Agronomy 526 Homework

Due: 2/10/22

1. The following data are from an experiment in which the growth of forage sorghum was measured on a weekly basis beginning at the 4-leaf stage. The yields are in units of g per plot. The analysis of variance indicated that there was a significant effect due to week and that the response was curvilinear.

Week	Mean Yield
1	14.33
2	31.44
3	93.55
4	164.52
5	246.04
6	271.61
7	338.93
8	420.24
9	467.57
10	459.77

a. Fit the data to the following functions using nonlinear least squares regression:
   - Gompertz
   - Monomolecular
   - Logistic
   - Beta

b. Plot the means and the lines associated with each of the functions above with respect to week.

c. Which function do you think best describes the biological (functional) relationship between yield and week following the 4-leaf stage.

* turn in your SAS program as well as OUTPUT