

Agronomy 526 Homework

Due: 2/8/22

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.

Week	Replication		
	1	2	3
1	14.41	5.3	23.29
2	31.41	29.31	33.59
3	85.42	93.65	101.58
4	166.19	176.32	151.04
5	237.35	256.43	244.35
6	278.06	268.73	268.03
7	350.43	340.71	325.65
8	422.9	416.58	421.23
9	468.15	474.53	460.03
10	455.73	467.82	455.77

- a. Perform the analysis of variance to determine if week is significant.
 - b. Calculate treatment means and standard deviations.
 - c. Examine the functional relationship between yield and week using orthogonal polynomial contrasts.
 - d. Based on your analysis above, fit an appropriate polynomial equation to the means of week.
 - e. Plot yield means and the line estimated by your polynomial against week.
- * turn in your SAS program as well as OUTPUT