

Most Important Processes in Rabbit Reproduction

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DOI: 10.31080/ASVS.2022.04.0424

Received: May 30, 2022

Published: June 02, 2022

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Mating process signs of rabbit does

Rabbit females are induced ovulators animals, which meaning that they do not ovulate spontaneously, as happens in other female like cows, buffaloes, and sheep, but it occurs about 10-12 hours after stimulation of the female by different methods of stimulation. Therefore, there is no estrus cycle phases as compared to cows or buffalo cows. But a lot of researchers observed the existence of estrus cycles which means females are more likely to be fertilized than any other period of their reproductive status. This tendency for mating from male rabbit occurs from 4 to 6 days during which the female accepts the insemination from the male. Many signs of acceptance mating from male like redness of valve. Also there is one famous position can be considered as acceptance of female rabbit to mating. This position is called as rabbit lordosis (excessive inward curvature of the spine). Where, doe stands in a very peculiar position. This position is related to successful mating. This can be completed within several seconds by the buck as shown in Figure 1. The opposite of this position is called kyphosis (excessive outward curvature of the spine, causing hunching of the back). Where, the doe do not accept mating by the buck anymore. Rabbit breeder should be able to distinguish between two positions carefully to avoid time consuming and repeat breeder phenomena. Mainly hormones are responsible for accepting mating from buck in rabbit does. GnRH hormone plays a key role in this situation. It is the start point in these events. Increasing levels of GnRH can cause increasing both FSH and LH hormones. And specially increasing FSH can support growth of ovarian follicles. These follicles are

responsible for secreting estrogen hormone. And finally, estrogen hormone is responsible for doe behavior including mating acceptance. The following Figures showing differences between lordosis and kyphosis positions in rabbits [1].



Figure 1: Showing, doe spine position at lordosis (mating acceptance).

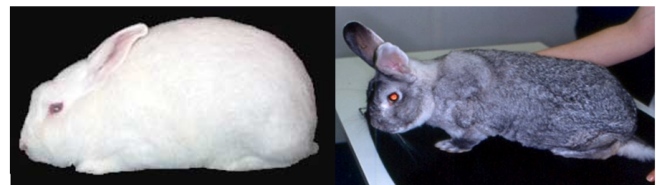


Figure 2: Showing doe spine position at kyphosis (mating refusing).

The second sign of mating acceptance of the doe is vulva redness. There are four main colors of vulva. These colors are white, red pale, rose and dark red. There are several experiments showed that the more redness color of vulva the more doe acceptance rate can be occurred. In one of our experiments in this field, we found dark red of vaginal vulva had the higher occurrence rate at three different times during the day (8 AM, 2PM and 8PM). In addition to external signs of doe mating receptivity, there are physiological characters like plasma estradiol-17 β , progesterone and some biochemical constituents' levels such as total protein, total lipids, glucose and creatinine. Finally, it can be suggested that time of mating is very important in this subject as pointed out by Kishk., *et al.* 2006. In which highest receptivity was at 8 AM while highest conception rate was at 2 PM [2].

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