



REPRODUCTIVE HERD HEALTH

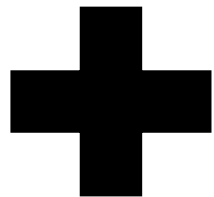
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The Effect of Herd Management on Fertility in Dairy Cows

The aim of dairy cows is to make a profit

- **Incomes**

- Milk production
- Breeding production



- **Outcomes**

1. Establishment of the facility
2. Animal supply
3. Equipment
4. Nutrition costs
5. Veterinary Medicine
6. Staff
7. Depreciation



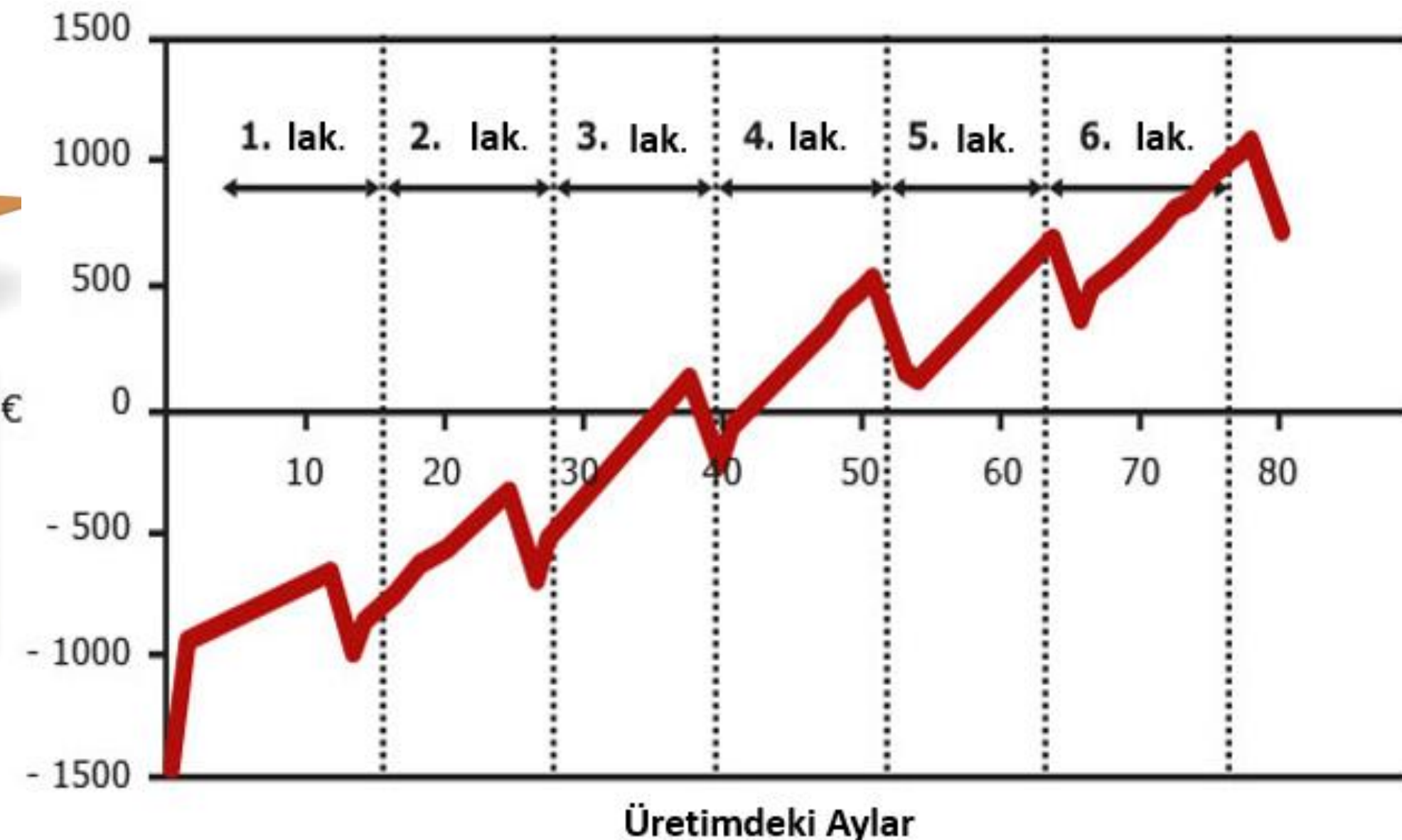
NOTE: If the income exceeds the expenses, the enterprise may survive!

