

# diagnostic\_plots

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Diagnostic plots (8/4/2022)

look at each variable against chl, by region and inundation season

look at each variable against dowy with chl and possible interactions

```
library(ggplot2)
library(lubridate)
```

```
##
## Attaching package: 'lubridate'

## The following objects are masked from 'package:base':
##
##   date, intersect, setdiff, union
```

```
library(dplyr)
```

```
##
## Attaching package: 'dplyr'

## The following objects are masked from 'package:stats':
##
##   filter, lag

## The following objects are masked from 'package:base':
##
##   intersect, setdiff, setequal, union
```

```
library(tidyverse)
```

```
## -- Attaching packages ----- tidyverse 1.3.1 --

## v tibble  3.1.7      v purrr   0.3.4
## v tidyr   1.2.0      v stringr 1.4.0
## v readr    2.1.2      v forcats 0.5.1
```

```
## -- Conflicts ----- tidyverse_conflicts() --
## x lubridate::as.difftime() masks base::as.difftime()
## x lubridate::date() masks base::date()
## x dplyr::filter() masks stats::filter()
## x lubridate::intersect() masks base::intersect()
## x dplyr::lag() masks stats::lag()
## x lubridate::setdiff() masks base::setdiff()
## x lubridate::union() masks base::union()
```

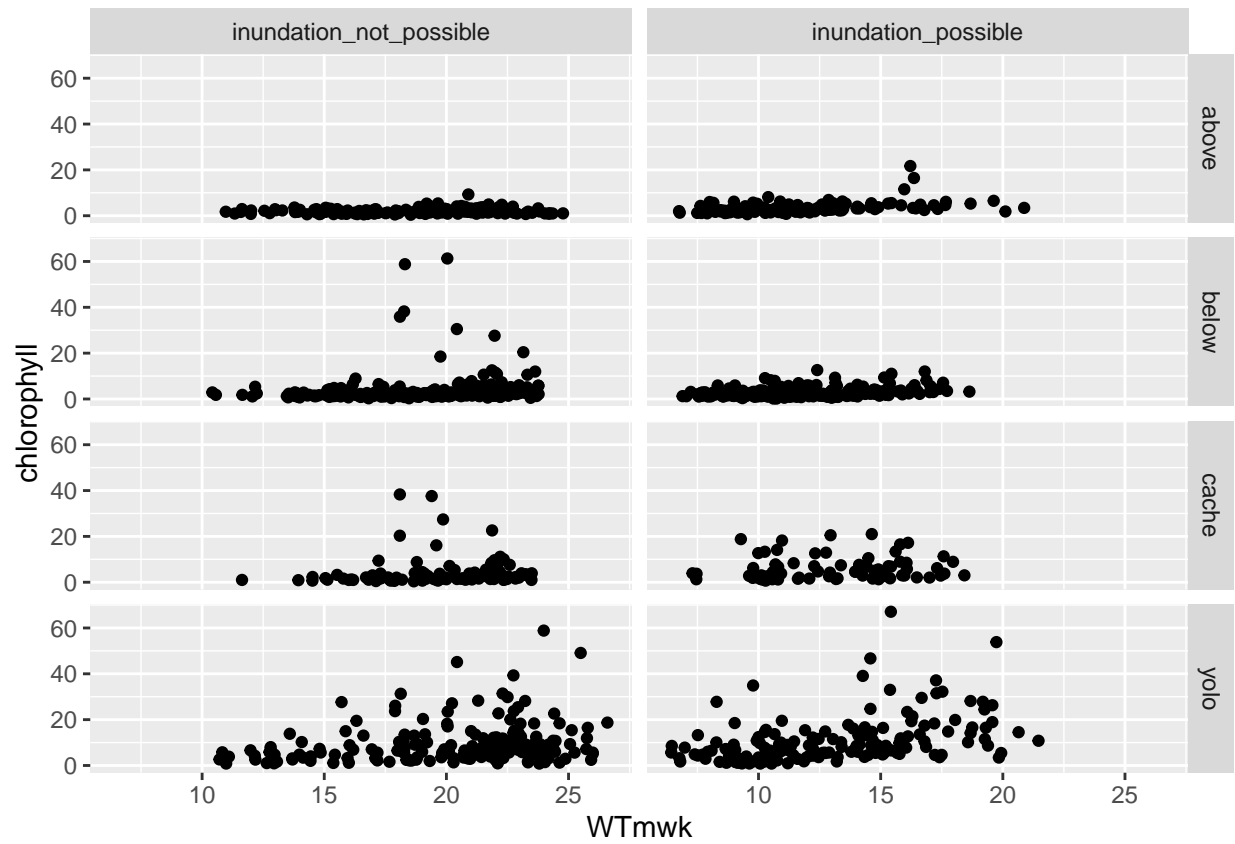
## Get data

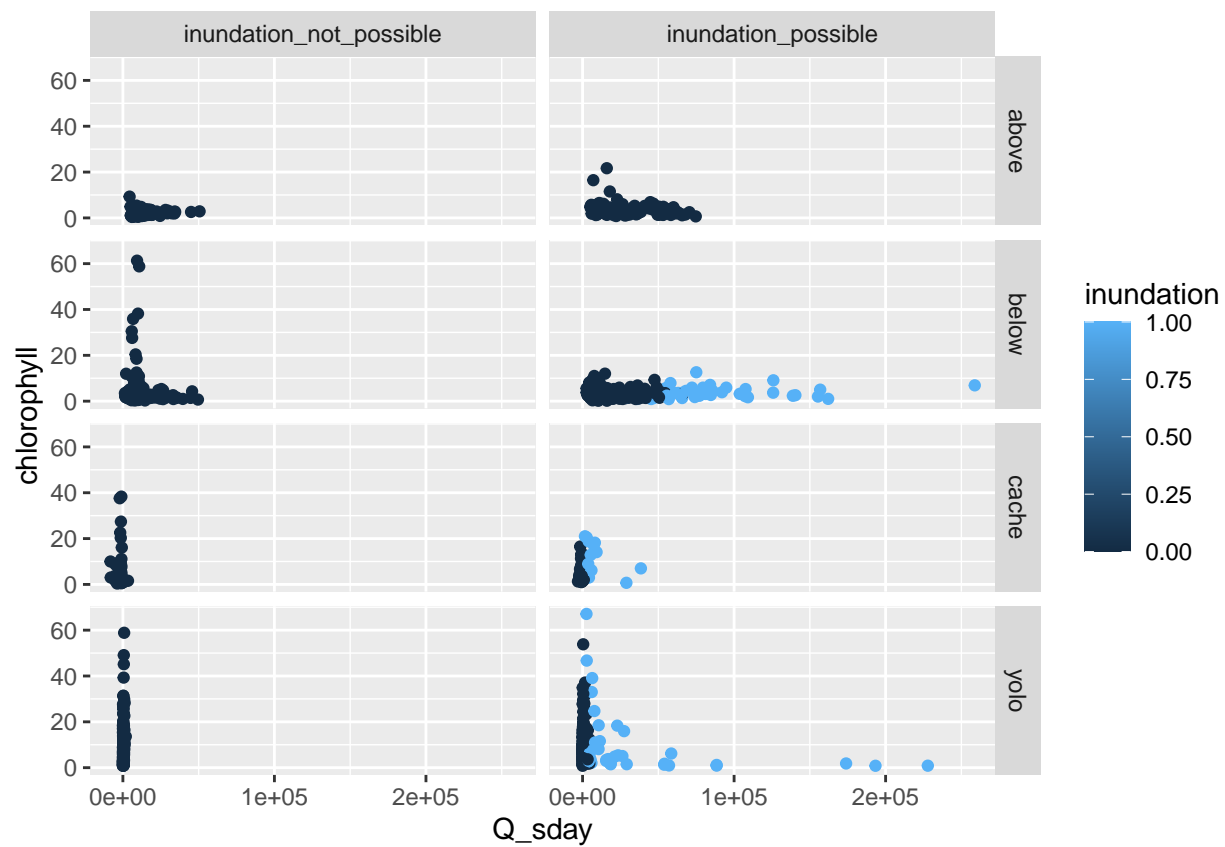
```
## Rows: 1397 Columns: 22
## -- Column specification -----
## Delimiter: ","
## chr (4): station_wq_chl, region, source, unique_id
## dbl (17): chlorophyll, doy1998, latitude, longitude, din, diss_orthophos, w...
## date (1): date
##
## i Use 'spec()' to retrieve the full column specification for this data.
## i Specify the column types or set 'show_col_types = FALSE' to quiet this message.

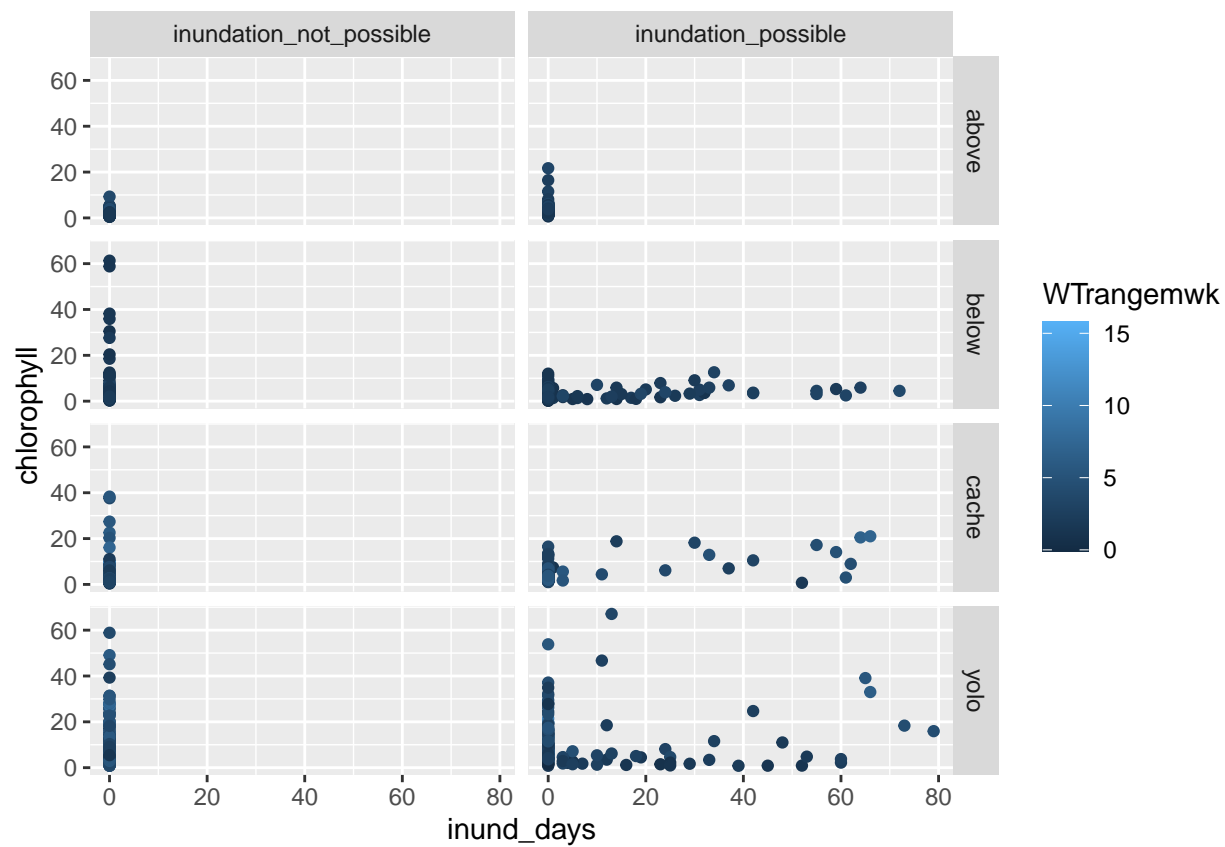
## [1] 65

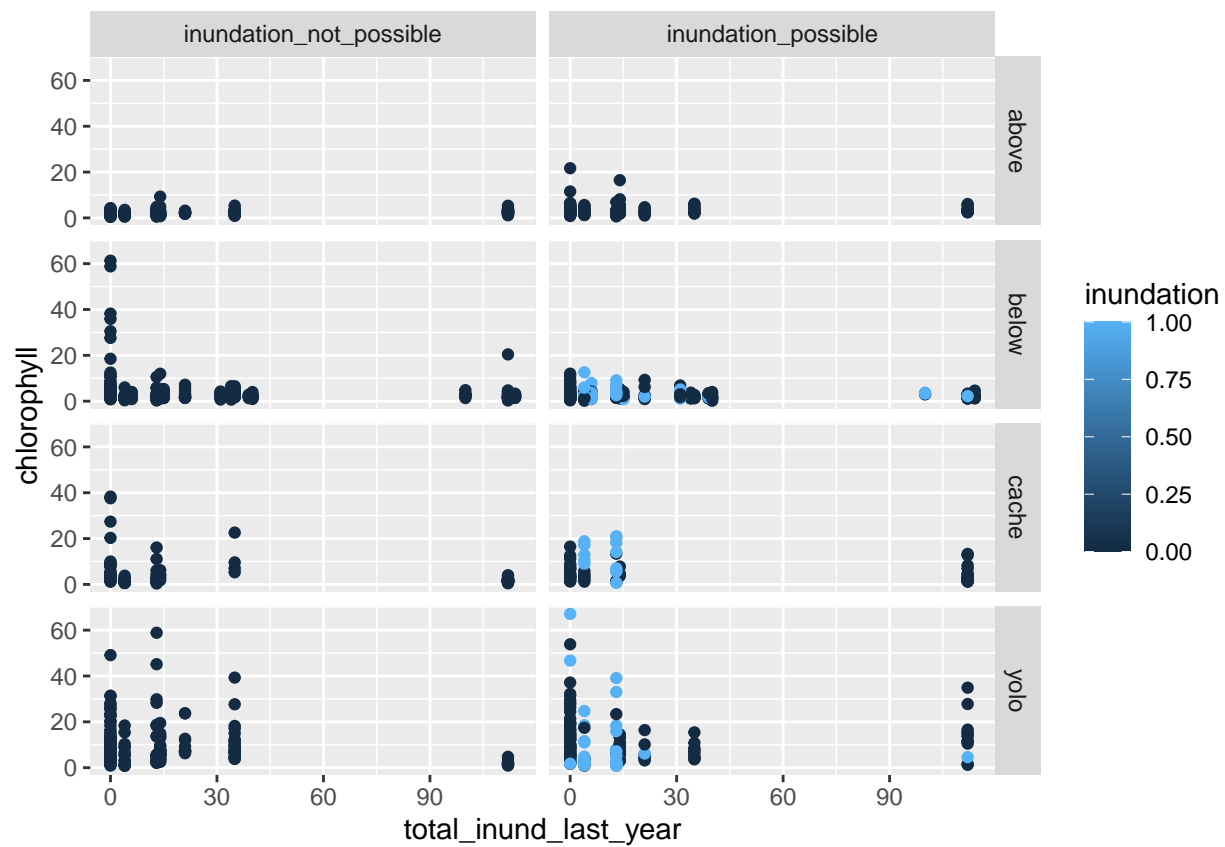
## [1] 215
```

