

The How & Why of Pregnancy Diagnosis

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Why preg check?

- 1) Avoid feeding cattle through the winter that will not produce a calf.
 - cost of stored feed is a high percentage of input.
 - maintaining an open cow for Midwest is ~\$320/year.
- 2) Cull cow costs are higher in September than November....so preg check earlier if possible.
(In general, the better you are, the earlier you can preg check)
- 3) Improve pregnancy rate of your herd by eliminating infertile females.....

Why preg check?

Effect of annual pregnancy testing and culling of subfertile cows on herd fertility

Percent Pregnant by Year							
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>		
<u>Herd</u>							
1	75	97	96	93	98	+23%	<i>Pregnancy diagnosis and culling subfertile females will increase number of calves weaned</i>
2	64	56	84	89	--		
3	59	66	79	92	85	+26%	
4	85	90	94	--	--		
5	82	94	93	93	--		
6	74	76	86	94	98	+24%	
7	49	89	92	89	89	+40%	

Sprott & Carpenter,
1994, Texas Extension
Publication

Why preg check?

- Know expected calving dates of females:
 - For your herd records & labor management
 - To sell bred replacement heifers to match a buyer's calving season



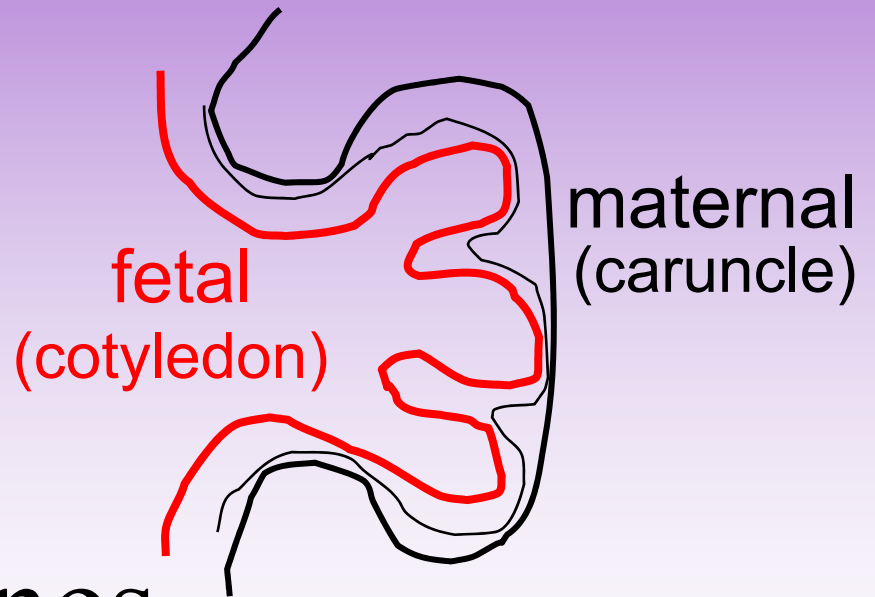
Three positive signs of pregnancy?

Things that are pregnancy-specific:

1. Fetus



2. Placentomes



3. Fetal membranes

To confirm <60 day pregnancies

Things that are not pregnancy-specific but can assist in your diagnosis:

1. Fluid in one or both horns WITH a thin-walled uterus
2. Fremitus = ?
the 'buzz' felt when palpate hypertrophy of the middle uterine artery
3. Can't retract tract up onto rim with cervix
4. Corpus luteum – which ovary?

False positives

(You said she'd calve, but she never does)

How differentiate?

1. Bladder – fluid-filled

No slip, no fetus, ribbed feel to bladder wall

2. Pouch of the rumen

Fibrous feel, you can indent it with a finger

3. Cow's right kidney

Location is always high and right, moves very little

4. Postpartum tract

Will feel caruncles, but no calf...Good RECORDS!

5. Repro tract abnormality

Is it IN the uterus?

