

# Introduction to Farm Animal Production

1. Know the common production systems used in livestock farming
2. Know the principles of livestock enterprise management
3. Be able to carry out routine husbandry and animal health duties on common farm livestock.

# INTRODUCTION TO DAIRY PRODUCTION!

# Facts about the dairy industry.

- About 17000 UK Dairy farmers
- Roughly 50000 people employed in the dairy industry.
- 34000 people work in the milk processing industry.
- Average herd size is 113 cows.
- Average farm produces 2000litres of milk a day.

# Facts on Moulton vs HAU Dairy.

- About 260 cows in the dairy.
- Around 210 in milk at present.
- 50 dry cows.
- Split in two herds at present. Highs and lows.
- Highs producing 28litres this week, Lows on about 24litres.
- All artificial insemination breeding to Holstein Friesian for replacements and Angus, limousine, Simmental and Belgium blue for beef.

# Calf rearing



# Heifers life.

- Main periods in a heifers life.
  1. Birth to weaning.
  2. Weaning to breeding.
  3. Breeding to calving down.
  4. Producing milk and calves.
  5. Been culled and used for meat production.

# Birth to weaning.

- Cow calves down.
  - Make sure airways are clear for the calf so normal breathing can take place.
  - Iodine dip calf navel.
  - Get colostrum into calf within 1<sup>st</sup> hour of life.
- Calf may stay with cow from 3hrs to 3days depending on farm.
  - Calf receives colostrum for approx 3days,
  - Twice a day feeding, 10% of body weight = 2litres morning and evening.

- Calf weaned from cow and feeds on whole milk or skim milk powder.
  - Calves usually feed twice a day on about 2 litres of milk twice a day for about 49 days.
  - From day 5 onwards introduce hay or straw to help develop calves rumen. Introduce concentrates ad lib to calves. A high protein concentrate to increase calf weight gain. From week 4 solids become more important.
  - Days 50-56 gradually wean calf back to one feed of 2 litres of milk once a day.
  - Days 57+ only feed every 2<sup>nd</sup> day with milk and wean.
  - Calf should be at least 75kgs at weaning and eating concentrates and hay.



# Feeding Calves Activity

In groups of 6, use the flip chart provided to describe and explain how we feed our calves in the Moulton dairy from birth to weaning.

# Feeding schedule for bucket feeding calves!

Age (days)	Liquid per calf per feed.	Feeds per day	Total daily feed (litres)	concentrates
1-4	Colostrum – 10% of body weight daily	2 to 3	-	-
5-6	2 litres of whole milk.	2	4 litres	Handfull
7-49	2 litres of whole milk/milk replacer	2	4 litres	Ad-lib.
50-56	2 litres of whole milk/milk replacer	1	2 litres	Ad-lib
57+	None	-	-	Ad-lib up to 2kg/day

# Do's and Don'ts

- Calves should always have
  - fresh water supply
  - Concentrates
  - And hay from day 5.
- Smaller calves less than 37kg should be given smaller feeds about 1.5litres for the first 2-3 weeks and weaning delayed.
- Better to underfeed than overfeed young calves.
- Don't feed silage until calves are at least 8 weeks old.
- Target weight of calf at weaning is 75kg+.

# Calf housing!

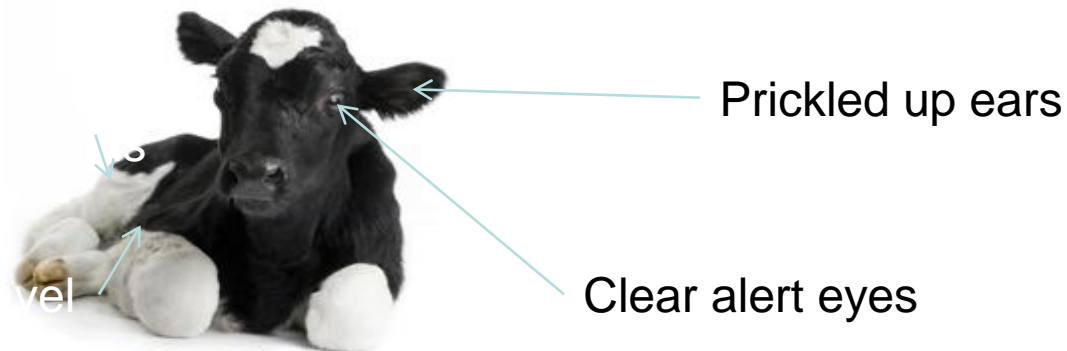
- Calves require a well ventilated draft free shed.
- A young calf can spend 80% of its time lying down, so a dry bed is essential to prevent heat loss and minimise straw usage.
- Allow 2.3m<sup>2</sup> floor space per calf.
- keep group sizes below 16 to reduce disease spreading.
- Keep all feeding away from lying area and close to a drainage point.

# Calf health!

- All calves born are free of bacteria at birth, but within hours of birth are subject to all types of bugs and organisms.
- Calf rearing is mainly about preventing disease.
- Two giant killers of calves are
  - **Scours**  
And
  - **Pneumonia**
- Prevention is better than cure.

# Prevention tips!

- Provide clean comfortable housing,
- Proper feeding,
- Regular observation,
- Early attention to signs of illness,
- Vaccination against some diseases,
- Building up natural immunity in the calf.



# Disease organism.

Organism	Disease	Occurrence	Age of onset	Vaccine available
E.Coli	Scour	Randomly	1 <sup>st</sup> week	Yes for cow & calf.
Salmonella	Scour, Pneumonia	Randomly	3 <sup>rd</sup> week	Yes for cow & calf.
E.Coli, streptococci, Staphylococci, Corynebacterium	Joint/Navel ill	Randomly	4-5 days	No
Pasteurela Diplococcus	Pneumonia	Common	any age	Yes for cow & calf.
Rotavirus	Scour	Common	2 <sup>nd</sup> week	Yes for cow only
Coronavirus	Scour	Randomly	First 2 weeks	Yes for cow only
Cryptosporidium	Scour	Common	2 <sup>nd</sup> week	No

Organism	Disease	Occurrence	Age of onset	Vaccine available
Clostridia	Black leg	Rare	6 weeks	Yes
Fusiformis necrophorum	Calf diphtheria	Random	3 weeks	No
Sucking & biting lice	Lice infestation	Common	10 days	No
Fungus (trichoryton verrucosum)	Ringworm	Common	6 weeks on	No.



# Calf Health Check Activity

- In pairs list down and discuss 8 signs of good health and 10 signs of ill – health in calves.

# Signs of health in calves!

- An alert appearance,
  - Bright eyes,
  - Shiny coat,
  - Loose skin,
- A keen interest in its surroundings,
- When disturbed will rise, arch its back and stretch its limbs,
  - Normal temp  $38.6^{\circ}\text{C}$  to  $39.3^{\circ}\text{C}$ .
    - Normal breathing

# Ill-health in calves!

- Off food,
- Dull and slow in movement,
  - Tends to lie down a lot,
    - Drooping ears,
    - Sunken eyes,
- Empty, tucked up stomach,
  - Tight skin,
  - Scouring
  - Running eyes,
  - Open mouth,
- Discharge from nose,
- Abnormal breathing,
  - Raised temp.