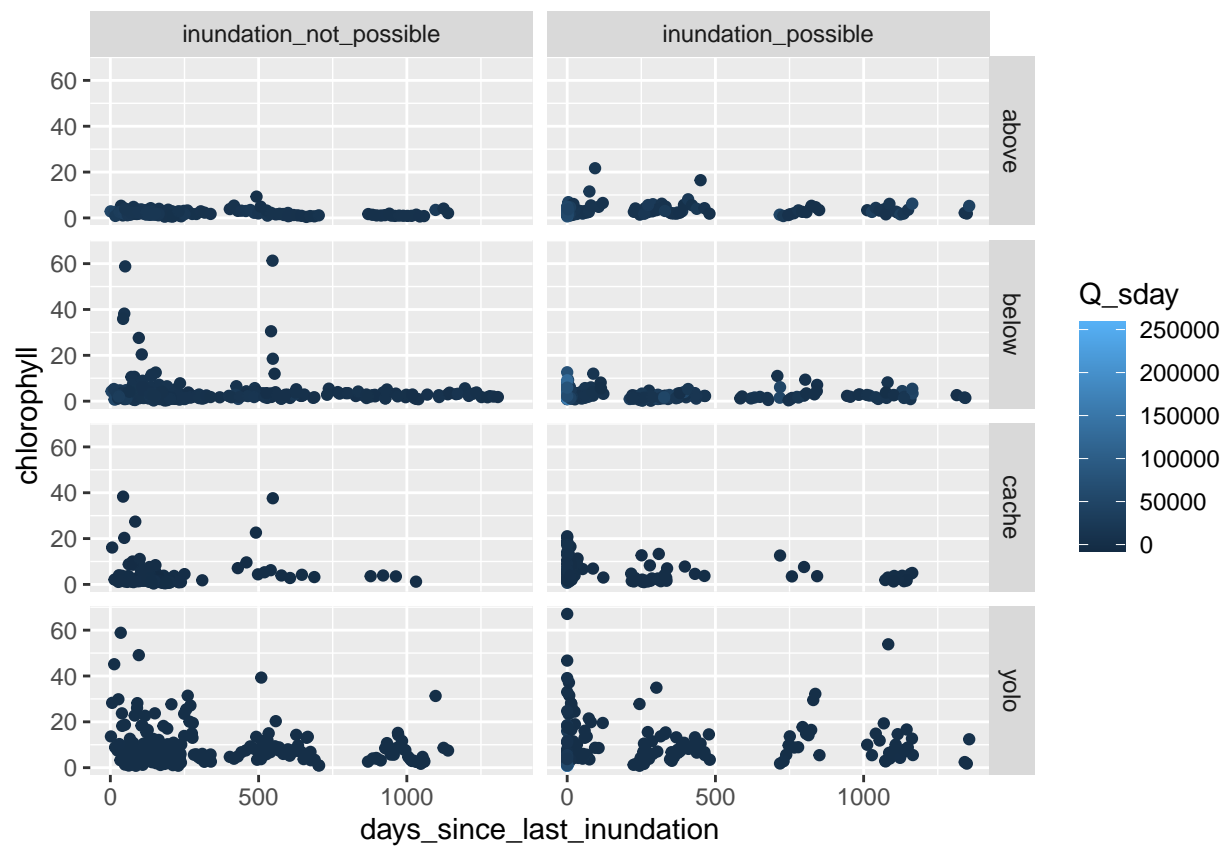
each variable

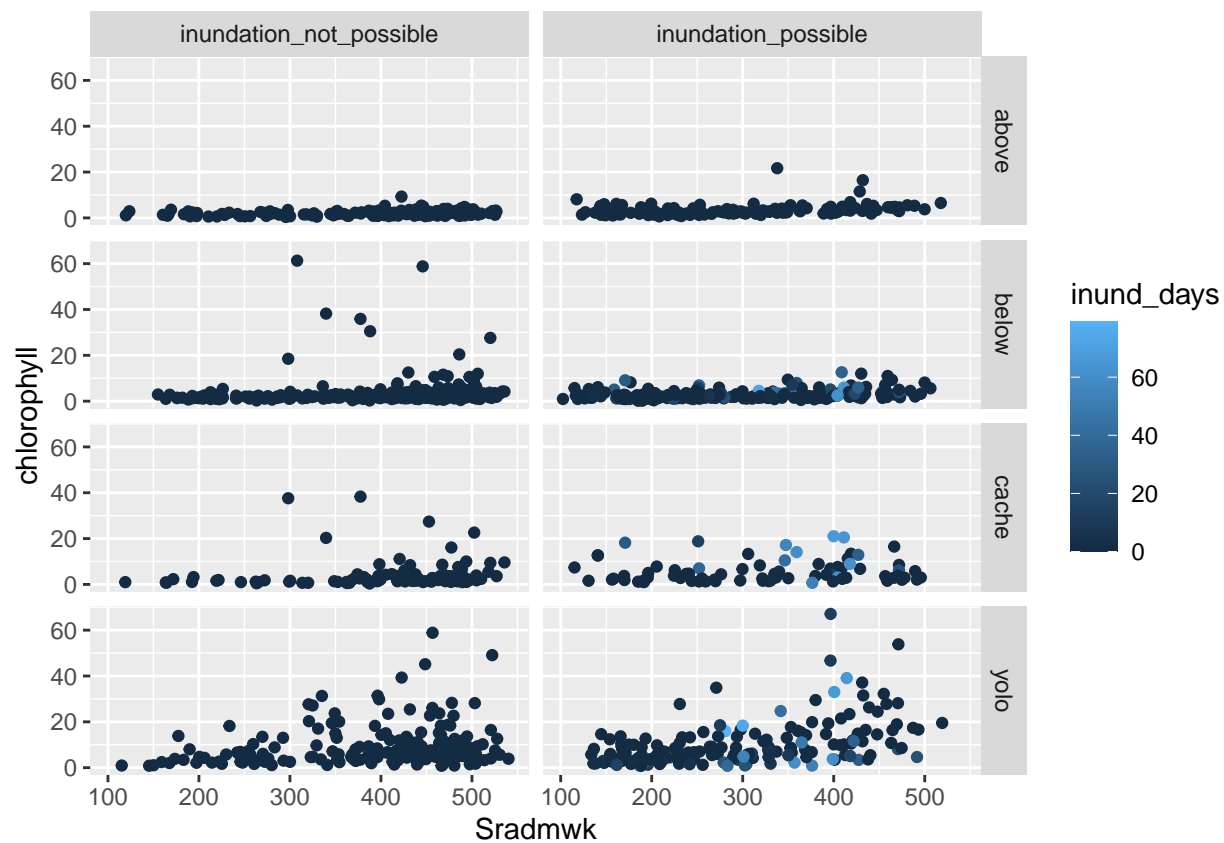










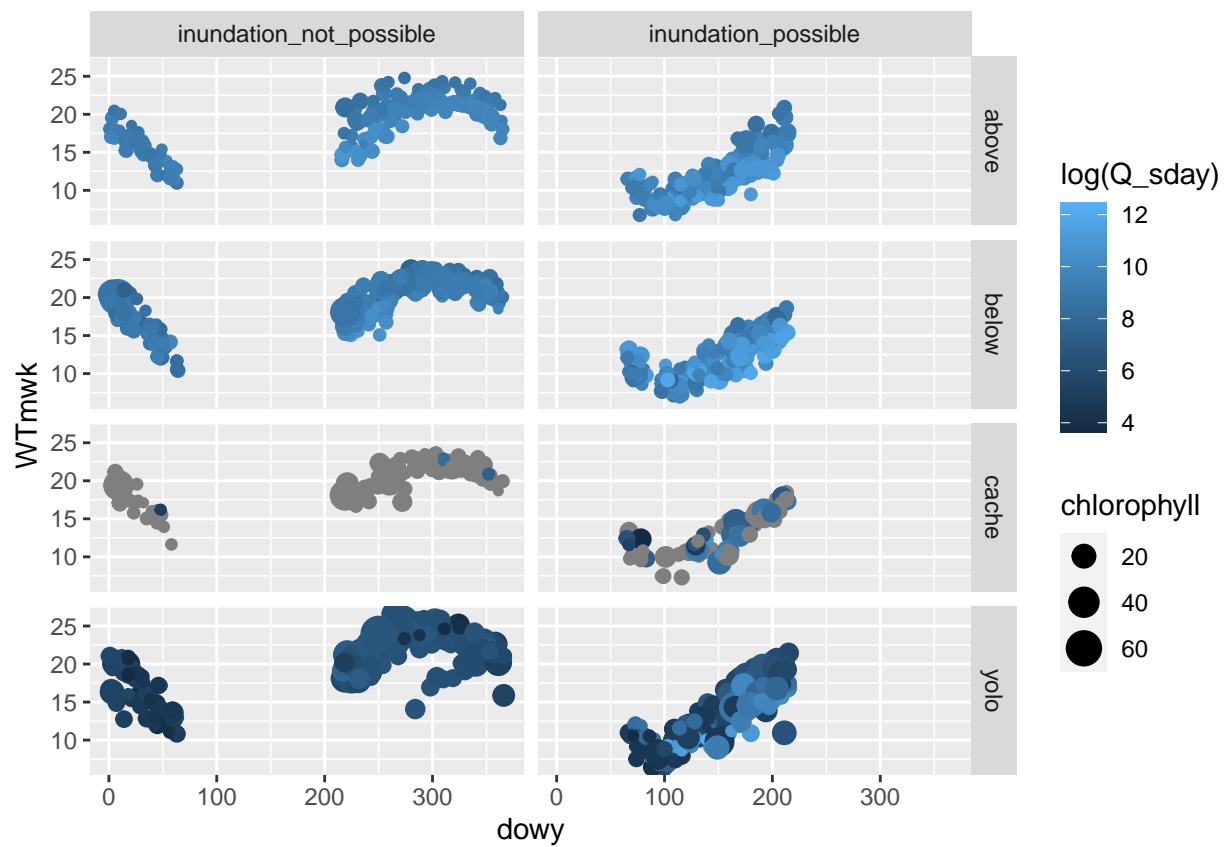


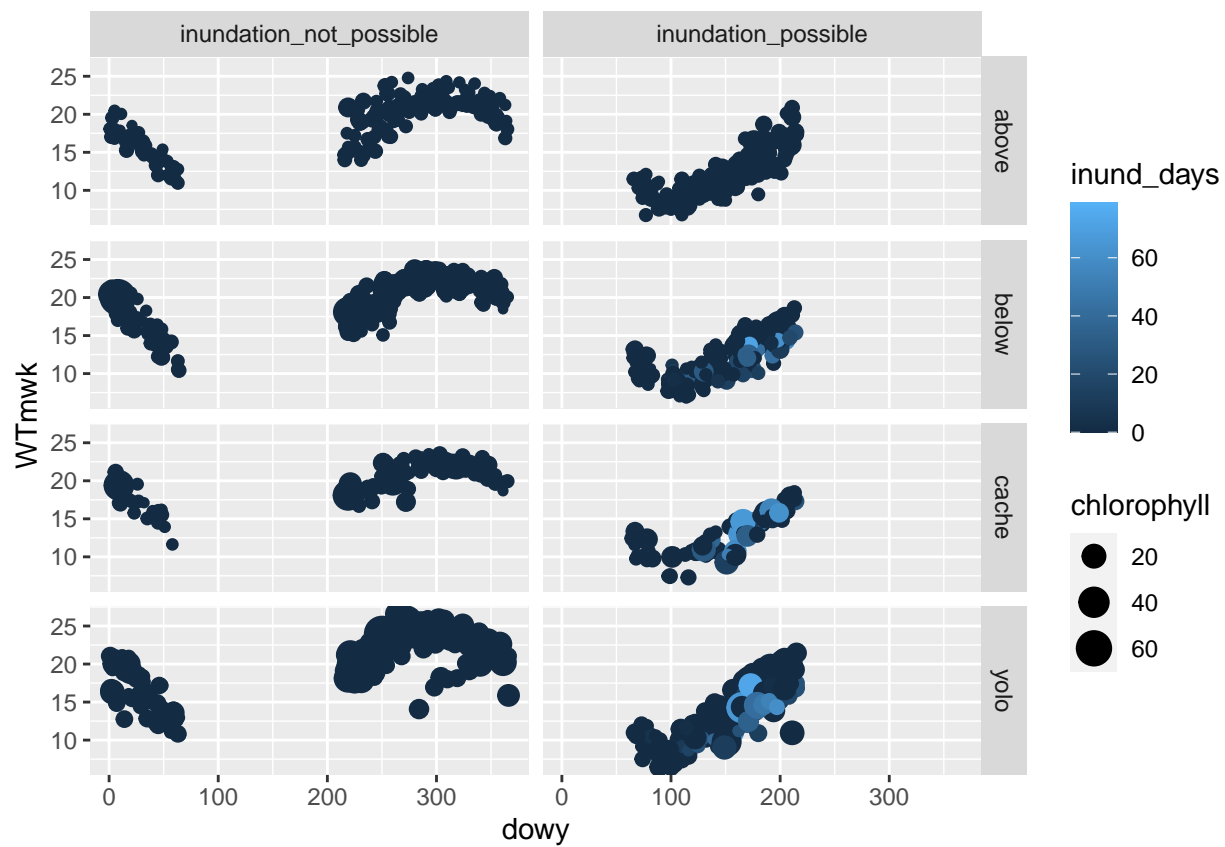
day of water year vs mean water temperature for the week

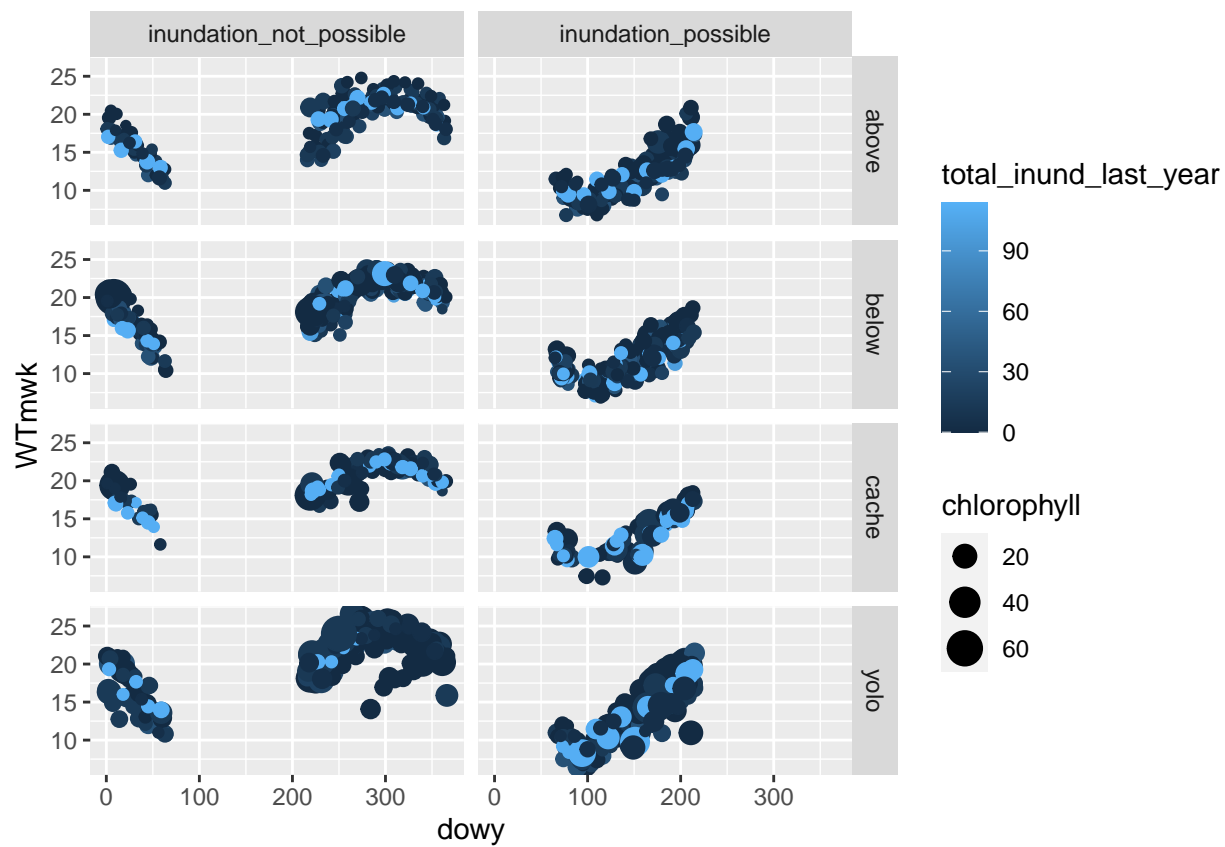
```
## Warning in log(Q_sday): NaNs produced
```