For success in cattle: herd management is important

1. Good planning
2. Animal selection with high genetic capacity
3. Well-trained staff
4. Effective health programs (preventive medicine-vaccination)
5. Recording system (Inputs, cost and especially fertility parameters)
6. Implementation of fertility control programs (Individual and Collective Approaches)
7. 7. Nutrition (accurate and cheap)

Combined cost

Accountability is important for profitability



(Anonim 6, 2017)

Measures against costs

PRECAUTIONS TAKEN BY THE BREEDER

Selection

- * Keeping the animals with high milk yield in the herd

Keeping animals of high genetic capacity in flock

PRECAUTIONS

The use of adipose tissue as an energy source in milk yield

Stop reproductive activities

NOTE: * These two parameters are antagonists of each other.

- * NEB

Relationship Between Milk Yield and Fertility (USA)

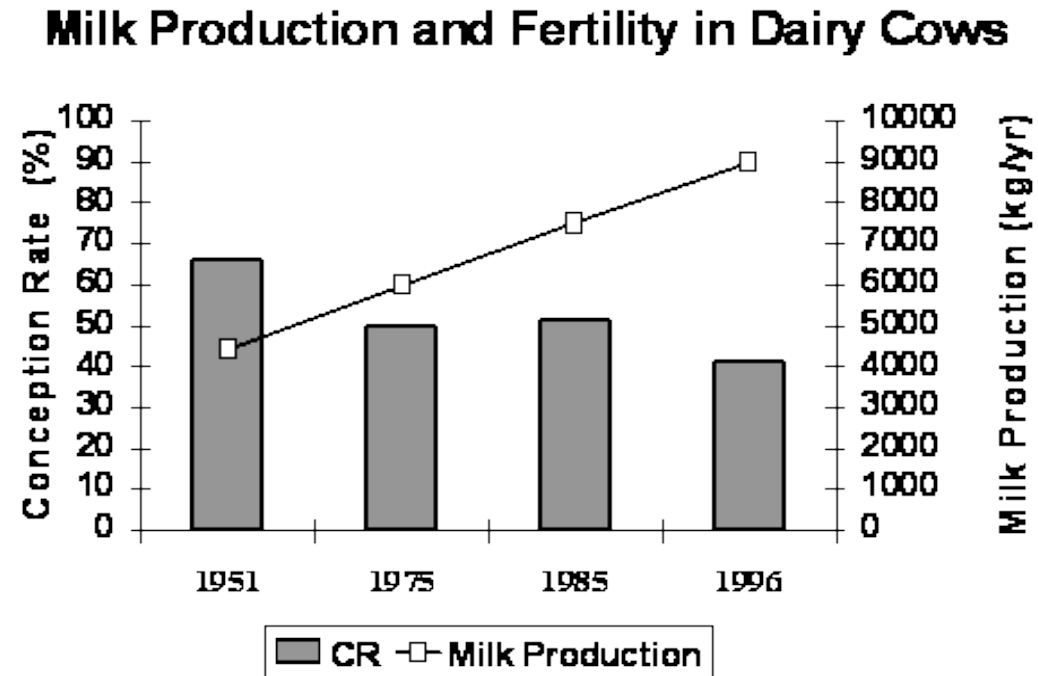
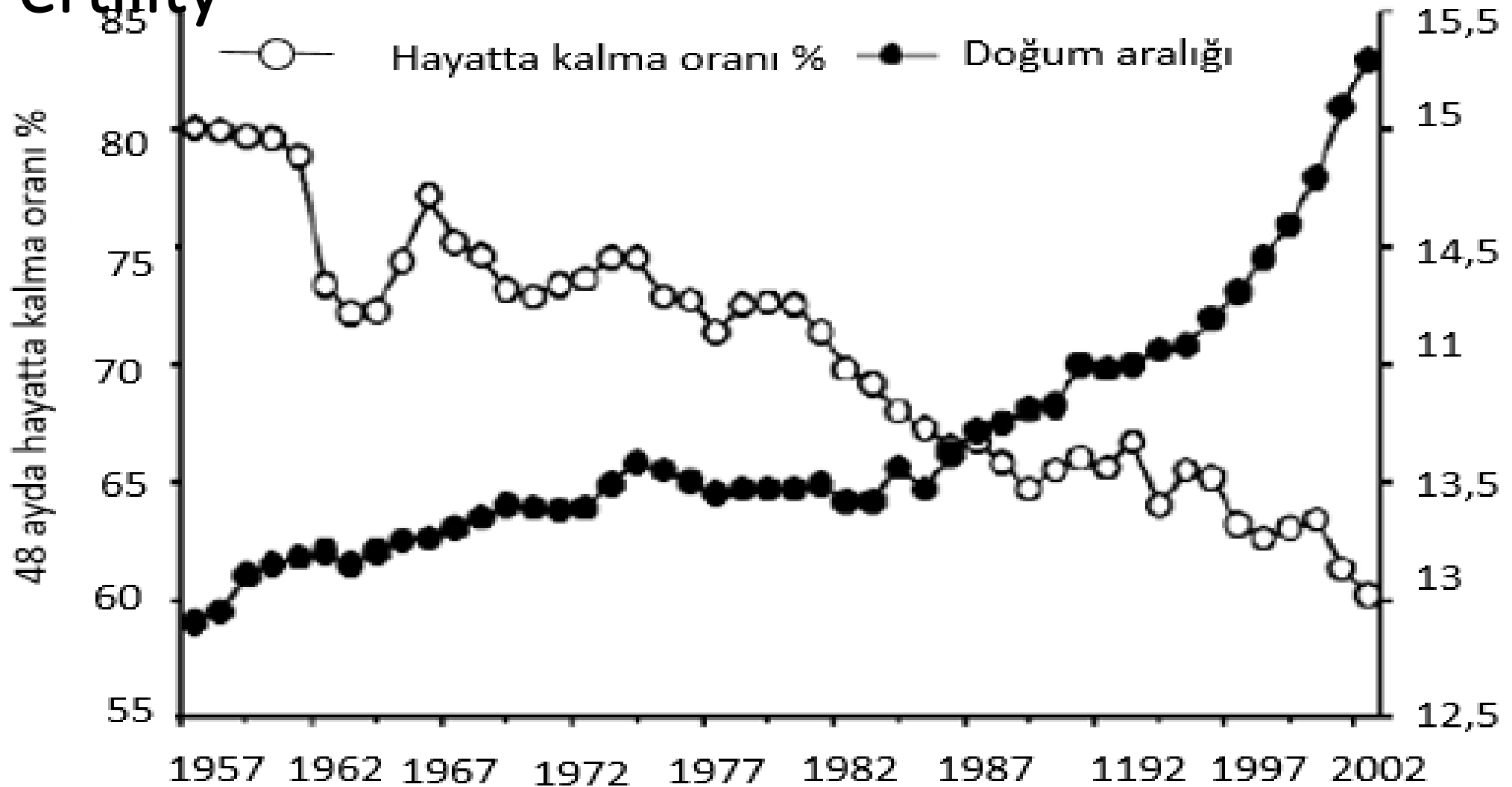


Figure 1. The inverse relationship between conception rate (CR) and annual milk production of Holstein dairy cows in New York.

**NOTE: Fertility decreases while milk yield increases.
Heifers have high fertility rate at first insemination**

The Relationship Between Milk Yield and Fertility



Cows Survival Rates and Birth Intervals in North-East America in 1957-2002

(Oltenucu ve Broom, 2010)

