A photograph of a sunset over the ocean. The sky is a mix of dark purple, orange, and red. A small crescent moon is visible in the upper left. In the foreground, a boat is visible on the water, and two buoys are floating. The text is overlaid on the image.

# **Non infectious infertility in sow herds**

**John Carr**

# **Analysis of reproduction problems**

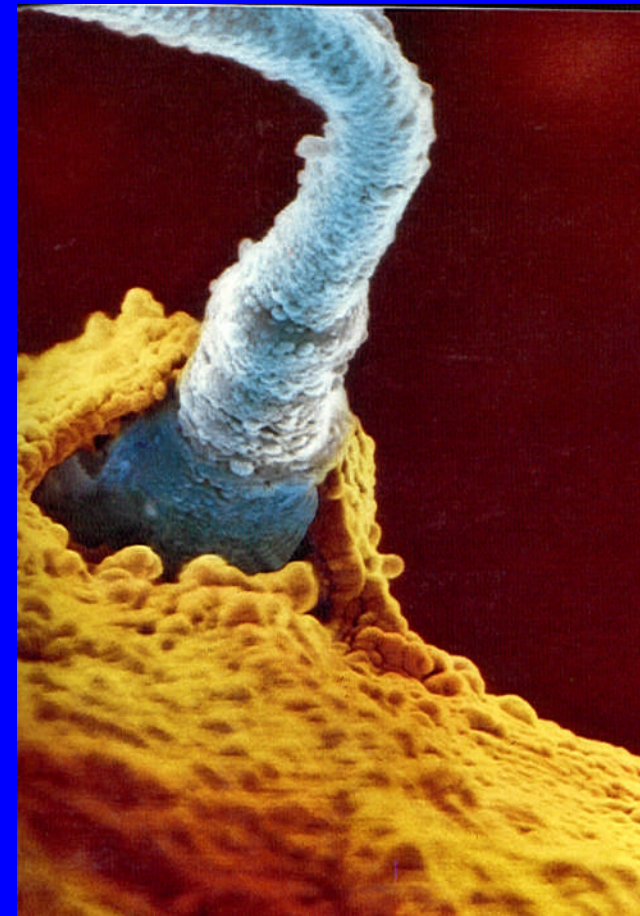
**Make sure it is a  
reproductive problem**

## Major reasons for reduction in farrowing rate

Reason	Farm actual	%	Target %
Total Returns			10
Regular returns 18-24 days post-service			8
Irregular return any other time post-service			2
Not In Pigs (>80 days post-service)			0 - 0.5
Abortion			0.5-1
Culls (pregnant)			1
Deaths (pregnant)			1
Farrowing rate			87%

