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Raising a Healthy and Future Production Dairy Heifer

Part 1 of a series on raising dairy animals and small scale farming

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Agenda

1. Clean, Easy Calving and where to settle after
2. Colostrum Importance
3. Milk, Milk replacer, or leaving with mom
4. When to start offering grain and water
5. Weaning
6. Making a plan for future calves

Beginning Goals – Setting the Stage

Providing the proper nutrition and vaccinations to Mom prior to calving

WHY??

Healthy Mom = Quality Colostrum

There is no “one size fits all” plan for vaccinations – Work with your Vet to tailor your farm and animals needs.

WHY Vaccinate??

Aid to limit or prevent diseases in cattle Such as Bovine Rhinotracheitis (IBR) virus, Bovine Viral Diarrhea (BVD), Bovine Respiratory Syncytial Virus (BRVS), clostridial infections, and leptospirosis.

Clean Maternity = Healthy Calf

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- Quick, easy calving with no assistance
  - Normal presentation – front feet first, nose and head
  - Understanding of Dystocia
  - Clean, dry calving area – indoor or outside

  WHY??

Housing –What is BEST

- It all comes down to MANAGEMENT
- Clean, dry, well ventilated.
- Bedding with shavings, sawdust, straw

- Seen it all, single hutch, mega hutch, group pens.
- Grouping by weight and age
- Feeding youngest to oldest groups first – AVOID DISEASE TRANSMITION – remember No Immunity at Birth.

Preparing the Calf for Healthy Life – Right after Birth

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- Dipping Navel or Umbilical cord with iodine or chlorohexidine solution asap, preventing bacterial infections.
- Picking the right vaccination plan with your Veterinarian.
  - Start vaccinating at 6 weeks for diseases like IBR-PI3 BVD, BRSV, and Clostridial spp.
  - 4-6 months old – Brucellosis
  - 6 months, booster for IBR, BVD, BRSV, Clostridial, and add Leptospirosis.

An Ounce of Prevention

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- Providing Quality feed and Clean Housing can reduce sickness
- Sanitization – clean bottles after each use, clean buckets after milk, clean daily.
- Signs of sickness
  - Temperature (hot or cold)
  - Droopy ears
  - Loose or smelly manure
  - Changing in respiration
  - Lucid or not getting up and moving around

Prevention reduce health problems

- Scours
- Pneumonia & respiratory disease
- Clostridial infections
- Umbilical hernias & abscesses
- Bloat
- Broken limbs
- Pink-eye

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Colostrum 101 – KEY STEP

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- At Birth – the calf is born with no immunity
- Colostrum (first milk) from the mother provides immunoglobulin (IgG's)
- Feed 2 quarts of warm, quality colostrum within first 6 hours of birth, sooner the better
- Feeding at least 1 gallon during first 18 hours of life.
- Feed colostrum for 3 days (6 feedings)

Jump Starting the Rumen

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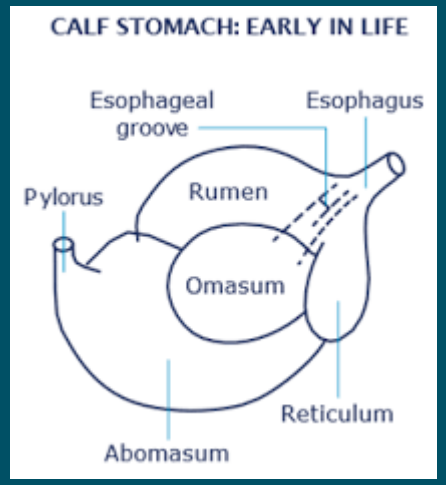
- At birth – Rumen is nonfunctional
  - Calf dependent on its digestive enzymes
  - Break down of fats, carbohydrates, and proteins in the abomasum and small intestine
- Liquids bypass the rumen to the abomasum via esophageal groove until closure.
  - Sights and sounds during feeding cause liquids to bypass rumen
  - First formations of a “curd” that helps provide supply of nutrients over first 24 to 48 hours.
  - Whey – contains the IgG’s, start to intestine for absorption into blood stream.



Grow Rumen, Grow

- The rumen starts to increase in size and begins to develop a microbe population important for the future
- Number and Type of Bacteria function of the type of feeds calf eat and environment
- It take 21 days to develop the rumen papillae from initial time grain is fed.

Feeding the newborn calf – After Colostrum

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- Milk or Milk replacer
  - Calves should be fed daily approximately 10% of their body weight.
  - Split total weight over 2-3 feeding per day.
  - Good rule of thumb is feeding 2-3 quarts per feeding if feeding twice daily.

  Amount, Temperature, Timing KEY!

- ***Only tube feed calves if properly trained

Milk Replacer

- Fed for convenience, biosecurity, and nutrient value, and cost as times.
- Following mixing directions is KEY!

Nutrient	Amount
Minimum Crude Protein (%)	20 to 28
Minimum Fat (%)	10 to 22
Maximum Crude Fiber (%)	1 to 2

Source: Adapted from Nutrient Requirements of Dairy Cattle, 2001.

Bottle to Bucket

- When should you transition from bottle to bucket.
- Comes down to preference and time management
  - Bottle feeding colostrum
  - Bucket training asap

Enter the Grain and Water

- Grain Starter – Really kicks off Rumen Development
  - When to start offering and amount
    - Small amounts can be offered within 3 days after birth
    - Gradually increasing amount when notice grain being consumed.
    - Avoid waste by filling entire bucket, feeding for little waste
- Water
  - When??
    - Within a few days after birth
    - Water plain – enters rumen and become available to microbes
    - Water with other feeds, not readily available to rumen microbes – enters abomasum

Weaning Time (6-8 weeks)

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- Do not wean on age alone, wean on amount of started eaten.
- Early Weaning systems require eating grain by 2 weeks of age – Allow enough time for rumen development
- If drinking a lot of milk, will not eat as much grain delaying rumen growth and development.
- Eating ample amount of grain before weaning off milk (minimum of 2 lbs. per day for 3 consecutive days)
- Milk removal can be abrupt or gradual.

Post Wean to Breed Timeframe

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- Maintaining healthy rate of growth for timely breeding at 12-14 months of age.
- Feeding Plan
  - Grain
  - Hay
  - Silage
  - Pasture
- Feeding to provide adequate nutrients w/intake at 1.5 to 2.0% of body weight
- Prevent heifers from becoming to fat

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Thank you

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