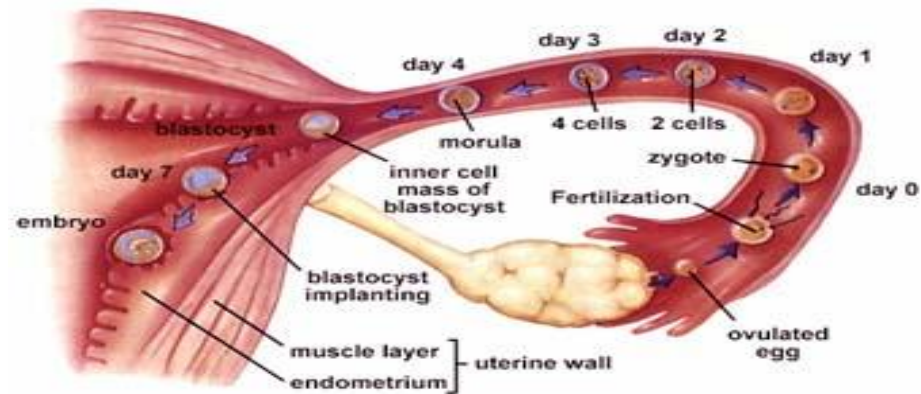




REPRODUCTIVE HERD HEALTH

Doç. Dr. Halit Kanca

EMBRYONIC IN MILK COW DEATH WITH BACTERIAL AND CLINICAL APPROACH TO VIRAL ABORTUS



Continuity of Dairy Cattle Depends on Economic Balance

Depreciation of plant and equipment
Provision of animal existence
Personnel expense
Health Service
ROUGH AND CONCENTRATED FEED