Gestational Age

Characteristics of the Bovine Fetus during Pregnancy

fetal aging

<u>Days of Gestation</u>	<u>Lbs. & Oz.</u>	<u>Inches</u>	<u>Remarks Concerning Palpation</u>
30 (1 month)	1/100 oz.	2/5	Some fluid in embryonic vesicle (large marble size).
45	1/8-1/4 oz.	1/2-1	Gravid horn somewhat enlarged.
60 (2 months)	1/4-1/2 oz.	1-2	Fetus size of a mouse, uterine horn banana size (2 inches diameter).
90 (3 months)	3-6 oz.	4-6	Fetus size of a rat, can be bumped. Uterine horns 3 inches diameter (Big Balloon) and dropping into abdominal cavity.
120 (4 months)	1-2 lbs.	10-12	Fetus size of a small cat, uterine horns <u>5 inches</u> in diameter. Can feel <u>placentomes</u> .
150 (5 months)	4-6 lbs.	12-16	Fetus size of a large cat. May be too deep to palpate. Horns <u>7 inches</u> diameter. Placentomes 2-2½ inches.
180 (6 months)	10-16 lbs.	20-24	Fetus size of a small dog. Movement of fetus may be felt. Might feel features of calf.
210 (7 months)	18-26 lbs.	24-36	From 7 months until parturition fetus may be felt. Age determined by fetal size.
240 (8 months)	30-60 lbs.	28-36	Large middle-uterine artery.
270 (9 months)	50-100 lb	28-38	Head and legs in pelvic cavity

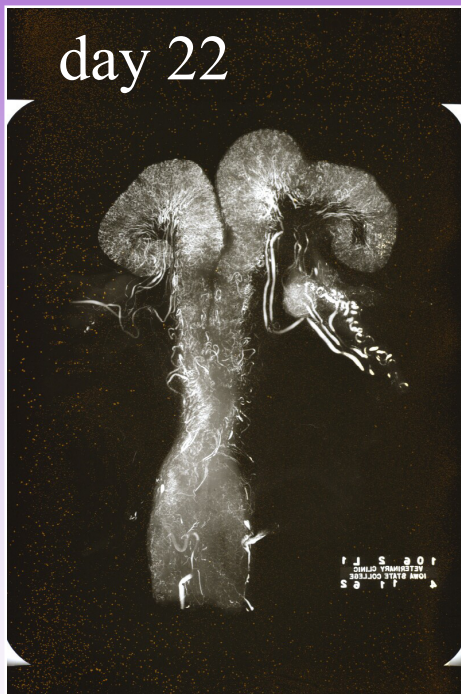
Gestational Age

Days of	Diameter of					
Pregnancy	Placentomes	Position of Uterus	Fetus size	+ve signs	Fetal Head Size	
40 - 50 d		on pelvis		slip		
60 - 70 d		slightly over pelvis	mouse	slip		
80 - 90 d		descending	rat	slip, fetus	golf ball	
100-110 d	dime	descending		slip, fetus, placentomes		
120 d	nickel	descending	kitten	slip, fetus, placentomes	tennis ball	
130-140 d	quarter	descending		slip, fetus, placentomes		
150 d	1/2 dollar	descending	large cat	fetus, placentomes	softball	
~180 d		on abdominal floor	beagle dog	fetus, placentomes		
~210 d		ascending	medium size dog	fetus		

Gestational Age

<u>Age</u>	<u>fetal size</u>	<u>fetal head size</u>
60 days	mouse	marble
90 days	rat	golf ball
120 days	small cat	tennis ball
150 days	large cat	softball
180 days	beagle dog	beagle dog