main purpose in cattle breeding

1 year

Healthy mother

A viable calf

1 YEAR OF MILK COW

Postpartum process

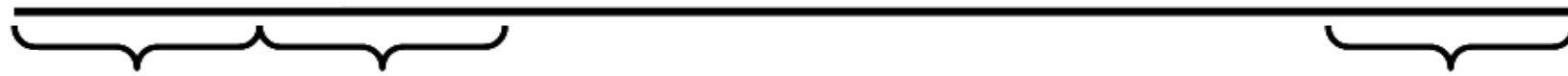
Uterine
regeneration

Ovarium activity +

Lactation

Insemination

Dry period
Milk secretion
Calf growth



$$60/365 = 16.4\%$$

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Lactation

$$305/365 = 84\%$$



Pregnancy

$$282/365 = \% 72$$

Pregnancy and Lactation

$$282-60=222= \% 61$$

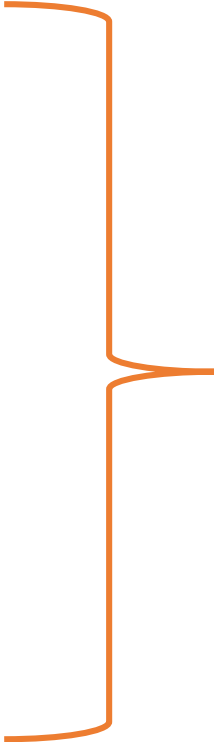
Reproductive parameters

Calving interval	1 year
Calving-first estrus	21-24 days
Calving-First insemination	< 60.0-65.0 days
Pregnancy rate in inseminated cows	> % 60-65
Insemination Index (number of pregnancy / insemination)	< 1.6
Calving-conception interval	< 80-82 days
Accepting mating	> 70-80
Determination of oestrus	> % 85-90

