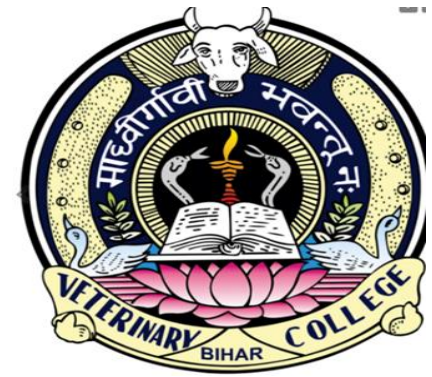




बिहार पशु विज्ञान
विश्वविद्यालय

BIHAR ANIMAL SCIENCES
UNIVERSITY



Pregnancy Diagnosis in cattle

VCP II, VCP 411 & VCP 511

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An accurate, early diagnosis of pregnancy in cow and mare is essential to a successful breeding programme

Target

1. It helps in identification of non-pregnant animals which can be treated or rebred at the earliest
2. It is required for certifying the animals for sale purpose.
3. It helps in good and economic management
4. It reduces economic loss in breeding programme using expensive hormonal techniques.
5. It helps to prevent lapse of one season for breeding in seasonal breeders.

Method Of Pregnancy Diagnosis		
Manage mental	Non return to oestrus	Cattle, buffalo, sheep, goat, sow
Clinical	Rectal palpation	Cattle, buffalo, sow, mare
	Radiography	Canine , Sheep, Goat
	Ultrasonography	All species
	Abdominal palpation	Canine
	Abdominal ballottement	Cattle, Buffalo, sheep, Goat
	Recto-abdominal	Sheep
Lab methods	Vaginal biopsy	Sheep and Sow
Lab methods (Chemical)	BaCl ₂	Cattle & Buffalo
	Cuboni test	Mare
	Mucin test	Mare
	CuSO ₄ test	Cattle & Buffalo
Lab Method (Immunogenical)	Progesterone	All Species
	eCG	Mare
	EPF	Cattle sheep and Goat
	Pregnancy specific Protein B	Cattle sheep and Goat
Biological test	A Z test	Mare
	Frog/ rabbit	Mare

External Indication of Pregnancy

1. Cessation of estrous Cyclicity-hardly any useful information
2. Increase in abdominal size-not reliable
3. Enlargement of udder (in heifers) - begins around 5 months
4. Relaxation of pelvic ligaments and edema, relaxation of vulva in last weeks

Internal indication on rectal examination

- ☐ In all species, the Increasing volume of the uterus throughout pregnancy
- ☐ In the last trimester , increasing in the volume foetal fluid-Balloting technique

Cattle, Buffalo & Ewe

- ☐ The fetus lies only in one cornu, 95 - 98% ipsi-lateral to the side of ovulation. When diagnosing pregnancy per rectum in cattle it is essential to confirm the presence of the ipsi-lateral corpus luteum.
- ☐ As the uterus and its contents enlarge, the uterus falls over the pelvic brim, sinking to the ventral body wall and advancing along the abdominal wall
- ☐ As pregnancy progresses, the uterus gets bigger and occupies more and more of the abdominal cavity, displacing the rumen dorsally and to the left
- ☐ The placenta is cotyledonary with about 100-150 caruncles.
- ☐ They are attached to the uterine wall by a delicate stalk which carries many blood vessels
- ☐ In the non-pregnant uterus, the surface of caruncles is smooth whereas in pregnancy the surface becomes pitted with a sponge-like network of deep crypts which receive the villi of the allantochorion

