**SP-P01**

The longevity of Nelore cows in grazing system of the Bolivian tropics

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The objective of the study to evaluate the longevity of Nelore cows in a grazing system of the Bolivian tropics. For the research study, retrospective data were used corresponding to the period between 2006 and 2019, belonging to the San Juan de Yapacani Integral Agricultural Cooperative (CAISY) located in the Japanese Communities San Juan, Santa Cruz, Bolivia (16 ° 59 ′ 0 ″ south latitude, 63 ° 58 ′ 0 ″ west longitude). The Japanese communities is located at 286 m.a.s.l. and it has a tropical climate, with significant rains in most months of the year and a short dry season with little effect on the general climate. The average annual temperature is 24.3 ° C in San Juan Japanese communities with average rainfall of 1805 mm. The data corresponding to 289 Nelore cows, primiparous and multiparous, were used, with a total of 800 calvings. Primiparous cows calve between the months of May and July of each year, while the rest calve between the months of July and September. Weaning occurs between seventh and eighth months in two or three stages depending on the body condition and general condition. Gynecological control is performed routinely, at weaning, by a technical advisor, as well as health. The feeding of the rodeo was grazing managed under intensive conditions, on 82 hectares with cultivated pastures Brachiaria decumbens (10 to 14 t / ha / year of DM), Brachiaria humidicola (8 to 12 t / ha / year of DM), Brachiaria dictyoneura (7 at 9 t / ha / year of DM), Cynodon dactylon (10 to 20 t / ha / year of DM) and Panicum maximum cv mombaza (20 to 28 t / ha / year of DM). The first artificial insemination (AI) is performed to the cows in October, then the second AI in early December. At the end of December, a natural service is made to cows that are still empty. The averages and standard deviations of the variables were obtained, Longevity (L): Discard or death date - date of birth in days, Age at first calving (AFC): Age of first calving (date of birth - date of first calving) in months, calving-calving interval (CCI): the calving-calving interval (date of calving - the date of the last previous calving) in days, Live Weight (LW) in kg. For the variable number of median deliveries and ranges, Number of calving (NC): The number of births (Σ of the deliveries of each cow). The survival curve for herd data was calculated, using the non-parametric method of Kaplan-Meier. The results show that the L of the herd had an average value of 74.8 months, this indicator is not used by the literature, so the value obtained presents an antecedent of the same, no longer has values of reference. The value used is productive life that takes into account the days from the first calving to its discard without taking into account the stage of breeding and rearing. The value of AFC is above those found in Nelore cattle in the Parabano farm (Cordillera Province, Santa Cruz Department) where the age at first birth was 35.6 ± 8.8 months. The value of CCI was 15.2 months. The LW found are lower than those mentioned by Lopes of 555 ± 71 kg in adult cows. The low NC found coincides with those reported by other authors of 2.4 births, which would imply an annual replacement of 50%, this value is far from being the most biologically and economically efficient for the system, since to have 20% Replacement cows should have at least five deliveries. These results could be a reflection of the requirements established in the different conditions of herd management, environmental conditions and nutritional aspects. The survival curve obtained from Kaplan-Meier for the herd evaluated. The probability of cows that would remain alive in days from birth to discard or death is shown. The risk of discard obtained during the initial days of L is high, showing that at 2282 days only 50% of the cows arrive. It is concluded that the longevity of Nelore cows in the studied grazing system of the Bolivian tropics is below what is required to maintain an annular replacement of 18-20%.

