

# Module 4 Assignment 1

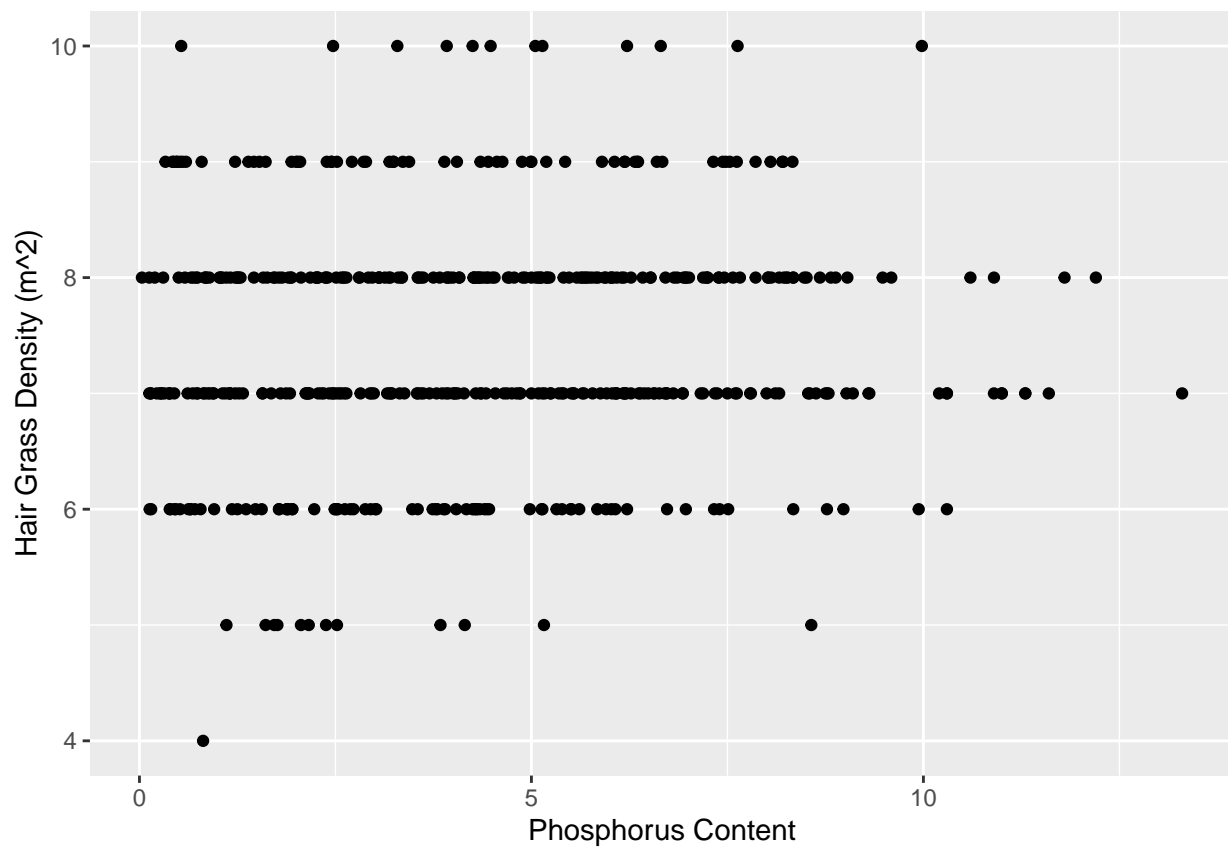
Ellen Bledsoe

2022-11-17

1.

```
## # A tibble: 1 x 2
##   mean_P stdev_P
##   <dbl>   <dbl>
## 1    4.33    2.76
```

3.



5.