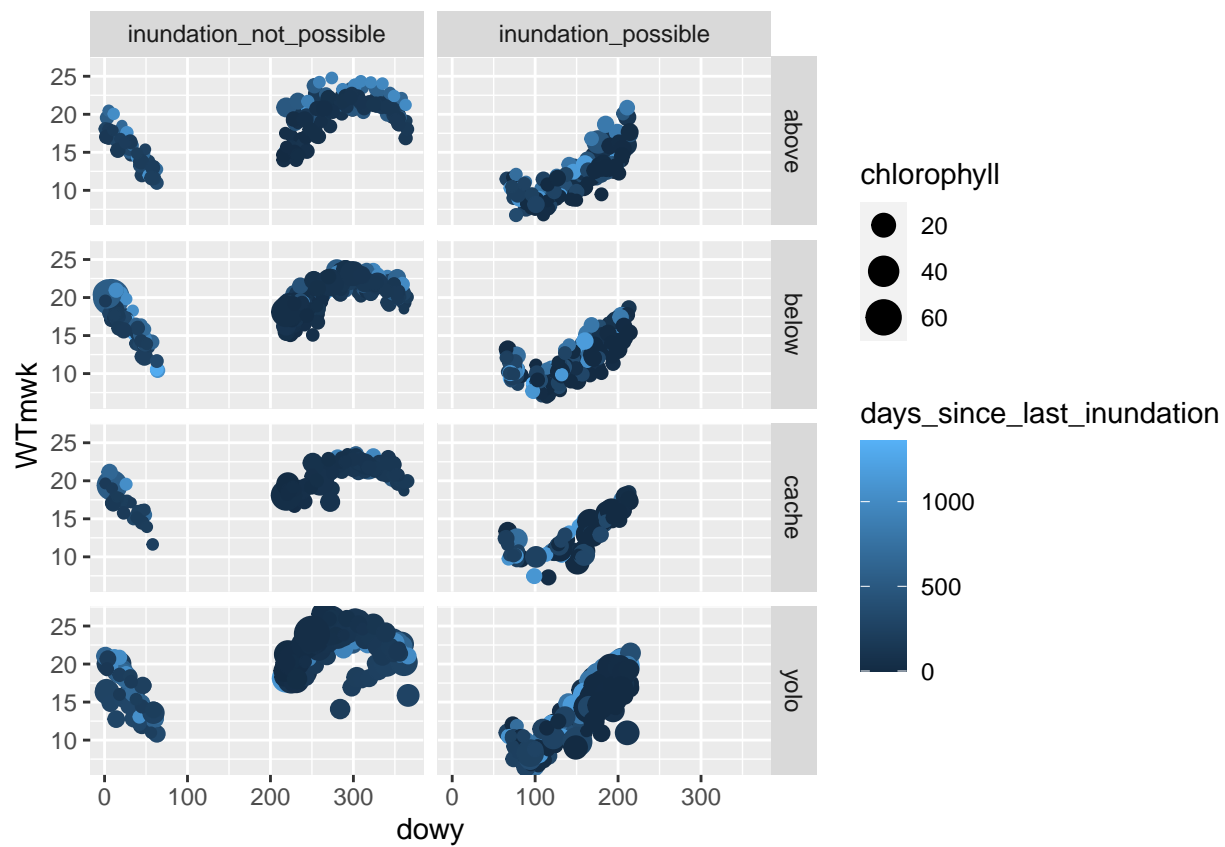
```
## Warning in log(Q_sday): NaNs produced
```

