Incidence of clinical form of anestrus after unsuccessful service in cows in eight dairy herds in north-east of Poland

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Abstract

There is no information available about the incidence of anestrus and its clinical forms after service in dairy cows in Poland. Thus, the aim of this study was to investigate the incidence of clinical forms of anestrus after unsuccessful artificial insemination in dairy cows based on ultrasound examination. The study was carried out on 1543 Polish Holstein-Friesian cows in 8 dairy herds in north-east Poland over a three-year period. Cows were examined for pregnancy on day 35 after AI using a Honda 1500 portable ultrasound scanner equipped with a 5 MHz linear-array transducer. Cows diagnosed as pregnant were re-examined on day 45. Of the 1543 inseminated cows, 408 (26.4%) showed no estrus signs and were diagnosed not-pregnant by ultrasonography, 328 (21.3%) returned to estrus within 35 days, and 807 (52.3%) were pregnant via artificial insemination. The incidence of anestrus after service in non-pregnant cows varied among herds from 10.3% to 32.9% of cows (p<0.05). Based on ultrasound examination silent heat was diagnosed in 324 (79.4%), corpus luteum pseudograviditatis in 36 (8.8%), ovarian cysts in 26 (6.4%), and ovarian afunction in 22 (5.4%) of 408 anestrous, non-pregnant cows. The results of this study showed that the incidence of anestrus after service in dairy herds in North-East Poland was high. The most prevalent clinical form of post-service anestrus was silent heat.

Key words: anestrus after service, dairy cows, silent heat

Introduction

Increased milk production demands have led to a decline in the reproductive performance of dairy cows due to a prolonged intercalving period (Lucy 2001, Walsh et al. 2011). One of the major factors contributing to an extended interval from calving to conception is anestrus after service. The cows being not-pregnant after the first service should have been observed in estrus for a second service. The majority of non-pregnant cows exhibit heat before pregnancy examination which is usually performed between 35 to 45 days after initial insemination. Non-pregnant cows that do not return to estrus within the expected time are termed “phantom cows” because they appear to be pregnant, but in reality are not (Nation et al. 2001, Lucy et al. 2004).

In the literature the incidence rate of anestrus after service ranges from 20% to 50% (Martinez and Thibier 1984, Bartlett et al. 1987, Nation et al. 2001). There are