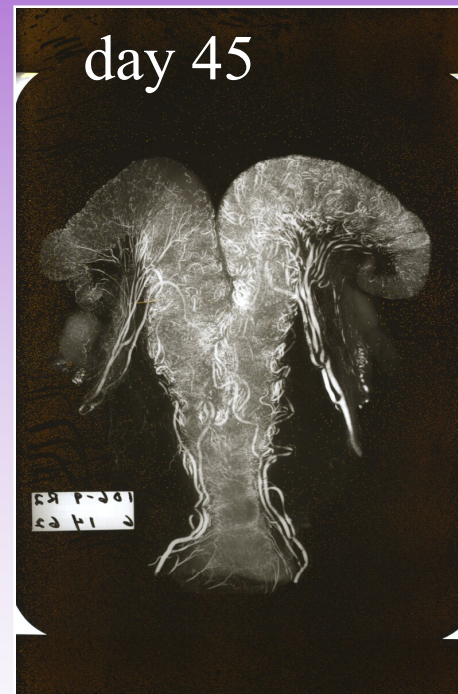
Stages of gestation (aging the pregnancy)



Can't diagnose



Diagnose only
with ultrasound

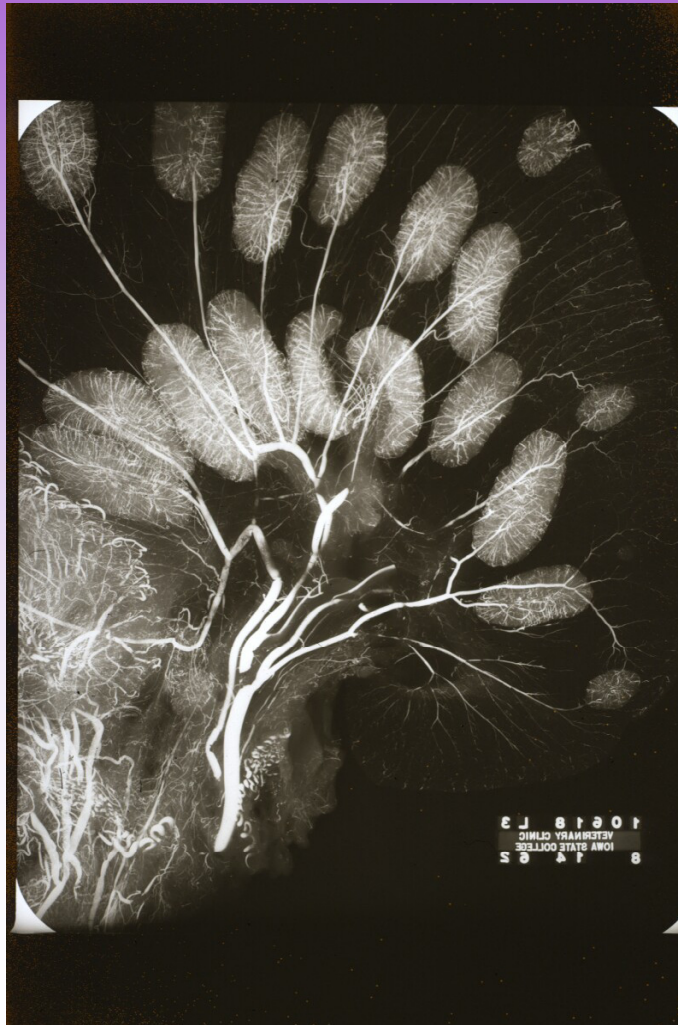


Some fluid one horn,
membrane slip,
amniotic vesicle

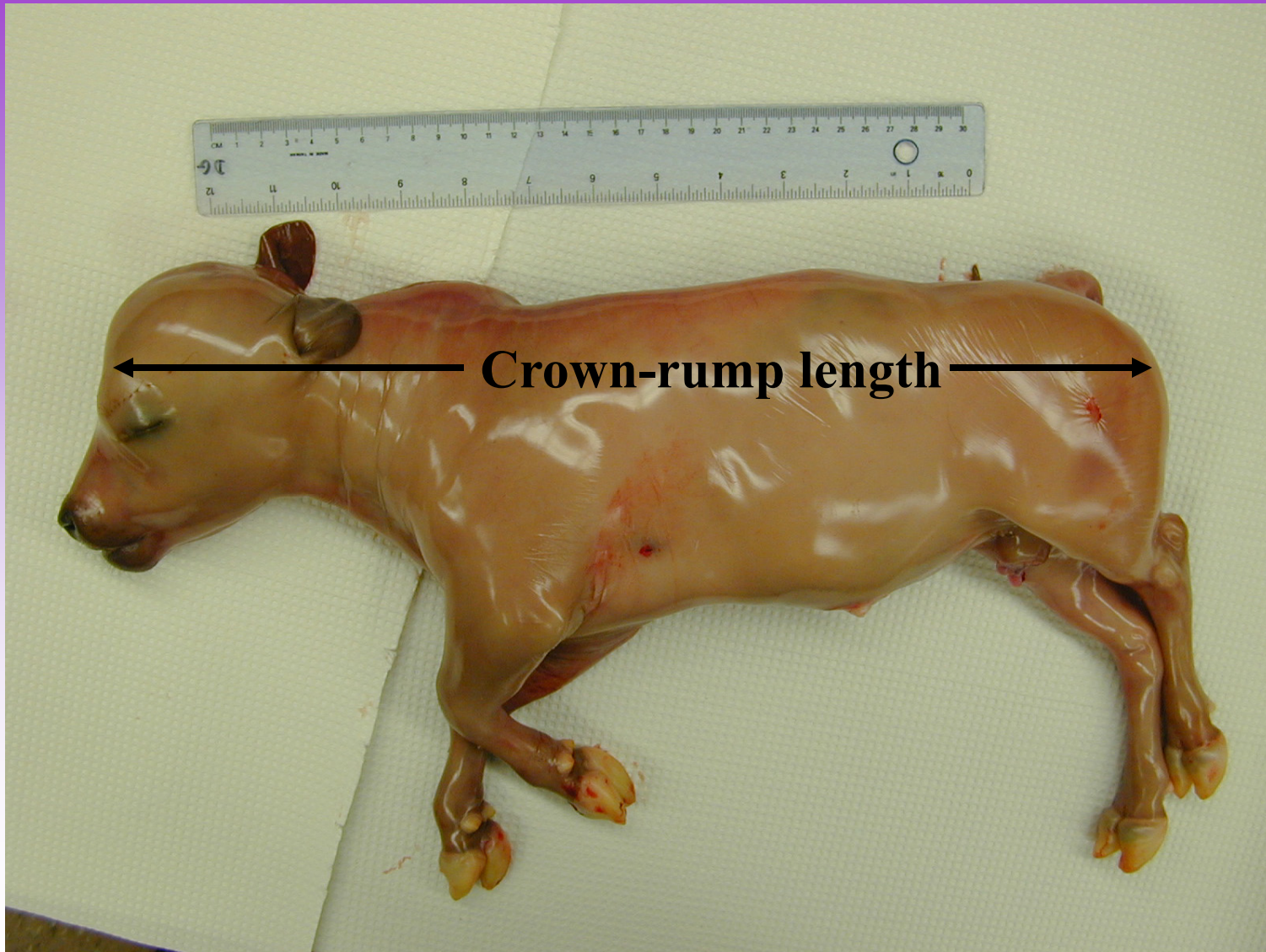


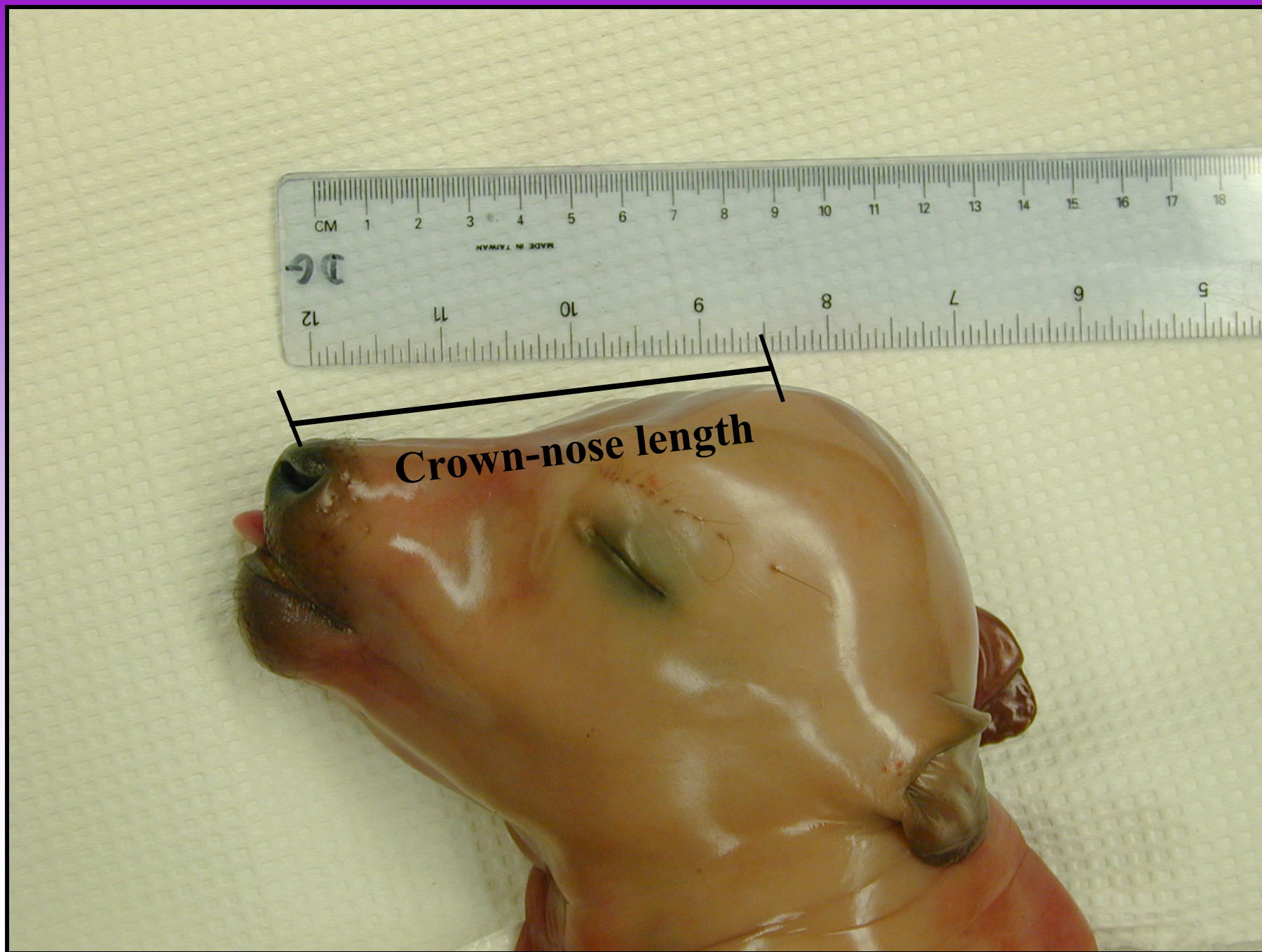
Fluid, membrane
slip, amniotic
vesicle

At 150 days, if fetus is too deep, may find
placentomes only



How age the pregnancy?





~150-160 days



~130-140 days

~110-120 days

~90-100 days

~60 days



Why an increase in variation of fetal size as gestation increases?

1. Gender
2. Breed

Orientation of fetus in uterus

Looked at 494 pregnant cow tracts at a slaughter plant:
Sorted tracts into 10 day intervals by fetal measurements

- < 40 days 23 % of fetuses were anterior presentation
- Up to 200 days, 50% of fetuses were anterior presentation
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- After 200 days 83% of fetuses were anterior presentation
- After 216 days, all fetuses were anterior presentation