More favourable SBT scores and shorter TTS were observed with increasing session number. Concentration of SKA did not affect SBT, but SBT tended to exhibit less favourable scores at high AND levels, even though effects were generally not statistically significant. Increasing AND concentrations were significantly associated ($p < .05$) with a greater interest/curiosity in the dummy sow and shorter TTS; we observed that the TTS of animals classified in level 5 of AND was 7 min shorter compared to the animals classified in level 1. Results indicate that associations between SBT and AND should be investigated more in-depth.

P082

The effect of an extender inducing sperm capacitation on fertility of Italian dairy cattle: a field experience

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The use of Heifer Plus, an additive for bovine semen extender that induces sperm capacitation, was associated with an increase in female births (about 70–75% if used 18 h after heat starts) and a higher conception rate than with conventional semen. The aim of this work was to evaluate the efficacy of Heifer Plus additive in combination with artificial insemination (AI) on the fertility of Italian Holstein Cattle (with a field trial). We analyzed the results of 3800 AI, carried out from September 2019 to July 2020, in 24 farms located in Northern Italy, using both Heifer Plus and conventional semen obtained from 9 bulls. We recorded the starting times of heat and AI; the data of the animals used; the type of semen, conventional and Heifer Plus; the number of progressively motile spermatozoa (NSPM) per batch of semen, and the result of the pregnancy diagnosis. With JMP®13 software we performed descriptive statistics and chi-square tests to evaluate the effect of the type of semen and other relevant variables collected on fertility evaluated through the positive or negative result of the diagnosis of pregnancy. 85.5% of the inseminations led to a diagnosis of pregnancy. The conception rate was 4% higher in cows inseminated with Heifer Plus semen than those who received conventional semen: 40.34% vs. 36.33%, respectively ($p = 0.019$). Interestingly, a significant effect of the calving order ($p < .001$) was also observed with a higher conception rate in heifers and a difference between conventional semen and Heifer Plus equal to 57.75% and 50%, respectively. The highest value of NSPM of the Heifer Plus semen (12.7 million/dose versus 8.2 million/dose of the conventional semen) did not affect the results significantly. Finally, there was also a significant variability between bulls and farms. However, we noticed that breeders did not always respect the ideal incubation time for Heifer Plus semen and this could have affected the results. In conclusion, the use of this technology seems interesting, but it should be adopted with better management of the reproductive programs including stricter compliance with the ideal incubation time of AI, which entails higher costs but yields better results. Due to the high degree of variability among bulls, it would also be better to use the semen of different bulls in each farm.

Acknowledgements
The authors are grateful to Dr. C. A. Valsecchi and F. Giudicatti for funding and supporting our research.

P083

Effect of sow's diet enriched with Arg and/or BCAA on health and performance of sows and newborn

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This study tested the hypothesis that dietary supplementation of branched-chain amino acids (BCAA; L-leucine, L-isoleucine and L-valine) and/or L-Arginine (Arg) to lactating sows enhance their immune status and productive performance. Sixty-eight sows were divided into 4 groups according to parity and body weight (BW): (i) control (CO) group (fed a corn lactating based diet); (ii) CO +22.5 g/d/sow of BCAA; (iii) CO +22.5 g/d/sow of Arg; (iv) CO +45 g/d/sow of BCAA and Arg. Amino acids were supplemented on top. Diets were fed to the sows from 4 days before farrowing (d-4) until weaning (d27). After weaning, piglets received a standard post-weaning diet. Piglets were individually weighed at d0 (farrowing), d7, d14, d27 and post-weaning, at d34 and d41; health status of piglets was followed over the whole period. Blood samples were collected on half of the sows at d-4, d10 and d27 for haematological analyses, urea, glucose, insulin, prolactin and immunoglobulin contents. Colostrum and milk were sampled at farrowing and at d10 and d20 and analysed for polyamines and immunoglobulin concentration. Data were analysed in a 2×2 factorial design by GLM or GENMOD procedure including batch, parity order, BCAA and Arg supplementation and their interaction as factors. A trend for higher lymphocytes percentage was observed in sow serum at d10 and d28 for BCAA ($p < .1$). Both BCAA and Arg supplementation increased glucose and prolactin content ($p < .05$) in serum at d27. Arg increased IgM content in serum at d10 ($p = .05$) and tended to increase it in colostrum ($p = .08$). BCAA increased IgA content ($p = .004$) in milk at d20. Two weeks post-weaning, piglets born from sows supplemented