



COMPONENTS OF PRODUCTION AND CORN YIELD INTERCROPPED WITH FORAGES IN SIMULTANEOUS SOWING

COMPONENTES DE PRODUÇÃO E PRODUTIVIDADE DO MILHO EM CONSÓRCIO COM FORRAGEIRAS COM SEMEADURA SIMULTÂNEA

DENISE TSUZUKIBASHI¹, CÁSSIA MARIA DE PAULA GARCIA^{1*}, MARCELO ANDREOTTI², MARCELO CARVALHO MINHOTO TEIXEIRA FILHO², KENY SAMEJIMA MASCARENHA LOPES³, CINIRO COSTA¹

¹ Faculdade de Medicina Veterinária e Zootecnia – UNESP, Botucatu, SP, Brazil.

*E-mail: cassiampg@yahoo.com.br

² Faculdade de Engenharia – UNESP, Ilha Solteira, SP, Brazil.

³ Curso de Engenharia Agrônômica e Zootecnia – UNESP, Dracena, SP, Brazil.

In the past, the integration of grain with cattle activity was limited to restricted options. Nowadays, however, there are numerous offers technology applicable to various concerns and socio-economic situation of producers. The integrated crop-livestock (ICL) can be made by the intercrop, succession or crop rotation with annual grasses. The work aimed to evaluate the grain yield of irrigated corn crop intercropped with forages of the genus *Panicum* and *Urochloa* in simultaneous sowing with corn. The experiment was conducted at the Farm for Teaching, Research and Extension, Faculty of Engineering - UNESP, Ilha Solteira in an Oxisol in Savannah conditions. The experimental area was irrigated by center pivot and it had a history of no-tillage to 8 years. The experimental design used was randomized blocks with four replications and five treatments, as being: *Panicum maximum* cv. Tanzania sown simultaneously (CTS) to corn; *Panicum maximum* cv. Mombaça sown simultaneously (CMS) to corn; *Urochloa brizantha* cv. Xaraes sown simultaneously (CBS) to corn; *Urochloa ruziziensis* sown simultaneously (CRS) to corn, and corn without intercropping (CWI). The production components of corn: plant population per hectare (PIPo), number of ears per hectare (NE ha⁻¹), number of rows per ear (NRE), number of kernels per row on the ear (NKR), number of grain per ear (NGE) and mass of 100 grains (M100G) were not influenced by intercrop with forages. Comparing grain yield of single corn and corn intercropped with forage of the genus *Panicum* and *Urochloa*, there were no differences between treatments (Table 1). Grain productivity (GP) of corn intercropped with forage of the genus *Panicum* and *Urochloa* was similar and did not differ from corn grown single. Regarding the dry mass production (DMP) of forage genus *Panicum* and *Urochloa* after intercropped with corn, it was observed that the intercrop that had the highest DMP was CTS, however, did not differ significantly from the other consortia. Therefore, the intercrop of corn with forage of the genus *Panicum* and *Urochloa* not influence growth and grain yield of irrigated corn in no-tillage system (NTS) in Savannah.

Table 1. Components of production and productivity of corn intercropped with forages of genus *Panicum* and *Urochloa* and productivity of forage dry matter after intercropped with corn. Selviria-MS, 2009/2010

Treatments	PIPo	NE ha ⁻¹	NRE	NKR	NGE	M100G (g)	GP (kg ha ⁻¹)	DMP (kg ha ⁻¹)
CTS	48,889	50,000	16.25	36.75	596.33	32.03	8,263	825 abc
CMS	51,111	51,111	15.40	37.00	566.00	33.66	8,020	687c
CBS	53,889	51,667	16.10	37.00	573.58	32.03	7,834	675c
CRS	51,667	50,000	16.00	36.05	575.12	32.12	8,224	762bc
CWI	53,889	47,222	16.00	34.75	595.61	33.69	6,750	----
C.V. (%)	11.04	10.15	6.27	5.07	7.90	8.20	13.05	6.17
P>F	>.0005	>.0005	>.0005	>.0005	>.0005	>.0005	>.0005	<.0005

Keywords: farming, livestock, *Zea mays*.

Acknowledgments: Fundacao de Amparo a Pesquisa do Estado de Sao Paulo (FAPESP).