

Persistence strategy of *Panicum maximum* cv. Tanzania in grazed pastures

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Introduction In many cases, tiller age cohorts survival diagrams show seasonal increases or decreases in rates of tiller birth and death, which may be regarded as persistence strategy (Matthew *et al.*, 2000). The aim of this work was to analyse tiller demographic information of *P. maximum* cv. Tanzania to determine its persistence strategy.

Materials and methods The experiment was conducted on a *Panicum maximum* cv. Tanzania pasture, in São Carlos, Brazil (21°57'42" S, 47°50'28" W). The pasture was rotationally grazed in a 30-day cycle (1-d grazing, 29-d rest). Tiller cohorts of five tussocks were identified by coloured plastic coated wire (Santos, 2001). Each tiller cohort represented a group of tillers marked during the same grazing cycle; Cohort 1 corresponded to the initial population marked in November 2002 and cohorts 2, 3, 4, 5, 6 and 7 to tillers that appeared in January, March, April, June, August and October 2003, respectively. A survival diagram for marked tiller age cohorts was made with means of five tussocks.

Results Initial mortality rates of tillers cohorts 1 and 2 were higher than for the others tiller cohorts (only 28 and 46% of tillers from cohorts 1 and 2, respectively, survived until the grazing cycle following its appearance). Tiller cohort 3 represented 25 and 13% of total tiller population in August and October, respectively; thus it seems to be important for sward persistence. Reproductive tillers represented 27, 20 and 10% of total tiller number in April, June and August, respectively. Sward renewal occurred mainly during spring and summer (from September till March). It is necessary to categorise new tillers according to the age cohort of the tillers that produced them to better characterise the persistence strategy of *Panicum maximum* cv. Tanzania.

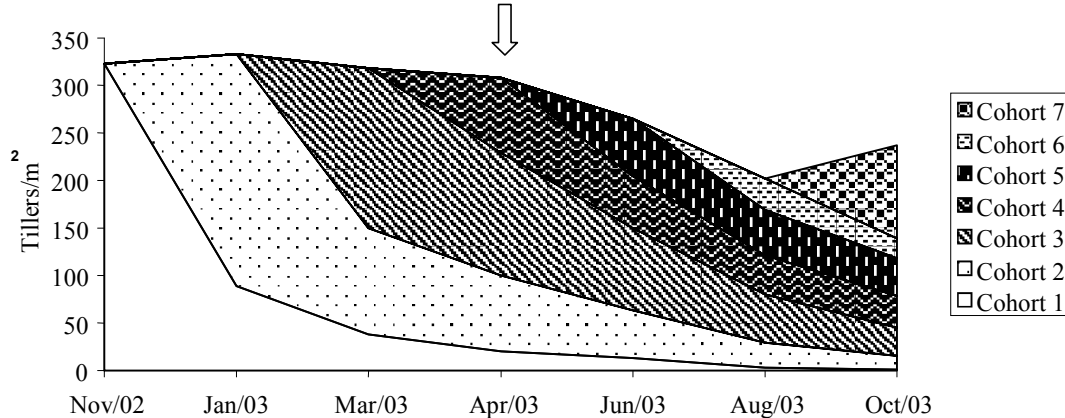


Figure 1 Survival diagram for marked tiller age cohorts of *Panicum maximum* cv. Tanzania. Arrow indicates the beginning of flowering

Conclusions Sward renewal in *Panicum maximum* cv. Tanzania occurs mainly during spring and summer. It is necessary to categorise new tillers according to the age cohort of the tillers that produced them to better characterise the persistence strategy of *Panicum maximum* cv. Tanzania.

References

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