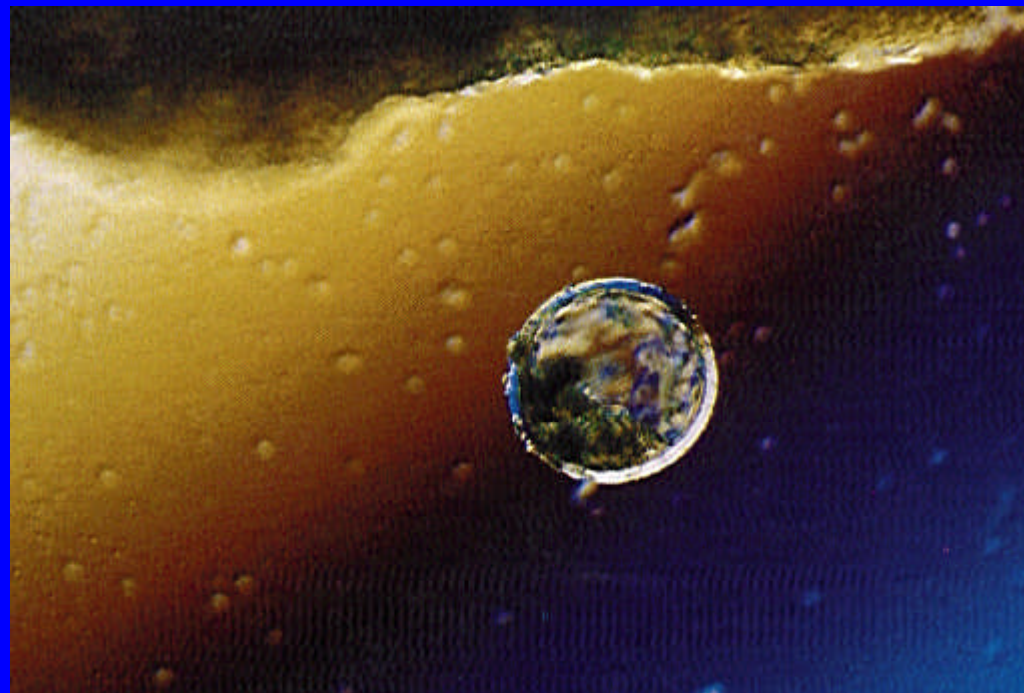
# Basic embryology

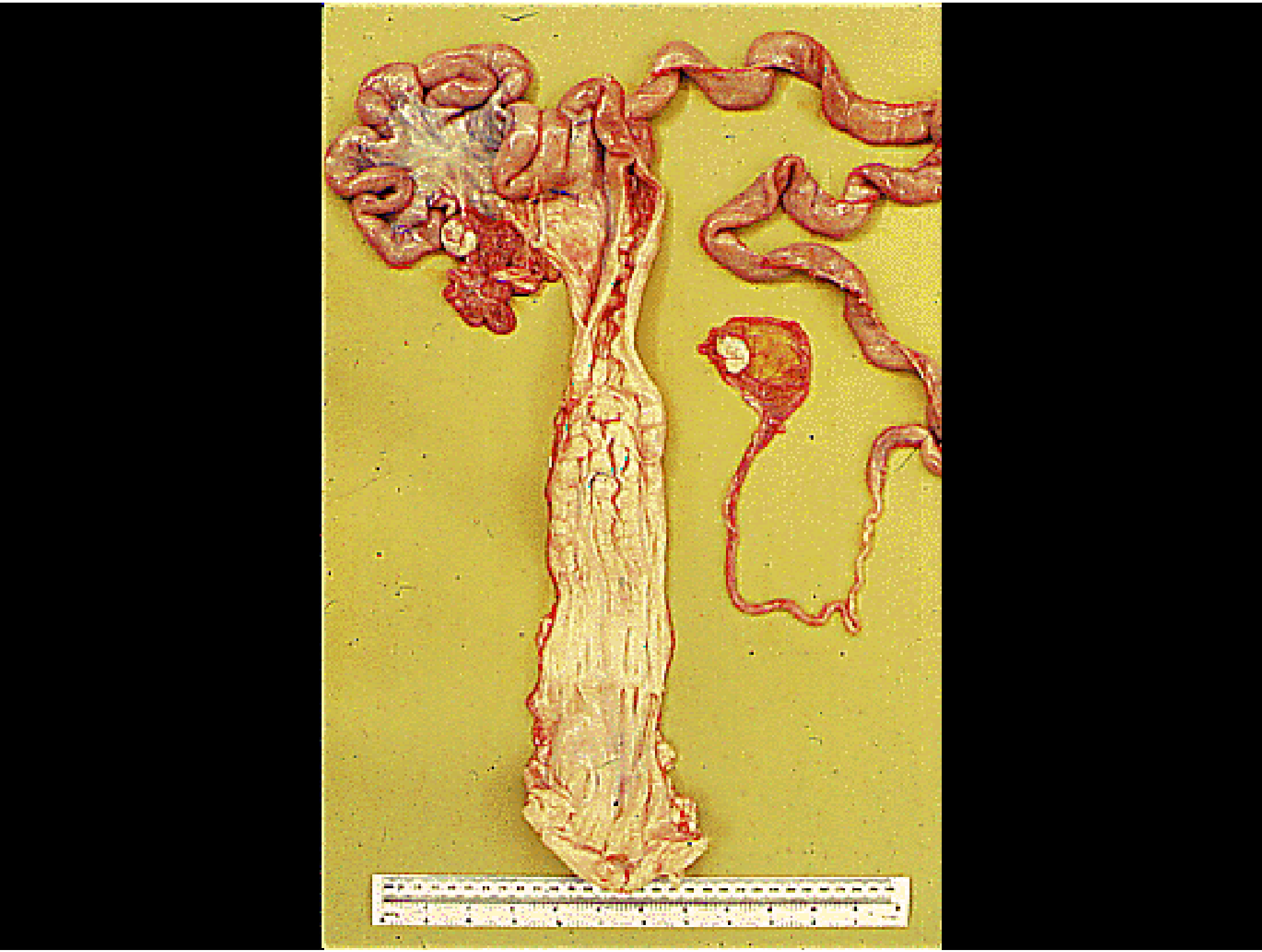
- Day zero ovulation and fertilization



# Basic embryology

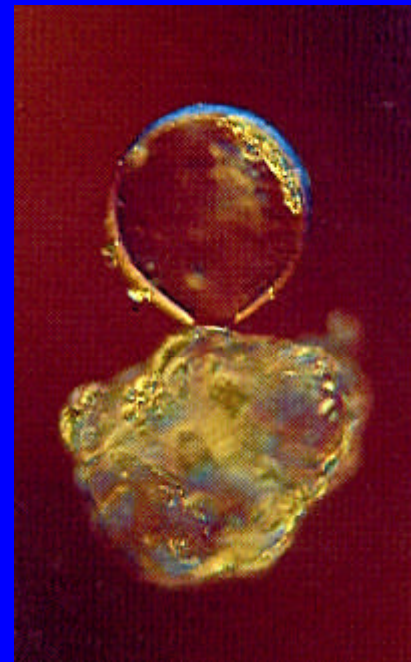
- Day zero ovulation and fertilization
- **Day 2-3 embryo enters uterus**





## Basic embryology

- Day zero ovulation and fertilization
- Day 2-3 embryo enters uterus
- **Day 7 embryo hatches**

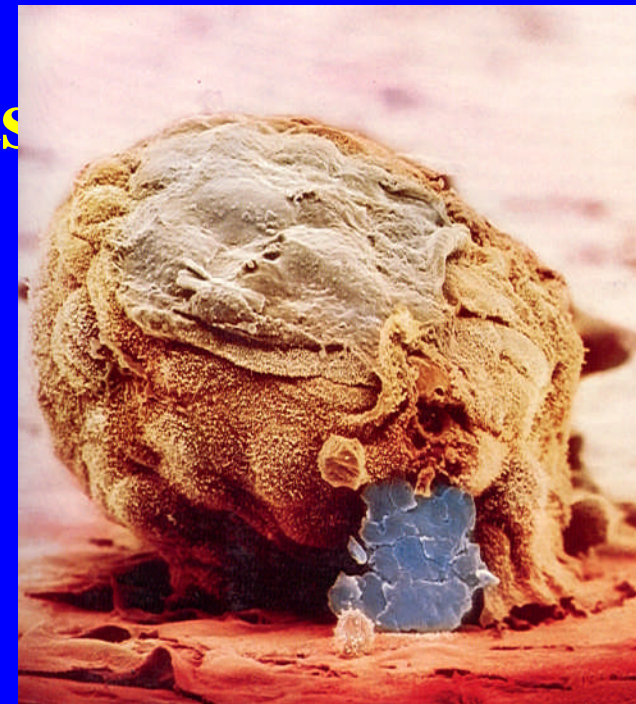