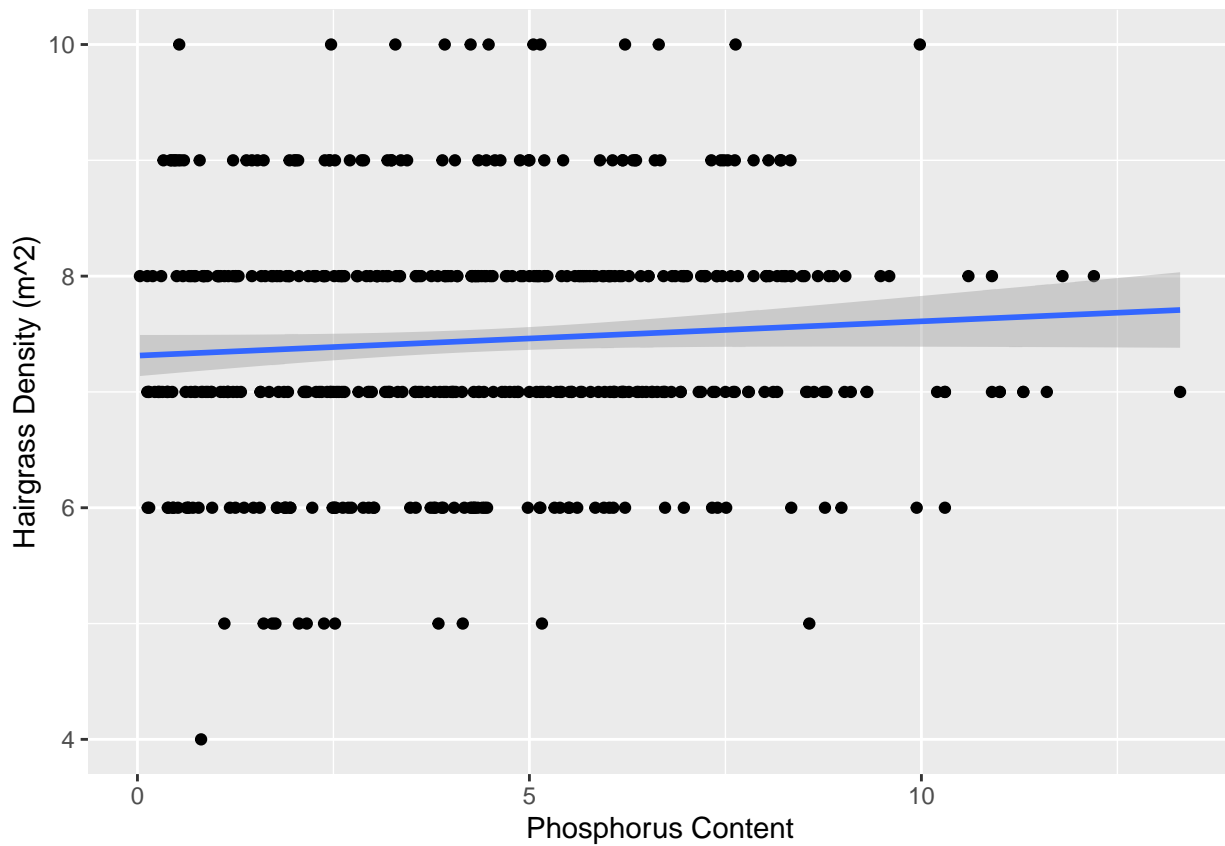
```
## [1] 0.07645087
```

6.

```
## [1] 0.005844735
```

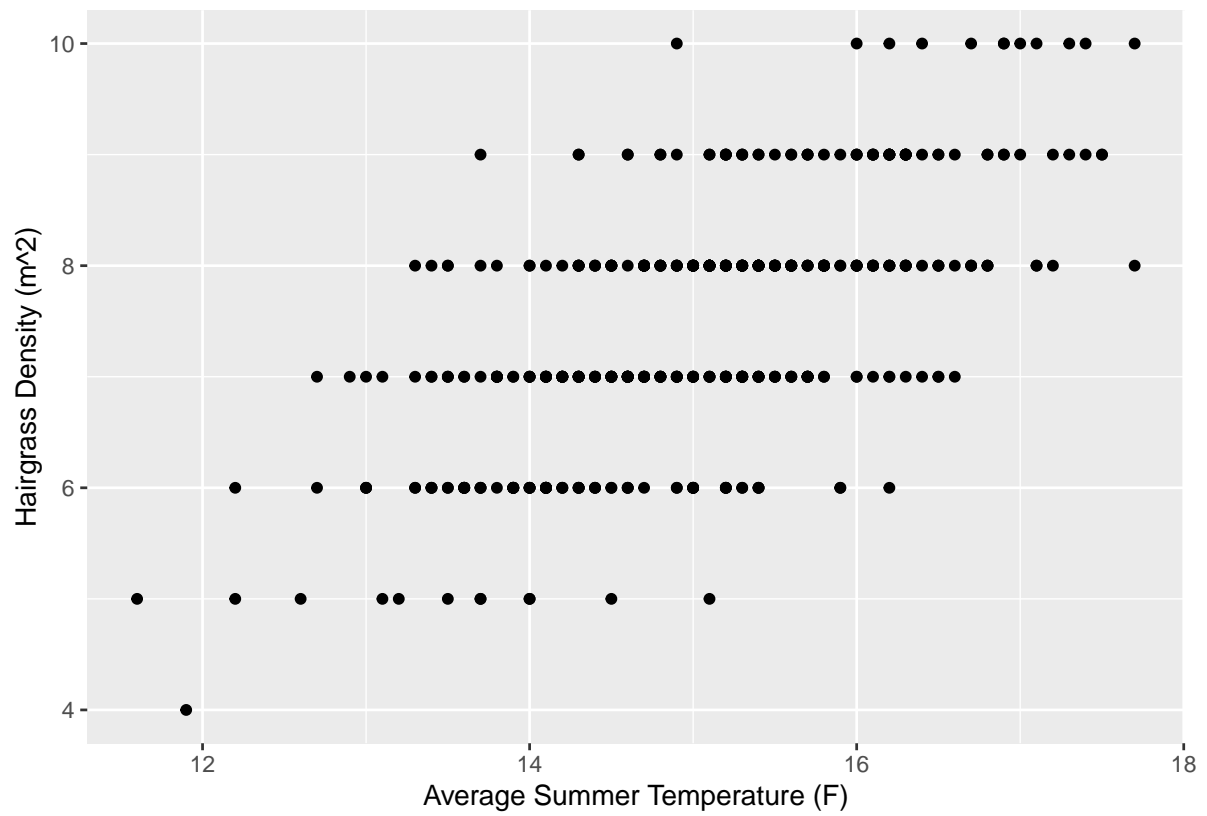
8.

```
## 'geom_smooth()' using formula 'y ~ x'
```



9.

```
##
## Call:
## lm(formula = hairgrass$hairgrass_density_m2 ~ hairgrass$P_content)
##
## Residuals:
##      Min       1Q   Median       3Q      Max
## -3.3376 -0.5276 -0.3239  0.6085  2.6706
##
## Coefficients:
##              Estimate Std. Error t value Pr(>|t|)
## (Intercept)      7.31359    0.09063  80.700  <2e-16 ***
## hairgrass$P_content  0.02961    0.01766   1.676   0.0943 .
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 1.068 on 478 degrees of freedom
## Multiple R-squared:  0.005845,    Adjusted R-squared:  0.003765
## F-statistic:  2.81 on 1 and 478 DF,  p-value: 0.09432
```



12.

13.

