

## SOYBEAN AFTER THE CONSORTIUM CORN WITH TROPICAL FORAGES IN THE SAVANNAH

### SOJA APÓS CONSÓRCIO DE MILHO COM FORRAGEIRAS TROPICAIS NO CERRADO

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The biggest limitation to sustainable tillage in the Savannah region is the low biomass accumulation during autumn up to spring, due to low water availability and high temperatures characterizing these regions as having a warm and dry winter. The consortium of grains crops with tropical forages mainly of the genus *Panicum* and *Urochloa* is an alternative, to this situation. This study aimed to evaluate the effect of the straw production of *Panicum* and *Urochloa* after consortium with corn in the crop-livestock integration system on the soybean crop irrigated in succession. The experiment was conducted at the Farm for Teaching, Research and Extension, Faculty of Engineering - UNESP, Ilha Solteira in an Oxisol in Savannah conditions, being in no-tillage for 8 years (previous corn crop). The experimental design was a randomized block with four replications and four treatments: *Panicum maximum* cv. Tanzania sown during the nitrogen fertilization (CTD) of the corn; *Panicum maximum* cv. Mombasa sown during the nitrogen fertilization (CMD) of the corn; *Urochloa brizantha* cv. Xaraés sown during the occasion of nitrogen fertilization (CBD) of the corn; *Urochloa ruziziensis* cv. Comum sown during the nitrogen fertilization (CRD) of the corn. After harvesting the corn and forages cuts, soybean was planted with seeds inoculated with *Bradyrhizobium japonicum* (Turfy with 600,000 viable cells/seed), at distances of 0.45 m with 24 seeds m<sup>-1</sup> in the no tillage system (NTS). The height of the first pod, plant population and yield components of soybean (number of pods per plant, number of seeds per pod and mass of 100 grains) and grain yield of soybean were not significantly influenced by the straws of forages (Table 1). These results were found, probably because the area already has a history of tillage for 8 years since this system was stabilized in the area. Therefore, in this soil that was managed correctly, the straw production of the forage of genus *Panicum* and *Urochloa* does not influence the growth and yield of soybean in the NTS.

**Table 1.** Height of the first pod, plant population, yield components and yield of soybean grown under straw and fodder of the genus *Panicum* and *Urochloa*. Selviria - MS, 2010/2011

Consortia	Height of the first pod (cm)	Population (plants ha <sup>-1</sup> )	Number of pods per plant	Number of grains per pod	Mass of 100 grains (g)	Grain yield (kg ha <sup>-1</sup> )
CTD	13.70	251736	52.92	1.81	13.04	3126
CMD	12.57	230902	50.30	1.81	12.92	2748
CBD	13.65	205902	48.97	1.80	12.99	2328
CRD	14.78	223958	54.34	1.84	13.02	2917
L.S.D.	5.80	55150	33.29	0.41	0.38	1288
C.V. (%)	35.69	20.15	21.28	6.63	2.50	36.89
P>F	>.0005	>.0005	>.0005	>.0005	>.0005	>.0005

Keywords: forage, *Glycine max*, straw.

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