Table S1. Fit statistics, test statistics, estimated thresholds, and estimated slopes of line segments for models with zero, one or two thresholds to describe changes in CP and NDF in Gulf cordgrass and seacoast bluestem after winter or summer burning on the East Foundation's El Sauz Ranch in Willacy and Kenedy Counties, Texas, in 2016. Estimated equations provided at the bottom of the table.

No. of thresholds	k	AICc	BIC	r^2	r_a^2	r_p^2	Model *F* (*df*) *P*	Threshold 1st (se)	 2nd (se)	First segment $\hat{\beta}_1$ (se)	 *t* *P* value	Second segment $\hat{\beta}_2$ (se)	 *t* *P* value	Third segment $\hat{\beta}_3$ (se)	 *t* *P* value
		Gulf cordgrass: Winter crude protein (%):													
2	7	208.2	220.9	0.66	0.64	0.61	37.2 (3, 57) <0.0001	6.4 (0.7)	29.7 (2.9)	2.035 (0.668)	3.0 0.0035	0.155 (0.026)	5.9 <0.0001	-0.098 (0.010)	-9.4 <0.0001
1	5	210.6	220.1	0.62	0.61	0.57	47 (2, 58) < 0.0001	28.4 (2.4)	–	0.199 (0.026)	7.6 <0.0001	-0.098 (0.0103)	-9.5 <0.0001	–	–
0	3	257.8	263.7	0.11	0.09	0.04	7.1 (1, 59) 0.0102	–	–	-0.024 (0.009)	-2.7 0.0101	–	–	–	–
		Gulf cordgrass: Summer crude protein (%):													
1	5	181.6	189.3	0.45	0.43	0.38	17.8 (2, 43) < 0.0001	28 (6.9)	–	0.058 (0.041)	1.4 0.1621	-0.086 (0.015)	-5.7 <0.0001	–	–
0	3	184.8	189.7	0.35	0.33	0.29	23.5 (1, 44) < 0.0001	–	–	-0.055 (0.011)	-4.8 <0.0001	–	–	–	–
2	7	185.6	195.6	0.47	0.43	0.37	12.4 (3, 42) < 0.0001	29.5 (5.3)	34.0 (6.8)	0.087 (0.049)	1.8 0.0821	-0.348 (0.204)	-1.7 0.0957	-0.072 (0.0200)	-3.6 0.0008
		Seacoast little bluestem: Winter crude protein (%):													
2	7	95.2	98.9	0.82	0.80	0.67	35.1 (3, 23) < 0.0001	11.3 (1.2)	27.1 (4.7)	0.848 (0.161)	5.3 <0.0001	-0.308 (0.054)	-5.7 <0.0001	-0.035 (0.014)	-2.6 0.0171
1	5	99.6	103.5	0.73	0.71	0.30	32.2 (2, 24) < 0.0001	6.1 (0.3)	–	4.8 (1.22)	3.9 0.0006	-0.076 (0.010)	-7.8 <0.0001	–	–
0	3	107.7	110.6	0.55	0.53	0.47	30.5 (1, 25) < 0.0001	–	–	-0.064 (0.012)	-5.5 < 0.0001	–	–	–	–
		Seacoast little bluestem: Summer crude protein (%):													
2	7	78.9	80.2	0.59	0.48	0.39	9.1 (3, 19) 0.0006	31.0 (8.7)	78 (5.0)	0.075 (0.036)	2.60 0.0529	-0.024 (0.015)	-1.59 0.1293	-0.241 (0.072)	-3.3 (0.0034)
1	5	77.5	80.0	0.46	0.41	0.32	8.7 (2, 20) 0.0019	60 (8.4)	–	0.02 (0.01)	1.2 0.2574	-0.12 (0.030)	-3.9 0.0008	–	–
0	3	84.3	86.8	0.23	0.19	0.06	6.4 (1, 22) 0.0189			-0.025 (0.010)	-2.5 0.019				

Table S1, continued.

