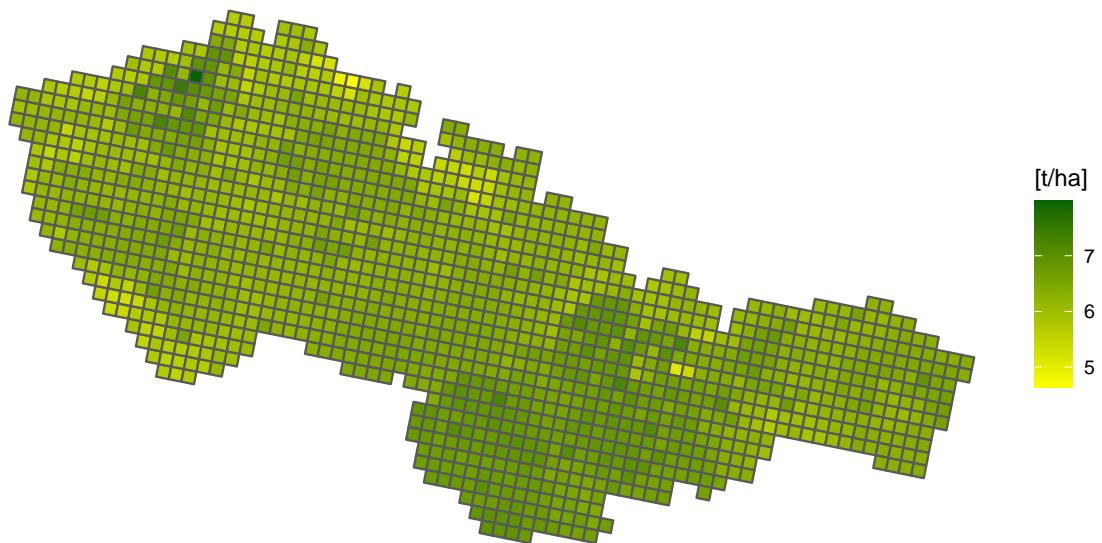
BASED ON IGMD

```
##   s3a   s4a
## 1363    59
```

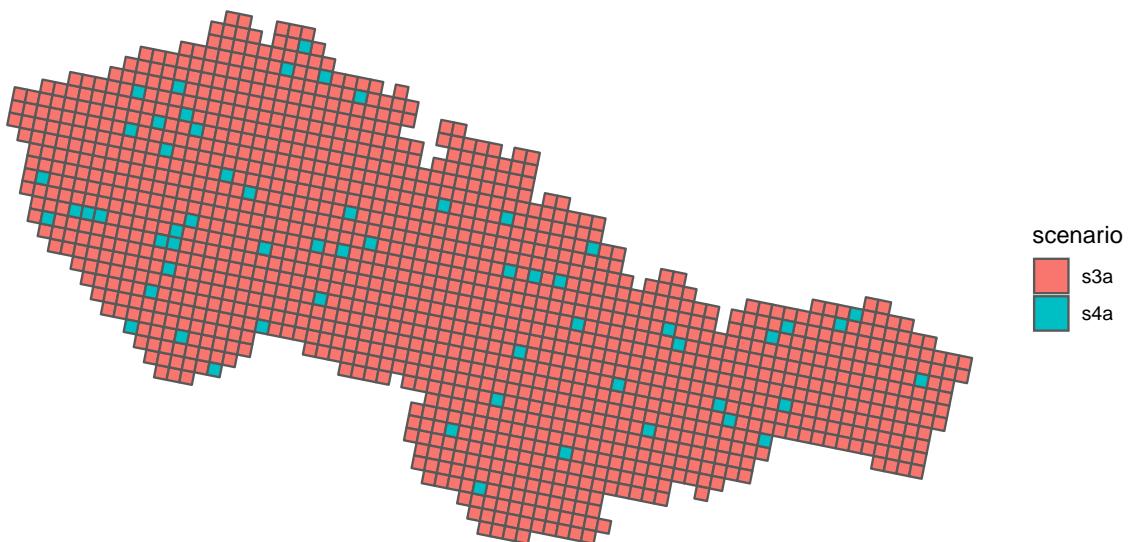
Table 3: Selected cultivars of winter wheat based on IGMD

runid	PLN_JUL	HRV_JUL	LVP	sow_dat	PLN_MON	PLN_DAY	hrv_dat	HRV_MON	HRV_DAY
s3a	253	212	324	910	9	10	731	7	31
s4a	253	222	334	910	9	10	810	8	10

Average yield of winter wheat in 1989–2019



Selected planting scenarios for winter wheat based on IGMD

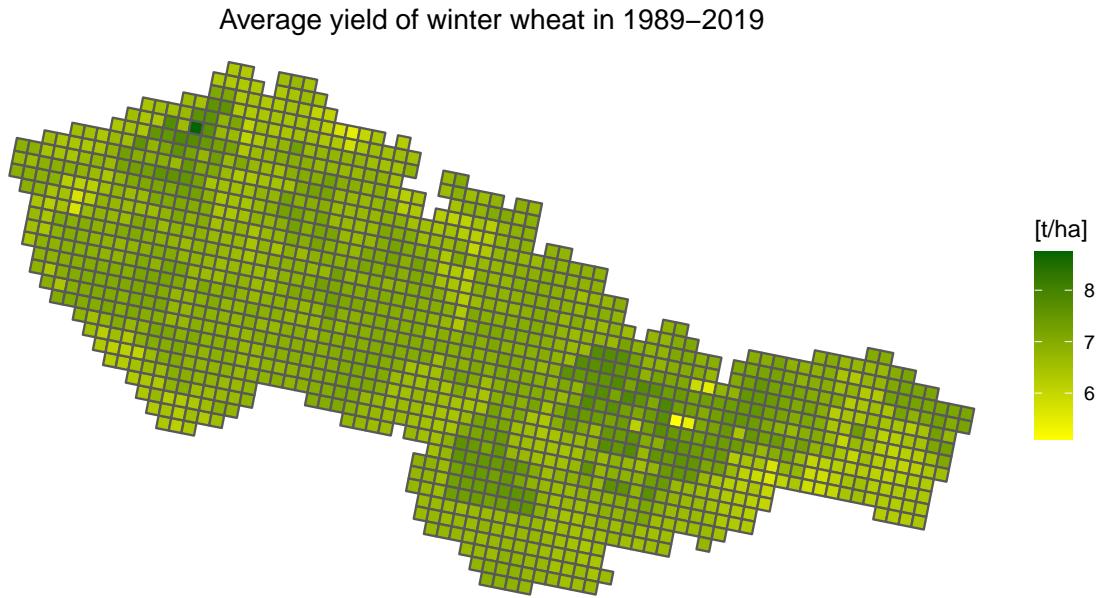


BASED ON IHVD

```
## s1a s1b s1c s2a s2b s4b s4c
## 263 56 61 2 1 138 901
```

Table 4: Selected cultivars of winter wheat based on IHVD

runid	PLN_JUL	HRV_JUL	LVP	sow_dat	PLN_MON	PLN_DAY	hrv_dat	HRV_MON	HRV_DAY
s1a	263	212	314	920	9	20	731	7	31
s1b	268	217	314	925	9	25	805	8	5
s1c	273	222	314	930	9	30	810	8	10
s2a	263	201	303	920	9	20	720	7	20
s2b	268	206	303	925	9	25	725	7	25
s4b	258	227	334	915	9	15	815	8	15
s4c	263	232	334	920	9	20	820	8	20



Selected planting scenarios for winter wheat based on IHVD

