Repeat breeding is still one of the important reproductive disorders in dairy cows. A number of studies reported the incidence, causes, and treatment of repeat breeding. As yet little is known about reproductive performance of repeat breeders when they are bred further. The objectives of this study were to characterize repeat breeding in dairy cows, including reproductive performance and risk factors. Data from 613 Holstein Friesian cows in nine dairy herds across Japan were enrolled. A repeat breeder was defined as a cow that did not become pregnant after three inseminations, despite no clinically detectable reproductive disorders. In contrast, cows that became pregnant within three inseminations were considered to have normal fertility. Of the 613 cows, 87.3% eventually became pregnant after repeated AI (maximum calving to conception interval was 435 d). Mean (±SEM) first AI conception rate, days in milk at first AI, calving to conception interval and service per conception were 38.3%, 82 ±2 d, 125 ±3 d, and 2.0± 0.1 times, respectively. Normal fertility cows (n = 479) required only 114 ±3 d to conceive and 1.7 ±0.1 inseminations per pregnancy, whereas repeat breeders (n = 86) required significantly more days to conceive (211 ±10) and more inseminations per pregnancy (4.7 ±0.2). Based on survival analysis, it took 94 d after calving for 50% of normal fertility cows to become pregnant, compared to 155 d for repeat breeders. For repeat breeders, 31.4, 50.0, and 58.1% became pregnant within 210, 300, and 435 d after calving, respectively. The risk factors for repeat breeding were parity (relative risk [RR] = 0.809; P = 0.058), resumption of postpartum ovarian cycles (RR = 1.928; P = 0.009), and days in milk at first AI (RR = 0.991; P = 0.039). In conclusion, repeat breeder dairy cows had very poor reproductive performance when the cows were inseminated further. Lower parity, abnormal resumption of postpartum ovarian cycles, and shorter days in milk at first AI were risk factors for repeat breeding.

**Keywords:** Repeat breeding; Infertility; Pregnancy; Reproductive performance; Holstein Friesian cows