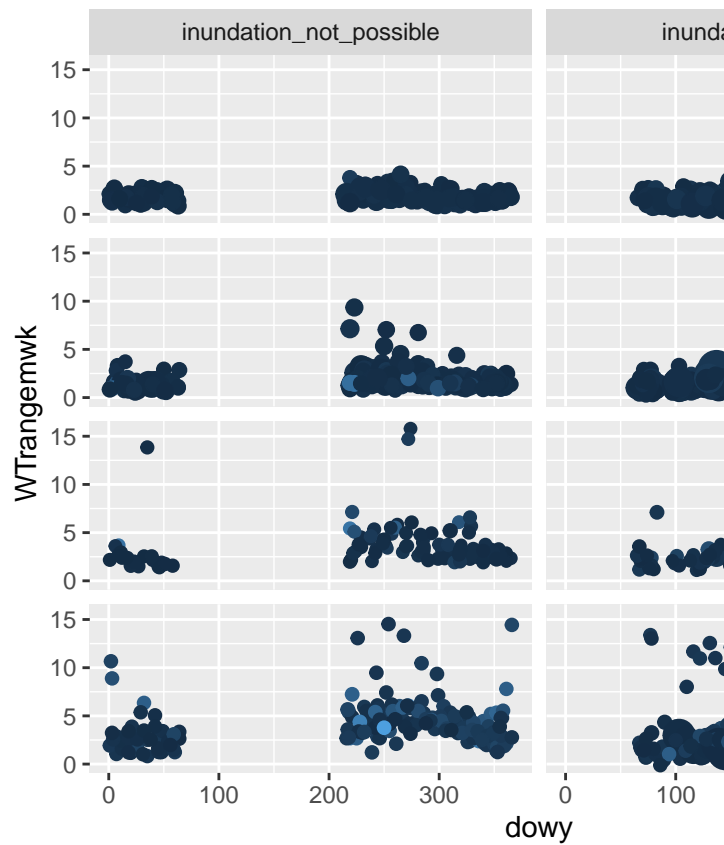




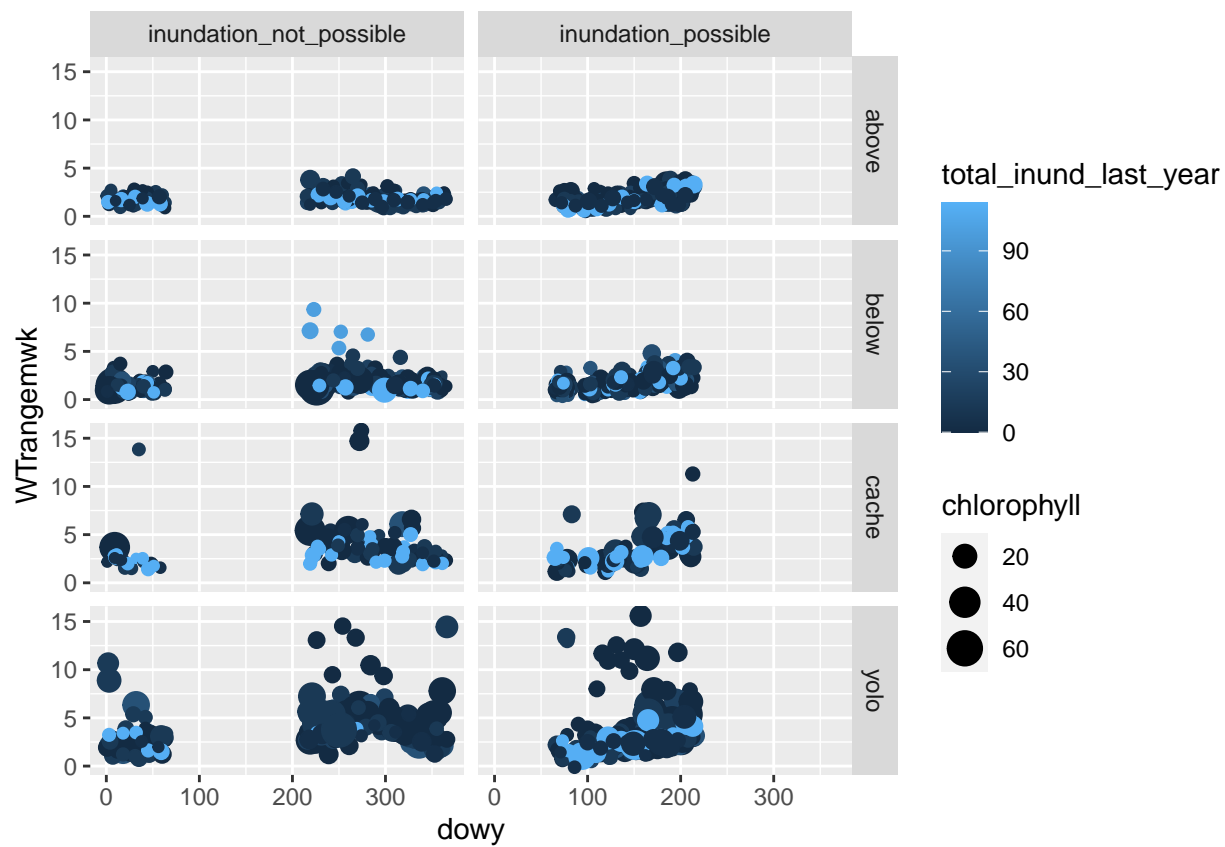


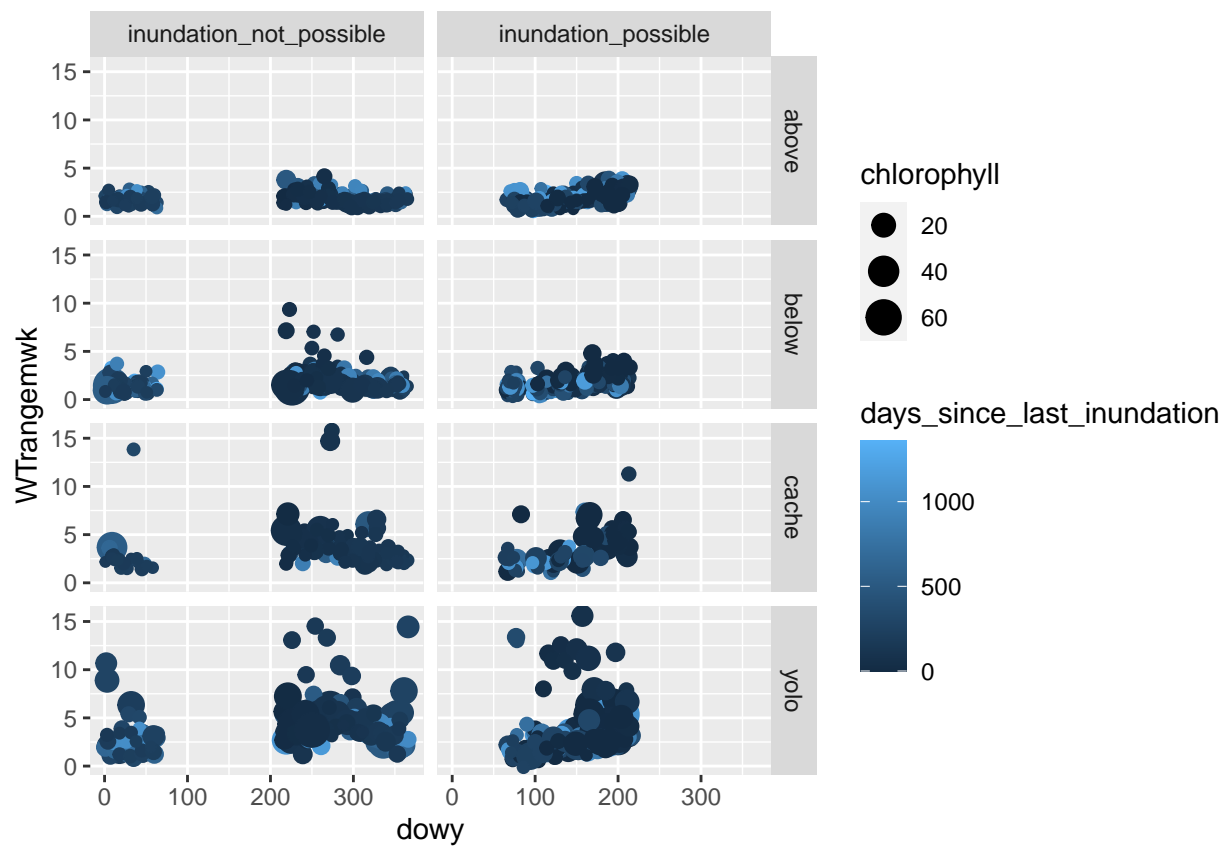




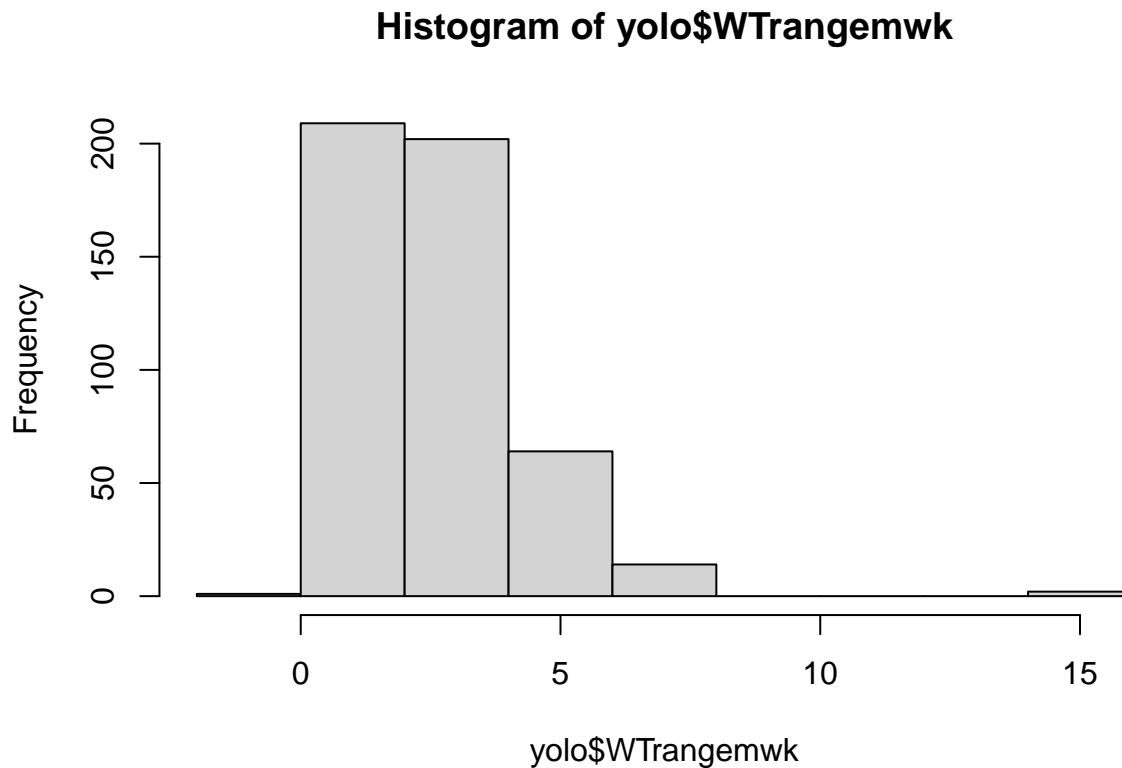


# day of water year vs range in water temperature for the week



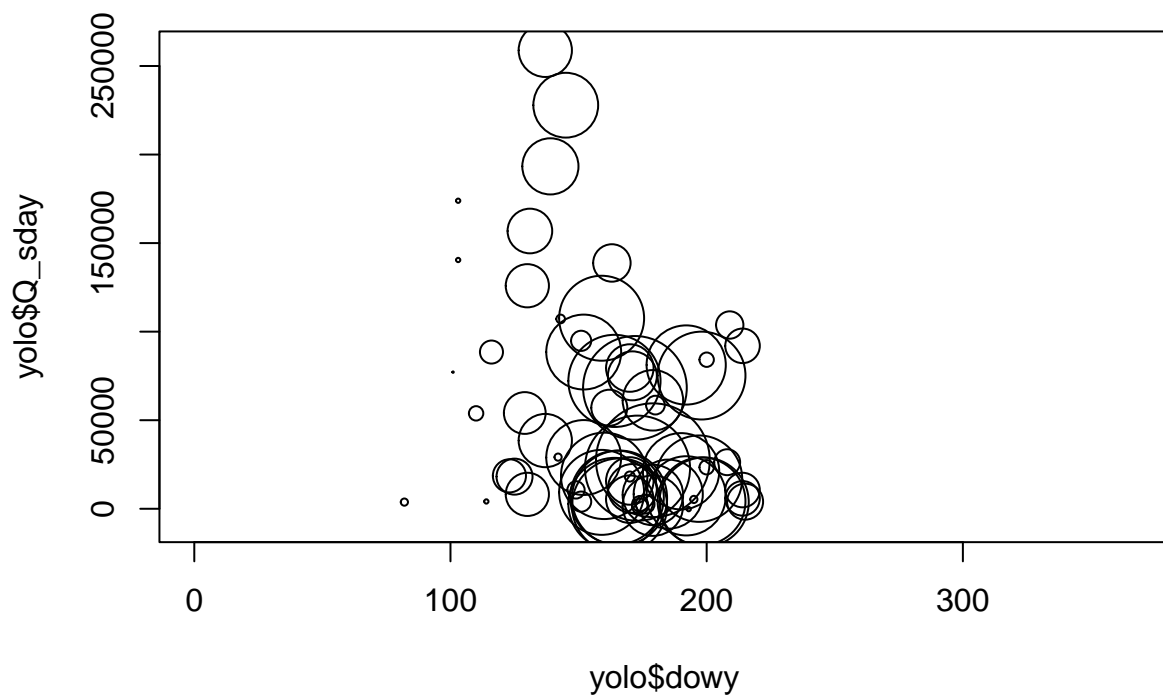


look into drainage period for yolo



```
## Warning in plot.window(...): "color" is not a graphical parameter
## Warning in plot.xy(xy, type, ...): "color" is not a graphical parameter
## Warning in axis(side = side, at = at, labels = labels, ...): "color" is not a
## graphical parameter
## Warning in axis(side = side, at = at, labels = labels, ...): "color" is not a
## graphical parameter
## Warning in box(...): "color" is not a graphical parameter
## Warning in title(...): "color" is not a graphical parameter
```

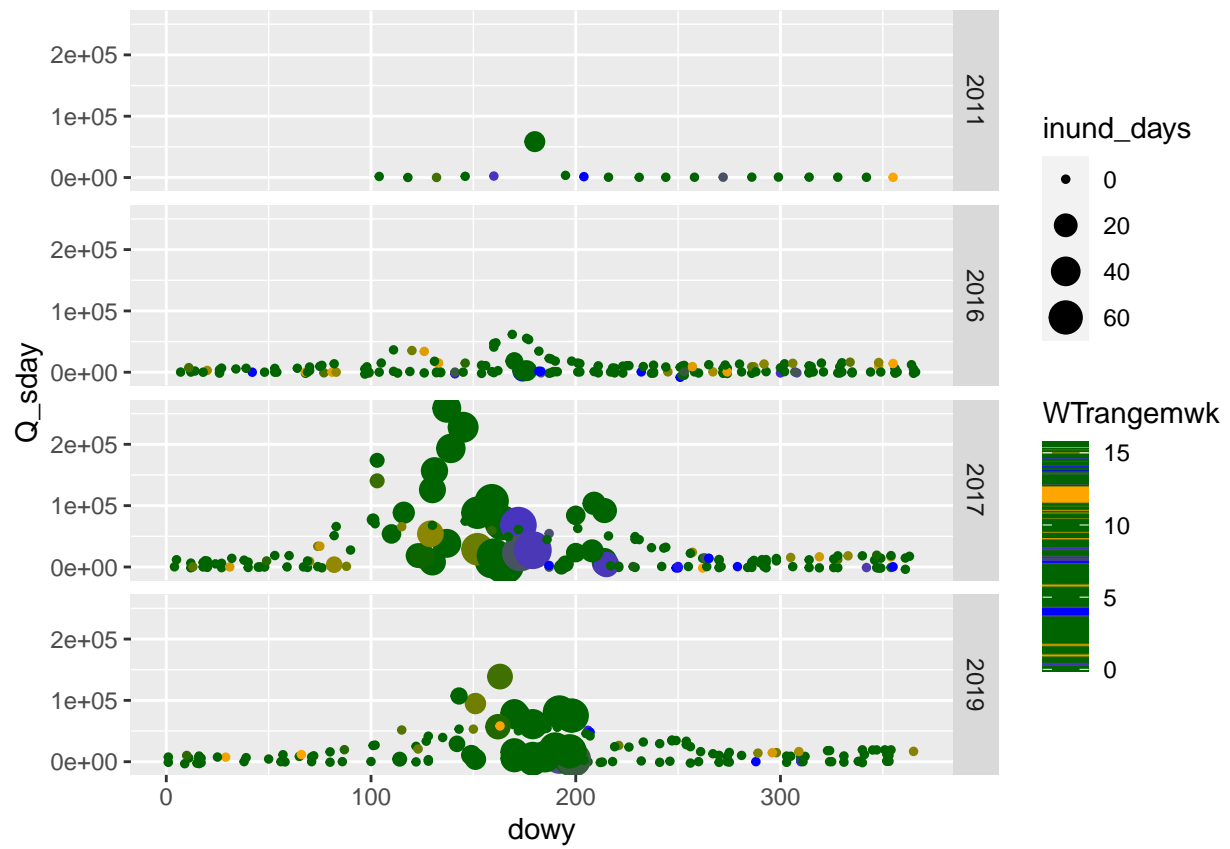




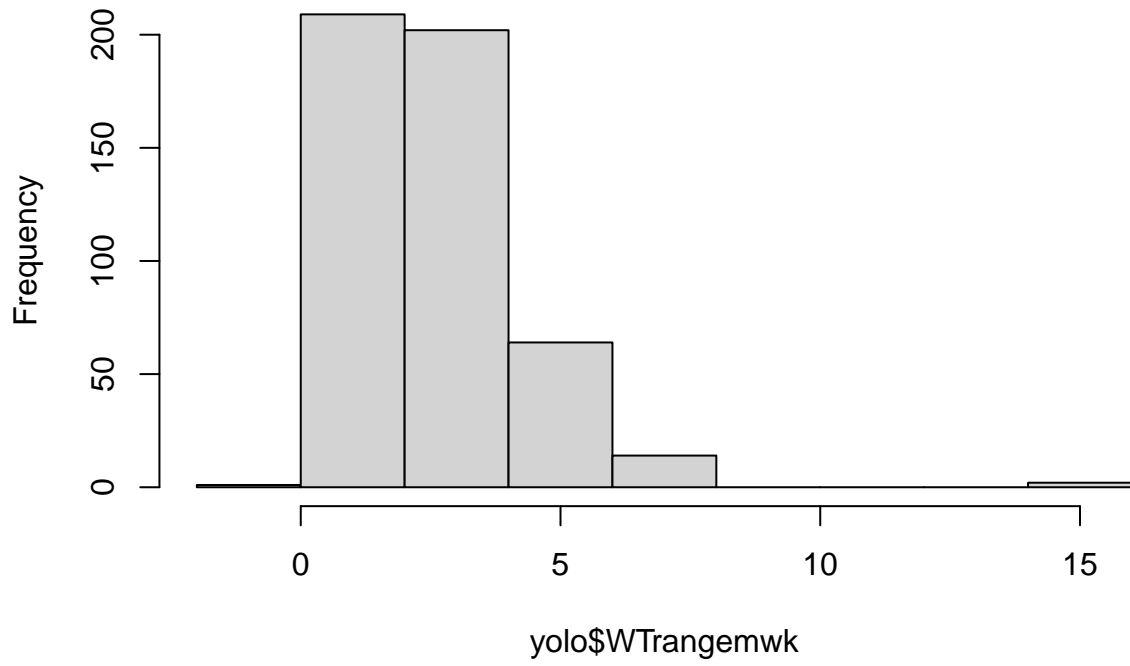
```
## Warning in regularize.values(x, y, ties, missing(ties), na.rm = na.rm):  
## collapsing to unique 'x' values
```