No. of thresholds	k	AICc	BIC	r^2	r_a^2	r_p^2	Model *F (df)* *P*	Threshold 1st (se)	 2nd (se)	First segment $\hat{\beta}_1$ (se)	 *t* *P* value	Second segment $\hat{\beta}_2$ (se)	 *t* *P* value	Third segment $\hat{\beta}_3$ (se)	 *t* *P* value
Gulf cordgrass: Winter neutral detergent fiber (%):															
2	*7*	*157.4*	*164.7*	*0.75*	*0.73*	*0.69*	*32.5 (3, 32)* *< 0.0001*	*19* *(3.1)*	*47* *(6.1)*	*-0.559* *(0.097)*	*-5.7* *<0.0001*	*-0.035* *(0.041)*	*-0.85* *0.4014*	*0.218* *(0.032)*	*6.7* *<0.0001*
1	5	162.7	168.8	0.66	0.61	0.42	32.3 (2, 33) < 0.0001	28 (2.4)	–	-0.377 (0.056)	-6.8 0.0001	0.146 (0.020)	7.2 0.0001	–	–
0	3	194.4	198.4	0.06	0.03	-0.07	2.2 (1, 34) 0.1497	–	–	0.035 (0.024)	1.5 0.1497	–	–	–	–
Gulf cordgrass: Summer neutral detergent fiber (%):															
1	*5*	*128.8*	*132.7*	*0.35*	*0.30*	*0.13*	*6.5 (2, 24)* *0.0056*	*23.6* *(6.0)*	–	*-0.204* *(0.090)*	*-2.3* *0.0334*	*0.096* *(0.027)*	*3.6* *0.0016*	–	–
0	3	130.8	133.8	0.17	0.10	<0.01	3.9 (1, 25) 0.0578	–	–	0.044 (0.022)	2.0 0.0578	–	–	–	–
2	7	130.9	134.6	0.45	0.38	0.26	6.4 (3,23) 0.0027	25 (5.3)	70.8 (6.3)	-0.218 (0.079)	-2.7 0.0111	0.145 (0.034)	4.2 0.0003	-0.255 (0.171)	-1.5 0.1493
Seacoast little bluestem: Winter Neutral detergent fiber (%):															
2	*7*	*167.0*	*174.3*	*0.55*	*0.51*	*0.41*	*12.9 (3, 32)* *< 0.0001*	*11.0* *(2.7)*	*21.2* *(2.9)*	*-1.151* *(0.347)*	*-3.3* *0.0027*	*0.657* *(0.145)*	*4.5* *0.0001*	*0.032* *(0.018)*	*1.8* *0.0889*
1	5	174.5	180.5	0.34	0.31	0.18	8.7 (2, 33) 0.0009	29 (12.2)	–	0.162 (0.062)	2.6 0.0142	0.036 (0.0245)	1.5 0.1506	–	–
0	3	172.1	176.1	0.29	0.27	0.21	14.1 (1, 34) 0.0007	–	–	0.064 (0.017)	3.8 0.0007	–	–	–	–
Seacoast little bluestem: Summer Neutral detergent fiber (%):															
0		*144.4*	*147.6*	*0.17*	*0.14*	*0.07*	*5.5 (1, 27)* *0.0265*			*0.056* *(0.024)*	*2.3* *0.0265*				
1		148.1	152.5	0.22	0.16	0.04	3.7 (2, 26) 0.0391	31 (14.3)	–	-0.038 (0.076)	-0.5 0.6178	0.0919 (0.036)	2.5 0.0176	–	–
2[1/]		–	–	–	–	–		–	–	–	–	–	–	–	–

[1/] No thresholds estimated

Continuous 1-threshold model:

$Y_i = \beta_0 + \gamma_1 D + \gamma_2 (D - T) X_2 + e_i$, where $X_2 = \begin{cases} 1 \text{ if } D > T \\ 0 \text{ if } D \leq T \end{cases}$; D = days after burn, and T = estimated threshold.

Gulf cordgrass winter protein: $\hat{Y}_i = 9.90024 + 0.19859D - 0.29668(D - 28.4)X_2$
Gulf cordgrass summer protein: $\hat{Y}_i = 13.70641 + 0.05781D - 0.14388(D - 28.0)X_2$
Seacoast little bluestem winter protein: $\hat{Y}_i = -14.830 + 4.805D - 4.881(D - 6.1157)X_2$
Seacoast little bluestem summer protein: $\hat{Y}_i = 10.64637 + 0.01731D - 0.11764(D - 60)X_2$
Gulf cordgrass winter neutral detergent fiber: $\hat{Y}_i = 76.69798 - 0.37678D + 0.52292(D - 28)X_2$
Gulf cordgrass summer neutral detergent fiber: : $\hat{Y}_i = 72.2478 - 0.20395D + 0.29991(D - 23.6)X_2$
Seacoast little bluestem winter neutral detergent fiber: $\hat{Y}_i = 67.18693 + 0.16179D - 0.12568(D - 29)X_2$
Seacoast little bluestem summer neutral detergent fiber: $\hat{Y}_i = 69.15232 - 0.03836D + 0.13027(D - 31)X_2$