**Keywords:** Longevity, Nelore cows, grazing system.

**SP-P02**

Progression of the length of life of cows Nelore cows of the Bolivian tropics

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Analyzing longevity through survival analysis allows us to detect genetic differences between animals in traits other than production, such as health, fertility, conformation and old age. The objective was to evaluate the behaviors of cows in terms of ages of beginning and end of their productive life in Nelore cows in the same grazing system of the Bolivian tropics. For the research work retrospective data were used corresponding to the period between 1987 and 2019 belonging to the Cooperativa Agropecuaria Integral San Juan de Yapacani (CAISY) located in the Japanese communities San Juan (16 ° 59 ′ 0 ″ south latitude, 63 ° 58 ′ 0 ″ west longitude) and the Technological Center on Agriculture and Livestock in Bolivia (CETABOL) in the Japanese communities Okinawa. (17 ° 13 ′ 12 ″ south latitude, 62 ° 53 ′ 39 ″ west longitude) Santa Cruz, Bolivia. Data corresponding to 800 calvings of the Caisy group (CA) and 3734 calvings of the CETABOL (CE) group of Nelore cows were used, with a total of 4534 calvings. Primiparous cows birth between the months of May and July of each year, while the rest did so between July and September. Weaning occurs between seven and eight months in two or three stages depending on the body condition and general condition. Gynecological control is performed routinely, at weaning, as well as health. The feeding of the herd was grazing managed in intensive conditions with cultivated pastures of Brachiaria decumbens (10 to 14 t / ha / year of DM), Brachiaria humidicola (8 to 12 t / ha / year of DM), Brachiaria dictyoneura (7 to 9 t / ha / year of DM), Cynodon dactylon (10 to 20 t / ha / year of DM) and Panicum maximum cv mombaza (20 to 28 t / ha / year of DM).
DM). As a descriptive indicator of longevity, the life of each cow was calculated: Longevity = \sum [date of birth - date of discard or death], in days. For the analysis of the progression of the proportion of females of each of the two groups in relation to the duration of the productive life, the Kaplan-Meier technique used for the calculation of survival curves was applied. The behavior of both groups was compared with the log-rank test (Mantel-Cox). The average length of life of both groups was 2264 days (6.12 years). Survival curves for the end of the productive life event for each group showed that there was a 50% probability that the cows of the EC group end their life before 2100 days of life and those of the CA group end their life before 2600 days old. The average length of life of the CA group was 2554 days (7 years) and the EC group was 2044 days (5.6 years). The differences between survival functions for the different groups were statistically significant (p≤0.0001). The greater probability of permanence of the Nelore cows of the CA group compared to the cows of the CE group could be attributed to better management and food that allowed a length productive life, and also to the production objectives of each cooperative. It is concluded that the Nelore cows of the CA group are more likely to complete their productive life at an older age than the cows of the CE Group in grazing systems of the Bolivian tropics.

**Keywords:** Progression, Life of cows Nelore, Bolivian tropics.

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**SP-P03**

**From a healthy calf to a performing cow: a case-control study**

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**Objectives:** As well as for any enterprise, the main target of the bovine dairy industry is economic sustainability. In other words, the core objective of a dairy operation is to reach an amount of milk production that helps to meet its goals. A dairy herd must be considered as an integrated, productive unit. Starting from newborn calves to milking cows, the health status of the animals is pivotal at obtaining satisfactory economic results. Neonatal calf diarrhoea (NCD) is considered the primary pathology involving newborn calves. Conversely, respiratory disease is the leading cause of losses after 60 days of life. This study aimed to assess the impact of NCDs on health, growth and milk productivity in a selected population of dairy cattle.

**Materials & Methods:** A case-control study was carried out in 300 newborn calves from 5 large dairy cow operations located in the Po Valley (Italy). The animals were split out in two groups: group A (cases) included 150 animals experiencing severe (needing antibiotic therapy) neonatal diarrhoea and group B (controls) included 150 calves without a clinical sign of neonatal enteritis. Weight at the born, 6 and 15 months of life besides the amount of milk during the whole lactation were collected. Also, the mortality rate and prevalence of respiratory disease episodes, involving single animals and requiring anti-inflamatory-antibiotic treatments, were recorded.

**Results:** The comparison of group A (cases) with group B (controls) showed: mean weight at the born 47.6±4.2 vs 47.2±3.8kg; at six months of life 182.5±32 vs 198.5±23kg, at 15 months 360.82±32.4 vs 379.4±21kg and average milk production of 11,720±425 vs 12,480±346kg. Group A suffered a mean loss of 760kg of milk per cow, equivalent to about €350-450, depending on the milk productive destination. The calculation did not take into account losses from mortality and costs for therapy of respiratory disease episodes. Besides, the mortality rate and prevalence of respiratory disease were respectively 9% and 31% in group A vs 5% and 21% in group B. In particular, 45% vs 21% of respiratory disease cases showed relapsing character.

