

# **2022 NY Regional 4-H Beginner Dairy Bowl Contest**

## **Beginner Packet 1, Phase A**

**1)** Explain what a cud is?

Feed that the cow has regurgitated and is being chewed again

**2)** What is a newborn calf's navel often dipped with?

7% tincture of iodine

**3)** What bedding is considered the most desirable?

Sand

**4)** Mastitis is an infection of what?

The udder (Mammary Gland)

## **Beginner Packet 1, Phase B**

1) Name two options for storage of excess colostrum.

Freezing

Refrigerate

Ferment

Add preservative acid

2) Name the four compartments of the mature dairy cows stomach.

Reticulum

Rumen

Abomasum

Omasum

3) Name 3 pieces of information about an animal you would find on a registration paper.

Name

Sire

Dam

Date of Birth

Owner

Breeder

Grand Dam

Grand Sire

Sex

Registration number

4) What are the two (2) types of parasites that can affect an animal?

External and internal

## **Beginner Packet 1, Phase C**

- 1)** What is a group of cows called?  
A herd
- 2)** In reproduction, what do the letters A.I. stand for?  
Artificial Insemination
- 3)** What is the name of the gas that is produced by manure digesters and can be converted in electricity?  
Methane
- 4)** What is the term for a pH that is greater than 7?  
Basic
- 5)** Where is copper sulfate most commonly used on a dairy?  
In a foot bath
- 6)** What mineral is found in the largest quantity in milk?  
Calcium
- 7)** When you see a calf coughing or sneezing, what system is probably affected?  
Respiratory system
- 8)** What does the acronym SCC stand for in regard to milk quality?  
Somatic Cell Count
- 9)** If a cow has interdigital foot infection, where is it specifically located?  
Between the toes
- 10)** What is the name for a bull calf that has been castrated?  
Steer
- 11)** Which of the major dairy cattle breeds is the smallest?  
Jersey
- 12)** What dairy breed, on average, has the highest milk production?  
Holstein
- 13)** What do we call a heifer that is born co-twin to a bull?  
Freemartin
- 14)** A mature cow can produce how many quarts of saliva per day?  
50 to 80 quarts
- 15)** In which state was the first U.S. cheese factory built?

New York

**16)**What is used to wipe teat dip off of teats before putting the milking machine on?

Cloth or paper towels

## **Beginner Packet 1, Bonus Questions**

**1)** Name the 3 main purposes for which cattle are used across the world.

Meat

Milk

Labor

**2)** Give the common name for the 3 different stages of a female dairy animal from birth through milk production.

Calf

Heifer

Cow

**3)** Name 3 parts of a dairy cow that are associated with the mammary system.

Teats

Rear udder

Fore udder

Rear udder attachment

Fore udder attachment

Milk wells

Milk veins

**4)** Name three dairy products made from milk.

Butter

Cheese

Yogurt

Ice Cream

low fat milk

flavored milks

## **Beginner Packet 2, Phase A**

1) A by-product called whey is produced from making what?

Cheese

2) What is the term for the period of time that a cow is in milk?

Lactation

3) Where would you find the dewclaws on a dairy cow's body?

Foot

4) What is used to freeze and store semen?

Liquid nitrogen

## **Beginner Packet 2, Phase B**

1) Name the six major breeds of dairy cattle.

Brown Swiss

Jersey

Holstein

Milking Shorthorn

Guernsey

Ayrshire

2) Name 3 common areas of the farm on which you could implement standard operating procedures

Parlor/milk house

Calving/Maternity Area

Fresh Cow Monitoring

Feed Management

Farm equipment

3) What do the 4 H's stand for in the 4-H pledge?

Head, heart, hands, health

4) What are three critical factors in colostrum management?

Quantity

Quality

Timing

Cleanliness

## **Beginner Packet 2, Phase C**

- 1) What is the name of the on-farm test that uses a white paddle and solution to detect subclinical mastitis?  
California Mastitis Test
- 2) How many quarts are in a gallon of milk?  
4 quarts
- 3) Churning is the process that turns milk into what?  
Butter
- 4) Which direction do you lead dairy animals in the show ring?  
Clockwise
- 5) What is the largest cost associated with dairy cattle?  
Feed
- 6) What is the term describing the method of dairy production that does not use antibiotics, growth hormones, or synthetic chemicals?  
Organic
- 7) What connects the fetus to the navel and carries nutrients between the mother's body and the fetus?  
Umbilical cord
- 8) Homogenization breaks up what in milk?  
Fat globules
- 9) Which of the cow's four stomachs is often referred to as the honeycomb?  
Reticulum
- 10) What is the term used to describe animals that give birth to live young and they can suckle their offspring after birth?  
Mammal
- 11) A double-20 parallel and a double-12 herringbone are both examples of what?  
Milking parlors
- 12) Milk fever is caused by extremely low levels of what mineral in the blood.  
Calcium
- 13) What is a dry cow?