## **Basic embryology**

- **Day zero ovulation and fertilization**
- **Day 2-3 embryo enters uterus**
- **Day 7 embryo hatches**
- **Day 10 free living embryo released  
oestrogen sulphate**

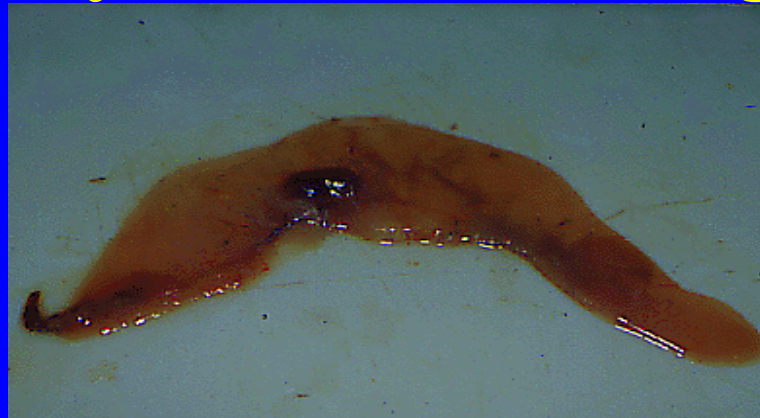
# Basic embryology

- Day zero ovulation and fertilization
- Day 2-3 embryo enters uterus
- Day 7 embryo hatches
- Day 10 free living embryo released oestrogen sulphate
- Day 14-17 embryo implants