Sow bitch and Cat

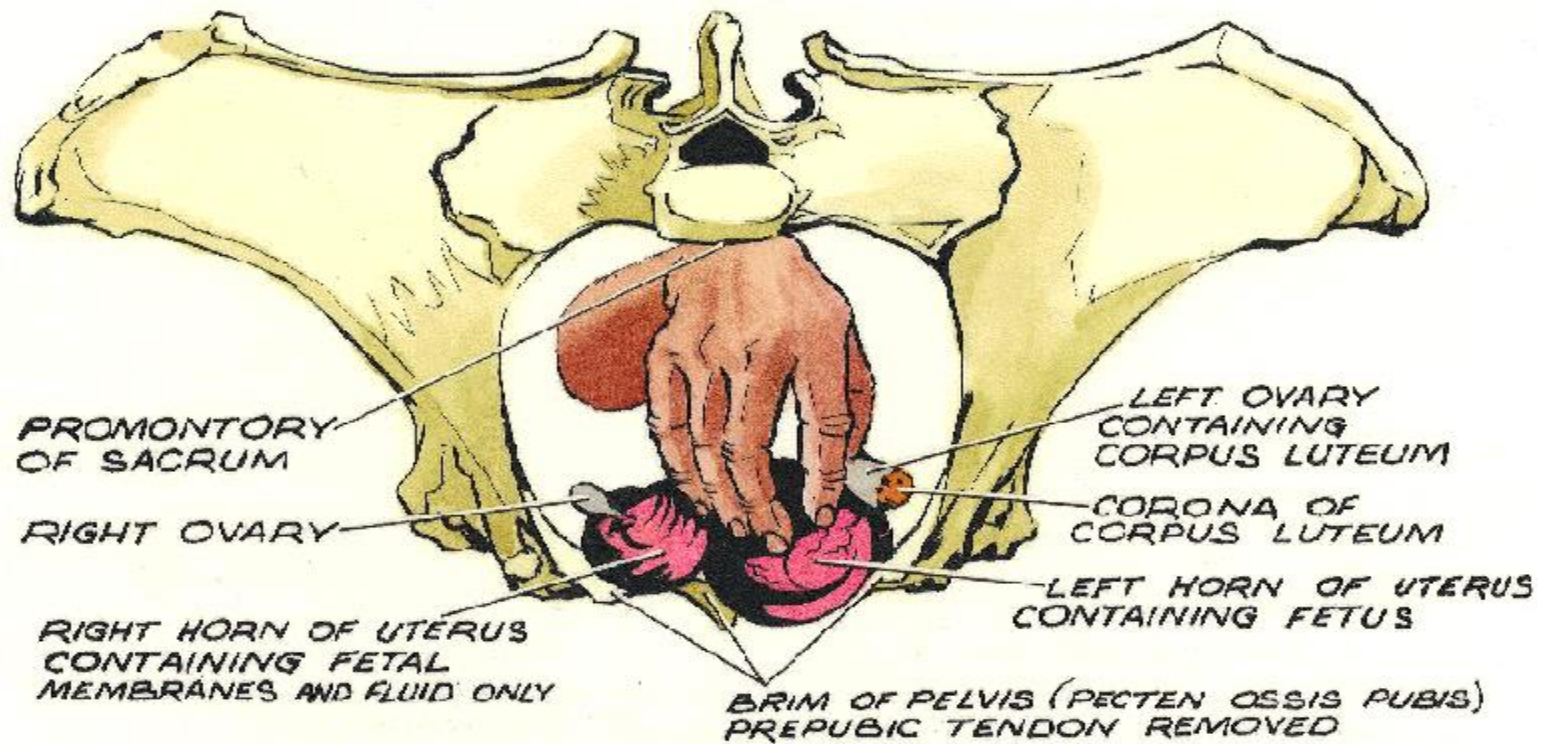
In all these species there are several ovulations at each oestrus, often occurring unequally from the two ovaries. However, a spatial distribution mechanism operates to ensure even spacing of the fetuses throughout both cornua

Differential diagnosis

- ☐ Filled urinary bladder (trace from cervix whether enlarged mass is in continuation with the cervix).
- ☐ Rumen (rumen feels like a doughy, flaccid mass whereas gravid uterus gives a live fluid feeling).
- ☐ Pyometra (no horn asymmetry, uterine wall thick)
- ☐ Metritis (thick uterine wall, no fluid feeling, foul smelling discharge)
- ☐ Mummified fetus (absence of fluid, placentomes, uterus contracted over fetal mass, fremitus absent).

