

Effect of different rotational stocking management of *Brachiaria brizantha* on weight gain of heifers

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The rotational stocking systems can be a tool to improve quality of forage and productivity in tropical swards



OBJECTIVE

3 Rotational System, fertilized with 200 kg N/ha/year were used to compared weight gain of heifers

Treatments

T_{28d} = after grazing cycles of 28 days

$T_{0.3m}$ = when the sward reached a pre-grazing height of 30 cm

T-irrig $_{0.3m}$ = irrigated when the sward reached pre-grazing height of 30 cm

Mococa city, SP (21°28'S, 47°01'W and 665 m altitude)



15 paddocks per treatment

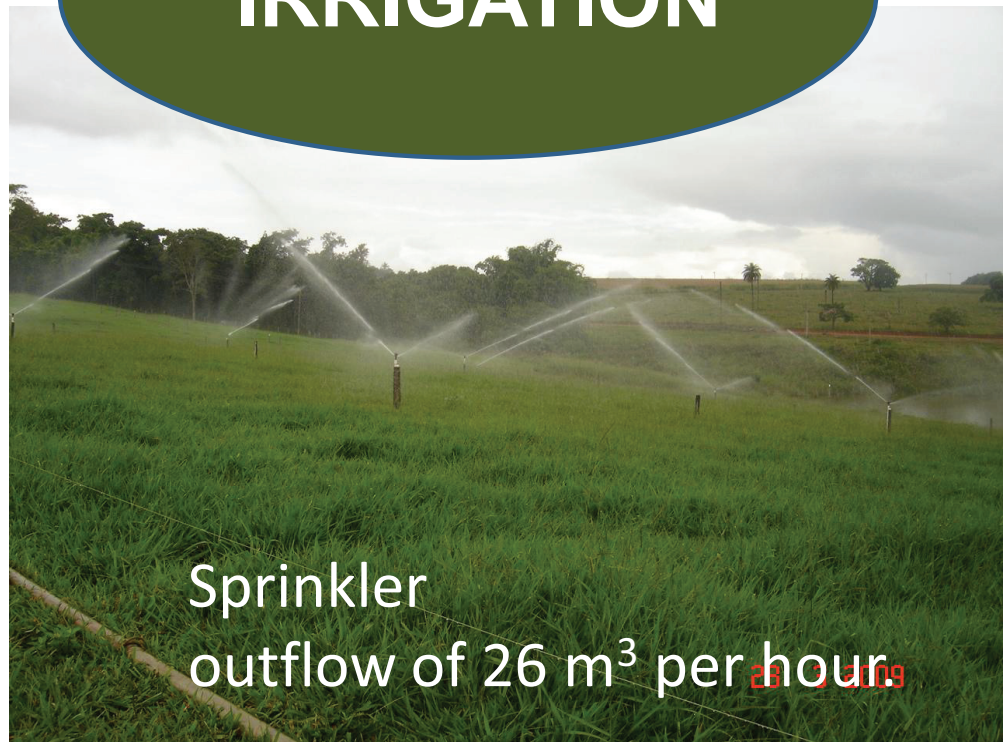
Four paddocks were sampled in each grazing cycle

