

The effect of dam age on heifer progeny performance and longevity

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Objective: Evaluate the impact of dam age on heifer progeny performance and herd longevity

Results: Heifer calves born to young cows had lighter ($P \leq 0.01$) body weight (BW) at birth and adjusted 205-d BW than heifers from moderate and old cows. Heifer pre-breeding BW and pregnancy determination BW were not influenced ($P \geq 0.17$) by dam age. However, heifers from moderate and old cows had a greater ($P < 0.01$) percentage reach puberty prior to the start of breeding compared with heifers born to young cows. However, there were no differences ($P = 0.28$) in percentage of heifers who calved within the first 21 d of calving in the subsequent calving season and dam age did not influence ($P = 0.15$) heifer pregnancy rates. Average number of calf crops from heifer progeny was different among all dam age groups ($P < 0.01$), with young dams having more calves (3.1 ± 0.7) than moderate (2.8 ± 0.7) and old (2.2 ± 0.8).

Table 1. Effect of dam age on heifer progeny growth performance

Items	Dam Age ¹			SE ²	P-Value
	Young	Moderate	Old		
Heifer BW, kg					
Birth	32 ^a	34 ^b	33 ^b	0.4	< 0.01
205 d	198 ^a	206 ^b	205 ^b	3	0.01
Prebreeding	277	283	281	4	0.21
Pregnancy diagnosis	371	371	366	4	0.17

^{a,b}Means with different superscripts differ $P \leq 0.05$.

¹Dam age = dam age at time of calving, Young (2 to 3 yr of age), Moderate (4 to 6 yr of age), Old (≥ 7 yr of age)

²SE is the SE of the difference between LSMeans.

Table 2. Effect of dam age on heifer progeny reproductive performance

Items	Dam Age ¹			SE ²	P-Value
	Young	Moderate	Old		
Puberty, %	51.55 ^a	69.64 ^b	74.06 ^b	9.7	< 0.01
Pregnancy, %	80.44	84.08	85.89	2.5	0.15
Calved in first 21 d, %	73.34	77.88	78.94	3.0	0.28
Calf Crop ³ , n	3.1	2.8	2.2	0.7	< 0.01

^{a,b}Means with different superscripts differ $P \leq 0.05$.

¹Dam age = dam age at time of calving, Young (2 to 3 yr of age), Moderate (4 to 6 yr of age), Old (≥ 7 yr of age).

²SE is the SE of the LSMeans.

³Number of calf crops produced with dam age groups.