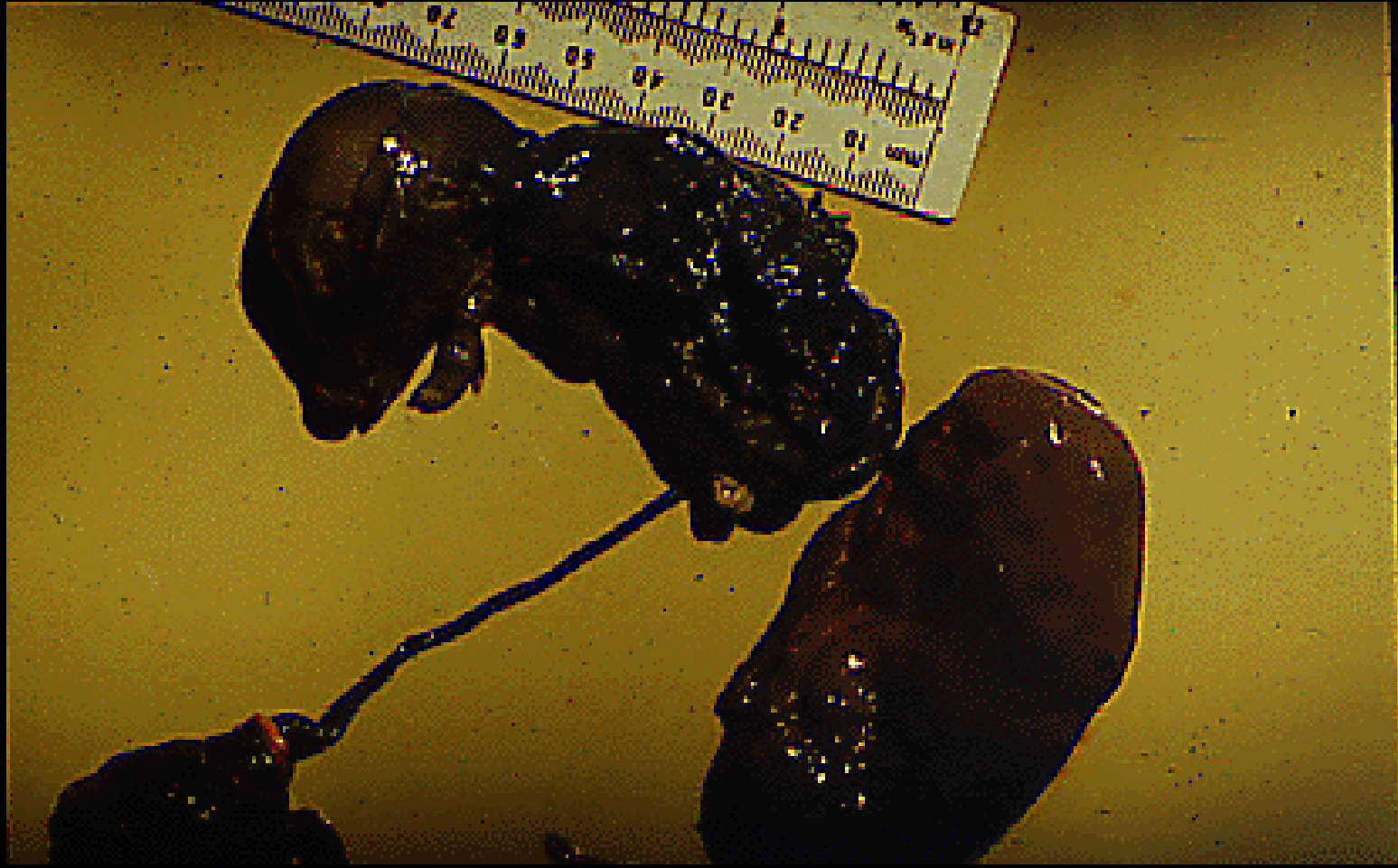
## Basic embryology

- Day zero ovulation and fertilization
- Day 2-3 embryo enters uterus
- Day 7 embryo hatches
- Day 10 free living embryo released oestrogen sulphate
- Day 14-17 embryo implants
- **Implanted embryo released oestrogen sulphate**



## **Basic embryology**

- **Day zero ovulation and fertilization**
- **Day 2-3 embryo enters uterus**
- **Day 7 embryo hatches**
- **Day 10 free living embryo released oestrogen sulphate**
- **Day 14-17 embryo implants**
- **Implanted embryo released oestrogen sulphate**
- **Day 35 bone is formed in foetus**