Heifers were weighed after 12 hours fasting,
each 28 days

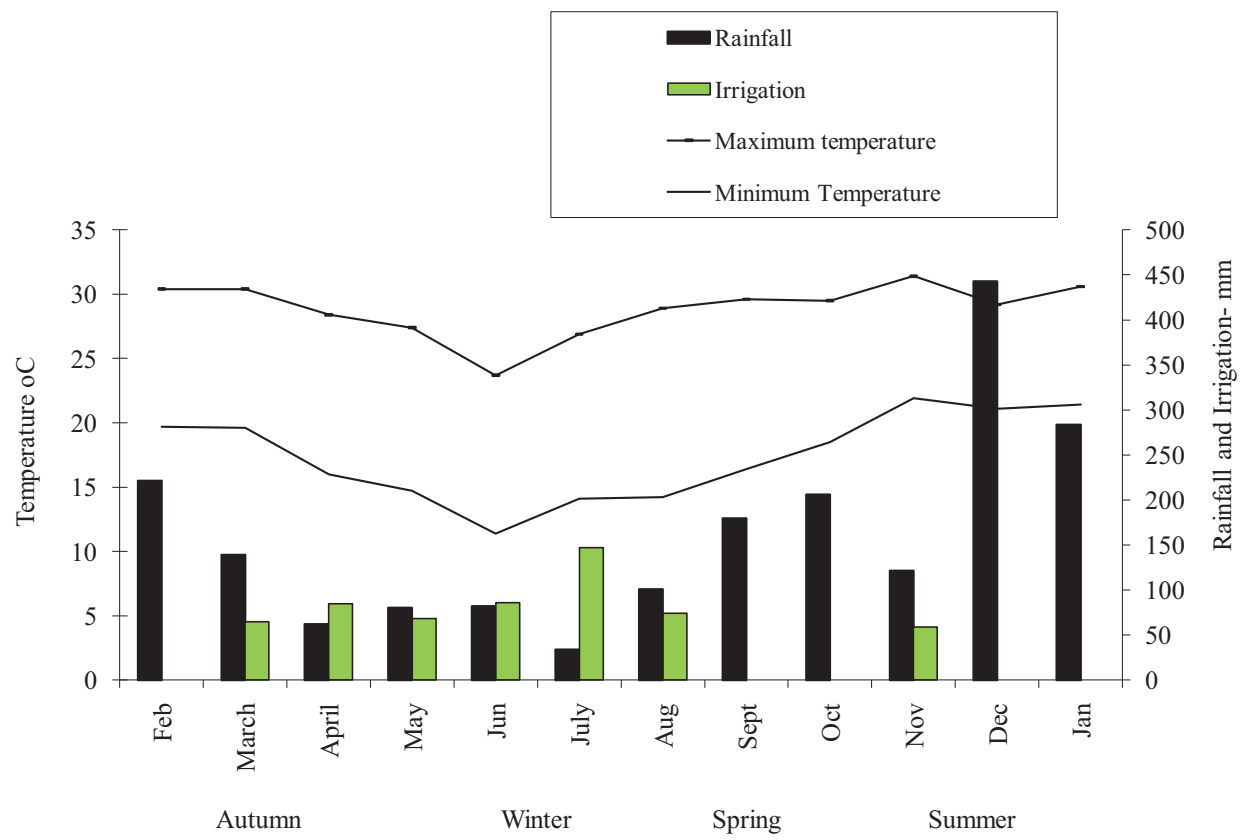


The irrigations were performed weekly to maintain the minimum storage capacity of the soil water of 50%

