



world congress on integrated
crop-livestock-forest systems

3rd International
Symposium on Integrated
Crop-Livestock Systems

towards sustainable intensification
brasilía • brazil • 2015

Congress Proceedings

Anais do Congresso

These Proceedings organize the papers and abstracts presented at the 2015 World Congress on Integrated Crop-livestock-forest systems (WCCLF) incorporating the Third International Symposium on Integrated Crop-Livestock Systems, held from July 12 to 17, 2015, at the Ulysses Guimarães Convention Center in Brasília, DF.

The objective of the Congress was to discuss the state-of-the-art of integrated agricultural systems as well as its perspectives as main 'drivers' of sustainable intensification on agriculture all over the world. The event was organized and promoted by the Brazilian Agricultural Research Corporation and the Federal University of Rio Grande do Sul, with the support of many national and international institutions including CIAT, CIRAD and USDA.

The event was based on three pillars. Plenary presentations of international scientific results on ICLF systems; technical training of technicians with focus on existing recommendations; and teaching conferences to discuss inclusion of the ICLF in the Universities agendas.

Scientists, experts, technicians, professors, students and leading producers of different fields participated in the Congress, which was organized into three main topics: technology, environment and social economy. The subjects distributed in many topics in the agenda include issues related to global agriculture sustainability; opportunities and limitations on the adoption of integrated systems; environmental costs of intensive agriculture; contributions of integration for family farming; efficient use of water and nutrients; carbon sequestration and greenhouse gas emissions, among others.

More than 350 scientific papers were selected for presentation. Forty of these scientific submissions were chosen for oral presentation, arranged in ten parallel sessions. The other submissions were presented in poster format, and remained displayed in the panels during the entire event. This present publication is divided in three sessions: Abstracts of plenary speakers, Abstracts of Oral Presentations in parallel sessions and Posters' Abstracts.

RESULTS

The program of the Congress, both technical and scientific, was substantial and produced significant statistics. A total of 24 scientists participated in the Plenary Session, from several different countries including five from Brazil. The two Special Sessions, for technicians and for teaching, had 23 presentations. A total of 907 attendees were pre-registered and 602 were present at the event. Twenty six Brazilian states were represented as well as 22 countries. Two hundred and twenty eight public and private institutions were represented by different attendees. Three hundred and fifty four submitted papers were presented either as posters or as oral presentations. The total of 1,075 co-authors contributed with scientific papers submitted. An intensive debate was encouraged in the teaching Special Sessions in order to discuss the inclusion ICLF systems courses in the universities and technical schools. Professors, students and technicians appointed limitations in the curricular plans and course programs. They proposed alternatives, new procedures and recommendations to improve ICLF disciplines, considering the complexity of the systems and the need of a systemic multidisciplinary approach of this subject



Sheep termination evaluation in Massai grass (*P. maximum*) irrigated pastures supplemented with different sunflower cake levels replacing soybeans meal

Geraldo, M. C. CARVALHO^{1*}, Raimundo B. ARAÚJO NETO¹, José L. RIBEIRO¹, Ana L. H. BARRETO¹, Luis J. D. FRANCO¹ and Arnaud A. ALVES.

¹ Embrapa Meio-Norte, Av. Duque de Caxias 5650, Teresina, PI, Brazil.

*E-mail address of presenting author: geraldo.carvalho@embrapa.br

Introduction

Brazil's Northeast region accounts 9.7 million heads of sheep, which represents 54% of the national herd (IBGE, 2014). The State of Piauí the fifth place among Brazilian states with 1.3 million head. Although the herd is expanding, it is not enough to meet current demand so Brazil imports lamb meat to supply the needs of the internal market (Rodrigues, 2011). In tropical regions of Brazil nutritional supplementation of animals during off season is very important so that the animals do not lose weight. The sunflower cake is a by-product industry and is inexpensive compared to soybeans and corn. So the aim of this study was to evaluate the growth of sheep kept on pasture supplemented with various levels of this byproduct replacing soybean meal.

Material and Methods

The study was conducted during 90 days in the 2014 off-season in the experimental field of EMBRAPA Mid North in Campo Maior city, Piauí State. We used twenty-four sheep of Santa Inês breed, with five months of age and initial weight of 19.51 kg, kept in irrigated pastures of *Panicum maximum* cv. Massai under rotational stocking. The evaluations included weight gain and the average daily gain (kg/day). The experimental design was completely randomized with four treatments: T1= 100% soybean meal; T2= 8.3% of sunflower cake; T3= 16.5% of sunflower cake and T4 = 21.9% of sunflower cake with six replications, represented by animals.

Results and Conclusions

The initial body weight of the animals was 19.51 kg and after 90 days the final weight ranged from 24.12 to 31.00 kg with an average daily gain per animal ranged from 51.22 to 127.77g. Although weight gain occurred in all treatments the weight gain of sheep kept in *Panicum maximum* cv Massai irrigated pasture was inversely proportional to the levels of sunflower cake added in diets with soybean meal evaluated.

References

IBGE. **Instituto Brasileiro de Geografia e Estatística**. Available at: <http://www.sidra.ibge.gov.br/bda/pecua/default.asp?t=2&z=t&o=24&u1=1&u2=1&u3=1&u4=1&u5=1&u6=1&u7=1>>. Accessed on January/5/2014.

RODRIGUES, R. M. C. **Brasil**: importação de carne ovina uruguaia em novembro cresce 216% comparado a outubro. FarmPoint 2011. On line. Available at: <http://www.farmpoint.com.br/cadeia-produtiva/especiais/brasil-importacao-de-carne-ovina-uruguaia-em-novembro-cresce-216-comparado-a-outubro-77092n.aspx>. Accessed on July/24/2014.

Traditional smallholder mixed farming systems

Geraldo Magela Cortes Carvalho

“ Sheep termination evaluation in massai grass (*P. Maximum*) irrigated pastures supplemented with different sunflower cake levels replacing soybeans meal

ANTJ

http://www.eventweb.com.br/specific-files/manuscripts/wc-clf2015/36411_1431016521.pdf

GO TO

- KEYNOTE SPEAKERS
- ORAL PRESENTATIONS
- POSTERS

NEXT
ABSTRACT



256

