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## **COMPARATIVE DIAGNOSIS OF PREGNANCY IN COWS BY RECTAL PALPATION AND VAGINAL INSPECTION**

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The aim of this investigation was to determine the best method for diagnosing pregnancy at different stages of gestation.

The literature concerning the genital organs of the cow and the techniques of rectal palpation and vaginal inspection are briefly reviewed (Chapter I).

The survey of material briefly describes the breeds and the number of animals used in this investigation (Table I).

500 cows were tested in this study. Rectal examinations and vaginal inspections for advancing pregnancies were carried out every month. The cows were chosen from the State Farms (Çifteler, Konya, Lalahan). The limits of pregnancies in these cows were between 32 days and 292 days.

Asymmetry and fluctuation as felt by rectal palpation were the first symptoms to be found in early pregnancies. In two of the six pregnancies diagnosed before the 45th day it was possible to detect these symptoms. The earliest detection using these symptoms was on the 37th day.

Detection of fetal membrane slip has proved to be a reliable symptom for diagnosing pregnancy on the 32nd day following conception.

Palpation of the ovaries during pregnancy could be done until the 115th day of gestation. In 500 pregnant cows only in one case did the corpus luteum occur on the left ovary and the fetus in the right horn.

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	Native Black	Brown Swiss			Breeds/Farms
	Konya	Lalahan	Konya	Çifteler	Days
11	1	1	3	6	Till 50 days
16	1	3	3	9	Between 50-60 days
32	5	—	7	20	Between 60-70 days
27	4	2	11	10	Between 70-80 days
31	10	—	6	15	Between 80-90 days
118	24	—	33	61	Between 90-120 days
101	18	—	26	57	Between 120-150 days
73	10	—	22	41	Between 150-180 days
50	7	—	15	28	Between 180-210 days
21	—	—	8	13	Between 210-240 days
7	1	3	2	1	Between 240-270 days
13	5	—	8	—	After 270 days
500	86	9	144	261	TOTAL

Feeling the fetus itself was the most reliable sign of pregnancy. Pressing the palm of the hand over the enlarged uterus sets the fetal fluids in motion and results in a rebound of the fetus against the hand. After the 6<sup>th</sup> day of conception the fetal bump can be felt through rectal palpation.

Cotyledons were the most accessible positive characteristics of pregnancy during the two last trimesters of the gestation period. The sizes of the cotyledons as observed at different stages of pregnancy are given below:

- From 90th day to 115th day as big as a hazelnut
- From 115th day to 155th day as big as a small walnut
- From 155th day to 210th day as big as a large walnut
- From 210th day to parturition as big as a small apple

Hypertrophy and Fremitus of the middle uterine artery were confirmatory signs of pregnancy. Fremitus was around 90 days after conception. Between 120 to 180 days it was sometimes not perceptible after 180 days it was clearly perceptible in all cases.

The fetus could be easily palpated during the descending and ascending phases. The most difficult period for detection of the fetus by palpation was from 6th to the 7th month of gestation.

Vaginal inspection was carried out simultaneously with rectal palpation. In vaginal inspection, four symptoms were taken into consideration.

a) Appearance of the gelatinous plug of cervix uteri: This was occasionally observed around the 108th day of pregnancy; it was of common occurrence after the 117th day, while after the 174th day the cervix was covered with a gelatinous plug.

b) Direction of uteral orifice: It was established that in early pregnancies the direction was caudal, after 94 days partly dorso-caudal; and after 159 days completely dorsal.

c) Protrusion of portio vaginalis: In early pregnancies it was very pronounced. Between the 110th and 150th days it was pulled to the base of vagina and it was still pronounced. From the 150th to the 220th day it was completely flat.

d) Microscopic examination of the mucus from cervix: At the microscopic examination of the mucus removed from the cervix we obtained rather good diagnostic results (93.7 per cent correct diagnoses in 80 cows) by noticing crystallization pattern.

The difficulty of obtaining mucus from the cervix and the necessity of using a sterile speculum for each examination renders this test impractical for routine field examinations.

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