A cow not producing milk

**14)**What country do Brown Swiss cows come from?

Switzerland

**15)**What compartment of the cow's stomach is called the true stomach?

Abomasum

**16)**What is the general term that refers to all cattle?

Bovine

## **Beginner Packet 2, Bonus Questions**

**1)** Name 3 types of storage facilities for silage.

Bunker silo

Trench silo

Upright or tower silo

Ag bag

Oxygen limiting silo (harvester)

**2)** Name 3 factors to consider when grouping the milking herd.

Size

Age or lactation number

Stage of lactation

Production level

Reproductive status

Body condition

**3)** Name 3 diseases of dairy cattle with a color in their name.

Red water

Red nose

Black leg

Blue tongue

White muscle disease

Pink eye

White heifer disease

**4)** Please name 3 pieces of paperwork you should have when exhibiting at your county fair.

- Registration papers or official identification sheets for your cattle
- Veterinary Health Certificate that shows current vaccinations including rabies.
- Proof of negative BVD test
- Your Premium Book
- Most current official production sheets

- Emergency contact information to include your parent/guardian,
- home/work/cell numbers, veterinarian etc. (NSFL curriculum)

## **Beginner Packet 3, Phase A**

1) In what part of the digestive system do fiber digesting microbes live?

The Rumen

2) What is the main symptom of scours in calves?

Diarrhea

3) What is known as a record of ancestry?

Pedigree

4) What percentage of milk is composed of solids?

13%

## **Beginner Packet 3, Phase B**

**1)** Name 4 Common external parasites of cattle.

Biting lice

Sucking lice

Ticks

Mites

Heel flies

Horn flies

Black flies

Mosquitoes

Horse flies

Deer flies

**2)** Spell the dairy breed G-u-e-r-n-s-e-y.

**3)** Name 4 different pieces of information you would find on the nutrition label on a container of milk.

Serving size

Servings per container

Ingredients

Calories

Fat content

Cholesterol

Sodium

Carbohydrates

Protein

**4)** Name 3 common metabolic diseases in dairy cattle.

Milk fever (Parturient paresis)

Ketosis (Acetonemia)

Displaced abomasum

Laminitis

Ruminal Acidosis

Retained placenta

Udder edema

Grass tetany

### **Beginner Packet 3, Phase C**

- 1) What is the term used that refers to the height of a calf or cow at the withers and hips?  
Stature
- 2) What is the enzyme that breaks down milk sugar called?  
Lactase
- 3) What is the technical term for calving?  
Parturition
- 4) How are lice spread from one animal to another?  
Direct contact with other animals that have them
- 5) What is the primary sugar found in semen?  
Fructose
- 6) What vitamin do cows obtain when they are exposed to sunlight?  
Vitamin D
- 7) Hoard's Dairyman was founded in what year?  
1885
- 8) In reference to milk production, what does the acronym ECM stand for?  
Energy corrected milk
- 9) What reproductive structure holds the uterus and ovaries in their proper position?  
Broad ligament
- 10) What parent determines the sex of a calf?  
Sire or bull
- 11) Grains usually come from which part of the plant?  
Seeds
- 12) What is the name for a Doctor of Animal's?  
Veterinarian
- 13) What type of organism causes Infectious Bovine Rhinotracheitis?  
Virus

**14)**When a dairy farm decides to go organic, how long must the dairy animal be fed and managed organically for the milk produced is classified as organic milk?

One year

**15)**What do the initials NDF stand for?

Neutral detergent fiber

**16)**When you take a calf off of milk as its main source of nutrition it is called what?

Weaning



### **Beginner Packet 3, Bonus Questions**

**1)** Name 3 potential point sources of water pollution from dairy waste.

Lot run-off, pasture run-off

Overflow from holding ponds and lagoons

Manure stockpiles

Cows defecating in water

Spreading manure near water source, over application of manure near water source

**2)** Name 3 methods commonly used to identify calves

Ear tag

Tattoo

Freeze Branding

**3)** Name 3 parts of the milking machine

Air tubes

Shell

Pulsator

Claw

Milk Tubes

**4)** Name 3 ways a dairy cow excretes or loses water

Breathing

Sweating

Feces

Milk

Urine

## **Beginner Packet 4, Phase A**

1) What is the number one cause of death in calves?

