

NO TILL SYSTEM OF MAIZE AND CROP-LIVESTOCK INTEGRATION

PLANTIO DIRETO DE MILHO E INTEGRAÇÃO LAVOURA-PECUÁRIA

EDMAR EDUARDO BASSAN MENDES¹, ROBERTO MOLINARI PERES¹,
AILDSON PEREIRA DUARTE², CÉLIO LUIZ JUSTO¹, DENYSE CHABARIBERY³, JOSÉ LUIZ VIANA COUTINHO
FILHO¹

¹ APTA, São José do Rio Preto, SP, Brazil. *E-mail: ebassanmendes@apta.sp.gov.br

² Instituto Agrônômico – IAC, Campinas, SP, Brazil.

³ Autônoma.

The aim of this work was to evaluate the implementation of the Integrated Crop-Livestock (ICL) in beef cattle farms where the corn was planted directly on the pasture, under no-till system, in the first year. The Crop-Livestock Integration (CLI) models evaluated consisted of *Brachiaria decumbens* pastures intercropped with corn in the no tillage system. However, the evaluated CLI system differed from the usual system because it did not use the conventional tillage in the first year, while the conventional soil preparation and sowing of grass is used by most of the Brazilian farms. The results show that in the first year the period of time spent planting and side-dressing nitrogen on corn was longer compared to the following years, mainly due to the lack of uniformity of the ground surface, once no conventional tillage was used to prepare the soil and these operations were performed with own implements for direct planting (Table 1). Therefore, many seeds were placed either very deep or not buried, thus compromising the crop and becoming necessary to replant the corn with a manual planter. From the second year on, even though the conditions were not ideal, the ground surface became more accessible for the sowing and cultivation of corn, after the tillage of the first year. The time spent in most operations performed was longer than usual, especially planting and side-dressing nitrogen on the corn so that the discs did not chop off plants due to the irregularities of the ground surface. Productivity dropped due to the problems already discussed that contributed to a lower income. It is therefore concluded that, under these experimental conditions, the conventional tillage is imperative when implementing the CLI system, even considering the soil management improvements observed from the first to the second year.

Table 1. Data regarding machine operations for sowing and side dressing nitrogen, as well as corn yield, in the implementation of no-till CLI system, São José do Rio Preto – SP

Crop Season	No-till sowing Side dressing nitrogen application (ha)		Corn Yield (sc/60 kg)
	(hour of machine)	(hour of machine)	
2006/07	1.4	2.4	76
2007/08	1.1	1.2	103
2008/09	1.0	1.2	108

Keywords: crop-livestock integration, sowing, *Zea mays*.