**What happens if....?**

## **What happens if**

- **Day 10 signal does not happen**

## **What happens if**

- **Day 10 signal does not happen**
  - **Sow returns 18-24 days**

## **What happens if**

- **Day 14-17 signal does not happen**

## **What happens if**

- **Day 14-17 signal does not happen**
  - **Sow returns 25-35 days**

## **What happens if**

- **Foetus dies around day 20?**
  - **Sow returns 63 days**
  - **pseudopregnancy**

**No reason for a sow to  
return at day 42**

# Abortions

- Abortions can occur at any time after day 11 because of prostaglandin production



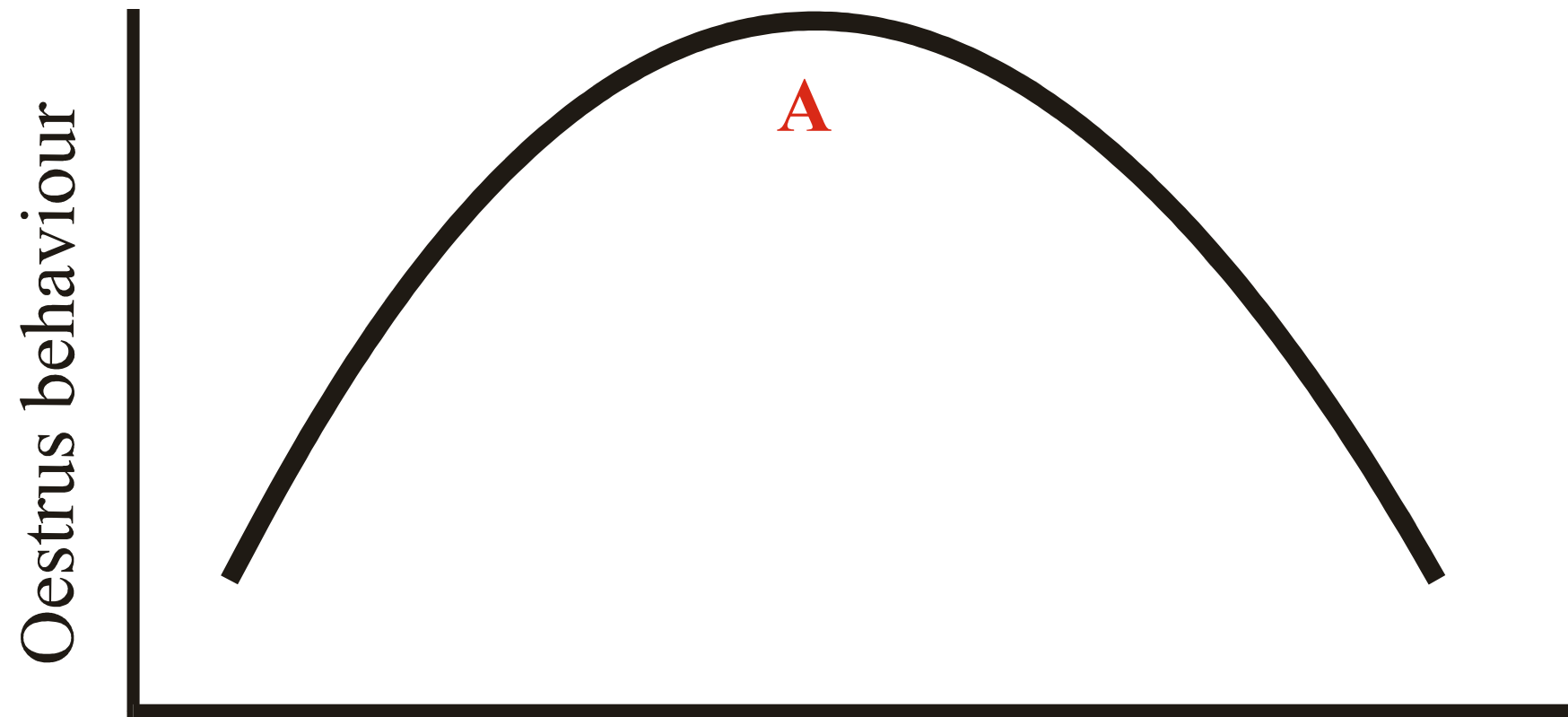
<b>Reasons for return</b>	
<b>0-17</b>	<b>Nymphomaniac, Not in season initially</b>
<b>18-24</b>	<b>Oestrus</b>
<b>25-35</b>	<b>Embryonic death, Not in season initially</b>
<b>36-48</b>	<b>Missed oestrus</b>
<b>49-80</b>	<b>Pseudo pregnancy, Abortion, Combination of above</b>
<b>80+</b>	<b>Combinations of above</b>

