

**DIFFERENT PLANT RESPONSE TO NYMPHS AND ADULTS OF SPITTLEBUGS (HEMIPTERA: CERCOPIDAE) – CASE OF PANICUM MAXIMUM CULTIVAR MASSAI**

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Several species and genera of spittlebugs (Hemiptera: Cercopidae) are economic pests of forage grasses in tropical America. Damage caused by these insects can result in the complete loss of available forage, thereby reducing the carrying capacity of infested pastures. Host plant resistance is both a low-cost method of controlling insects and appropriate for low value crops per unit area, like pastures. Forage grasses germoplasms (*Brachiaria* spp. and *Panicum maximum*) are being screened for spittlebug resistance at Embrapa's Beef Cattle Research Center. Both nymphs and adults are xylem feeders. Nymphs feed mostly on superficial roots as well as at the base of the plant, while the adults feed mostly on the leaves. In the screening process two mechanisms of resistance have been considered: antibiosis to nymphs and, tolerance to adult damage. Although high levels of both resistance mechanisms are desirable in a given released cultivar, different plant responses have been recorded in this insect-plant relationship. The forage grass *Panicum maximum* cv. Massai has shown a high level of antibiosis to nymphs but a low level of tolerance to adult damage. As to the mechanism Antibiosis, lower nymph survival and prolonged nymphal period have been observed in the cultivar Massai, when compared to other *P. maximum* cultivars. Nymph survival percentages and duration of nymphal period of the pasture spittlebug *Notozulia entreriana* were 4% and 42,5 days in the cultivar Massai, contrasting to 32% and 29,6 days in the cultivar Tanzania; and 60% and 26,8 days in the cultivar Mombaça. As to the mechanism Tolerance, based on the reduction of dry matter production of plants compared under the same insect pressure (10 spittlebug adults/plant, during 10 days), a higher reduction was registered in the cultivar Massai. The percentage of dry matter reduction due to *N. entreriana* adult damage in the cultivar Massai was of 88,1%, while 58,8% and 38,6% reductions were observed in the cultivars Tanzania and Mombaça, respectively.

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