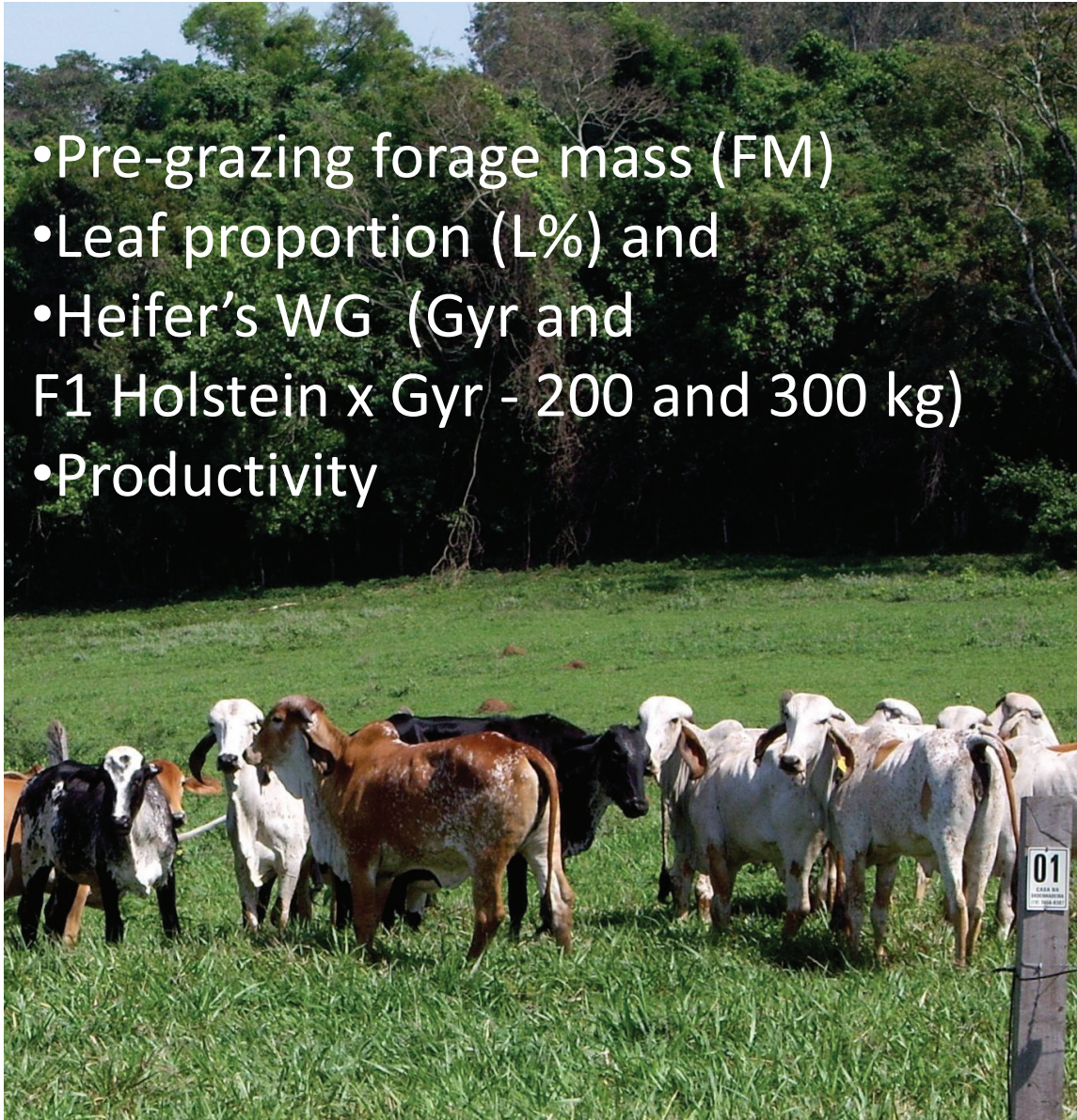
IRRIGATION



Sprinkler
outflow of 26 m³ per hour.



- Pre-grazing forage mass (FM)
- Leaf proportion (L%) and
- Heifer's WG (Gyr and F1 Holstein x Gyr - 200 and 300 kg)
- Productivity



RESULTS

Stocking	Grazing cycle				
System	Autumn	Winter	Spring	Summer	Mean
Herbage mass (kg DM/ha)					
T _{28d}	4418.6	4152.4	4409.8	5790.5	4692.8
T _{0.3m}	4804.8	4006.2	4348.7	5866.0	4756.4
T-irrig _{0.3m}	5725.0	4159.8	4462.4	5722.0	5017.3
Mean	4982.8a	4106.1b	4406.9b	5792.8a	
Leaves (% of DM/ha)					
T _{28d}	25.3	22.6	31.5	29.5	27.3
T _{0.3m}	28.6	22.1	31.8	32.5	28.7
T-irrig _{0.3m}	33.6	20.8	27.4	32.5	28.6
Mean	29.10a	21.80b	30.24a	31.50a	



RESULTS

Stocking	Grazing cycle				
System	Autumn	Winter	Spring	Summer	Mean
Weight gain (kg/day)					
T _{28d}	0.42bA	0.45abA	0.46abA	0.49aA	0.45AB
T _{0.3m}	0.44bA	0.47abA	0.52aA	0.55aA	0.49A
T-irrig _{0.3m}	0.39bB	0.26cB	0.54aA	0.55aA	0.43B
Mean	0.42b	0.39b	0.51a	0.53a	
Stocking rate (heifers of 250kg/ha)					
T _{28d}	10.9aA	7.2bB	6.2cB	9.3aB	8.4B
T _{0.3m}	12.7aA	8.7bB	9.3bAB	14.0aA	11.2A
T-irrig _{0.3m}	11.4Aa	13.1aA	11.0aA	13.5aA	12.2A
Mean	11.7a	9.7ab	8.9b	12.2 ^a	
Productivity (kg of weight gain/ha per season - during 90 days)					
T _{28d}	657.0bA	622.7bA	521.0cC	847.9aB	662.2B
T _{0.3m}	485.8cB	667.5bA	697.5bB	1116.0aA	741.7A
T-irrig _{0.3m}	621.0bA	586.5cA	890.7abA	934.9aAB	758.3A
Mean	657.0b	622.7b	521.0c	847.9a	



CONCLUSION

- Stocking strategy affects the weight gain, stock rate and productivity .
- During winter, the pre-grazing herbage mass and leaf proportion were lower and affected the weight gain of heifers do not supplemented in irrigated pasture.

Thank you

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