**Influence of stockpeople on  
reproductive success**



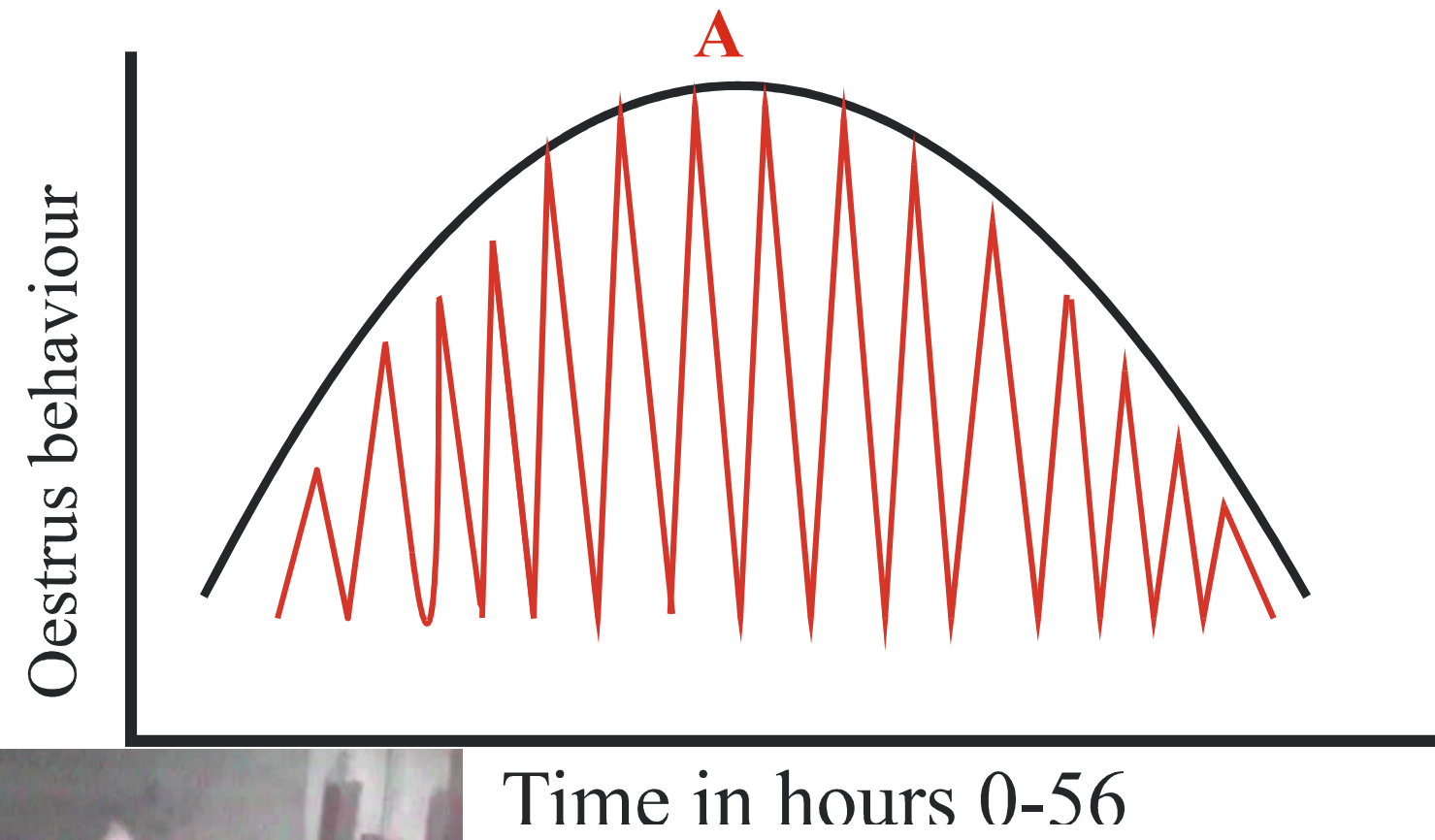


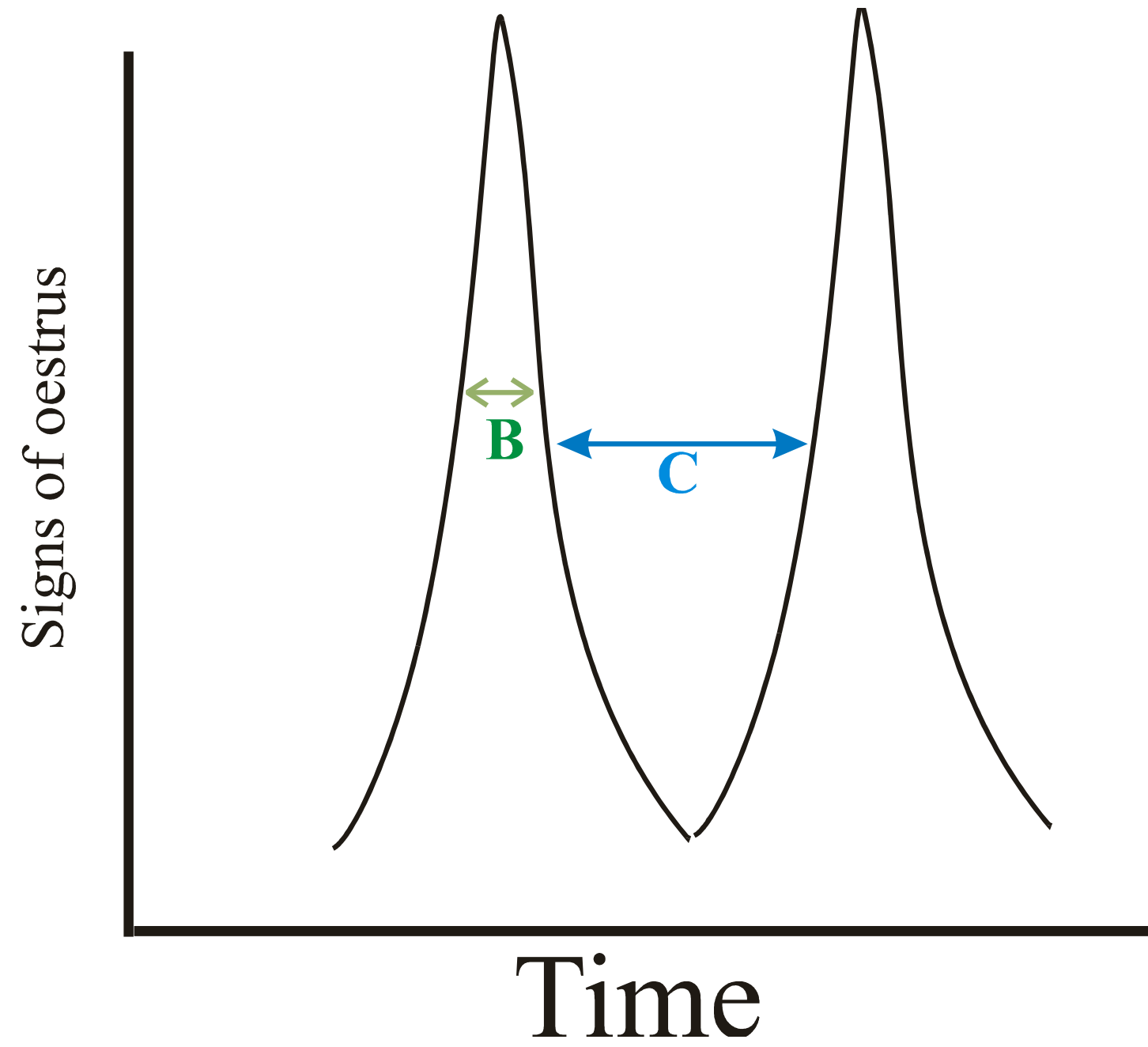
**Why is this important?**

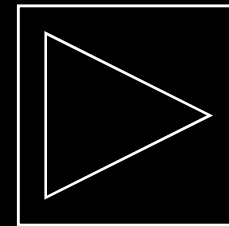


Time in hours 0-56

**Standing heat, how long does it last?**





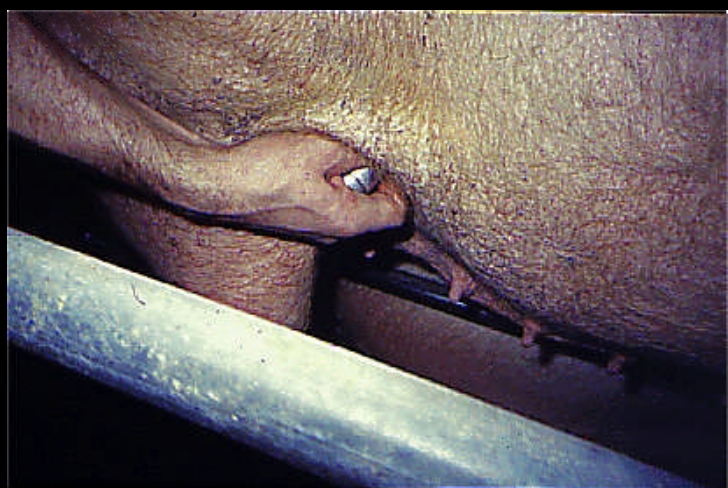
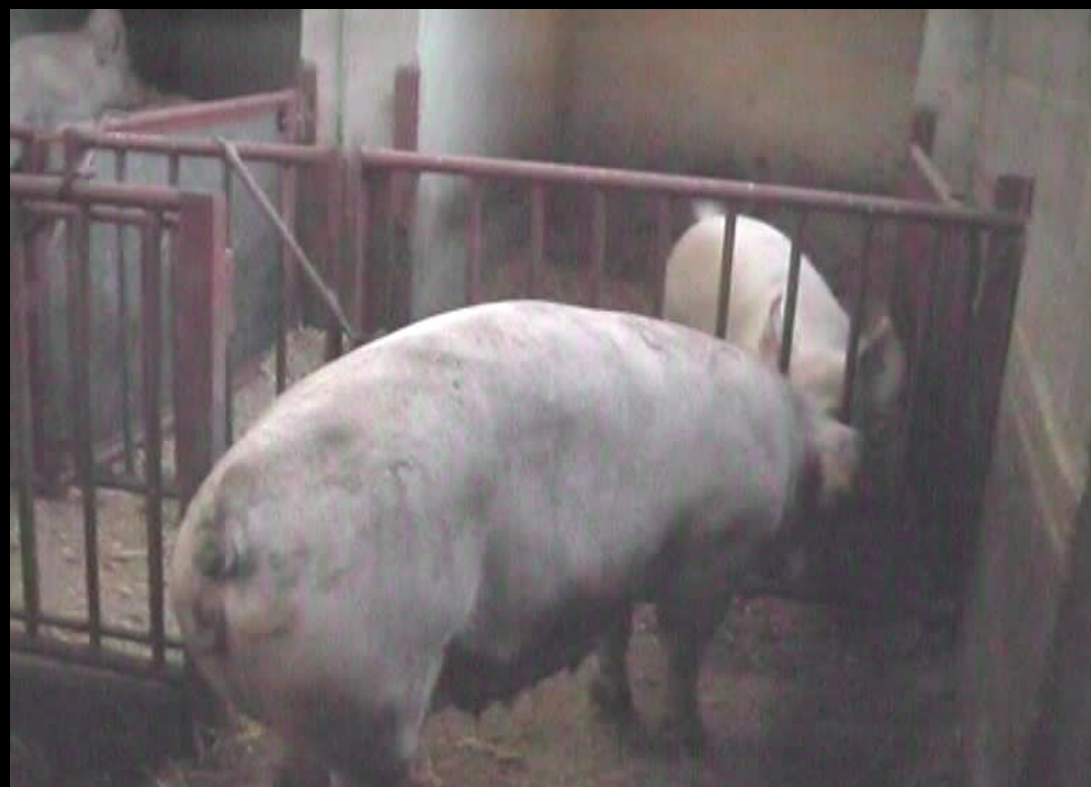


<b>Stock-person</b>	<b>Farrowing rate</b>	<b>Total born alive</b>	<b>Live piglets</b>
<b>1</b>	90.6	11.0	2348
<b>2</b>	89.8	11.1	2413
<b>3</b>	89.1	10.8	2346
<b>4</b>	85.9	11.2	2310
<b>5</b>	81.6	11.0	2153
<b>6</b>	67.8	9.3	1371

# Pregnancy Checking

# Pregnancy checking

- 1-115 days in the presence of the boar\*
- 18-24 with boar regular return
- 21 days + - real time scanner
- 25-35 days with boar irregular return
- 28 days doppler machine for uterine pulse
- 35 days doppler machine for uterine pulse
- 8 weeks by eye



# Summary

- **Farmers and Vets want a disease answer and want to blame someone rather than themselves.**
- **Unfortunately, stockmanship and management are the more common reasons for poor results**

**The major cause of poor reproduction**



