

Performance in primiparous cows from two breeds submitted to different rearing strategies*A. Sanz, J.A. Rodríguez-Sánchez and I. Casasús**CITA de Aragón, Avda Montañana 930, 50059 Zaragoza, Spain. asanz@aragon.es*

An experiment was conducted to analyse the influence of breed (Pirenaica vs Parda de Montaña) and nutrition level during the rearing period (from weaning at 6 months to first mating at 15 months) on the performance of primiparous cows calving at two years. Twenty-five autumn-born-heifers were assigned to two nutrition levels (High vs Low). At 15.2 months heifers were treated with an intravaginal progesterone device (PRID, CEVA, Spain) and Ovsynch protocol, being inseminated 14 days later. Blood samples were collected weekly during rearing and postpartum periods for progesterone analysis (Ridgeway Science, UK). Productive parameters were controlled from heifers' birth until weaning of their first calves (30 months). As expected, nutrition level influenced heifer average daily gain (ADG) during the rearing phase (0.814 vs 0.624 kg, in High and Low, $P < 0.001$) and therefore their weight at 15 months (452 vs 399 kg, in High and Low, $P < 0.05$). No difference was found in weight at onset of puberty (323 kg, 56% of adult weight in these breeds) due to feeding level, but Pirenaica heifers reached puberty 50 days later than Parda breed (326 vs 276 days, $P < 0.05$). These divergence did not traduced in significant differences in the conception weight or age (426 vs 466 kg; 497 vs 503 days; in Pirenaica and Parda), nor fertility rate (93%). Primiparous cows weight, age and body condition at first calving were not affected by breed or rearing nutrition level. However, Pirenaica cows showed lower calf birth weight (32 vs 38, $P < 0.01$), slightly higher ADG during it first lactation (0.109 vs -0.024 kg, $P = 0.06$) and greater body condition at 120 days-weaning (2.8 vs 2.6, in a 1-5 point scale, $P < 0.01$). No difference was found in calf gain (0.651 kg/d) or postpartum anoestrous period (62.9 days) due to breed or rearing nutrition level. Regardless of their different precocity and aptitude, these preliminary results confirm the feasibility of advancing the first service from 21 to 15 months of age in both breeds.