Continuous 2-threshold model:

$Y_i = \beta_0 + \gamma_1 D + \gamma_2 (D - T_1) X_2 + \gamma_3 (D - T_2) X_3 + e_i$, where $X_2 = \begin{cases} 1 \text{ if } D > T_1 \\ 0 \text{ if } D \leq T_1 \end{cases}$ and $X_3 = \begin{cases} 1 \text{ if } D > T_2 \\ 0 \text{ if } D \leq T_2 \end{cases}$; D = days after burn; and

T_1 and T_2 = estimated thresholds.

Gulf cordgrass winter protein: $\hat{Y}_i = -1.26000 + 2.03500D - 1.87970(D - 6.411064)X_2 - 0.25339(D - 29.73537)X_3$
Gulf cordgrass summer protein: $\hat{Y}_i = 13.35001 + 0.087134D - 0.43518(D - 29.49)X_2 + 0.27637(D - 33.96)X_3$
Seacoast little bluestem winter protein: $\hat{Y}_i = 6.60232 + 0.84848D - 1.1568478(D - 11.338)X_2 + 0.2729415(D - 27.118)X_3$
Seacoast little bluestem summer protein: $\hat{Y}_i = 9.46793 + 0.07527D - 0.09939(D - 31.0)X_2 - 0.21723(D - 78)X_3$
Gulf cordgrass winter neutral detergent fiber: $\hat{Y}_i = 78.72749 - 0.55859D + 0.52359(D - 19.00)X_2 + 0.25308(D - 46.964)X_3$
Gulf cordgrass summer neutral detergent fiber: $\hat{Y}_i = 72.40914 - 0.21801D + 0.36305(D - 25)X_2 - 0.39990(D - 70.78719)X_3$
Seacoast little bluestem winter neutral detergent fiber: $\hat{Y}_i = 77.7127 - 1.1512D + 1.8083(D - 11)X_2 - 0.6249(D - 21.22912)X_3$
Seacoast little bluestem summer neutral detergent fiber: no thresholds estimated

EXAMPLES OF HOW TO USE TABLE S1 AND A 2-THRESHOLD MODEL

Gulf cordgrass, CP, winter burn:

$T_1 = 6.411064;\ T_2 = 29.73537$

- For ***D* = *5*** days post-burning*:* (**bold-faced value of 5** to be inserted in eq. 1, below)

  $X_2 = 0$ because $D \leq T_1$ and $X_3 = \underline{0}$ because $D \leq T_2$ (*italicized values of 0 and 0* to be inserted in eq. 1, below*):*

  $$\hat{Y}_i = -1.26000 + 2.03500 \times \mathbf{5} - 1.87970(\mathbf{5} - 6.411064) \times 0 - 0.25339(\mathbf{5} - 29.73537) \times \underline{0} = \underline{8.915} \qquad \text{Eq. 1}$$

- For ***D* = *20*** days post-burning*:* (**bold-faced value of 20** to be inserted in eq. 2, below)

  $X_2 = 1$ because $D > T_1$ and $X_3 = \underline{0}$ because $D \leq T_2$ (*italicized values of 1 and 0* to be inserted in eq. 2, below*):*

  $$\hat{Y}_i = -1.26000 + 2.03500 \times \mathbf{20} - 1.87970(\mathbf{20} - 6.411064) \times 1 - 0.25339(\mathbf{20} - 29.73537) \times \underline{0} = \underline{13.897} \qquad \text{Eq. 2}$$

- For ***D* = *40*** days post-burning*:* (**bold-faced value of 40** to be inserted in eq. 3, below)

  $X_2 = 1$ because $D > T_1$ and $X_3 = \underline{1}$ because $D > T_2$ (*italicized values of 1 and 1* to be inserted in eq. 3, below*):*

  $$\hat{Y}_i = -1.26000 + 2.03500 \times \mathbf{40} - 1.87970(\mathbf{40} - 6.411064) \times 1 - 0.25339(\mathbf{40} - 29.73537) \times \underline{1} = \underline{14.4019} \qquad \text{Eq. 3}$$