NOT: Bu parametreleri yakalamak çoğu zaman zordur

Diseases that need to be strictly monitored for fertility

1. Brucellosis -
2. Tuberculosis -
3. BVD-MD -
4. IBR -
5. Neospora caninum -
6. leucosis -

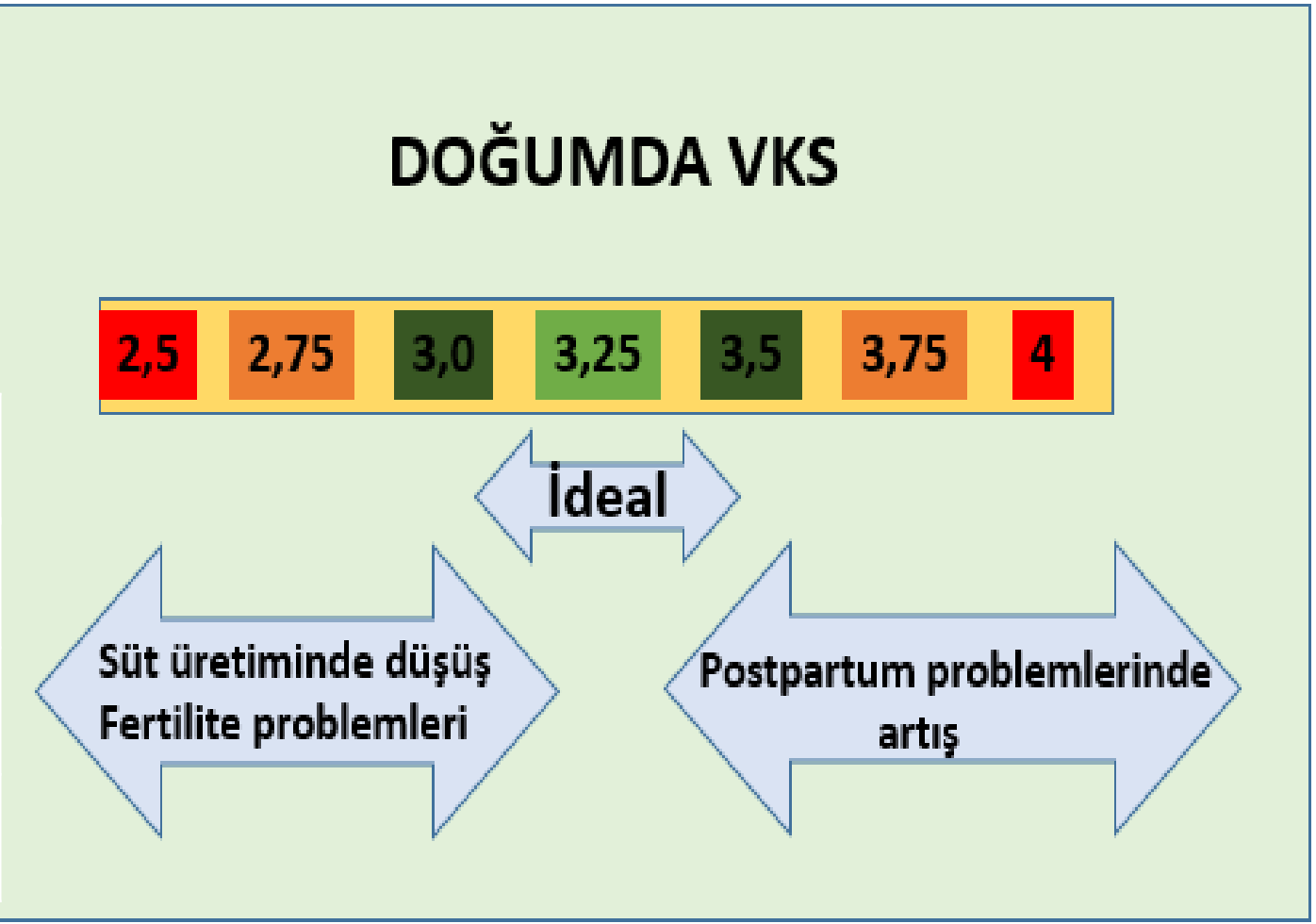


It is unnecessary to evaluate fertility parameters in herds with these diseases.