**Conclusion:** The complex of obtained data supports the thesis that neonatal enteritis harms the weight gain during grow period and on milk production too. Regarding the pathogenesis of NCD, failure of passive transfer (FPT) plays an important role in favouring viral, bacterial and parasite infections and related pathogenic effect. A concentration of IgG <1000 mg/100 ml of blood serum collected from calves 3-10 days of life is considered the index of FPT status. The phenomenon is widespread in dairy cattle. A previous study carried out on newborn calves serum samples from 254 Italian Friesian herds with high milk production (≥11000kg/cow/lactation), pointed out an FPT mean prevalence of 28%. Colostrum samples from animals of the same herds showed a 17% prevalence of low-quality colostrum. Parity did not significantly affect colostrum quality. In this study, animals with previous diarrhoea showed a higher prevalence of the respiratory disease in their lifetime. Impairment of enteric barrier triggers a microbial (mainly bacteria) translocation from gut to the bloodstream and then to different organs, lung included. Isolation of E. coli enteropathogenic strains from the lung of calves experienced neonatal diarrhoea credits of value that pathogenetic hypothesis. Furthermore, the anatomy of the bovine lung (8 lobes, absence of interalveolar pores and presence of interlobular septa) hampers the microbial clearance, promoting the persistence of silent foci of infection that can reactivate long life causing relapsing respiratory episodes. If severe, NCD affects health, growth and production of dairy cattle, the control of the disease is the first step to support the sustainability of the business. Following the mantra “is better to prevent than cure”, vaccination of dam during the dry period is included in the protocols to cope with neonatal enteric disorders. If an FPT status persists, even in the presence of active maternal immunization, prevalence and seriousness of the disease often persist as well. To avoid that, it’s pivotal to detect the origin of FPT in the herd, setting up possible solutions.

**Keywords:** Calf, neonatal calf diarrhoea, bovine respiratory disease.
Estimation of the environmental impact of CLAS vials in comparison with glass vials using a life-cycle assessment approach

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Objectives: Ceva Santé Animale has developed a new type of plastic vials called CLAS® which is intended for its injectable products in replacement of the traditional glass vial. On the field, many users acknowledge the superiority of the CLAS vials because it is lighter, more resistant and ergonomic in comparison with glass vials. As the environmental impact of CLAS vials has not been previously assessed, a life-cycle assessment (LCA) was undertaken to determine the level of environmental impact of these new type of vials compared to the glass vials.

Material and methods: A complete life-cycle assessment (LCA) was conducted by an independent laboratory (APE- SA, Pau) to compare the environmental impacts of glass and CLAS vials. LCA is a methodology for assessing environmental impacts associated with all the stages of the life-cycle of a commercial product (from cradle to grave). Environmental impacts were assessed from raw material extraction and processing, through the product's manufacture, distribution and use, to the recycling or final disposal of the materials composing it. The following criteria were taken into account when calculating the environmental impacts: potential for climate change, freshwater eutrophisation, fine particles emission, depletion of fossil-fuel resources, toxicity or carcinogenicity for humans, ecotoxicity, acidification, water depletion. In addition, the IMPACT 2002+ life cycle impact assessment methodology was used to estimate the overall environmental impact (Jolliet, 2003). The IMPACT 2002+ life cycle impact assessment methodology proposes a feasible implementation of a combined midpoint/damage approach, linking all types of life cycle inventory results (elementary flows and other interventions) via 14 midpoint categories to four damage categories (human health, ecosystem quality, resources, climate change). Finally, an external expert reviewed the compliance of the LCA with ISO 14040 standards.

Results: Following this LCA, CLAS vials were found to have a lesser environmental impact than traditional glass vials (-33%). In particular, CLAS vials were associated with a marked reduction in the potential consequences for human health and ecosystems (50%), a significant reduction on the depletion of resources (-23%) mainly due to the reduction in electricity consumption and a small reduction in the potential for global warming, but of the same order than in the initial assessment of potential impacts (-14%). Methodology used in this LCA was found compliant with the requirements of ISO 14040 standards.

