

IMPLEMENTATION COSTS OF CROP-LIVESTOCK INTEGRATION (CLI) IN PASTURE ON  
BEEF CATTLE FARMING, SÃO JOSÉ DO RIO PRETO, SP

CUSTO DE IMPLANTAÇÃO DA INTEGRAÇÃO LAVOURA-PECUÁRIA EM PASTAGEM,  
NA RECRIA DE BOVINOS DE CORTE, SÃO JOSÉ DO RIO PRETO-SP

EDMAR EDUARDO BASSAN MENDES<sup>1\*</sup>, ROBERTO MOLINARI PERES<sup>1</sup>, MARLI DIAS MASCARENHAS  
OLIVEIRA<sup>2</sup>, DENYSE CHABARIBERY<sup>3</sup>, CÉLIO LUIZ JUSTO<sup>1</sup>, JOSÉ LUIZ VIANA COUTINHO FILHO<sup>1</sup>

<sup>1</sup>Agência Paulista de Tecnologia dos Agronegócios (APTA), Pólo Regional Centro Norte, São José do Rio Preto, SP, Brazil.

<sup>2</sup>Instituto de Economia Agrícola (IEA), São Paulo, SP, Brazil.

\*e-mail: ebassanmendes@apta.sp.gov.br

This study analyzes the implementation costs of four models of integrated Crop-Livestock systems, with corn in tillage (*Zea mays* L.) intercropped with *Brachiaria decumbens*, without conventional tillage in the first year and subsequent years, while comparing them with two others grazing models used to rear Nellore females during the agricultural years of 2007-08, 2008-09 and 2009-10. This economic study was based on the technical coefficients matrices constructed from data gathered from an experiment on Crop-Livestock Integration (CLI) developed at the Unidade de Pesquisa e Desenvolvimento de São José do Rio Preto (SP), no Pólo Centro Norte. In this experiment, four models of rotational grazing with *Brachiaria decumbens* x corn in comparison to permanent pasture of *Brachiaria decumbens* fertilized with two levels of nitrogen fertilizers (45 and 90 kg/ha/year), with and without correction of soil acidity, respectively. The four integration models differ by the occupation of the areas during the rainy season, with the following combinations: one or two consecutive years of corn intercropped with brachiaria, followed by one or two years of grazing. During the dry season, all areas are used as pasture. The economic results were grouped into four categories with similar characteristics in terms of area occupation and management, regardless of treatment, considering the averages: P- permanent pasture with remnant management; Pi- permanent pasture with intensive management; Pf1- 1<sup>st</sup> year of pasture formed by CLI; and CLI- pasture followed by crop. The interest of such analysis lies in studying the CLI in parts to understand better the results of the treatments. Accordingly, the CLI category refers only to the year when corn and calf rearing occur in the same area. The data obtained from the analysis show clearly that in this study, the CLI has better economical results with gross profit margin of 42% TOC and operational profit of R\$1,009.20/ha. Therefore, the strategy displayed good average indices for animal and agricultural productivity with good profit, allowing indemnity for other expenses not charged to the operating cost.

Table 1. Economic results regarding the Crop-Livestock Integration Model used in the Nellore Cows rearing system, 1ha, São José do Rio Preto (SP), Averages for the agricultural years of 2007/08, 2008/09 and 2009/10. Reais of January, 2013

Item	P	Pi	Pf1	CLI
Total Operational Cost (TOC)	848,39	1,226.22	1,222.28	2,373.51
Gross Revenue (GR)	1,235.76	1,663.19	1,709.71	3,382.80
Gross Profit TOC (GP) - %	45.66	35.64	39.88	42.52
Benefit/cost	1.46	1.36	1.40	1.43
Operating profit (OP)	387.37	436.97	487.43	1,009.29
Profitability Index - %	31.35	26.27	28.51	29.84

Keywords: *Brachiaria decumbens*, corn, Nellore.