almond_yield

Danielle Sclafani, Wylie Hampson, Felicia Cruz

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#reading in the climate data

```
clim_data <- read.delim(here("data", "clim.txt"), sep = " ")

# view(clim_data)
```

```
source(file = here("R", "almond_yield.R"))

almond_yield_df <- almond_yield(data = clim_data)
```

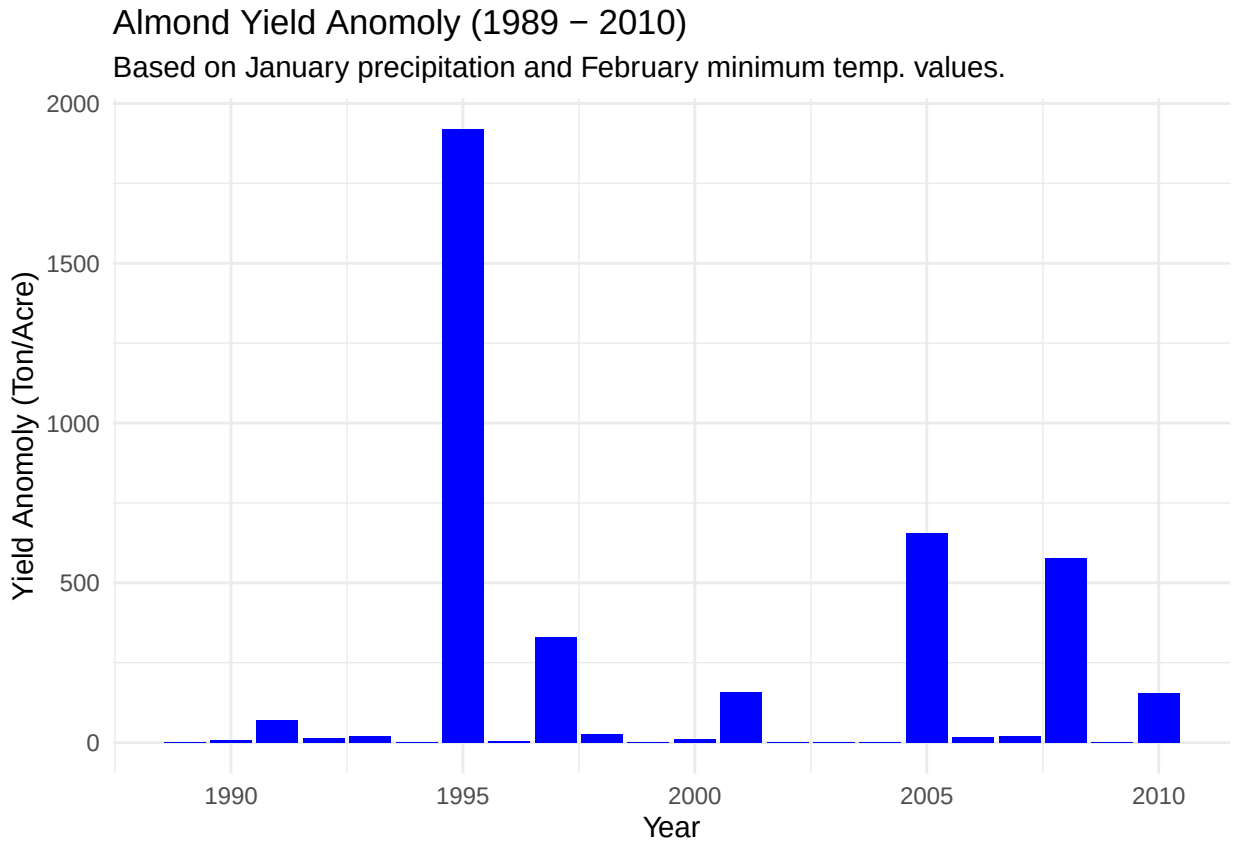
```
## `summarise()` has grouped output by 'year'. You can override using the `.groups` argument.

## Adding missing grouping variables: `year`
## Adding missing grouping variables: `year`

## Joining, by = "year"
```

```
almond_yield_df
```

```
## # A tibble: 22 x 2
## # Groups:   year [22]
##     year    yield
##    <int>    <dbl>
##  1  1989   -0.355
##  2  1990    9.29
##  3  1991   68.9
##  4  1992   15.4
##  5  1993   20.2
##  6  1994    2.48
##  7  1995 1920.
##  8  1996    3.58
##  9  1997  330.
## 10  1998   27.9
## # ... with 12 more rows
```

```
ggplot(data = almond_yield_df, aes(x = year, y = yield)) +
  geom_col(fill = "blue") +
  labs(title = "Almond Yield Anomoly (1989 - 2010)",
       subtitle = "Based on January precipitation and February minimum temp. values.",
```

```
      x = "Year",
      y = "Yield Anomoly (Ton/Acre)") +
 theme_minimal()
```



The model predicts annual almond yield anomaly by the mean daily minimum temperatures for the month of February and the total precipitation of January. Almond yield anomaly was greatest in 1995 with small spikes in 2005 and 2008. To find this we created a function that takes the users input data and uses the values for minimum February temperature and the sum of January precipitation and puts those parameters into the Lobell equation and outputs the almond yield anomaly for each year in a data frame. The data frame organizes almond yield anaomly by year.