Conclusion: According to the results from this life-cycle assessment, CLAS vials have considerably less environmental impacts compared to traditional glass vials.

References:
Jolliet, O., 2003. IMPACT 2002+: a new life cycle assess-

Keywords: Environmental impact, glass vials, life-cycle assessment, CLAS.
A Cow–Calf Farming System Fully Adapted to Elevation and Harsh Conditions in Andorra (Europe).
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Objectives: This work describes the project of the Bruna d’Andorra (BA), a local cow breed (begin year 2000) from Andorra. The main goal of this strategic project of national interest is to achieve a homogeneous bovine population of a typical local breed from Andorra, well adapted to the mountain pastures of the country, and able to maximize the use of natural resources in a sustainable way and in an area with adverse environmental conditions. This system of cattle production includes the breeding, the fattening of calves, obtaining replacement animals, the slaughter of animals, and the marketing of their high-quality meat in the Andorran territory.

The main aim of this work is to reflect the evolution of BA population, meat productive performance, and main reproductive data that have been achieved during this 21-year period (2000–2020). A second objective is to explain the plans for the future of the project as a highly sustainable and environmentally friendly farming system.

Materials and methods: The BA breed is genetically very closely related to the Bruna dels Pirineus (BP), an autochthonous beef breed located in the mountainous areas of Catalonia (Northeastern Spain) and Parda Alpina (PA), an autochthonous beef breed located in the mountainous areas of Aragon (Northeastern Spain). The BP and PA breeds originated from the cross of native cattle with imported old-type Brown Swiss individuals during the first decades of the 20th century.

The BA genetic improvement program focused its efforts on maximizing the strengths of the breed (adaptability to the environment, acceptable productive yields, and good maternal fitness) and minimizing the weak, unwanted, or risky points (gene of Mh, inbreeding, and aggressiveness). The genetic selection of the included blood sampling, anatomical evaluation and measurements, productive, carcass quality data and breed standards.

The data used for this descriptive study were from official sources, with more than 20,000 data points from 47 farms. Data under study are: census (females > 12 months old, bulls, and animals in the fattening units), fattening performance (body weight—BW—at birth (kg), BW at slaughter (kg), average daily gain (ADG) (g/days of life, % meat yield (Kg carcass/kg BW × 100-), carcass quality based on muscular profile (SEUROP rating), and reproductive performance (age at first calving, average number of calving, calving ease, interval calving–calving). Data compiled are from pure BA and BA x Limousine breeds.

The cow–calf BA extensive system is thoroughly described and productive and reproductive performance, compiled over 21 years (2000–2020), has been analyzed by years with the Chi-square test or ANOVA to compare proportions or means, respectively, and regression analysis was used to decipher evolution across years.

Results: The data available cover a total of 21 years (2000–2020). During this period, the yearly population of bovines older than 12 months (cows, bulls, and replacements) ranged between 1008 and 1390 bovines. The data analyzed were from 14,128 calvings and 9982 slaughtered males and females, including pure BA and BA x BAXL bovines.

The results show a population with a census large and stable enough to avoid inbreeding. Moreover, a sustained and significant improvement of the productive performance (ADG in crossbred and meat yield for males and females of both, pure and crossbred), better carcass quality and better maternal fitness (anatomy and behavior, the eradication of muscle hypertrophy in BA bulls, and a reduction of BW at birth – from >41.0 kg at begin of the program to always <40.0 kg nowadays for a better calving ease) has been observed.

There were no significant differences between the years regarding to reproductive performance parameters such as the age at first calving, the average number of parturitions per cow and interval calving–calving.

Conclusion: The work concludes that local breeds can achieve sustainable animal production, especially when farmers, public administration and commercial circuits in the area agree to cooperate on such projects. A low inbreeding risk, population, and maternal aptitude in the BA breed seem guaranteed. The study also concludes that the BA cow breed can still improve in meat and reproductive performance.