Calf and Milk

In order to create economic value, farm components must work in harmony

PLANING

DRY TERM

FRESH GROUP

TRANSITIONAL PERIOD



CALF

HEIFER

BREEDING GROUP

HOUSING-NUTRITION-VACCINATION AND BIOSAFETY

Importance of Measurement and Evaluation System

- **FERTILITY PARAMETERS AND APPLICATIONS**
- **MILK PRODUCTION**
- **DISEASES**
- **SUCCESS OF APPLICANTS**

You can't measure and control, you can't manage

P.P PROBLEMS / INCIDENCE AND DEFINITION RATE

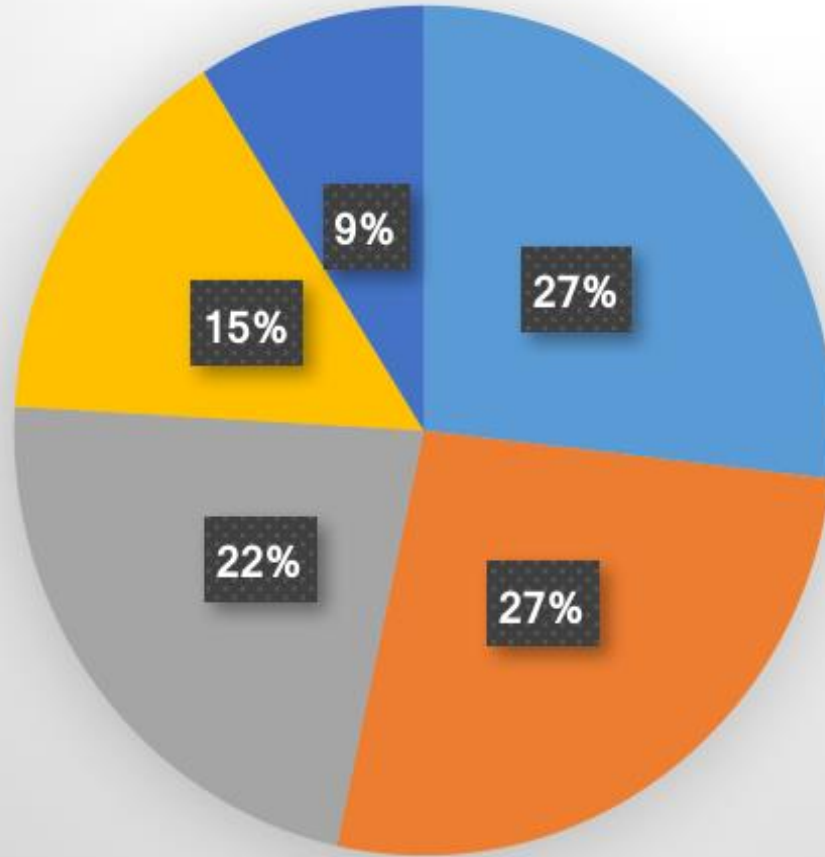
Mean%

Dystocia	7
Hipocal	6,5
Retensiyo sec.	8,6
Udder edema	97
Metritis	10,1
Mastitis	14,2
Ketozis	4,8
Abomasum Disp.	2 - 5
Laminitis	7

Lifetime: 90%

Lifetime culling 60%

İneklerde Sürüden Çıkarılma Oranları (%)



- Reproduktif s.
- Meme s.
- Üretim s.
- Topallıklar
- Diğer hastalıklar

(Stevenson, 2009; Roberts ve ark., 2012).