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## collapsing to unique 'x' values
```

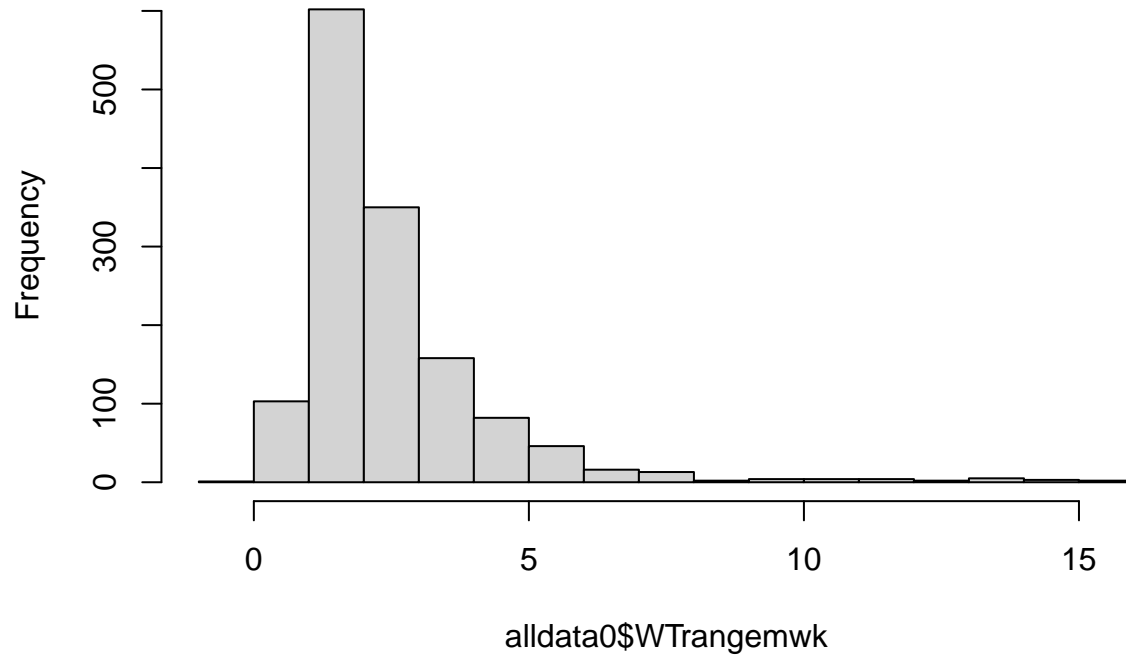


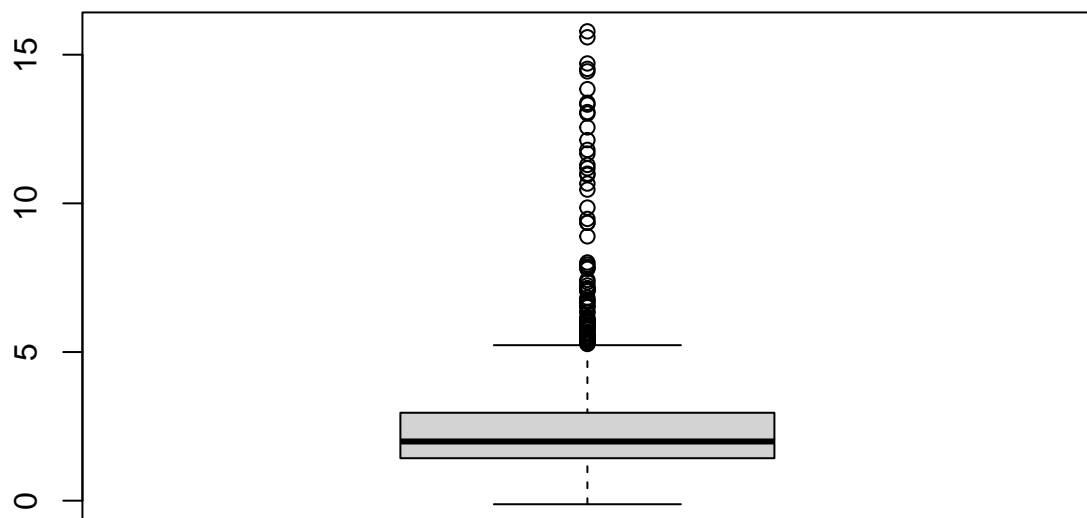
**Histogram of yolo\$WTrangemwk**

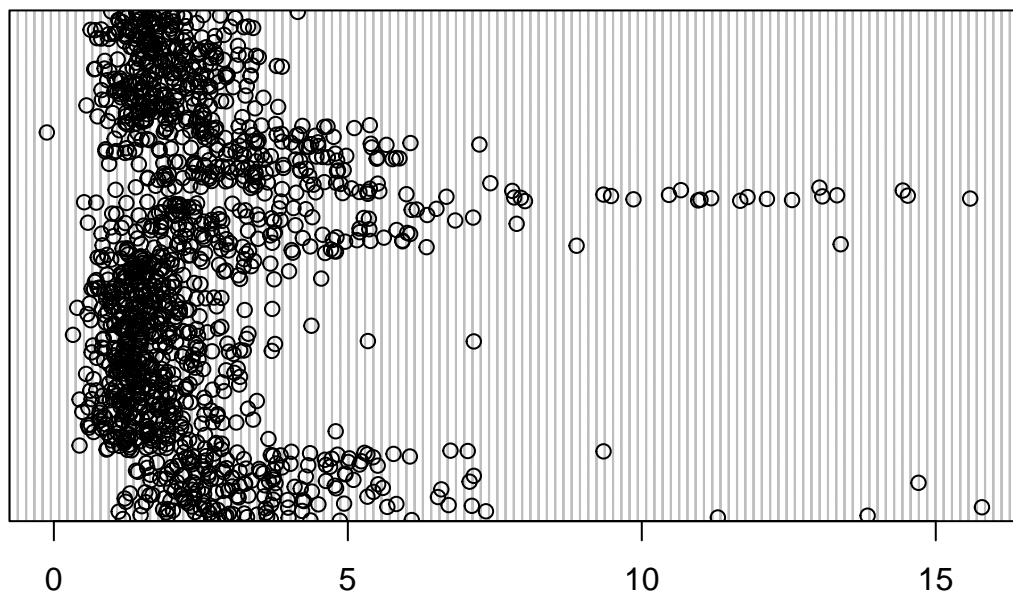




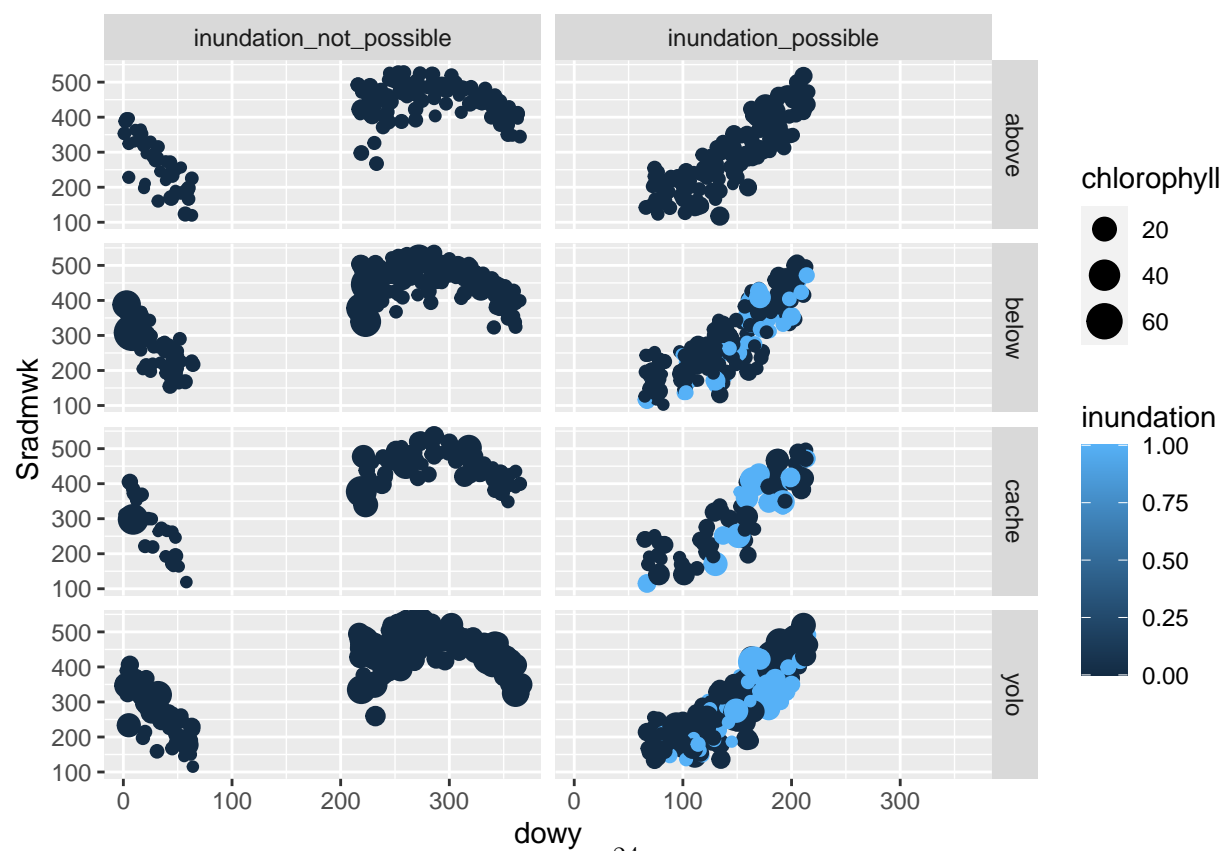