Scours

2) How many teeth does a mature dairy cow have?

32

3) What is the name for the muscle at the bottom of the teat that allows for milk retention and let down?

Sphincter muscle

4) Ringworm is caused by which of the following: a fungus, bacteria, or virus?

Fungus

## **Beginner Packet 4, Phase B**

**1)** Name 3 recommended proper milking procedures.

Provide a clean, low stress environment for the cows

Check foremilk and udder for mastitis

Predip teats and provide contact time of 20 to 30 seconds

Dry teats completely with an individual towel

Attach milking unit within 1 minute after start of stimulation

Adjust units as necessary for proper alignment

Shut off vacuum before removing the milking unit

Dip teats immediately after unit removal with effective product

Wash equipment regularly

Wear gloves

**2)** Name three different types of non-permanent cow identifications.

Neck straps

Ear tags

Ankle straps

Crayons

External electronic devices

Brisket tags

**3)** Name 2 types of common calf housing.

Hutches

Elevated stalls

Pens on the floor

Cold calf housing system

Counter slope system/barn

Individual pens in barn

Group pens

**4)** Salt is composed of which two elemental minerals?

Sodium

Chloride

## **Beginner Packet 4, Phase C**

- 1) What is the selling of an unwanted or sick animal?  
Culling
- 2) What is the meat from a young calf called?  
Veal
- 3) What season are lice most prevalent?  
Winter
- 4) When administering drugs or antibiotics to a cow, what does the acronym IV stand for?  
Intravenous (VA study materials, pg. 3)
- 5) Where did the Holstein breed originate?  
The Netherlands
- 6) How many pounds of grain should a calf consume for three consecutive days before she is weaned?  
1.5 to 2 pounds
- 7) Lois Pasteur is significant for making what contribution to the dairy and food industry?  
Pasteurization
- 8) The term gestation is the term used to describe the length of what?  
Pregnancy
- 9) What do we call a cow's natural buffer?  
Saliva
- 10) What is an herbivore?  
An animal that only eats vegetables
- 11) What does an animal do with excess energy from its diet?  
Stores it as fat
- 12) What is the term for a feed that is high in energy and low in fiber?  
Concentrate
- 13) A swelling of the rumen caused by the accumulation of gas is called what?  
Bloat
- 14) What is the bush of hair at the end of a cow's tail called?

Switch

**15)**In the cow's digestive system, what organ is after the stomach in the food pathway?

Small intestine

**16)**What term describes when two living creatures live in harmony with each other and both benefit from the relationship?

Symbiosis

## **Beginner Packet 4, Bonus Questions**

**1)** Name 3 Italian cheeses.

Mozzarella

Provolone

Romano

Parmesan

Ricotta

Mascarpone

**2)** When talking about farm machinery, what does the three letters PTO stand for?

Power take off

**3)** Name 3 ways to treat your animal with Dewormers.

Boluses or pills

Paste

Drenches

Injectables

**4)** Name three reasons why cattle should be dehorned.

Safety-prevent injury to people

Prevent injury to other animals

Space (horned animals need more room to eat)

Cannot fit easily into headlocks

## **Beginner Packet 5, Phase A**

- 1) What is the name of the time for a dairy cow when she is not producing milk and usually is about 45 to 60 days?

Dry period

- 2) What happens to the nutrient value of high moisture corn with the growth of mold in it?

It decreases, or is less palatable

- 3) What is the term used to describe grasses or legumes for grazing animals in an enclosed or fenced in area?

Pasture

- 4) What is the name of the young female cattle that is weaned but has not had a calf?

Heifer

## **Beginner Packet 5, Phase B**

1) What does ADA stand for?

American Dairy Association

2) What does the abbreviation USDA stand for?

United States Department of Agriculture

3) Give 2 observations a dairy nutritionist should take note of when visiting a farm

Manure consistency

Body condition score of cows

Cud chewing

Foot health

Barn conditions

Resting behavior

Water access and condition

Amount and condition of feed in the bunk

4) Name 2 different ways to administer an injection.

