

2024 Batch-Lecture No. 8

Examination for pregnancy----- continued from previous class

INTERNAL INDICATORS OF PREGNANCY:

1. The rectal examination of the uterus, ovaries, and uterine vessels is more practical and accurate, as well as the earliest means of diagnosing pregnancy in the cow.
2. Prior to the actual rectal examination, the breeding history of the cow should be studied including-
 - i. The date of last calving,
 - ii. The date and number of services and
 - iii. Information on any pathologic or disease condition previously affecting the reproductive organs.
3. Complete breeding and reproductive records are very helpful to an accurate and rapid pregnancy or sterility examination of a cow or herd.
4. Undoubtedly many herds do not have this information.
5. The operator should wear proper protective clothing, consisting of
 - i. Rubber boots,
 - ii. Clean short sleeved coveralls or rubber pants and short sleeved cloth jacket,
 - iii. Thin rubber surgical glove and obstetrical sleeve or disposable gloves.
6. Either hand may be used for examination,
 - i. but if many examinations are to be made it is usually desirable to use the stronger arm.
 - ii. Many prefer to do examination with the left hand, so that the right is free for writing and for the manipulation of instruments such as cervical forceps and uterine catheters.
7. The cow should be fastened or held securely to prevent forward and lateral motion.
 - i. If many cows are to be examined it is helpful for an assistant to hold up the tail away from the examiner's arm.
 - ii. Caution should be exercised when examining near posts or other obstructions that might cause the examiner injury if the cow moved her rear parts suddenly.

- iii. Cows seldom kick when being examined rectally but the excitable dairy cow or beef cow may occasionally kick backwards and injure the operator. This kick usually occurs prior to or as the hand enters the anus.
- iv. When beef cows are in a chute, a bar should be placed behind the cow above the hocks.
- v. Applying a nose lead or forcing the cow tail dorsally and cranially in a firm manner may be necessary to restrain certain cows that kick.

8. RECTAL PALPATION:

- i. The arm should be well lubricated with a non-irritating soap or liquid soap.
- ii. The fingers and the hand are inserted into the rectum in the form of a cone.
- iii. They are advanced into the rectum beyond the organ or structure to be palpated.
- iv. Do not introduce the hand and arm a short distance into the rectum and push the rectum forward, thus stretching and irritating the rectal wall.
- v. With the arm well-inserted, bring back a portion of the rectum as a fold upon the hand and arm, thereby giving more freedom to the hand and producing greater relaxation of the rectum.
- vi. It is usually necessary to remove most of the fecal material from the rectum before a thorough examination can be made.
- vii. This can be made by raking the feces from the rectum with the hand or by stimulating peristaltic contractions and defecation by massaging allowing some air to enter the rectum to dilate it.
- viii. In the older, larger dairy cows one can leave the arm and hand, the latter in the shape of a cone, in the rectum when a peristaltic wave is passed backward.
- ix. However, in heifers and small beef cattle such a practice occasionally results in a tearing of the mucosa or even the rectal wall.
- x. In some cases, particularly where cattle have been on lush pasture and the faeces are thin and loose, the rectal mucosa is easily

irritated and the cow will suck air into the rectum, making examination nearly impossible through the dilated tense rectal walls.

- xi. Stimulating peristalsis, as mentioned above will result in evacuation of the air.
- xii. This may be aided and hastened by hooking the fingers cranially into a peristaltic contraction ring and pulling it gently caudally.
- xiii. The cow's back should not be pinched down, since this tends to fill the rectum with air.
- xiv. Examinations of cows under epidural anaesthesia usually result in a ballooning of the rectum that cannot be overcome until the anaesthesia wears off.
- xv. All rectal examinations should be done with care, gentleness, and patience to avoid traumatizing the mucosa or rupturing the rectum.
- xvi. If manual damage results in bleeding, the examination should cease.

9. PRESENCE OF FREE BLOOD DURING RECTAL PALPATION:

- i. The presence of free blood, or a fresh blood clot, in amounts of $\frac{1}{2}$ to 1 ounce or more, not mixed with the faeces is highly indicative of a rupture of the rectum.
- ii. If a rupture of the rectum occurs in the cow, examinations should cease immediately.
- iii. Supportive treatment with penicillin and streptomycin, tetracyclines or sulphonamides and atropine are indicated.
- iv. If the cow is not valuable, or at the first sign of diffuse peritonitis characterized by a marked increase in pulse rate or temperature, anorexia, and stiffness, immediate slaughter (in parts of world other than India, not possible in Indian states where cow slaughter act exists) may be indicated.
- v. If recovery follows rectal trauma with perforation, adhesions of the rectum to the genital tract, occasionally associated with abscesses, may occur.

10. REGULAR ROUTINE EXAMINATION FOR THE FEMALE GENITAL TRACT:

- i. In making a rectal examination the hand is introduced to the pelvic inlet or bony pelvis and is passed or swept from one side downward, across, and up the other side.
- ii. If no structure is palpated the uterus is in the pelvic cavity.
- iii. Usually the cervix or uterus is palpated on the brim of the pelvis in older cows.
- iv. The hard, firm cervix is relatively easily located on the floor of the pelvis or cranial to it.
- v. The uterine body, cornua, and inter-cornual ligaments can be palpated in non pregnant cows or cows in early pregnancy.
- vi. The ovaries may be palpated lateral and slightly cranial to the cervix.
- vii. As pregnancy develops they are drawn forward especially the ovary corresponding to the horn containing the foetus, until by the fourth to sixth month of pregnancy they are out of reach.
- viii. The uterus may be located laterally in the pelvic cavity if held there by a full bladder or a short broad ligament.
- ix. The normal nonpregnant uterus in the heifer and cow vary greatly in size from 1.25 to 2 cm and 2.5 to 6.5 cm in diameter and 15 to 20 cm and 20 to 30 cm in length, respectively.
- x. The uterus is normally soft, pliable and relaxed with a slight amount of tonicity in early pregnancy.
- xi. A completely flaccid atonic uterus is characteristic of true anoestrus and chronic cystic ovarian disease.
- xii. At the time of oestrus or following vigorous massage the uterus may become quite erect and turgid.
- xiii. In late estrum and early post estrum, 1 to 2 days after ovulation, the uterus may be thick-walled and edematous.
- xiv. Often about 20, 40 or 60 days post conception the uterus may be quite erect and tonic together with some follicular activity in the ovaries but a normal corpus luteum is present.