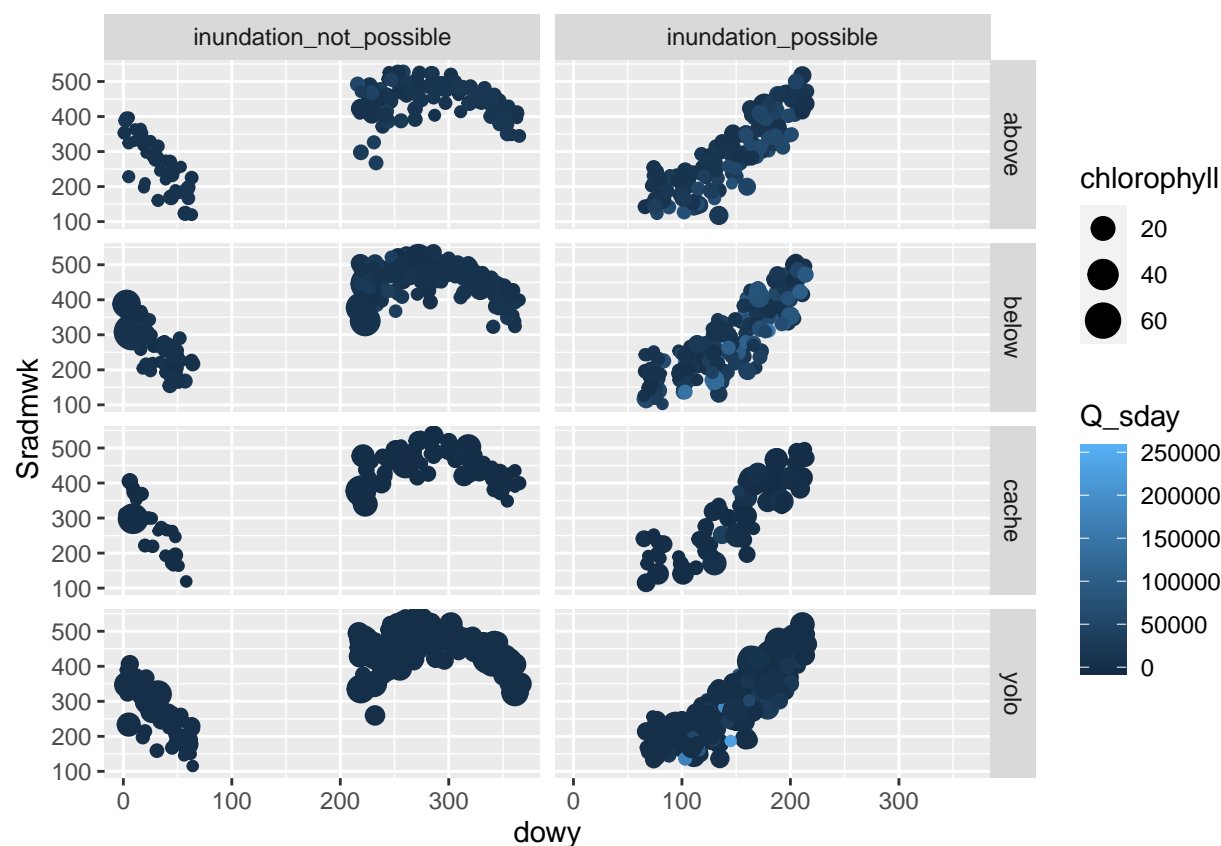
**Histogram of alldata0\$WTrangemwk**



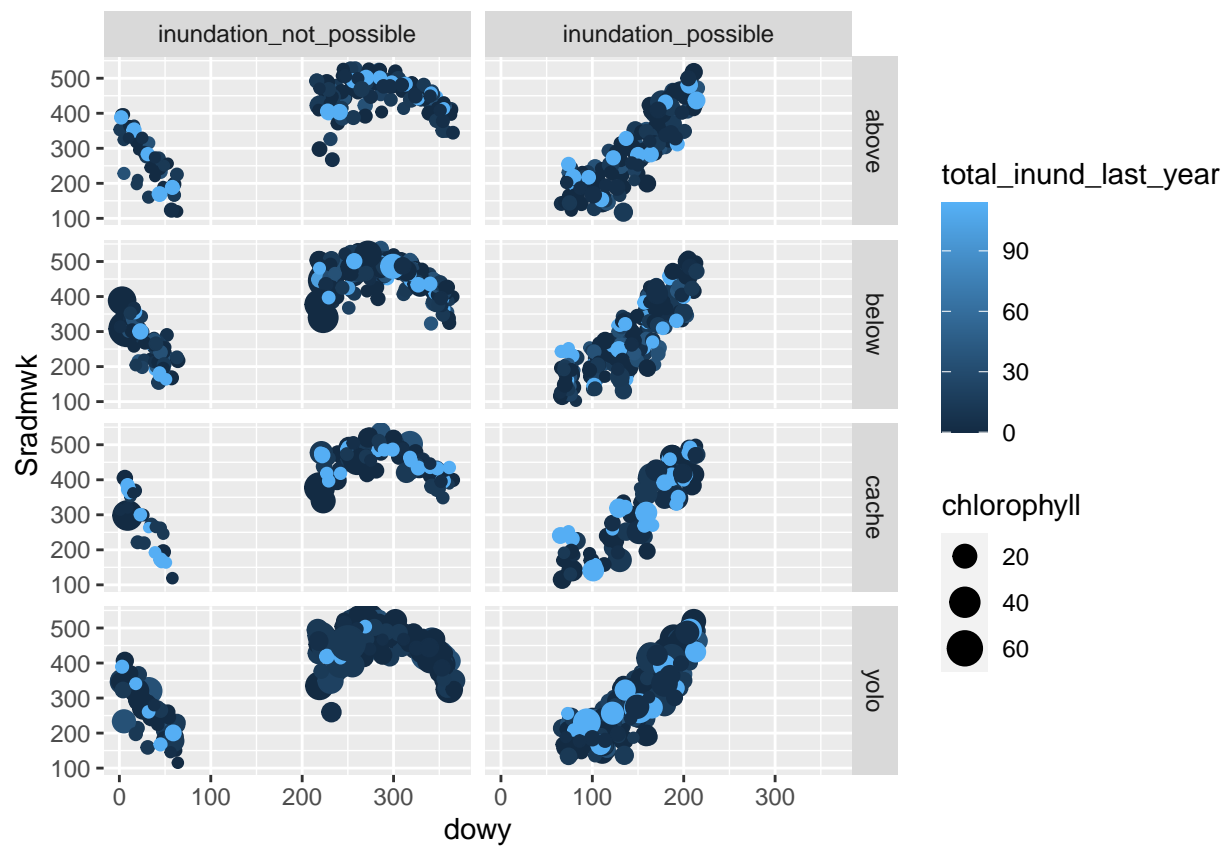


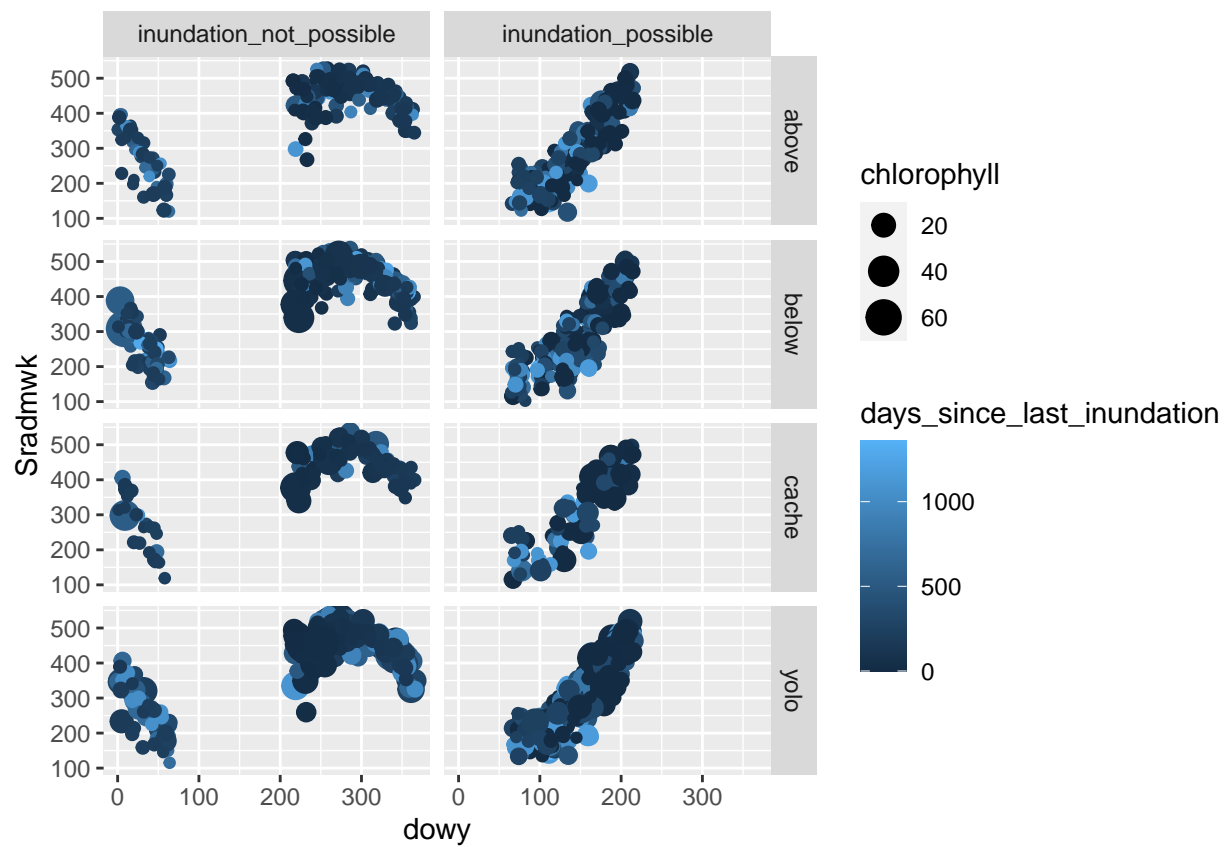


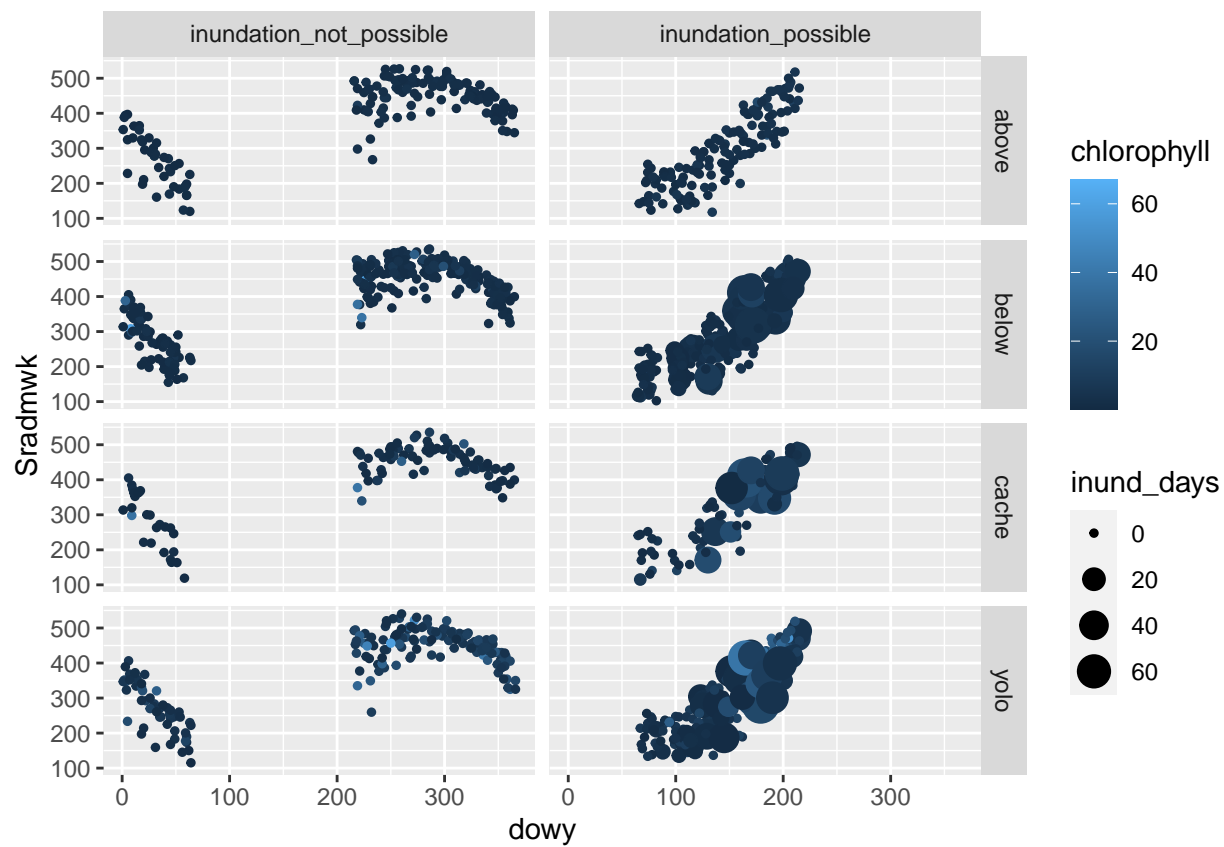
day of water year vs solar radiation

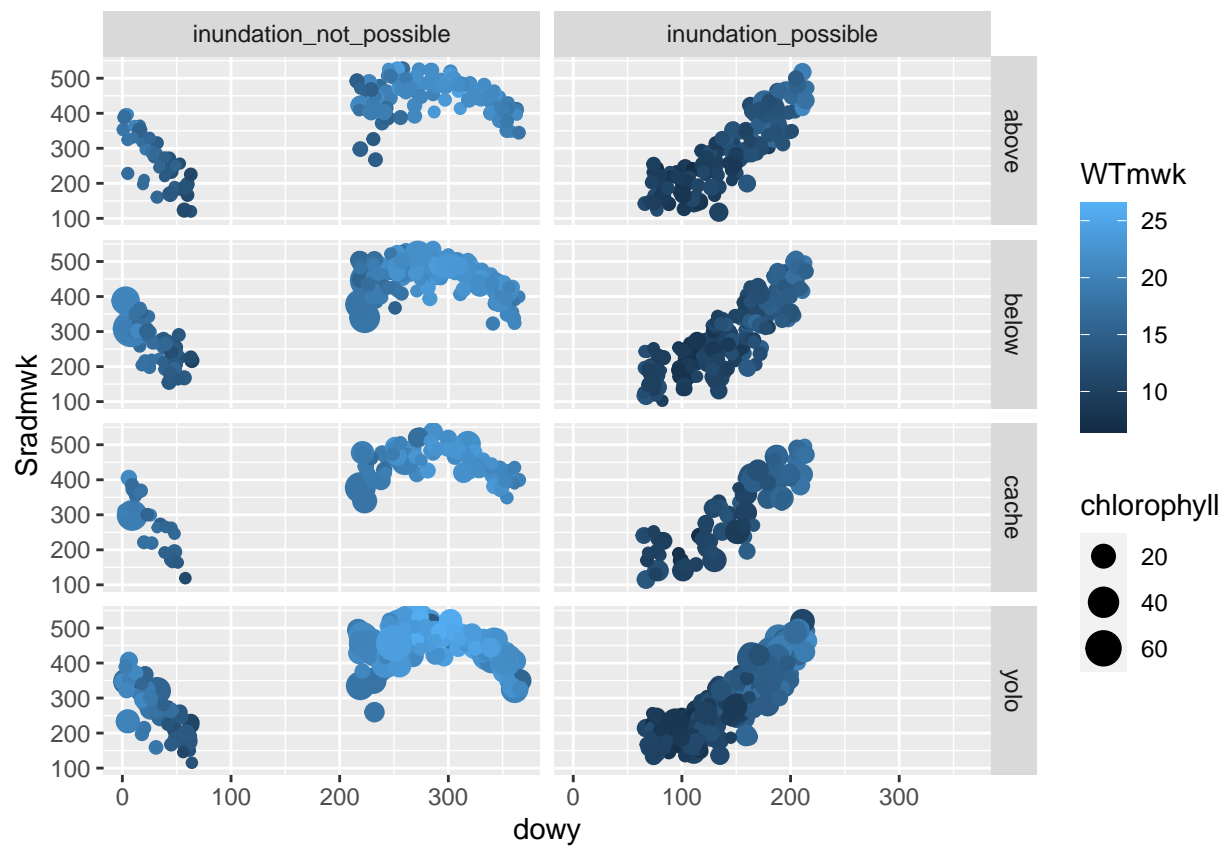


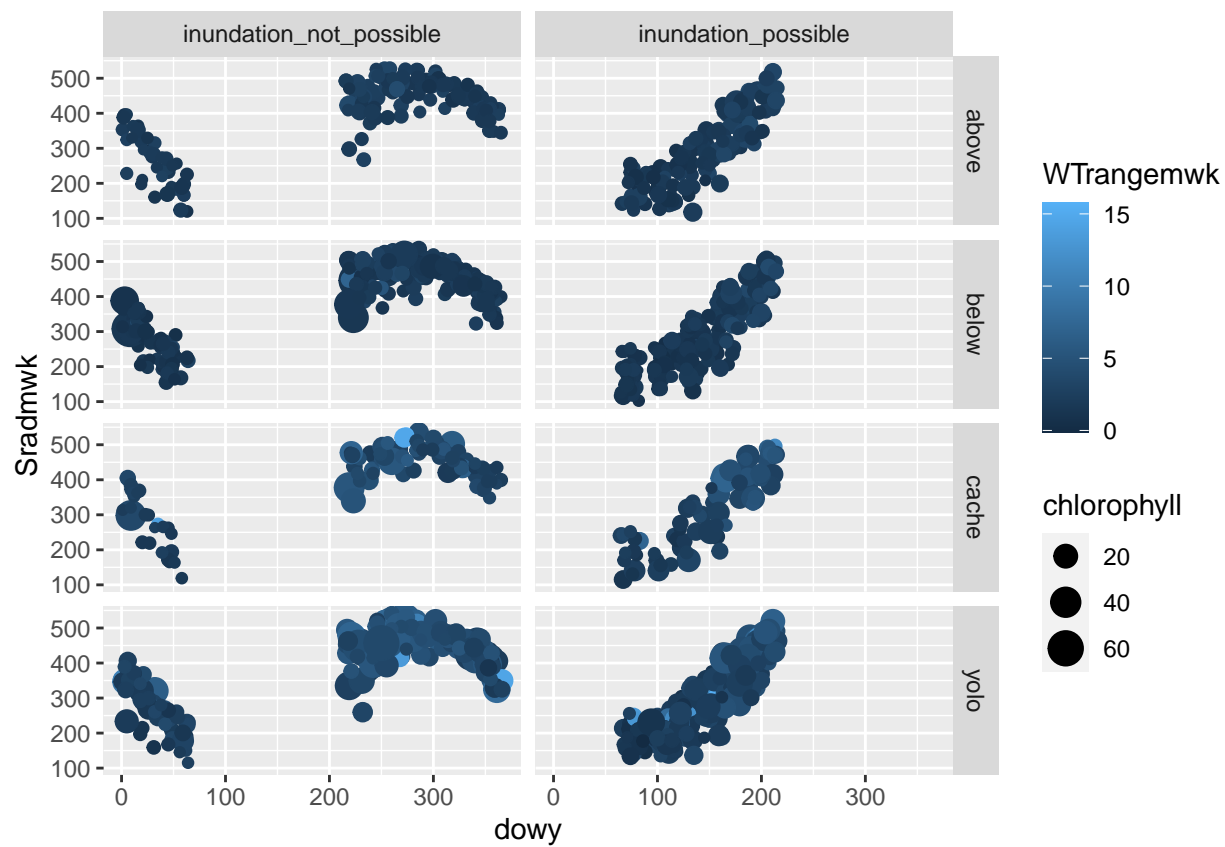