Changes observe during pregnancy in bovine by rectal palpation

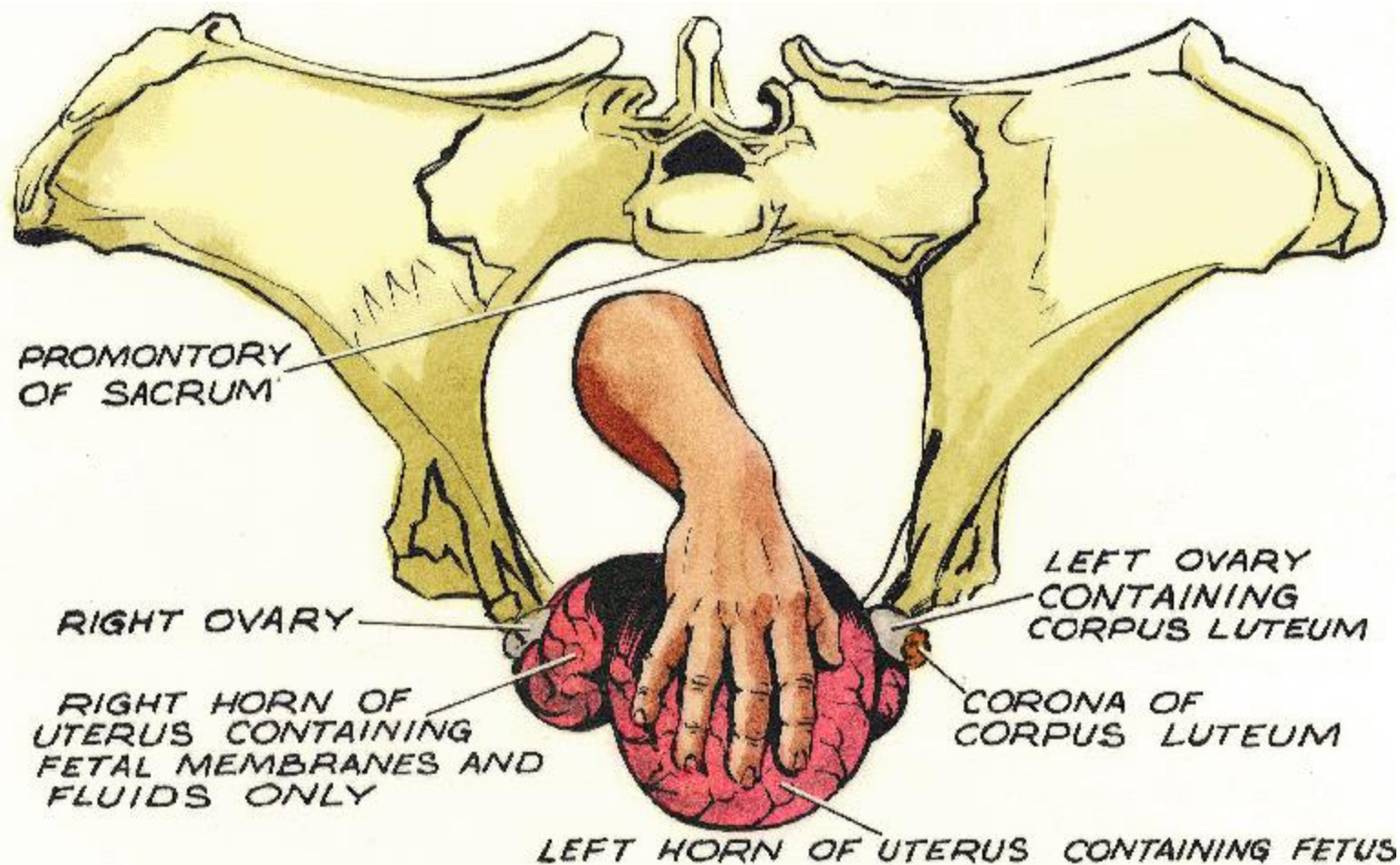
Stage	Uterus	Fetus	Placentome	Middle ut. Artery, diamete
35-40 days	“shell-less egg”! be gentle!, In pelvic floor, Slight fluctuation, slipping of fetal membranes, asymmetry of horns, horn diameter 4-5cm (3 fingers	Not Palpable	-	No Cahnge
45-50 days	In pelvic floor, asymmetry of horn, slipping of fetal membranes, horn diameter- 5-6.5 cm (4 fingers).	Not Palpable	-	No Change
60 days	Slightly over pelvic brim Appears as water filled balloon, diameter- 6.5-7.6 cm, slipping of fetal membranes,	5 cm long, can be bumped by hand rubbing	-	Increased pulse
90 days	Pulled well over the pelvic brim, 8-10 cm diameter	10-15 cm long palpable fetus	Small	Pencil sized
120 days	Not retractable with cervix pulled to the pelvic brim	25-30 cm long, anatomical parts may be palpable	Small	Fremitus present
150 days	Deep in abdominal cavity, out of reach	35-40 cm long	Distinct	6-1.25 cm, Fremitus-strong
170- 230d	Deep in abdominal cavity, Dorsal wall – tight and difficult to palpate	Out of reach	variable	1.30-1.4 cm, increased fremitus
230- 280 d		Movements	Large sized	Increased fremitus