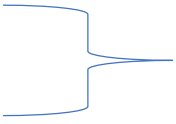
Stages of Reproductive Physiology

0 h

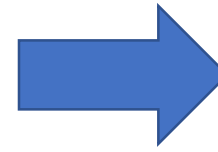
Onset of oestrus

4h

16h



Optimum Insemination Time



Sperm viability 24-34 hours

Oocyte viability 6-12 hours

Old Gamet

28±4h

Ovulation

Fertilisation

7. d

Oviduct migration - arrival to uterus

9.d

Hatching

16.d

Antiluteolitik signal

19.d

Contact to uterus

30. d

Plasentation

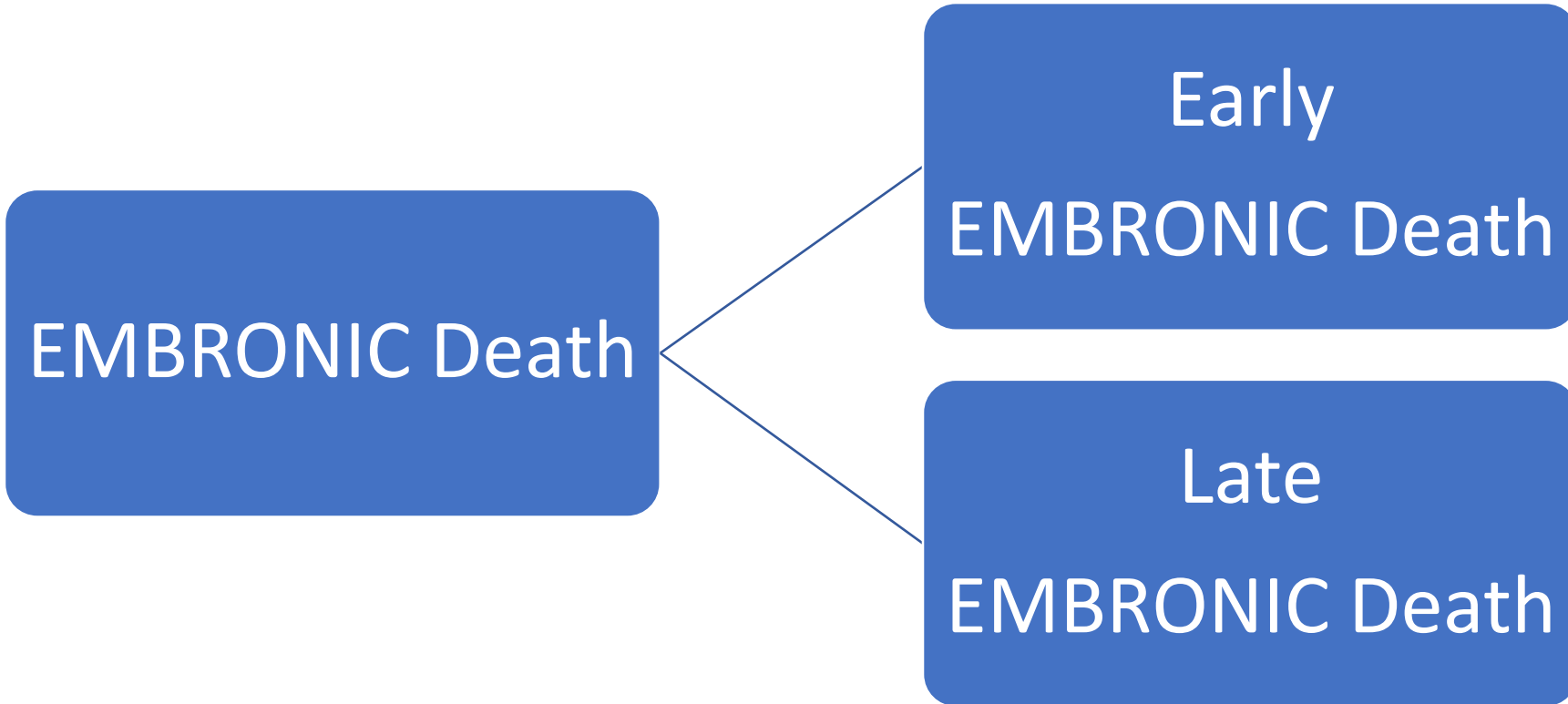
45.d

Organogenezis

Parturition

From Insemination to Calving: A Hypothesis

- Number of inseminated cows: 100
- Number of cows giving birth: 45
- Where does 55% loss occur?
- Since 1980, the success of artificial insemination is reduced by 1% / year.
- Milk yield increases / Fertility decreases. ENERGY - NUTRITION



From Insemination to Calving: Losses

- Lack of fertilization (0) 10%
- Early embryonic deaths (0-15 days)
- Late embryonic deaths (15-45 days)
- Early fetal death (45-90 days)
- Abortions (90-270 days)

More Losses

%90

Less losses

Etiopathogenesis of embryonic deaths is a multifactorial syndrome.



EMBRYONIC
DEATH



Major Factors in Embryonic Deaths

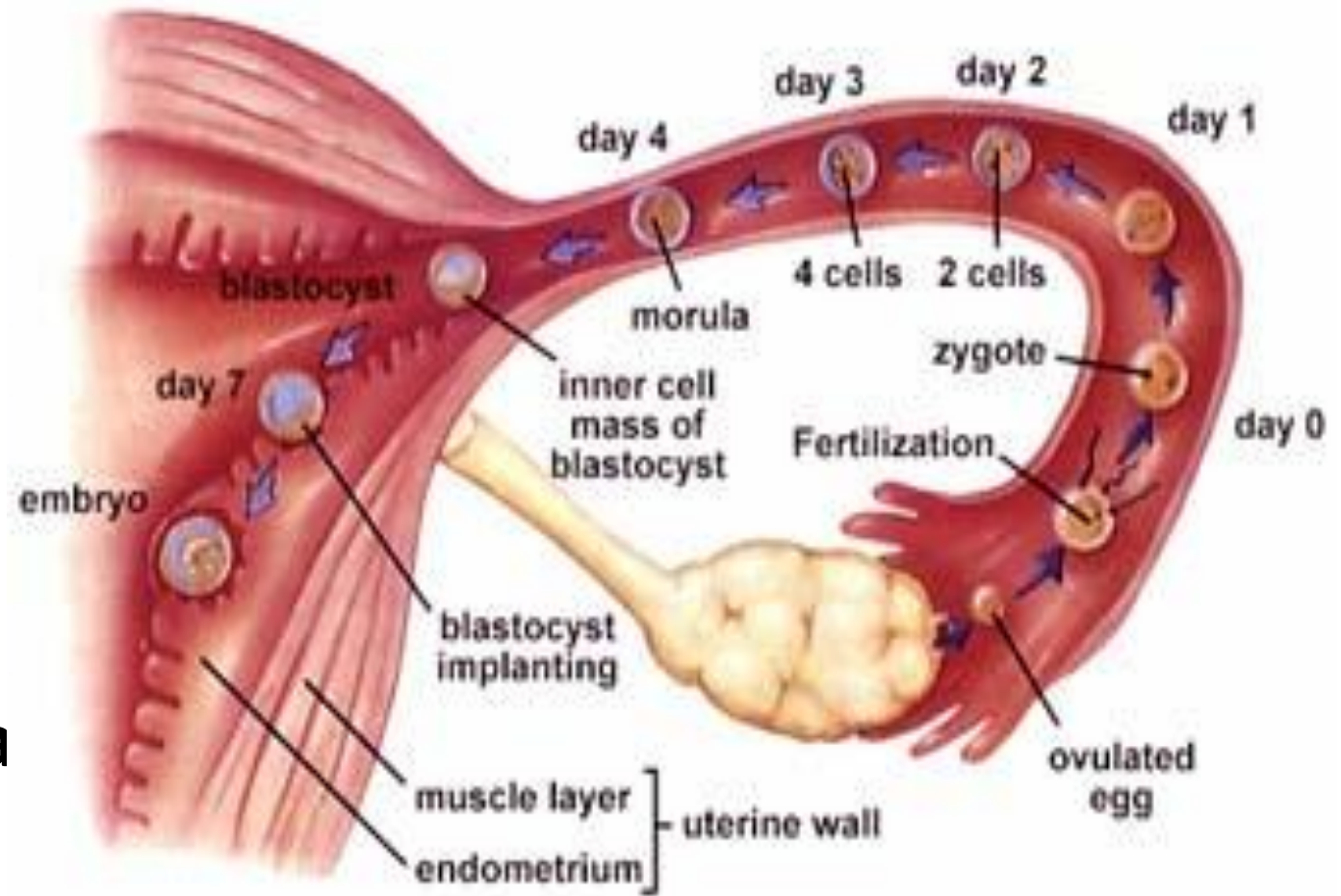
- **Genetic factors**
- **Infections (local or systemic)**
- **Viral (BVD, IBR)**
- **Bacterial**
- **Protozoal (N.caninum)**
- **Environmental Factors**
- **Heat Stress**
- **Housing conditions and Grouping Stress**
- **Seasonal effect**
- **Nutrition (Deficiency or excess of some substances)**