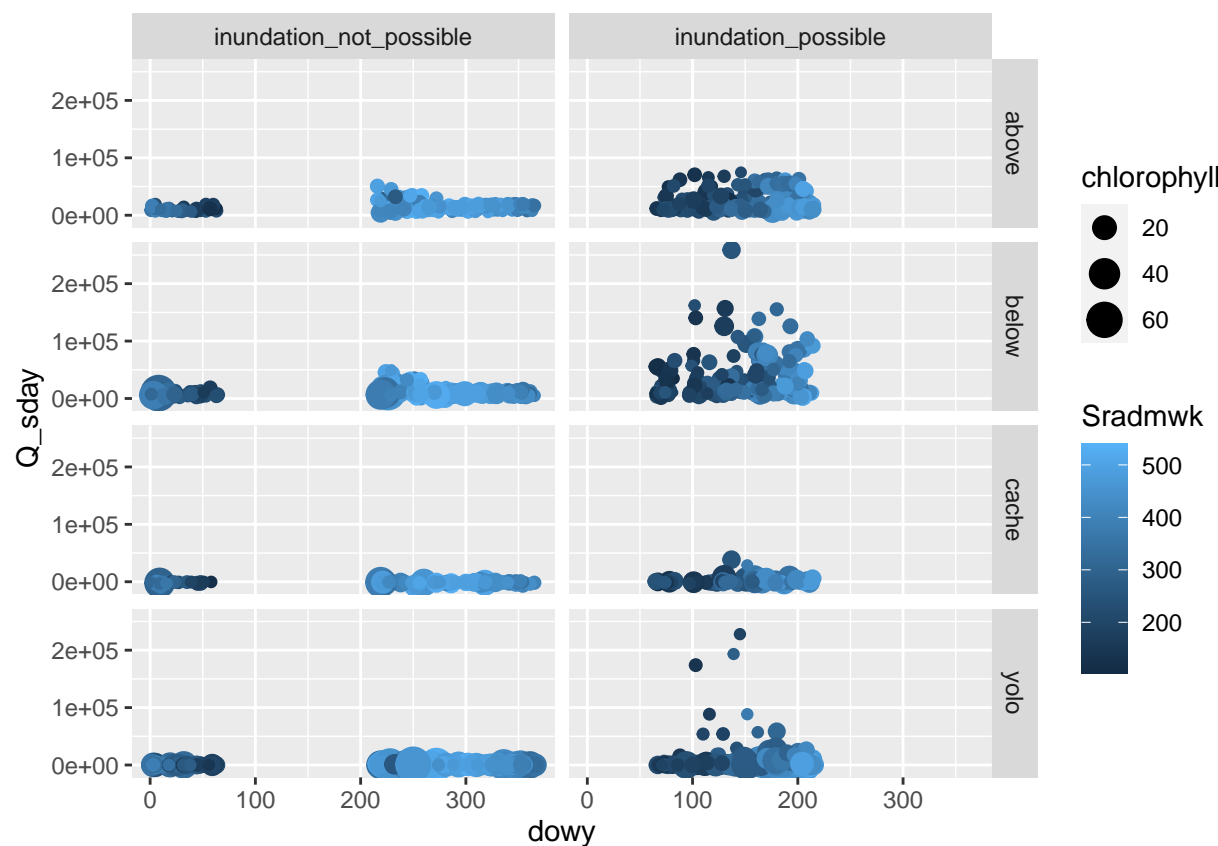
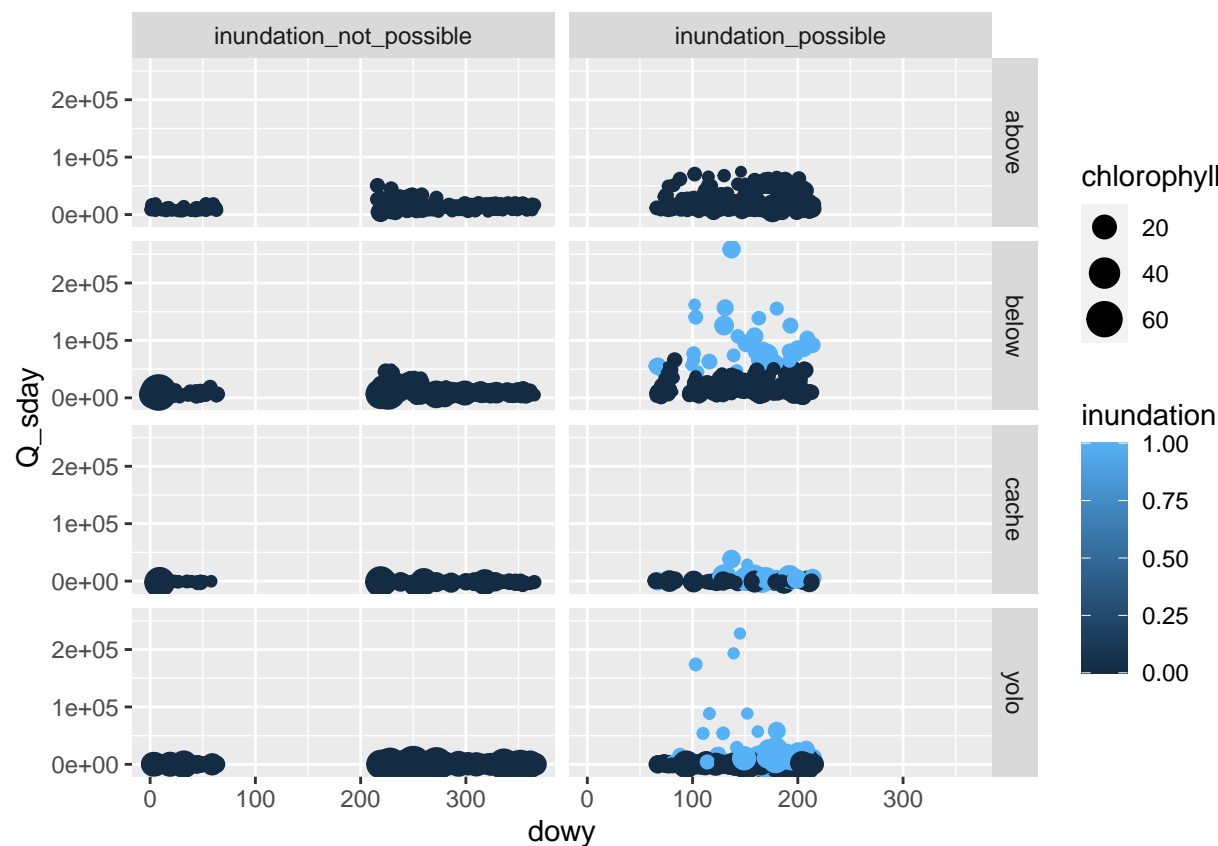


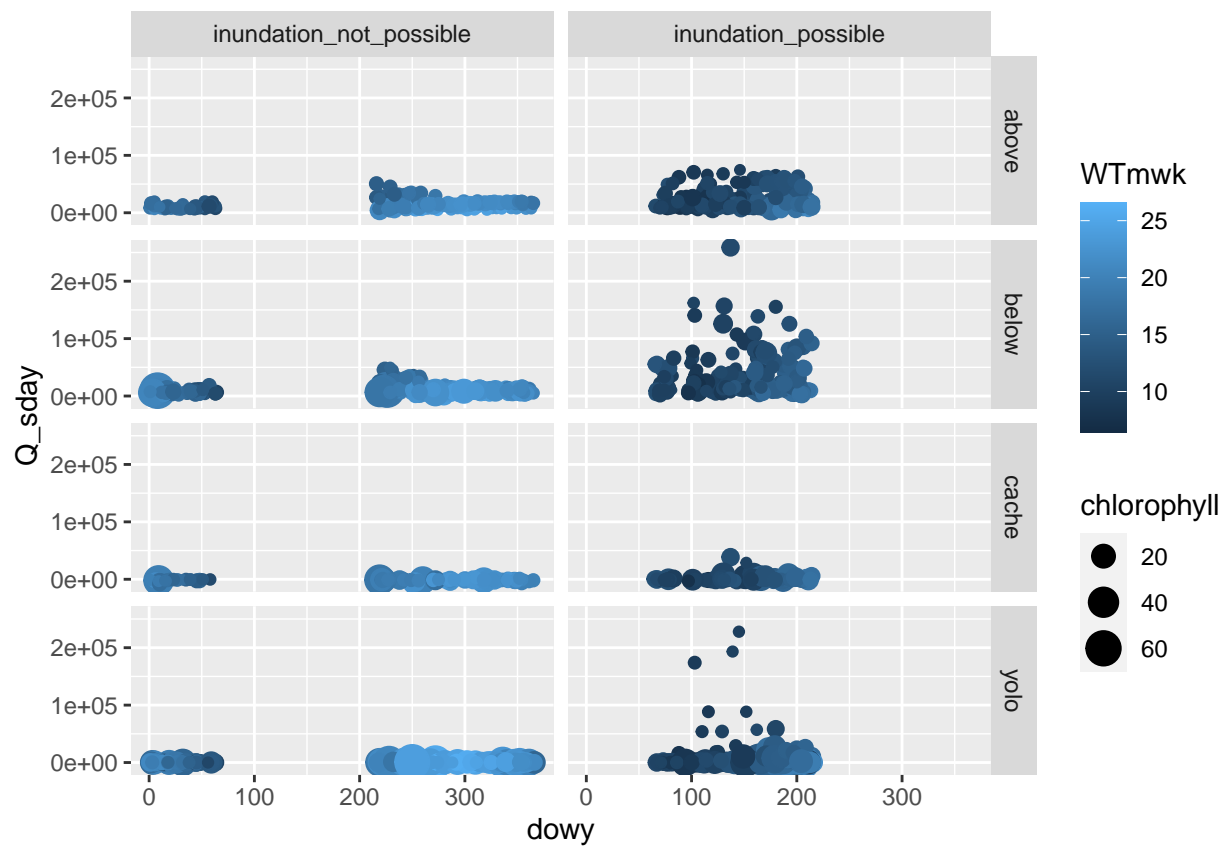


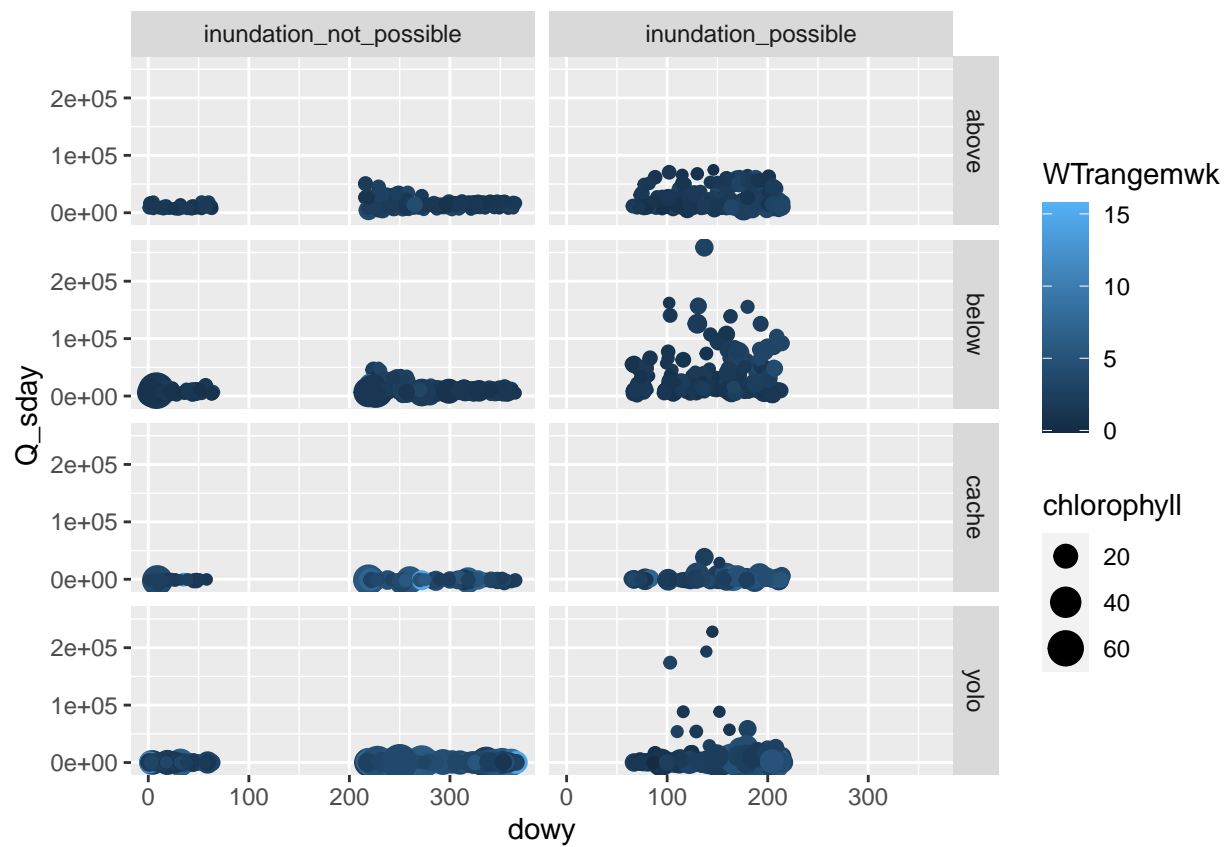




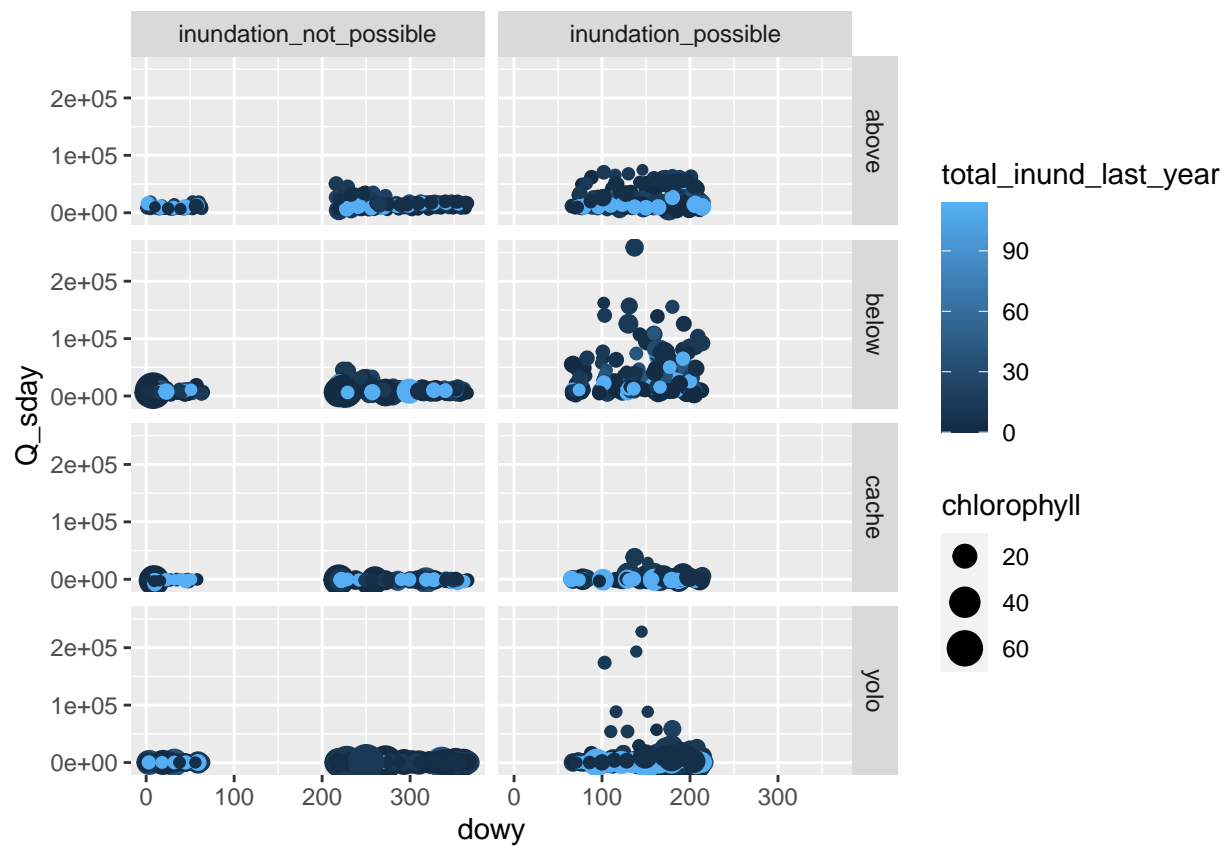
flow

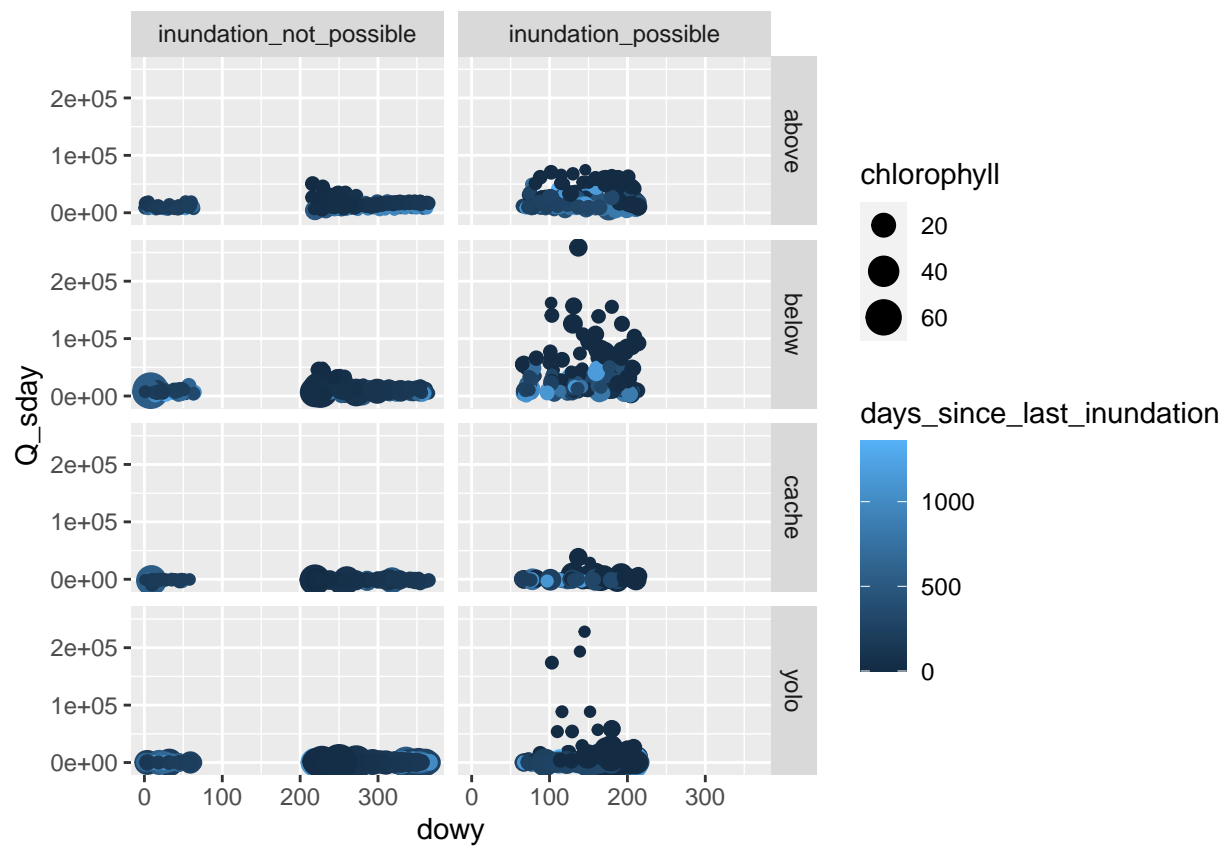


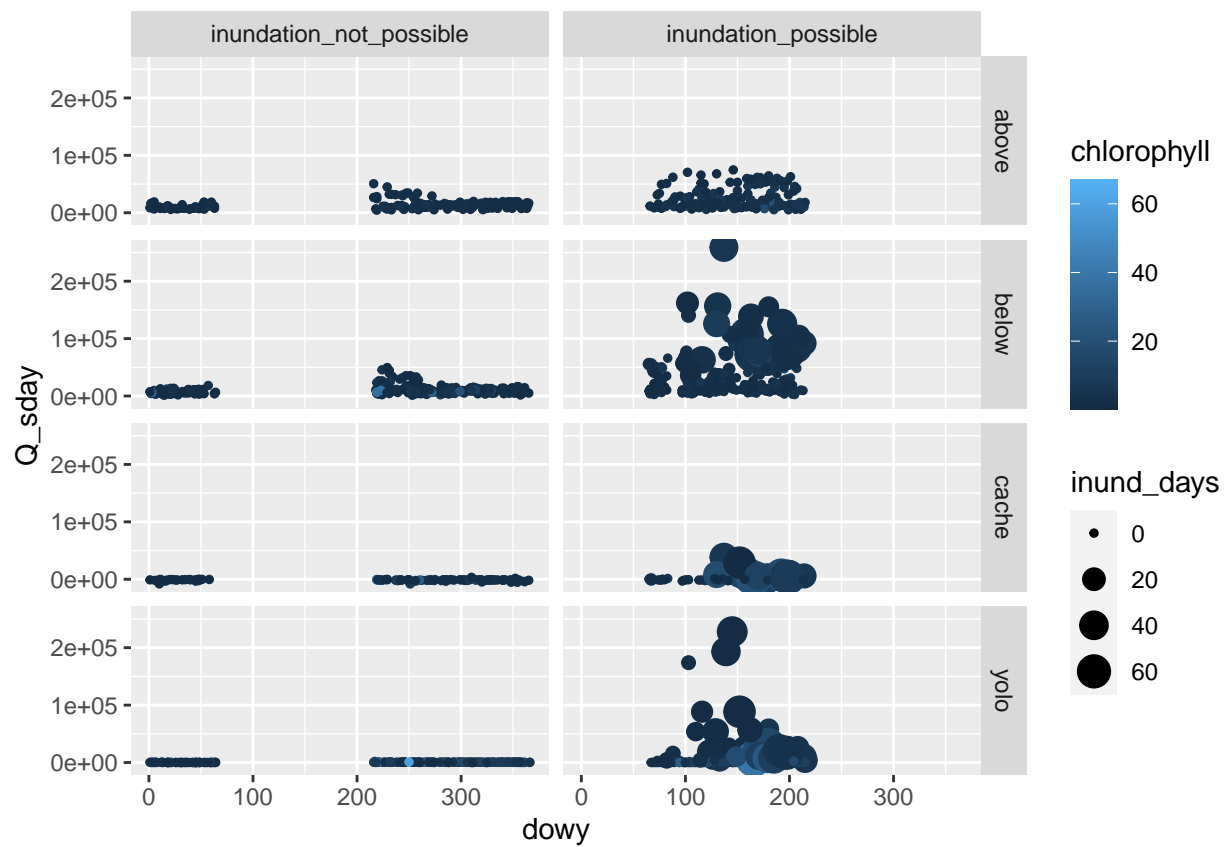