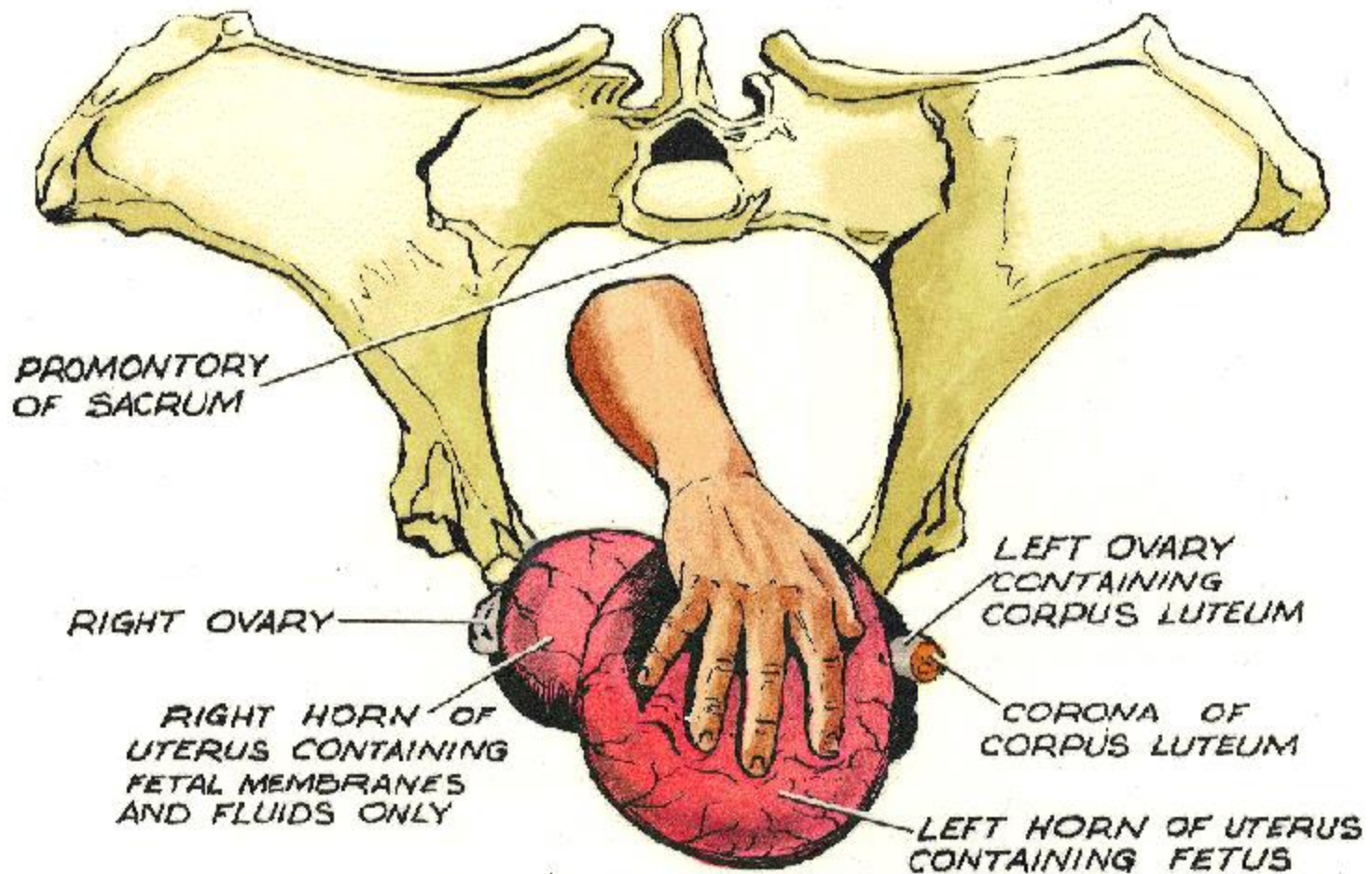
RECTAL EXAMINATION OF PREGNANT COW. GRAVID UTERUS - 70 DAYS.

In all ages of cattle the uterus lies on the floor of the abdominal cavity after the fourth month of pregnancy