Body Condition Score and Fertility

Back, waist and sacrum subcutaneous fat thickness

	Target. BCS
Far off	3- 3,50
Close up	3,25
Early lactation	3



(Anonim, 2017; Vince ve ark; 2017)

BCS and Immunity

Immunosuppression occurs in fatty cows

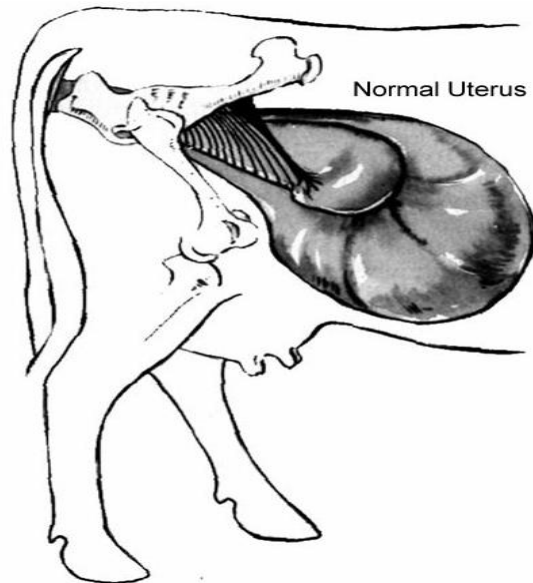
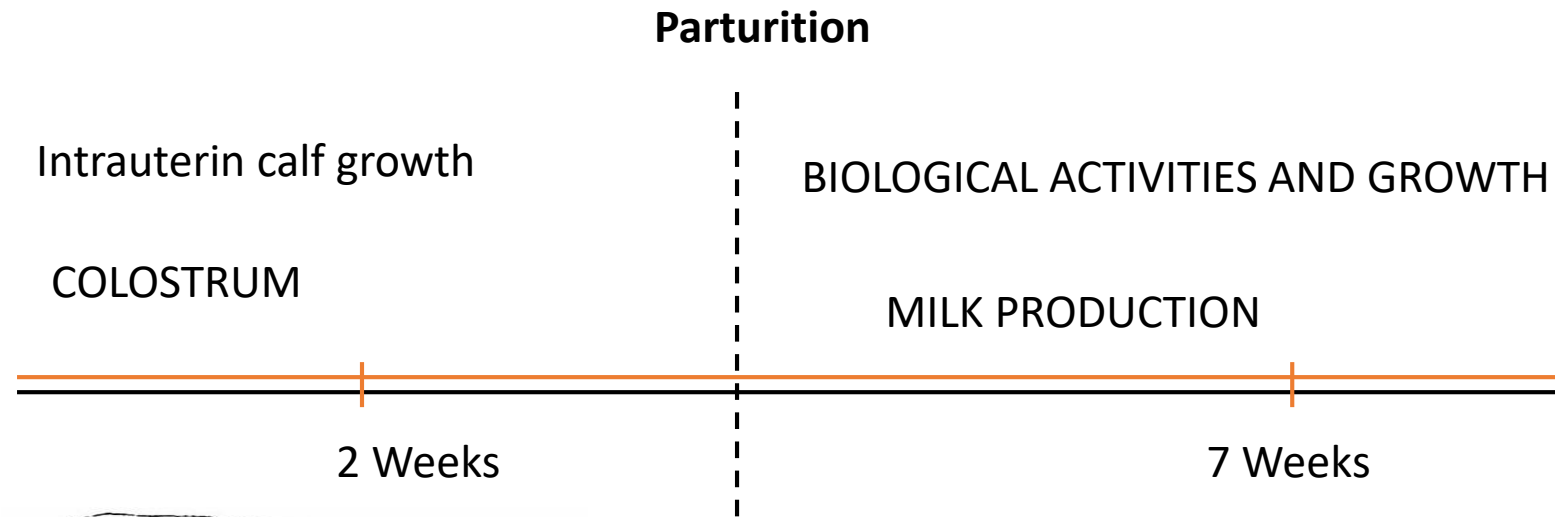
Good ones Ig high interferon γ high