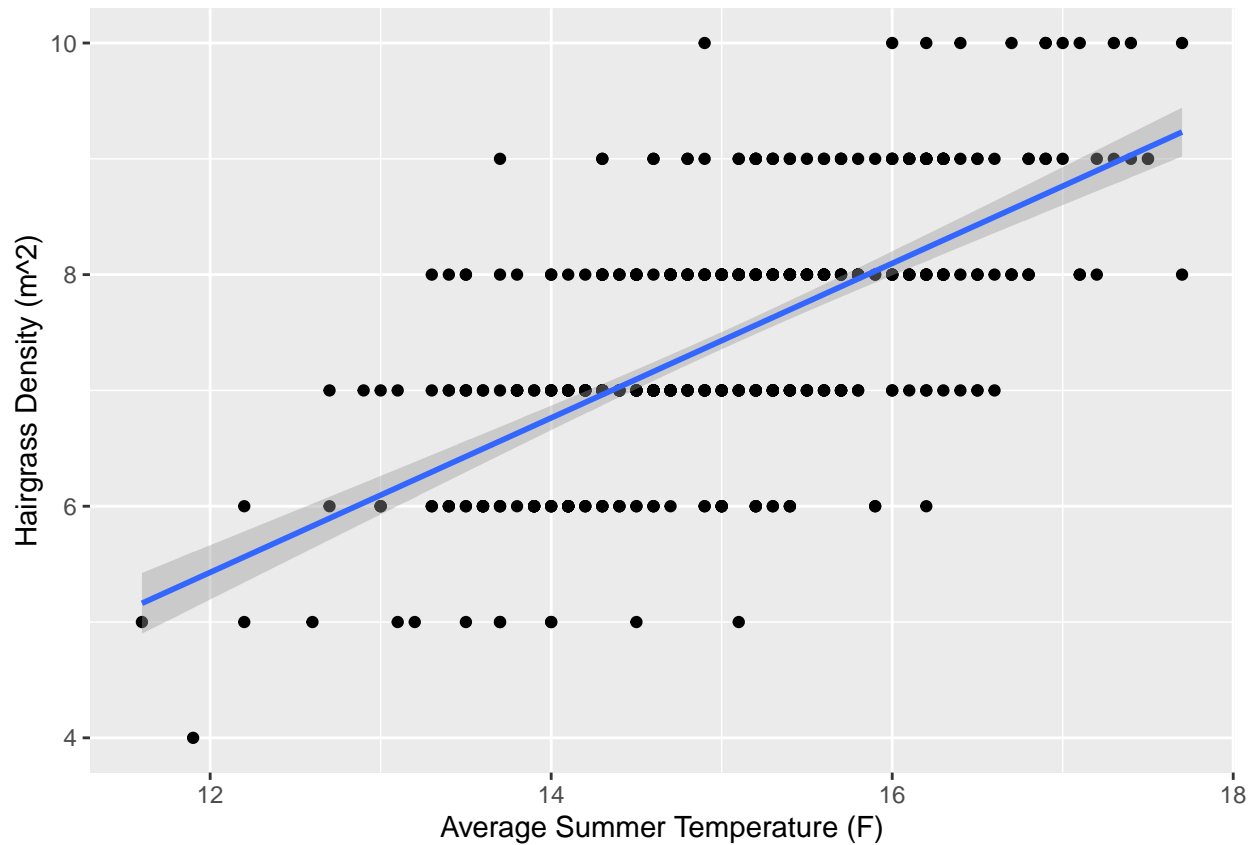
```
## [1] 0.6315753
```

15.

```
## [1] 0.3988874
```

16.

```
## 'geom_smooth()' using formula 'y ~ x'
```



17.

```
##
## Call:
## lm(formula = hairgrass$hairgrass_density_m2 ~ hairgrass$avg_summer_temp)
##
## Residuals:
##      Min       1Q   Median       3Q      Max
## -2.49670 -0.56407  0.03632  0.57001  2.63672
##
## Coefficients:
##              Estimate Std. Error t value Pr(>|t|)
## (Intercept)    -2.57656    0.56378   -4.57 6.21e-06 ***
## hairgrass$avg_summer_temp  0.66710    0.03746   17.81 < 2e-16 ***
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 0.8304 on 478 degrees of freedom
## Multiple R-squared:  0.3989, Adjusted R-squared:  0.3976
## F-statistic: 317.2 on 1 and 478 DF, p-value: < 2.2e-16
```