Keywords: Beef cattle, extensive production, local breed, Bruna d’Andorra.
Measuring the sustainability of dairy production at the farm gate: the PEF initiative

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Objectives: The European Commission’s Product Environmental Footprint (PEF) initiative, is working towards harmonising a methodology to calculate and help communicating environmental footprint of products. This study aims to assess the environmental impact of the dairy value chain in Catalonia, north-eastern Spain, with scope cradle to farm gate, in order to test the suitability of PEF and dairy-specific PEF Category Rules (PEFCRs) guidelines to our production systems.

Material and methods: The environmental impact of cow milk was assessed at three farms located in Catalonia. As stated in the PEFCR for dairy, the study was performed following the four standard phases by the LCA methodology (ISO-14040, 2006). The functional unit was 1 tonne of fat protein converted (FPCM) milk. The scope of the study was cradle to farm gate. A questionnaire was designed to collect primary data from each farm. Datasets used for secondary data (e.g.: electricity mix) were adapted to local conditions. Emissions were calculated following Tier II from IPCC (2019) and European Environmental Agency (EMEP/EEA, 2019). Regarding system multifunctionality, the allocation method by Nemecek & Thoma (2020) was followed. All sixteen impact categories listed in the dairy specific PEFCR guidelines were assessed.

Results: Table 1 shows the results from a selection of impact categories for each farm. Carbon footprint (CC) ranged between 1,320 and 2,150 kg CO2 eq tonne-1 FPCM milk at farm gate, being the benchmark value 1,530 kg CO2 eq tonne-1 including processing and distribution (European Commission, 2018). Regarding variability across the studied farms, CC varied up to 830 kg CO2 eq per tonne of FPCM milk across farms (Table 1). When performing an LCA from milk at the industry gate, one challenge would be how to account for the impact that variability at the farm level can have on results. The most accurate way would be to perform a weighted measure, what would require a major effort. Another solution would be to have local databases of farms, initiative that should be promoted, together with the use of labels that show the range in which the impact varies, rather than absolute values, to account for the primary sector variability in agrifood products.

Conclusions: This study shows some of the challenges when utilising the PEF methodology in real-world applications to assess environmental impact of agri-food products: how to capture the agriculture-inherent variability in final product results. We propose to promote work towards having representative pictures of farms at regional level. Nevertheless, for a complete assessment of how variability at farm level could be determinant in the product environmental footprint results, the whole value chain should be considered.

Acknowledgements: All farmers who kindly provided the data for this study. EC’s EIP-AGRI Operational Group RUMPRINT, funded by Department of Agriculture, Livestock, Fisheries and Food Government of Catalonia and European Agricultural Fund for Rural Development.

Table 1. Results of the environmental impact assessment for a selection of categories by tonne of FPCM cow milk produced. BMR: ratio between live weight of sold animals and FPCM. The characterised benchmark values also include processing and distribution.

<table>
<thead>
<tr>
<th>Units</th>
<th>Farm 1</th>
<th>Farm 2</th>
<th>Farm 3</th>
<th>Characterised benchmark values</th>
</tr>
</thead>
<tbody>
<tr>
<td>BMR %</td>
<td>2.2</td>
<td>3.4</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>Climate change</td>
<td>kg CO₂ eq</td>
<td>1.32E+03</td>
<td>1.47E+03</td>
<td>2.15E+03</td>
</tr>
<tr>
<td>Acidification</td>
<td>mol H+ eq</td>
<td>5.19E+00</td>
<td>8.23E+00</td>
<td>7.90E+00</td>
</tr>
<tr>
<td>Eutrophication, freshwater</td>
<td>kg P eq</td>
<td>1.70E-01</td>
<td>1.80E-01</td>
<td>2.79E-01</td>
</tr>
<tr>
<td>Eutrophication, marine</td>
<td>kg N eq</td>
<td>4.15E+00</td>
<td>7.88E+00</td>
<td>8.54E+00</td>
</tr>
<tr>
<td>Eutrophication, terrestrial</td>
<td>mol N eq</td>
<td>2.85E+01</td>
<td>5.43E+01</td>
<td>6.13E+01</td>
</tr>
<tr>
<td>Land use</td>
<td>Pt</td>
<td>6.10E+04</td>
<td>1.27E+05</td>
<td>1.46E+05</td>
</tr>
<tr>
<td>Water use</td>
<td>m³ depriv.</td>
<td>3.69E+03</td>
<td>6.24E+03</td>
<td>7.25E+03</td>
</tr>
</tbody>
</table>

Keywords: milk, livestock farming, LCA, sustainability, supply chain.
Development of a NIRS calibration equation for in situ analysis of green pasture

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Objective: To develop a rapid method of analysing the quality of grass consumed by grazing beef cattle in order to optimise the administration of concentrate feed according to the characteristics of the grass at each time of the year, using NIRS equipment in the laboratory and in situ, using portable NIRS equipment.

