This study investigated relationships between vitality score (VS), colostrum intake (CI), and mortality of piglets during 24 h postpartum in different farrowing environments. A total of 334 piglets [Duroc × (Danish Yorkshire × Danish Landrace)] from 26 sows were used for this experiment. The sows were kept in (1) CRATE (N=13): a farrowing crate (crate size: 220 × 80 × 80, pen size 250 × 170), or (2) OPEN (N=13): an open farrowing crate (crate size: 220 × 80 × 180, pen size: 250 × 240). At birth, VS and body weight of each piglet were recorded. The VS was observed for the first 15 seconds of life and divided into low (LVS; with no movement; N = 153) or high (HVS; with movement; N = 181) group. At 24 h after the first piglet, all piglets were weighed again for estimation of CI. The farrowing environment did not affect CI or VS. However, there was higher mortality in OPEN pen compared to CRATE pen (17.1 ± 2.1 vs. 1.3 ± 2.3 %; \( P < 0.001 \)). The mortality rates between LVS and HVS were not differed in both farrowing environments. In CRATE pen, HVS had higher CI than LVS (287.9 ± 26.3 vs. 217.3 ± 26.3 g; \( P < 0.01 \)), whereas in OPEN pen, CI was not differed between LVS and HVS. In conclusion, this experiment indicate that piglet vitality at birth was associated with colostrum intake in the farrowing crate, but not in the open farrowing crate. Further study will be needed to demonstrate the causal relationship between colostrum intake and farrowing environments.