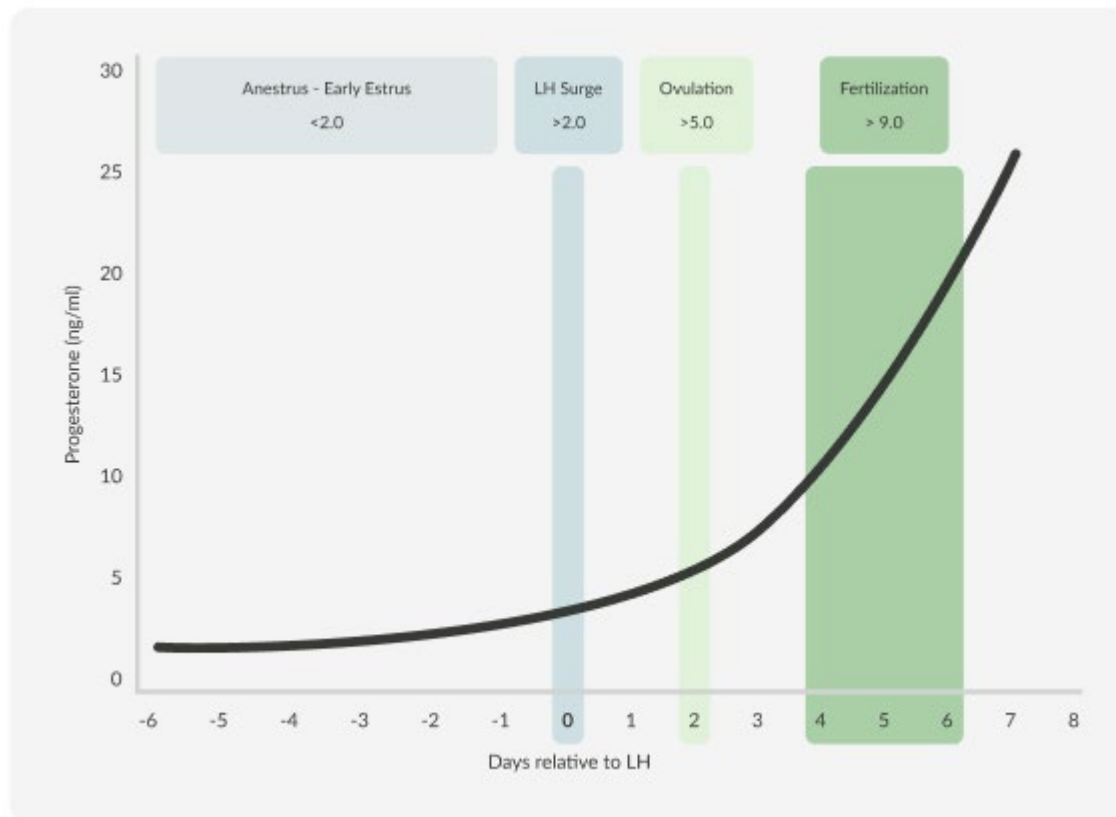


TRUFORMA Progesterone: Clinical Interpretation Guidelines (K-9)

Progesterone Analysis for Determination of Optimal Breeding Time

Determination of the optimal breeding time in the bitch is predicated upon detecting the luteinizing hormone (LH) surge. Since the LH surge causes preovulatory luteinization of ovarian follicles, timing of the surge can be accomplished by measuring serum progesterone (P₄) levels.

Figure 1. Progesterone Profile of Canine Estrus Cycle



Serial progesterone measurements, starting at the onset of serosanguinous vulvar discharge and continued until breeding is complete, are recommended. In proestrus/early estrus, measurements taken every 2 – 4 days are usually adequate. After the LH surge, measurements should be taken every 2 days to ensure the expected rise in progesterone has taken place.¹

A rise in progesterone from baseline to above 2.0 ng/mL indicates that the LH surge has occurred. Ovulation generally occurs 2 days later and is accompanied by a rise in progesterone to above 5.0 ng/mL. Progesterone continues to rise to above 10 ng/mL by day 6 post-LH surge.² Typical progesterone values throughout the estrus cycle are given in Table 1.

Oocytes are capable of undergoing fertilization 2 days post-ovulation. Pregnancies may result from natural breedings that take place from 3 days before to 7 – 10 days after the LH surge. However, for critical breedings or those performed via artificial insemination, the optimal time is from days 4 to 6 after the LH surge.¹

Table 1.

Progesterone (ng/mL)	Interpretation	Recommendation
<1.0	Anestrus/Proestrus	Recheck in 3-4 days
1.0 - 1.9	Proestrus/Estrus; Pre-LH surge	Recheck in 2 days
2.0 – 2.9	LH surge	Recheck in 2 days to confirm rise to >5 ng/mL. Plan breeding for 4-6 days after first rise above 2 ng/mL.
3.0 – 4.9	Preovulation	Recheck in 2 days to confirm continued rise. Plan to breed in 3-5 days
5.0 – 9.0	Near ovulation	Recheck in 2 days to confirm continued rise. Plan to breed in 2-4 days.
>9.0	Fertilization period	Breed today and rebreed within the next 2-3 days.

Progesterone Analysis for Predicting Onset of Parturition

When calculated from the day of the LH surge ($P_4 > 2.0$ ng/mL), 90% of bitches will whelp at 65 ± 2 days and 100% of bitches will whelp at 65 ± 3 days.³

Interpretation of progesterone measurements in the prepartum period is given in Table 2.

Table 2.

Progesterone (ng/mL)	Interpretation ⁴
> 5.0	Parturition unlikely within next 12 hours (<2% probability)
2.7 - 5.0	Parturition possible within 48 hours
< 2.7	Parturition likely within 48 hours (99% probability)
< 1.0	Parturition likely within 24 hours (100% probability)

References

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