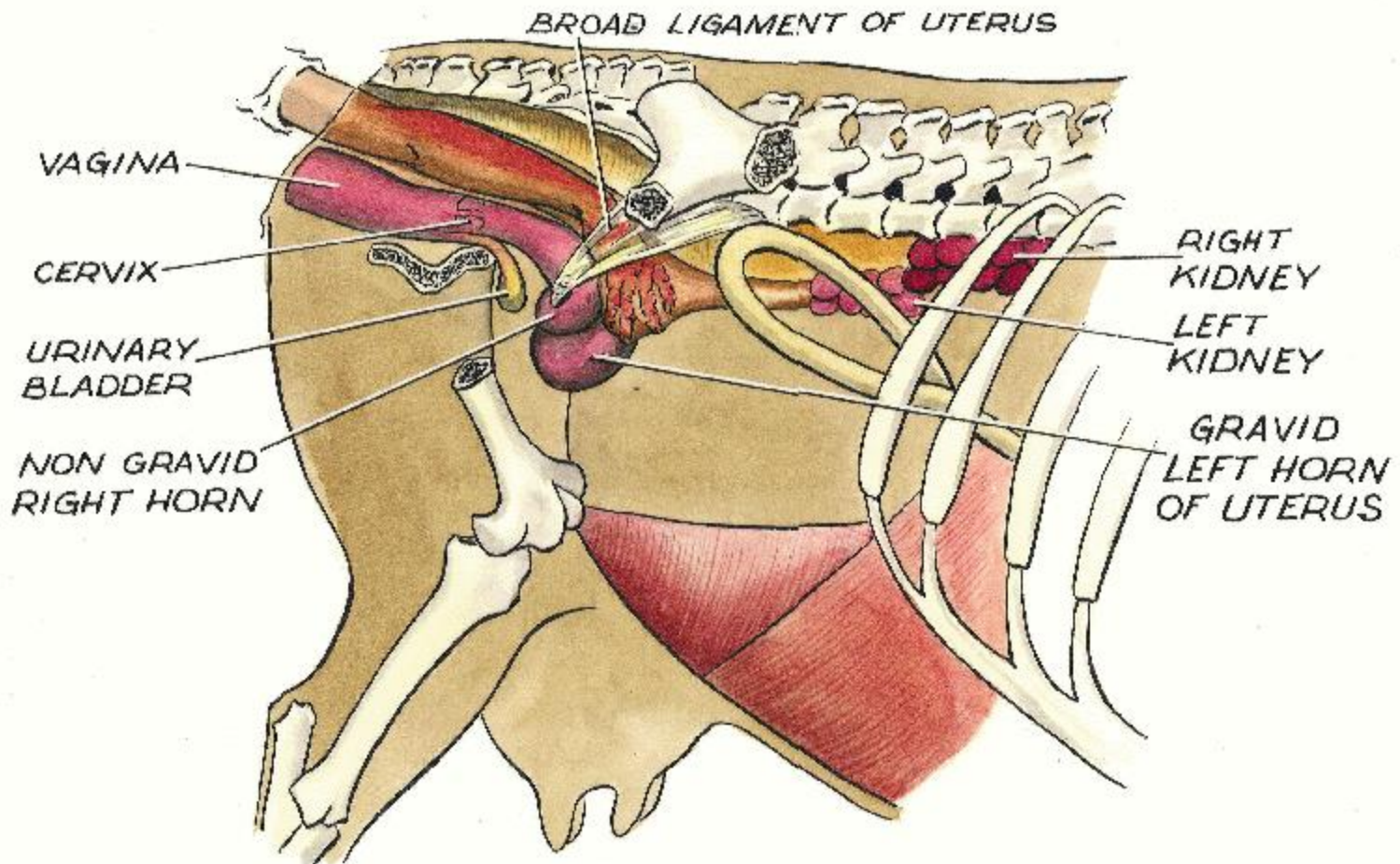
After 45 to 55 days of gestation PD is usually easy for the experienced veterinarian