IV

IM

Sub Q



## **Beginner Packet 5, Phase C**

- 1) What is the name of the amount of time that must pass after administering a medication before food products from the animal can be safely used for humans?  
Withdrawal time
- 2) What is a balling gun used for?  
Administer pills or bolus
- 3) What is the name for the removal of the testes from a male animal?  
Castration
- 4) What breed of dairy cattle weighs about 1000 pounds at maturity and has a black muzzle and tongue?  
Jersey
- 5) The term fresh cow refers to what?  
A cow or heifer after having given birth
- 6) Which type of flies lay their eggs on the lower legs of cows?  
Heel flies
- 7) What did Dr. Harvey Thatcher invent?  
The milk bottle
- 8) What is the one mineral found in milk that is important for bone growth?  
Calcium
- 9) What is the name of the condition where excessive fluid collects in the udder?  
Udder edema
- 10) What are curtains and fan used for in a dairy barn?
  - Ventilation
- 11) What month is National Ice Cream Month?  
July
- 12) What is a crop that has been turned into animal food through fermentation in a silo or stored with little exposure to oxygen called?  
Silage
- 13) The Babcock test evaluates levels of which milk component?  
Fat

**14)**What is the legal limit for somatic cells in milk?

750,00 cells/milliliter

**15)**What disease can result from a deficiency in either Vitamin E or Selenium?

White muscle disease

**16)**What is the term that is defined as the building blocks of protein?

Amino Acid

## **Beginner Packet 5, Bonus Questions**

**1)** Name 3 trace minerals for cows.

Copper, Iodine, Iron, Manganese, Selenium, Zinc, Molybdenum

**2)** Name 3 of the 5 digestive system functions in a dairy cow?

Food intake

Storage

Digestion

Absorption

Elimination of waste

**3)** Name 3 major feedstuffs used in dairy cattle rations that can currently be genetically modified

Corn

Soybeans

Cotton

Canola

Alfalfa

Sugar beets

**4)** Name the 3 Class I dairy products.

Chocolate milk

Whole milk

Reduced fat milk (2%)

Low fat milk (1%)

Fat free milk

## **Beginner Packet 6, Phase A**

1) Is BVD caused by a virus or bacteria?

Virus

2) What is the name for the practice of squeezing milk from the teat prior to milking?

Fore stripping

3) What food stuff consists of leaves and stems or plants that are relatively high in fiber content?

Roughage or forage

4) What is the food a cow is given where everything is mixed together so each bite is the same and the mix meets all of the animal's nutritional needs?

TMR or Total Mixed Ration

## **Beginner Packet 6, Phase B**

1) What are the two parts of a cow that can be twisted to one side and called wry?

Face

Tail

2) Name two things that the milk hauler does before pumping our milk from the bulk tank to the truck.

Check the temperature of the milk

Agitate the milk

Take a sample of the milk

Measure the amount of milk in the tank

Check the milk for off odors

3) What are the two most important minerals for the dairy cow?

Calcium

Phosphorus

4) Name the 2 most important on-farm management practices used to maximize foot health.

Hoof trimming

Foot baths

## **Beginner Packet 6, Phase C**

- 1)** In pounds, how much does a gallon of milk weigh?  
8.6 lbs.
- 2)** What is a tiny-one celled microorganism that may cause illness?  
Bacteria
- 3)** Regarding nutrition, what does DE stand for?  
Digestible Energy
- 4)** What disease in humans has been linked to Johne's disease?  
Crohn's disease
- 5)** What is the most effective way to prevent rabies in cattle since we can't eliminate exposure of cattle to wildlife?  
Vaccinate
- 6)** After returning with your heifer from a cattle show or fair, in weeks, how long should your show animal be housed separately from the rest of the herd?  
3 to 4 weeks
- 7)** What is the name given to a calf with parents from two different breeds?  
Crossbreed or crossbred
- 8)** What does the term 3X in a dairy cow's production records stand for?  
Milked 3 times each day
- 9)** The calf develops in what part of a pregnant cow.  
Uterus
- 10)** Where on a cow's body is the poll?  
On the top of the head
- 11)** How much water does a cow drink in one day?  
25-50 gallons
- 12)** What is the cow, calf or heifers personal space called?  
Flight Zone
- 13)** What is the purpose of placing a magnet into a cow's stomach?  
To help protect the animal from hardware disease caused by wires, nails, or other metal objects

**14)**What does IM mean relative to injections?

Intramuscular

**15)**What class of nutrients is the major source of energy in a cow's diet?

Carbohydrates

**16)**What is the term used on an animal's pedigree for that animal's mother?

Dam

## **Beginner Packet 6, Bonus Questions**

**1)** Name 3 other cloven-hooved animals, other than cows

Goats

Sheep

Pigs

Camels

**2)** Name three reasons for culling a dairy cow from the herd.

Low production

Mastitis

Reproduction

Udder

Feet and legs

Disease

Injury

Disposition

**3)** Name three sources of environmental mastitis-causing organisms.

Manure

Bedding

Mud

Water

Feed

**4)** Name 3 examples of a farm's assets.

Cows

Land

Tractors

Equipment

Feed

Lumber

Cash

Buildings



Stocks and bonds

Co-op equity

Milk check receivables

## **Beginner Packet 7, Phase A**

1) When showing a heifer, which leg should be placed farther back when setting her up?

