



(Asociación de Biología de Tucumán)

Abstracts from the
XXXV ANNUAL SCIENTIFIC MEETING

October 25 – 26, 2018
Tafí del Valle, Tucumán, Argentina

*The abstracts have been revised and evaluated by the
Scientific Committee
of the Tucumán Biology Association*

TUCUMAN BIOLOGY ASSOCIATION

President

María Teresa Ajmat

Vicepresident

Liliana I. Zelarayán

Secretary

José E. Zapata Martínez

Prosecretary

Mario Fortuna

Treasurer

Cecilia Gramajo Buhler

Protreasurer

Federico Bonilla

Board members:

Patricia Albornoz Lucrecia Iruzubieta Villagra
Analía Salvatore María Eugenia Pérez

Past President

Martha Buhler.

products as an alternative to non-traditional animal supplement feed. We worked with samples of ground maize (polenta), corn flour, black bean, white bean and corn bran. We determined crude protein (%PB) AOAC method (1994) and gross energy (EB) by adiabatic calorimeter (Parr, Illinois, USA). The following results were obtained: ground maize: %PB=8.24 $\sigma\pm 0.03$, EB=4.96kcal/gr $\sigma\pm 0.01$; Corn flour: %PB=10.16 $\sigma\pm 0.92$, EB=4.4kcal/gr $\sigma\pm 0.05$; Black bean (*Phaseolus vulgaris*): %PB=24.2 $\sigma\pm 0.15$, EB= 4.22kcal/gr $\sigma\pm 0.02$; White bean (*Phaseolus vulgaris*): %PB=24 $\sigma\pm 0.25$, EB=4.2kcal/gr $\sigma\pm 0.02$, Corn bran: %PB=11.32 $\sigma\pm 0.18$, EB=4.82kcal/gr $\sigma\pm 0.01$. *Phaseolus vulgaris* is a good protein supplement, followed by bran and corn flour. The energy values of the samples are low.

A121

FORAGE PLANTS IN SILÍPICA DEPARTMENT LOCATIONS

Schefer ES, Céspedes FN, Carrizo E del V

Facultad de Agronomía y Agroindustrias/UNSE. E-mail: seba.schefer@gmail.com

The main resource for livestock feeding in the Silípica department comes from native forest species. In order for these systems to be sustainable, knowledge of the possible sources of food by the producers is essential.

The aim of this work was to study popular knowledge about the plants with which cattle are fed in localities of the Silípica department. Semistructured interviews were conducted with inhabitants of 6 villages; we asked about the plants that their animals eat, the parts of the plants that are consumed, the type of cattle fed and the use of supplements. Twenty-two species distinguished as forage belonging to 10 botanical families were mentioned, out of which the most representative one was Fabaceae. The most often mentioned plants belong to the genus *Prosopis* (*P. alba*, *P. nigra*, *P. kuntzei*) in addition to *Geoffroea decorticans* and *Ziziphus mistol*. Producers stated that goats are the animals that most often use forest plants, that in general no supplementation is used, and that the most often consumed parts of the plants are fruits and leaves. The results show that the inhabitants know the plants of their environment and apply this knowledge to activities such as livestock rearing, which contributes to provide food and improve family economy.

A122

PRELIMINARY EVALUATION OF THE SUITABILITY OF LACTIC ACID BACTERIA FOR THEIR USE AS INOCULANTS IN FORAGE SILAGES

Andrada E^{1,2}, Abeijón-Mukdsi MC¹, Rosa R², Cerviño S^{2,3}, Imoberdorf C², Leguiza HD⁴, Chagra Dib EP⁴, Setti W⁴, Medina R^{1,2}

¹Centro de Referencia para Lactobacilos (CERELA-CONICET). ²Universidad Nacional de Tucumán, Facultad de Agronomía y Zootecnia (FAZ-UNT). ³Subsecretaría de Agricultura Familiar de la Nación, Zona Valles Tucumán (SAF). ⁴Instituto Nacional de Tecnología Agropecuaria (INTA-EEA Salta).E-mail: eandrada@cerela.org.ar

Silage inoculants are widely used in the cattle industry; those with fibrolytic activity constitute a recent innovation. The aim of this work consisted in the evaluation of two fibrolytic *Lactobacillus* ability to beneficially transform both chemical and microbiological profiles of inoculated maize silages. *Materials and Methods:* hybrid maize was chopped and hand sprayed according to the corresponding experimental group with *L. sp.* ETQ27 (homolactic, 1×10^6 CFU/g forrage), *L. sp.* CRL1669 (heterolactic, 1×10^6 CFU/g forrage), or with an equal amount of sterile suspension medium. Mini silos of 3kg were prepared in bags (duplicates for each opening day) and were opened for analysis at 5, 30, 60 and 90 days. *Results and Discussion:* ETQ27 reduced silage pH faster and produced more lactic acid than control and CRL1669 groups. On the other hand, CRL1669 produced higher concentrations of acetic acid, which could be the cause of the significantly lower amount of yeasts and consequently, of ethanol. Lactic acid bacteria and total culturable bacteria counts followed similar patterns. *Conclusions:* Both strains induced changes in the fermentation patterns of maize silages. ETQ27 showed a better inoculant ability, as the most important factor for preservation is lactic acid production. CRL1669 might be beneficial to improve silage aerobic stability. These assays are considered the first steps in the development of *third generation* inoculants.

A123

FIRST HISTOLOGICAL CONTRIBUTIONS OF *Semiscolex similis* (Weyenbergh, 1879) (HIRUDINEA, SEMISCOLECIDAE): BODY WALL

Salguero EJ, Pucci A, Valdez IC

Cátedra de Histología Animal. Fac. de Ciencias Naturales e IML- UNT. E-mail: irisvaldez@csnat.unt.edu.ar

Semiscolex similis is a hirudinean haematophagous freshwater endemic to South America. It is characterized by presenting a body of uniform width, with narrow and long anterior suction cup and a specific coloring pattern. The leeches are known for their medicinal use and in our province, cases of application of *S. similis* have been reported to reduce venous congestion. However, the species is captured in wastewater and is used without medical supervision,