High BCS Ig low interferon γ low

CALF SEPTEMIA

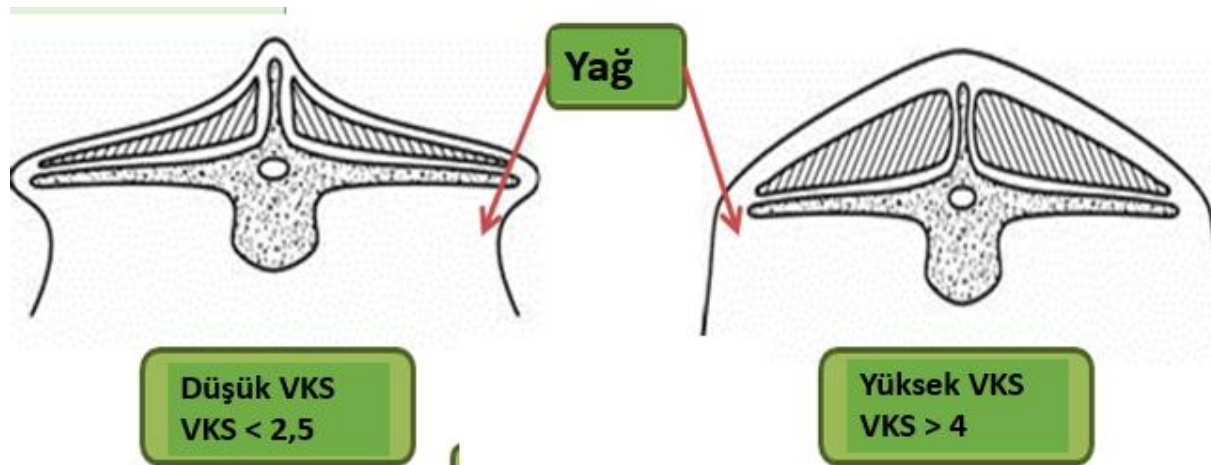


Energy requirement in periparturient period



Body Condition Score and Fertility (Practical Indicator of Energy Balance)

1. Nutrition is the key to fertility.
2. The indicator of nutrition is VKS.
3. Commercial enterprises should have an animal nutritionist.
4. Nutrition strategy should be established.



PRACTICAL APPROACHES TO FERTILITY CONTROL ON FARM BASE

1. Check vaccination and antiparasitic applications
2. Are there any measures to prevent infertility? (Brucellosis, Tuberculosis, IBR etc.)
3. Check fertility control parameters
4. Evaluate abortion and cull rates
5. See the general hygienic structure of the farm
6. Evaluate Energy Balance and BCS (Grouping by BCS)
7. 7. Check the age distribution of the flock