The rear leg nearest the judge

2) What structures carry blood from the body back to the heart?

Veins

3) True or False: Protozoal Organisms are often treated with antibiotics?

False

4) True or False: Calves need four times as much water intake as calf starter?

True

## **Beginner Packet 7, Phase B**

1) You are walking through a calf barn to look for sick animals. What are 4 signs of illness you might look for?

Decreased appetite

Coughing

Heavy breathing

Nasal discharge

Watery manure

Drippy ears

Elevated or below normal temperature

Dull eyes and hair coat

Lack of energy

2) Name four dairy breeds and where they originated from

Ayrshire: Scotland

Brown Swiss: Switzerland

Guernsey: Isle of Guernsey

Jersey: Isle of Jersey

Milking Shorthorn: England

Holstein: The Netherlands and Germany

3) Spell Ayrshire. A-Y-R-S-H-I-R-E

4) Name 4 things that a judge looks for in a fitting and showmanship class.

Animal's condition

Cleanliness

Clipping

Grooming

Appearance of exhibitor

Leading of the animal

Posing of the animal

Showing the animal to best advantage

Poise, alertness, and attitude of the showman

## **Beginner Packet 7, Phase C**

- 1) What is another name for Johne's disease?  
Paratuberculosis
- 2) Limestone contains high amounts of what mineral?  
Calcium
- 3) What do we call the condition in the cow when the abomasum twists out of the normal position?  
DA or displaced abomasum
- 4) How many upper front teeth does a dairy cow have?  
None
- 5) What does the Delvo test detect?  
Antibiotic residues in milk
- 6) How many grams of fat are in fat free milk?  
0 grams
- 7) What is a perennial?  
A plant that will grow for multiple years from one seeding
- 8) Propylene glycol is commonly used to treat ketosis. How is this treatment administered?  
Orally
- 9) What is the primary acid in the abomasum?  
Hydrochloric acid
- 10) How much time is required after milking for the teat end to close entirely?  
1 hour
- 11) What is the most common disease caused by staph aureus, strep ag., and klebsiella?  
Mastitis
- 12) On average, cows have a flight zone of how many feet?  
5 feet
- 13) Which month of the year is known as "National Dairy Month"?  
June

**14)**What is the name for the condition in which a cows teats point too far outwards?

Strutting

**15)**In days, what is the standard length of a dairy cow's lactation?

305 days

**16)**What is another name for the reticulum?

Honeycomb

## Beginner Packet 7, Bonus Questions

- 1) Ear tattoos are recognized as the preferred method of permanent identification in 3 dairy cattle breeds. Name them.

Brown Swiss

Jersey

Milking

Shorthorn

- 2) The average gestation length of dairy cows varies from 276 to 292 days. Name 3 factors that can contribute to this variation.

Age of the cow

Breed of the cow

Sex of the calf

Number of calves carried,

Season of the year

Health of the cow, Health of calf

- 3) Give 3 examples of a common by-product feedstuff.

Cottonseed hulls

Cottonseed meal

Distiller grains

Dried brewers' grain

Hominy feed

Soybean hulls

Soybean meal

Wheat middling's

Whole cottonseed

Beet pulp

Citrus pulp

Blood meal

Whey

Bakery by products

4) Name three methods or practices to use to help in reducing soil erosion.

Wind breaks

Cover crops

Strip cropping

Contour cropping

Terracing

Grass waterways

Reduced tillage

Soil seeding

Planting hedge rows

## **Extra Questions for 2022 NY Regional 4-H Beginner Dairy Bowl Contest**

- 1) What does the term “ad libitum” mean?  
Free choice
- 2) What component in plants gives them their green color?  
Chlorophyll
- 3) What is the respiratory rate of a healthy lactating dairy cow?  
30 breaths per minute
- 4) Regarding preventing milk fever, what does the acronym DCAD stand for?  
Dietary Cation-Anion Difference
- 5) What is the term for mastitis characterized by visible abnormalities in the udder or milk?  
Clinical Mastitis
- 6) One stick of butter is equivalent to how many cups.  
 $\frac{1}{2}$  cup
- 7) High concentrations of what hormone are necessary to maintain pregnancy?  
Progesterone
- 8) What vitamin, found in green leafy feeds, is important for the blood clotting process?  
Vitamin K
- 9) What are supernumerary teats in dairy cattle?  
Extra teats that are nonfunctional
- 10) What is another name for the Corpus Luteum?  
Yellow Body