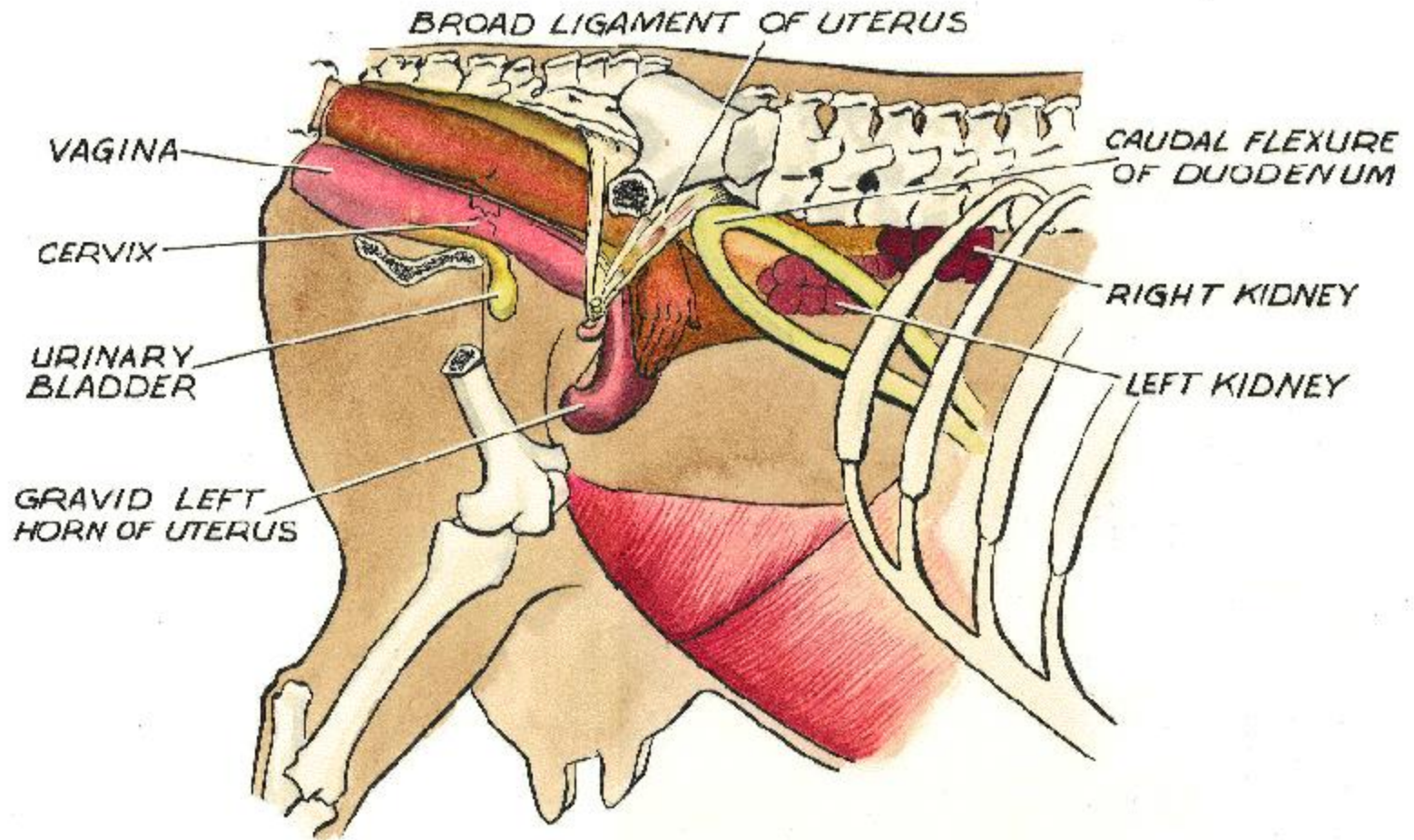
**RECTAL EXAMINATION OF PREGNANT COW.
GRAVID UTERUS - 90 DAYS.**



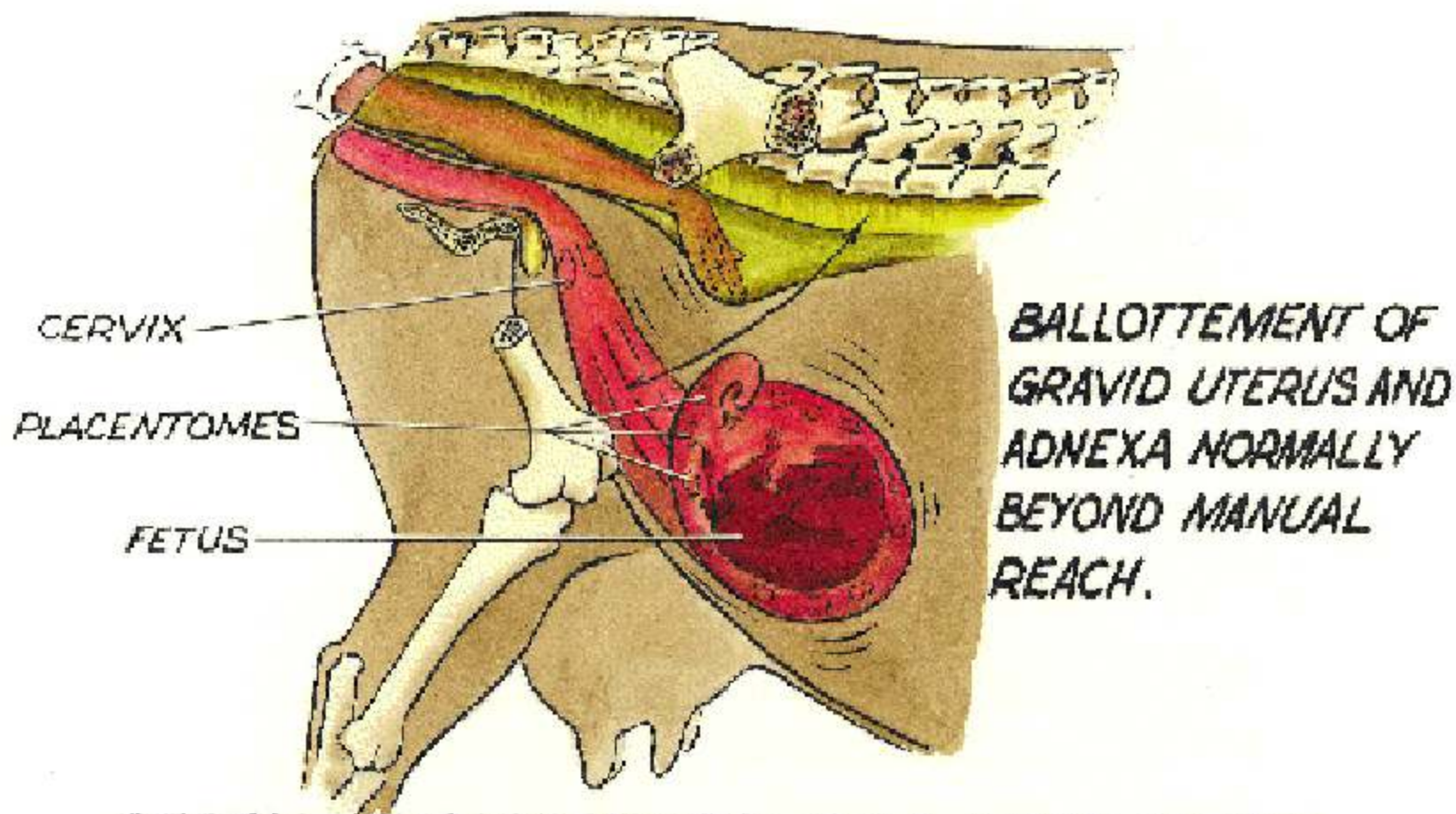
**RECTAL EXAMINATION OF PREGNANT COW.
GRAVID UTERUS-110 DAYS.**



