

Almond Profit Model

Load Data and function

```
almonds <- read.table(here::here("assignment3", "clim.txt"),
                      header = TRUE)

source(here::here("assignment3", "R", "almond_profit_fun.R"))
```

Subset almond df

For min and max temps and precipitation per year

```
almond_subset <- almonds %>%
  group_by(month, year) %>%
  summarize(tmin = mean(tmin_c, na.rm = TRUE),
            tmax = mean(tmax_c, na.rm = TRUE),
            precip = sum(precip, na.rm = TRUE),
            .groups = "drop")
```

Run function

```
almond_profit_fun(almond_df = almond_subset)
```

	year	yield_anomaly	price_ton	cost_acre	yield	revenue	profit
1	1989	-0.3552237	286.7980	76.85914	0.5447763	156.2408	79.38164
2	1990	9.2906757	292.3961	83.77646	10.1906757	2979.7134	2895.93695
3	1991	68.9130633	297.9941	91.31634	69.8130633	20803.8802	20712.56383
4	1992	15.4280698	303.5921	99.53481	16.3280698	4957.0733	4857.53847
5	1993	20.2083803	309.1901	108.49295	21.1083803	6526.5032	6418.01026
6	1994	2.4820009	314.7882	118.25731	3.3820009	1064.6139	946.35657
7	1995	1919.9811511	496.0000	128.90047	1920.8811511	952757.0509	952628.15048
8	1996	3.5818399	416.0000	140.50151	4.4818399	1864.4454	1723.94388
9	1997	329.6938750	312.0000	153.14665	330.5938750	103145.2890	102992.14235
10	1998	27.8636956	282.0000	166.92985	28.7636956	8111.3622	7944.43232
11	1999	-0.1436364	172.0000	181.95353	0.7563636	130.0945	-51.85900
12	2000	9.5999883	194.0000	198.32935	10.4999883	2036.9977	1838.66837
13	2001	159.5119587	182.0000	216.17899	160.4119587	29194.9765	28978.79750
14	2002	0.2450914	222.0000	235.63510	1.1450914	254.2103	18.57519
15	2003	-0.2585997	314.0000	256.84226	0.6414003	201.3997	-55.44258
16	2004	-0.2367722	442.0000	279.95807	0.6632278	293.1467	13.18861
17	2005	656.3724121	562.0000	305.15429	657.2724121	369387.0956	369081.94132
18	2006	18.6324135	412.0000	332.61818	19.5324135	8047.3544	7714.73617
19	2007	20.2007396	350.0000	362.55381	21.1007396	7385.2589	7022.70506

20	2008	576.2821943	290.0000	395.18366	577.1821943	167382.8363	166987.65269
21	2009	0.7367438	330.0000	430.75019	1.6367438	540.1255	109.37528
22	2010	153.7655092	358.0000	469.51770	154.6655092	55370.2523	54900.73458