Major Factors in Embryonic Deaths

- toxins
 - Local toxins (Metritis, Mastitis Toxins)
 - Toxins from feed (Mycotoxins)
 - Toxic plants
-
- Immunological Factors

Important predisposition factors to embryonic deaths

- Nutrition
- VKS
- Heat stress
- Oxidative stress
- Insufficient P4 oscillations



Importance of P4 Levels After Ovulation Low P4 = Embryonic Death

- **Basic Effects of P4;**
- **Protein synthesis from uterus**
- **Growth rate of embryo**
- **Antiluteolytic signal strength increases.**
- **Goal: To ensure rapid development of CI**
- **Direct (Nutrition)**
- **Induce indirect P4 synthesis (GnRH, hCG, PMSG)**

Embryonic death - BCS-NEB

Embryonic Death in BCS protectors: 4%

Embryonic Death in BCS Losers: 11%

Relationship Between Nutrition and Embryonic Deaths: NED (All Nutritional Components)

CALVINGDOĞUM

INTRAUTER'S CALF GROWTH

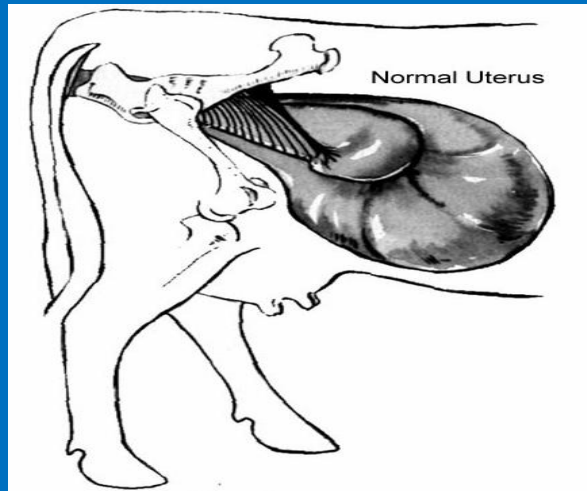
BIOLOGICAL ACTIVITIES AND GROWTH

COLOSTRUM

MILK PROD

2 weeks

7 weeks



Pre-post Partum NEB- RESULTS

Mcal/gün