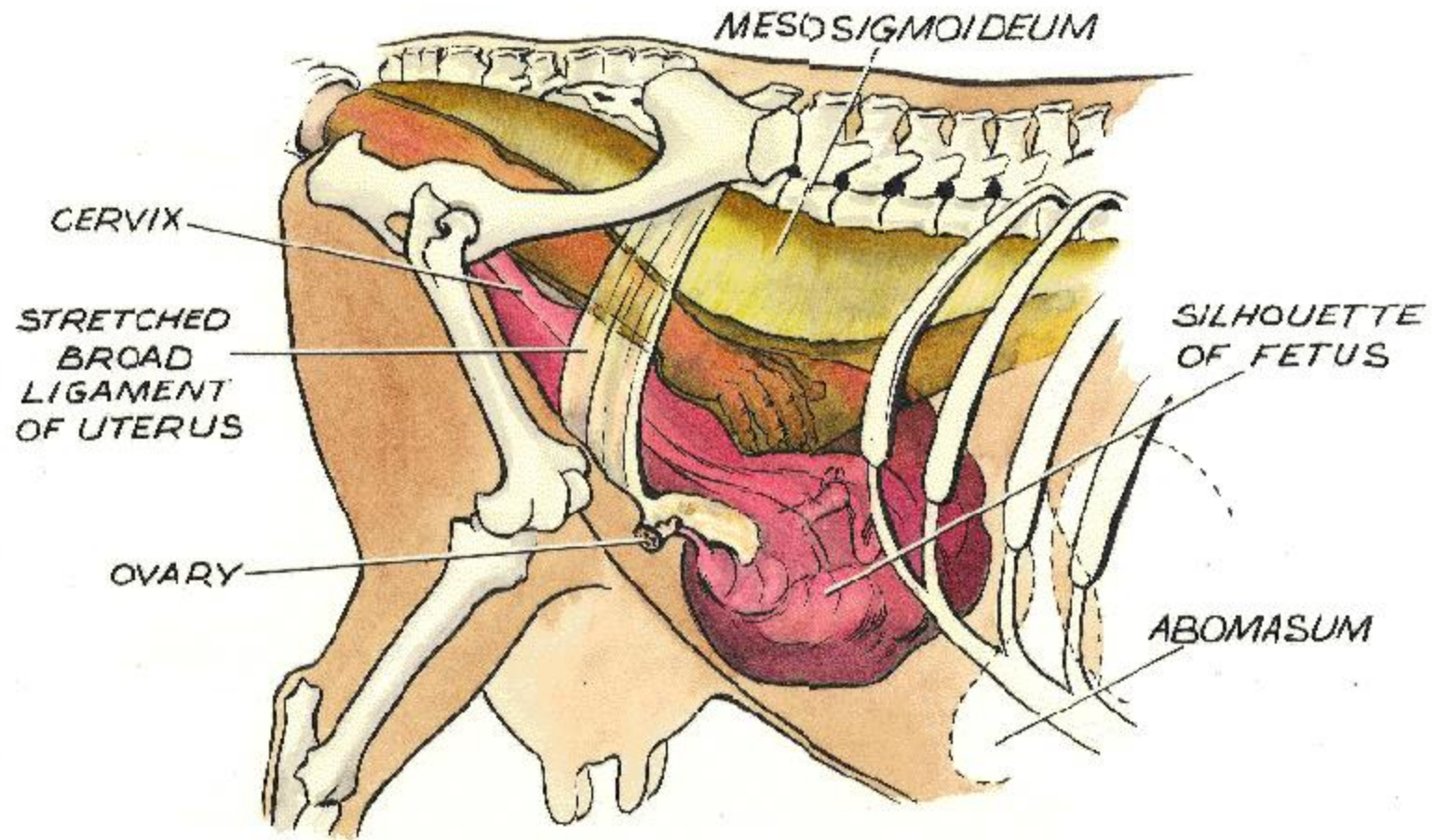
***RECTAL EXAMINATION OF A COW AT THE
END OF THE THIRD MONTH OF GESTATION.***



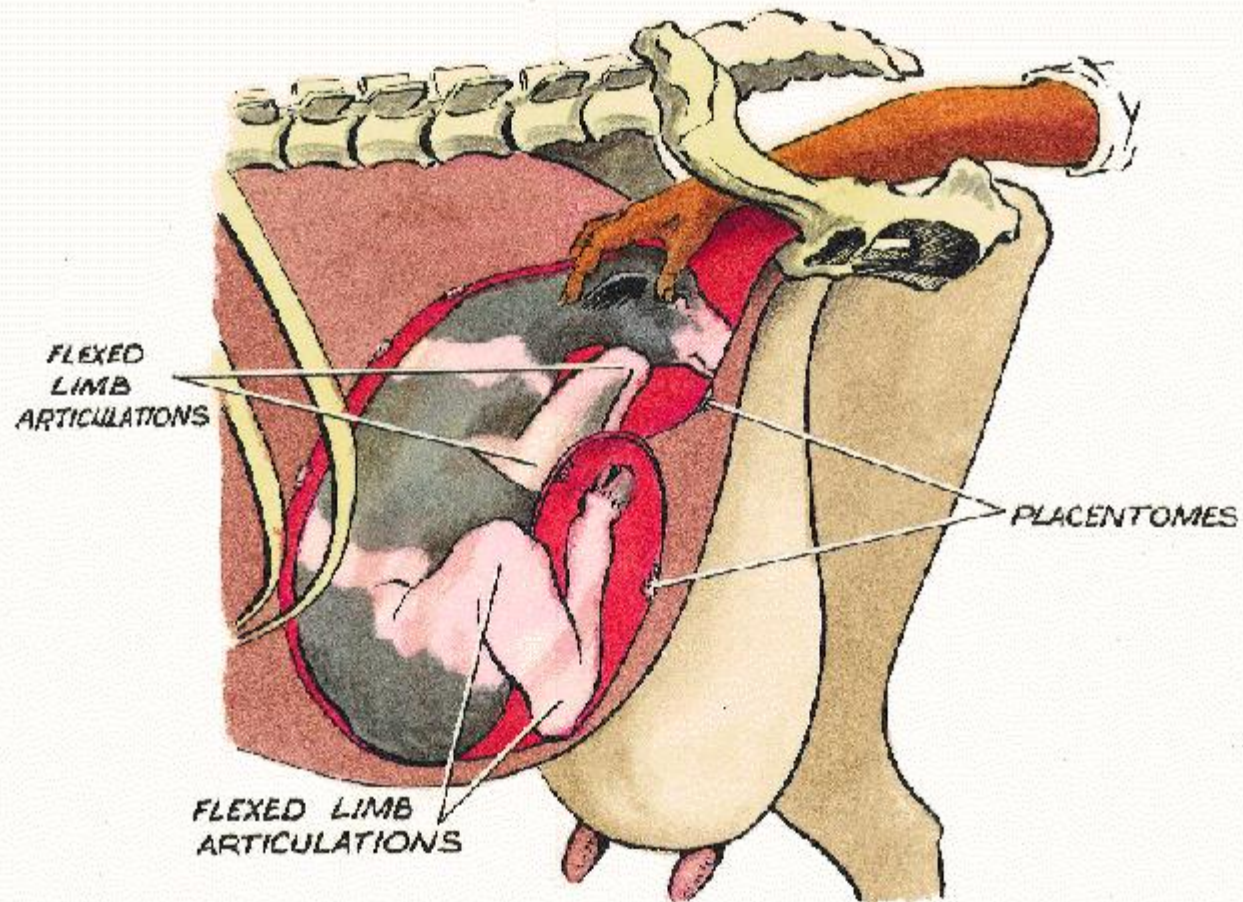
***RECTAL EXAMINATION OF A COW AT THE
END OF THE FOURTH MONTH OF GESTATION.***



RECTAL EXAMINATION OF A COW AT THE FIFTH MONTH OF GESTATION.



RECTAL EXAMINATION OF A COW AT THE SIXTH MONTH OF GESTATION.



RECTAL EXAMINATION OF A COW APPROACHING TERM. RUMINANT STOMACH REMOVED.