Australian Journal of Crop Science AJCS

AJCS 12(10):1685-1694 (2018) ISSN:1835-2707
doi: 10.21475/ajcs.18.12.10.pne1440

Rehabilitation of pasture fertilized with wood ash and its application management in the Brazilian Cerrado

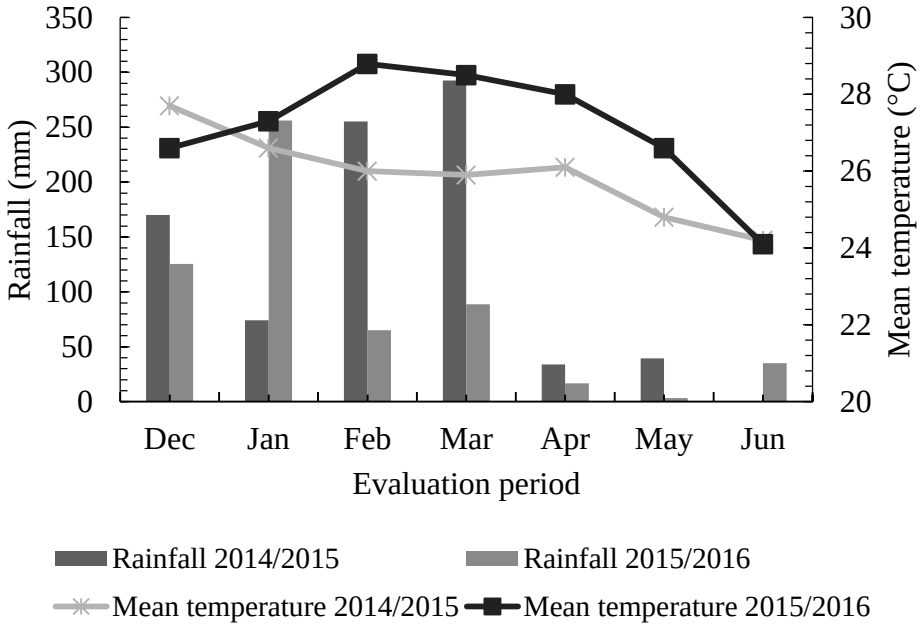
Éllen Souza do Espírito Santo[1], Edna Maria Bonfim-Silva[1], Helon Hébano de Freitas Sousa[1], Tonny José Araújo da Silva[1], Adriano Bicioni Pacheco[1], William Fenner[2]

Supplementary Table 1. Analysis of variance for chlorophyll index, plant height, number of leaves and number tillers of Marandu grass under wood ash doses and application managements. Rondonópolis, MT - Brazil

	Source of Variation						
Evaluation	Block	Doses (D)	Res. (1)	Application (A)	Res. (2)	D*A	Res. (3)
DF	3	5	15	1	3	5	15
				Chlorophyll Index			
				2015			
1st	11.9ns	8.7ns	19.3	311.0ns	36.2	25.8ns	10.0
2nd	38.4ns	70.3*	19.1	455.9ns	91.3	15.2ns	33.1
3rd	7.2ns	3.6ns	7.7	217.7*	20.0	5.0ns	2.8
4th	7.7ns	13.9ns	9.7	18.0ns	3.5	6.0ns	10.1
				2016			
1st	187.7*	69.5ns	37.8	95.8ns	44.2	8.5ns	8.5
2nd	102.1ns	171.8ns	75.4	275.0ns	443.8	130.5ns	124.2
3rd	3.3ns	11.9ns	11.5	30.1ns	25.9	33.5ns	27.8
4th	79.3***	3.6ns	4.7	0.1ns	0.5	0.2ns	0.5
				Plant Height			
				2015			
1st	115.0ns	131.4ns	54.0	1201.3**	34.7	40.5ns	21.9
2nd	8.2ns	377.4***	17.3	5.9ns	5.1	2.1ns	18.1
3rd	5.5ns	87.7**	17.5	1872.9**	23.1	36.3*	12.5
4th	18.6ns	24.6ns	9.4	71.1ns	19.0	13.3*	3.8
				2016			
1st	24.3ns	350.0***	331.8	383.4**	22.4	29.5ns	205.7
2nd	29.8***	26.8***	1.7	81.4ns	10.3	6.7*	2.2
3rd	7.2ns	55.8***	7.0	71.0ns	17.5	6.1ns	10.5
4th	12.5ns	52.7*	13.3	78.4ns	23.8	5.9ns	4.9
				Number of leaves			
				2015			
1st	1126940.2***	110427.3*		26953.3	59400.4ns	12371.9	28522.3ns 22376.8
2nd	457477.1ns	884224.7**		167934	15979099.6**	111641.6	325042.6ns 186041
3rd	18113.7ns	337288.2*		79381.4	2431781.9*	108986.8	6833.6ns 60493.2
4th	67497.5ns	909560.9*		263443	310319.8ns	98757	161764.6ns 258933
				2016			
1st	176396.7*	340165.1***		36104.5	1644280.3ns	216528.3	25365.1ns 81630.2
2nd	78787.8ns	204375.8**		31214	576408.3ns	179465.2	105105.9ns 75954.8
3rd	129696.4ns	73233.6ns		63468.4	105281.3ns	59271.5	67413.3ns 47140.1
4th	49127.5ns	353114.1*		119062	17328.0ns	195286.2	97364.0ns 76574.5
				Number of tillers			
				2015			
1st	119609.8**	8979.2ns	12944.6	2129021.4*	83923.3	4859.3ns	10674.4
2nd	288662.7*	177366.3ns	85438.8	2220023.1**	35653.1	49229.9ns	48806.6
3rd	8207.7ns	45196.5*	12564.6	553703.0*	20210.4	5599.0ns	6109.7
4th	26037.7ns	140226.8***	15319.3	59120.7ns	9037.2	4186.5ns	11826.4

				2016			
1st	549.2ns	1685.4**	319.8	2508.5*	212.8	452.9ns	386.9
2nd	622.5**	369.3ns	90.1	2523.0ns	360.7	177.8ns	409.3
3rd	252.7ns	379.9ns	365.1	2821.3*	167.5	31.6ns	232.8
4th	215.0ns	515.4ns	330.1	176.3ns	80.4	172.1ns	108.2

Res. = Residual; ***, ** and * significant at 0.001, 0.01 and 0.05 probability levels, respectively; ns not significant.



Supplementary Fig 1. Cumulative monthly rainfall and mean temperature from December 2014 to June 2015 and from December 2015 to June 2016. Rondonópolis, MT - Brazil.

Supplementary Fig 2. Rectangle for sampling (A), chlorophyll index determination (B), plant height measurement (C) and cut of the plant material (D) in Marandu grass pasture under rehabilitation using wood ash doses and application forms.