Materials and methods: The experimental phase was developed between May 2018 and November 2021, in six suckler cow farms in and around Castilla y León, representing different ecosystems. In each farm, a pasture sample was taken every 45 days for chemical and NIRS analysis.

The constituents analyzed were moisture (%), crude protein (%), crude fiber (%), neutral detergent fiber (%), acid detergent fiber (%), lignin (%) and ash (%).

The grass sampling was carried out using two different techniques: random sampling following the classical methodology and targeted sampling using GPS collars, placed on animals from three of the herds, to obtain their most frequent locations, as sampling points.

All pasture samples, a total of 550, were analysed by the same instrument DS2500 (FOSS)-NIRS (near-infrared spectroscopy) in order to obtain their spectra in a range from 400nm to 2200nm at constant intervals of 0.5nm. Some of them (350) were also analysed by the Portable X-NIR (Dinámica Générale).

The samples were not subjected to any kind of pre-treatment, following the same analysis protocol:
- 4 sub-samples were taken and scanned separately.
- Selection of spectra.
- Chemical analysis of the selected samples.
- Calibration and validation of the regression equations.

ISI Nova and Mosaic software (from FOSS) were used to collect the spectral data. For the development of the equations, different mathematical treatments and cross-validation were tested with the WINISI IV software (Infrasoft International), regression models were generated using MPLS (Modified Partial Least Squares), combining different mathematical treatments and light scattering correction using SNV (Standard Normal Variate) and Detrend mathematical techniques.

The statistics used for the selection of the best calibration equations were SEC, SEVC, R², r², SEP, RSQ, RPD and RER.

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The statistics used for the selection of the best calibration equations were SEC, SEVC, R², r², SEP, RSQ, RPD and RER.

R²(RSQ): coefficient of determination; SEC(SEP): calibration/validation standard error; SEVC: cross-validation standard error; (1-VR) r²: determination coefficient, RPD: Ratio between the standard deviation of the reference data for the validation group and the SEP. RER: Relationship between the range in the reference data for the validation group and the SEP.

Results and Discussion: The evaluation of the accuracy and reliability of the obtained equations would need further discussion, but in general terms the results obtained indicate calibrations with r² values higher than 0.9 with are perfect for quantitative predictions. The lower r² values remain high (0.8-0.9), except for lignin (0.78) in the portable X-NIR.

These models also presented RPD greater than 3, a good indicator of the predictive capacity and robustness of the model, except for lignin and crude ash in the DS2500 NIR (2.43 and 2.42 respectively) and for lignin in the Portable X-NIR (2.12).

Therefore, the calibration models developed on both equipments give reliable and fast predictions in the laboratory and on the farm, so they can be used to evaluate the nutritional quality of a pasture area and adapt the complementary feeding in a short period of time (hours).

As a result of this work, a nutritional advice tool has been developed for extensive cattle farmers.

Keywords: Pasture, NIRS, extensive, cattle.

Association of antibiotic therapy expenditure in clinical mastitis and genomic prediction for mastitis in European Holstein cows

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Objective: The objective of this study was to determine the association of genomic predictions of wellness traits - in this case, mastitis - with the incidence of mastitis and, in particular, on antibiotic use, using a large European data set from Holstein cows in commercial herds.

