

Supplementary Table 1. Effect of fertility group on revenues and expenses accumulated during the experimental (first) and second lactation calving interval

| Item ¹ | Fertility Group | | | P-value ² |
|--------------------------|---------------------------|---------------------------|---------------------------|----------------------|
| | High | Medium | Low | |
| First CI | (n = 798) | (n = 1,029) | (n = 838) | |
| Total Milk (kg/cow) | 10,062 ± 229 ^A | 10,474 ± 221 ^A | 11,145 ± 229 ^B | <0.01 |
| Milk income (\$/cow) | 3,723 ± 85 ^A | 3,977 ± 82 ^A | 4,124 ± 85 ^B | <0.01 |
| DMI lact. (kg/cow) | 7,280 ± 169 ^A | 7,642 ± 164 ^A | 7,755 ± 169 ^B | <0.01 |
| DMI dry (kg/cow) | 618 ± 20.1 | 622 ± 20.0 | 618 ± 20.0 | 0.52 |
| Feed cost lact. (\$/cow) | 1,966 ± 46 ^A | 2,063 ± 44 ^A | 2,094 ± 46 ^B | <0.01 |
| Feed cost dry (\$/cow) | 161 ± 5.2 | 162 ± 5.2 | 161 ± 5.2 | 0.52 |
| Second CI | (n = 670) | (n = 866) | (n = 687) | |
| Total Milk (kg/cow) | 11,684 ± 408 | 11,711 ± 398 | 12,224 ± 410 | 0.06 |
| Milk income (\$/cow) | 4,323 ± 151 | 4,333 ± 147 | 4,523 ± 152 | 0.06 |
| DMI lact. (kg/cow) | 7,873 ± 258 | 7,786 ± 251 | 8,060 ± 259 | 0.21 |
| DMI dry (kg/cow) | 731 ± 19.9 | 742 ± 19.6 | 742 ± 20.2 | 0.53 |
| Feed cost lact. (\$/cow) | 2,126 ± 69.5 | 2,102 ± 67.8 | 2,176 ± 69.9 | 0.21 |
| Feed cost dry (\$/cow) | 190 ± 5.2 | 193 ± 5.1 | 193 ± 5.2 | 0.53 |

¹Values for binary outcomes are presented as LSM and the SEM.

²FG = fertility group. Non-significant Trt x FG interaction term retained in final models.

^{A,B,C}Different superscripts within a row indicate significant differences ($P < 0.05$) between fertility groups.

Supplementary Table 2. Effect of fertility group on milk production, milk income, dry matter intake and feed cost during the experimental (first) and second lactation calving interval

| Item ¹ | Fertility Group | | | P-value ² |
|---|--------------------------|--------------------------|--------------------------|----------------------|
| | High (n = 798) | Medium (n = 1,029) | Low (n = 838) | |
| Milk IOFC ³ (\$/cow) | 3,306 ± 103 ^A | 3,499 ± 101 ^A | 3,681 ± 104 ^B | <0.01 |
| Calf value (\$/cow) | 129 ± 3.4 ^A | 124 ± 3.1 ^{AB} | 117 ± 3.4 ^B | 0.02 |
| Reproductive cost (\$/cow) | 81.4 ± 3.1 ^A | 88.1 ± 2.9 ^B | 97.6 ± 3.1 ^C | <0.01 |
| Market value replacement cost ⁴ (\$/cow) | 109 ± 14 | 128 ± 13 | 131 ± 14 | 0.20 |
| Rearing value replacement cost ⁵ (\$/cow) | 521 ± 43 ^A | 601 ± 40 ^B | 663 ± 42 ^B | <0.01 |
| Other operating expenses (\$/cow) | 2,062 ± 51 | 2,073 ± 49 | 2,064 ± 51 | 0.94 |
| Cash flow (Replac. market value; \$/cow) | 1,198 ± 78 ^A | 1,346 ± 76 ^B | 1,519 ± 79 ^C | 0.01 |
| Cash flow (Replac. rearing value; \$/cow) | 763 ± 92 ^A | 853 ± 89 ^B | 961 ± 93 ^C | 0.04 |

¹Values for binary outcomes are presented as LSM and the SEM.

²FG = fertility group. Non-significant Trt x FG interaction term retained in final models.

^{A,B,C}Different superscripts within a row indicate significant differences ($P < 0.05$) between fertility groups.

Supplementary Table 3. Effect of fertility group on revenues and expenses accumulated per slot during 28 mo after calving in the experimental lactation.

| Item ¹ | Fertility Group | | | P-value ² |
|--------------------------|---------------------------|---------------------------|---------------------------|----------------------|
| | High (n = 798) | Medium (n = 1,029) | Low (n = 838) | |
| Total Milk (kg/cow) | 27,720 ± 234 ^A | 28,269 ± 317 ^A | 29,297 ± 326 ^B | <0.01 |
| Milk income (\$/cow) | 10,356 ± 120 ^A | 10,497 ± 117 ^B | 10,840 ± 121 ^B | <0.01 |
| DMI lact. (kg/cow) | 19,133 ± 156 ^A | 19,323 ± 154 ^A | 19,670 ± 156 ^B | <0.01 |
| DMI dry (kg/cow) | 971 ± 35 ^A | 939 ± 34 ^A | 879 ± 35 ^B | <0.01 |
| Feed cost lact. (\$/cow) | 5,166 ± 42 ^A | 5,217 ± 42 ^A | 5,311 ± 42 ^B | <0.01 |
| Feed cost dry (\$/cow) | 286 ± 8.7 ^A | 273 ± 8.5 ^A | 259 ± 8.7 ^B | <0.01 |

¹Values for binary outcomes are presented as LSM and the SEM.

²FG = fertility group. Non-significant Trt x FG interaction term retained in final models.

^{A,B,C}Different superscripts within a row indicate significant differences ($P < 0.05$) between fertility groups.

Supplementary Table 4. Effect of fertility group on milk production, milk income, dry matter intake and feed cost during 28 mo after calving in the experimental lactation

| Item ¹ | Fertility Group | | | P-value ² |
|---|-------------------------|-------------------------|-------------------------|----------------------|
| | High (n = 798) | Medium (n = 1,029) | Low (n = 838) | |
| Milk IOFC ³ (\$/cow) | 4,806 ± 86 ^A | 5,015 ± 84 ^A | 5,281 ± 87 ^B | <0.01 |
| Calf value (\$/cow) | 141 ± 2.6 ^A | 136 ± 2.3 ^A | 128 ± 2.6 ^B | <0.01 |
| Reproductive cost (\$/cow) | 151 ± 3.7 ^A | 159 ± 3.4 ^A | 170 ± 3.3 ^B | <0.01 |
| Market value repl. cost ⁴ (\$/cow) | 148 ± 20 | 164 ± 19 | 173 ± 20 | 0.32 |
| Rearing value repl. cost ⁵ (\$/cow) | 711 ± 63 ^A | 795 ± 60 ^{AB} | 873 ± 63 ^B | 0.01 |
| Cash flow (Replac. market value; \$/cow) | 1,862 ± 81 ^A | 2,046 ± 79 ^B | 2,289 ± 82 ^C | <0.01 |
| Cash flow (Replac. rearing value; \$/cow) | 1,326 ± 83 ^A | 1,446 ± 77 ^A | 1,630 ± 82 ^B | <0.01 |

¹Values for outcomes are presented as LSM and the SEM.

²FG = fertility group. Non-significant Trt x FG interaction term retained in final models.

^{A,B,C}Different superscripts within a row indicate significant differences ($P < 0.05$) between fertility group.