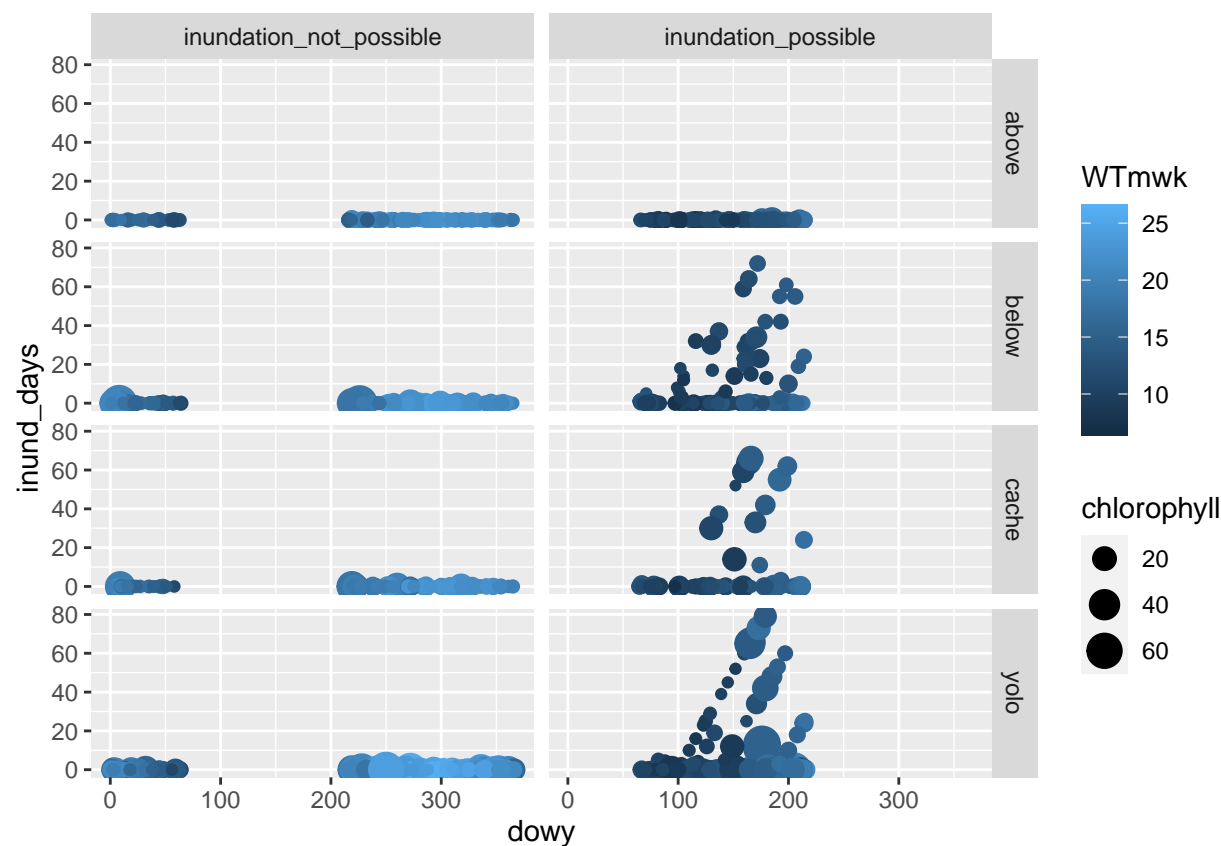
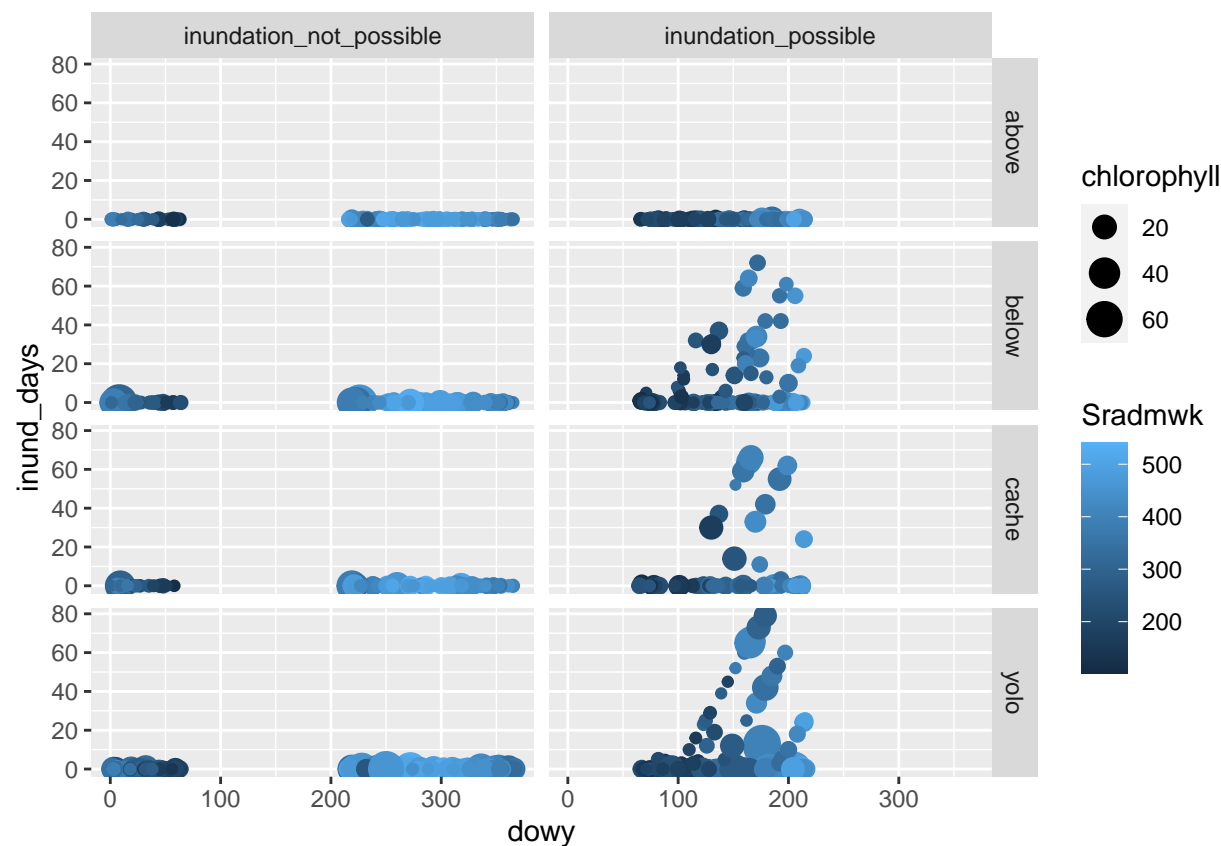


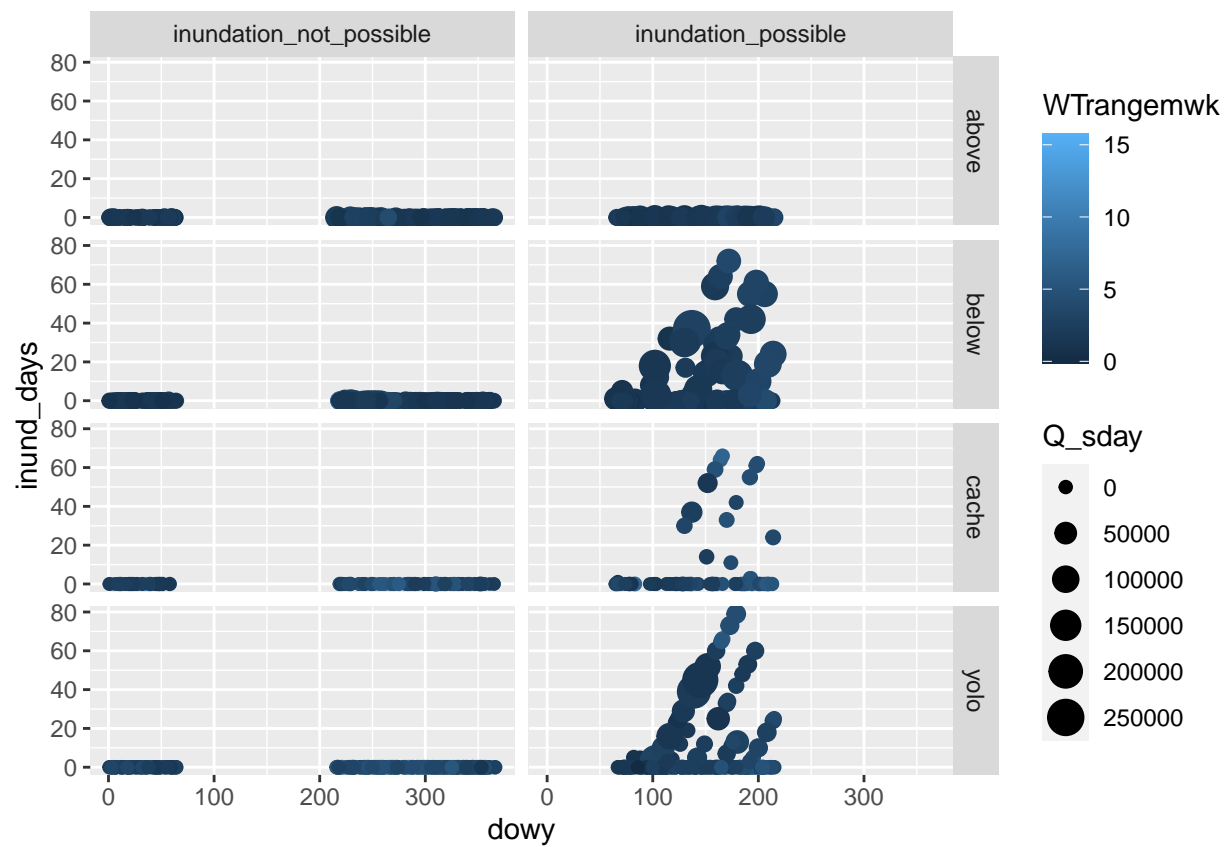


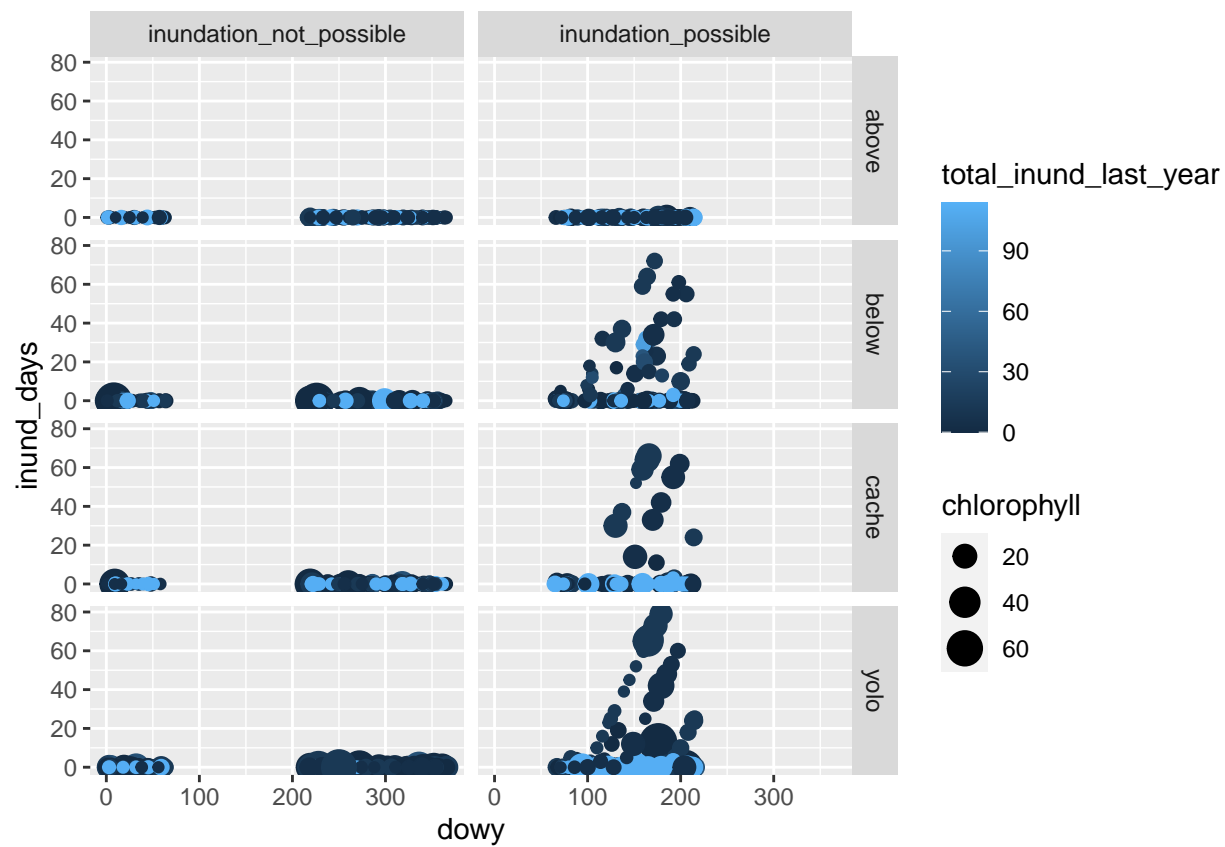




inundation







inundation other metrics that are not directly related to what is happening on the day of chl collection (lag variables)