Material & Methods: Data from 10 different farms in the United Kingdom (4 farms), the Netherlands (3 farms) and Italy (3 farms) were used for this preliminary analysis. In total, the dataset included 3987 lactations from 2482 cows from 2015-2021. Genomic data of young calves and heifers were compared with accurate records of the occurrence of clinical mastitis and treatments administered, which were obtained from the animals' farm documentation in herd management systems. The Clarifide Plus genomic evaluation (Zoetis, USA) was used to estimate the genetic risk of mastitis occurrence. The animals were divided into two groups (≤100 STA (Standardized Transmitting Abilities), >100 STA) based on the genomic evaluation of the mastitis trait. Statistical analysis was performed with generalized linear mixed models using genetic evaluation group and lactation number and the interaction of these two variables as fixed effects; and country, herd and animals within the herd as random effects.

The target variables examined were incidence of mastitis, days under antibiotic treatment, and days under withdrawal time per lactation.
Results: Mastitis STA group was significantly associated with all outcome variables. On average (estimated means), animals in the >100 STA group had lower incidence of mastitis (18.6% for >100 STA, 26.7% for ≤100 STA; P<0.001), fewer days under treatment (0.50 days for >100 STA, 0.89 days for ≤100 STA; P<0.001), and fewer days under withdrawal time per lactation (0.81 days for >100 STA, 1.15 for ≤100 STA; P<0.001).

Conclusion: These results indicate that genomic data of young calves and heifers can be used to effectively predict future antibiotic use. Reducing mastitis incidence through direct genetic selection represents a compelling opportunity for dairy farmers to reduce antibiotic use due to mastitis and thus improve herd health and profitability when combined with modern management.

Keywords: Mastitis, genomic prediction, antibiotic treatment, antibiotic doses, Europe.

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**SP-P12**

Milk production evaluation of family dairy farms in Pontal do Paranapanema, State of São Paulo, Brazil

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Objectives: Milk production evaluation of family dairy farms from Pontal do Paranapanema region.

Material and methods: Eight rural communities from the Pontal do Paranapanema region were selected to evaluated the milk production from this region. It was visiting approximately 80% of the milk producing properties in Porto Maria, municipality of Rosana, SP; 19 family dairy farms in Rancho Grande, municipality of Euclides da Cunha, SP; 29 milk producing properties in Bom Pastor, municipality of Sandovalina, SP; 21 family dairy farms in Floresta Fernandes, municipality of Presidente Bernardes, SP; 4 family dairy farms in Asa Branca, municipality of Presidente Bernardes, SP; 19 family dairy farms in Santa Rosa 1, Mirante do Paranapanema, SP; 32 family dairy farms in São Paulo, municipality of Presidente Epitácio, SP; 8 family dairy farms in Yapinari, Ribeirão dos Índios, SP). A questionnaire was carried out for each of the family producers, to learn about the characteristics of the productions.

Results: 159 properties were visited, and the following results were obtained: 74.84% (119/159) of properties in this region have between 16 and 24 hectares. 67.30% (107/159) has an average of 40 animals, most of them are milk producing properties 91.19% (145/159) and has an average of 30 cows per property. 96.85% (154/159) has a milk production below 100 liters daily. 53.46% (85/159) perform manual milking and 46.5% (74/159) perform mechanical milking (bucket at the foot). 83.64% of the properties perform only one milking a day. 81.13% (129/159) stimulates the milk to descend with the presence of a calf, 84.27% (134/159) does not clean the teats before milking (pre-dipping), 86.16% (137/159) do not perform a test to diagnose clinical mastitis in cows. 83.64% (133/159) do not perform the CMT test, 93.08% (148/159) didn’t use mastitis treatment without knowing the cause or etiological agents of mastitis. 86.79% (138/159) didn’t dispense the milk after mastitis treatment, 36.95% (57/159) provide this milk for pigs, 26.81% (40/159) throw the milk into the sewer. 81.13% (129/159) of the properties store milk in gallons after milking. 93.08% (148/159) of the properties carry out natural breeding as animal reproduction.

Conclusion: It concluded that this region should be more monitored and has a possibility to improve your production if applicate better technology. The development of this region after the settlements politics is one reality but exist lack information between them about how is the better practice to produce milk with quality. The future of this producers will depend on politics and investments in education and sanitary of this animals. Support programs for these producers is necessary to improve their benefits.

Keywords: Bovine, cattle, calves, hygiene, technology.