

## 2016 NY District Novice 4-H Dairy Bowl Contest

### Novice Packet 1, Phase A

- 1) Which one of the cow's stomachs is the largest?

Rumen

- 2) What is a PTO in reference to farm machinery?

Power Take Off

- 3) Where in the cow is a streak canal located?

Teat

- 4) What is the process called when a calf is switched from milk or milk replacer to water and hay?

Weaning

## Novice Packet 1, Phase B

1) Name the six major breeds of dairy cattle in the United States

Ayrshire, Brown Swiss, Guernsey, Holstein, Jersey, Milking Shorthorn

2) What are the four compartments of a dairy cow's stomach?

Rumen

Reticulum

Omasum

Abomasum

3) Give three signs that a cow is in heat

Restlessness

Bellowing

Following/selling another cow

Mounting other cows

Standing to be mounted

Discharge of clear mucous from vulva

Vulva becomes red and swollen

4) Name 2 types of common calf housing.

Hutches

Elevated stalls

Pens of the floor

Cold calf housing system

Counter slope system/barn

Individual pens in barn

## Novice Packet 1, Phase C

1) What is the name of the liquid material left over after cheese is produced?

Whey

2) Which breed of dairy cattle has the longest gestation period?

Brown Swiss

3) What part of the plant normally has the highest protein content?

Leaves

4) What is a freemartin?

Sterile heifer born twin to a bull

5) Mastitis is an infection of what?

The udder

6) What is a young female cow that has not yet had a calf called?

Heifer

7) Who invented the pasteurization process?

Louis Pasteur

8) Milk is what percent water?

87%

9) What does it mean if a calf is polled?

Born without horns

10) What does AI stand for?

Artificial Insemination

11) What is the cow, calf or heifers personal space called?

Flight Zone

12) How many quarters are there in a cow's udder?

Four

13) What organ of the cow carries the fetus or calf during pregnancy?

Uterus

14) What are extra teats called?

Supernumerary Teats

15) What are the building blocks of protein?

Amino Acids

16) A record of the ancestry of an animal is also known as what?

Pedigree

## 2016 NY District Novice 4-H Dairy Bowl Contest

### Novice Packet 2, Phase A

- 1) What is the major buffer for a dairy cow that helps maintain rumen pH?

Saliva

- 2) An adult cow has how many incisor teeth?

- 3) What month is National Ice Cream Month?

July

- 4) What country did the Brown Swiss cow come from?

Switzerland

## Novice Packet 2, Phase B

- 1) Spell the dairy breed H-O-L-S-T-E-I-N
- 2) What are the 3 critical factors in colostrum management?

Quality

Quantity

Quickness (Timing)

- 3) Name 2 dairy products made from Class 1 milk?

Whole milk

Low fat milk

Skim milk

Flavored milk drinks

Buttermilk

Milk shake mixes

Ice cream mixes

- 4) Name 3 parts of a dairy cow's mammary system

Teats

Rear udder

Fore udder

Rear udder attachment

Fore udder attachment

Milk veins

Milk wells

Median suspensory ligament

## Novice Packet 2, Phase C

- 1) What is the name of the cow's stomach compartment that is also known as the honeycomb?

Reticulum

- 2) What is the normal dairy cow's body temperature?

101.5 degrees F

- 3) The acronym SCC stands for what?

Somatic Cell Count

- 4) How many front teeth does a dairy cow have?

None

- 5) What does mastication mean?

Chewing

- 6) How many quarts are in a gallon of milk?

4

- 7) In a newborn calf, what stomach compartment is the largest in total volume?

Abomasum

- 8) What hygiene practice is the single most important measure for preventing the spread of diseases from animals to humans?

Handwashing

- 9) When looking at a dairy animal's pedigree, what term is used for an animal's father?

Sire

- 10) Homogenization breaks up what in milk?

Fat globules

- 11) What is dystocia?

Difficult calving

- 12) What vitamin in milk helps maintain normal vision and skin?

Vitamin A

13)What hormone is at peak levels at the onset of standing heat?

Estrogen

14)What do we call the condition in the cow when the abomasum twists out of the normal position?

DA or Displaced Abomasum

15)What is the name of the farmer magazine that has the dairy cattle judging contest on the cover?

Hoard's Dairyman

16) If a feed contains 40% dry matter, what percentage of the feed is made up of water?

60%

**2016 NY District Novice  
4-H Dairy Bowl Contest**

**Novice Packet 3, Phase A**

- 1) Why would you groove floors in a free stall barn?

To prevent slipping

- 2) Where do you deposit the material when an injection is given IM?

Into the muscle

- 3) What is the first part of the calf you will see coming out of the cow during a normal calving?

Front hooves

- 4) How many pounds does a gallon of milk weigh?

8.6 pounds

### **Novice Packet 3, Phase B**

1) Name 3 different kinds of bedding that can be used on a dairy farm

Straw

Sand

Old hay

Sawdust

Mattresses

Paper

Recycled manure solids

2) 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 and alertness of showman

3) Name 3 parts of the milking machine

Shell

Inflation

Air tubes

Claw

Milk tubes

Pulsator

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

Head, heart, hands, and health

### Novice Packet 3, Phase C

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

Dry period

- 2) An excess of calcium fed during the dry period can result in what metabolic disorder at freshening?

Milk fever

- 3) The spot located directly behind a cow is called her what?

Blind spot

- 4) The process of turning cream into butter is called what?

Churning

- 5) Why would a veterinarian use electric burners on a calf?

Dehorning

- 6) What substance is frozen semen stored in?

Liquid nitrogen

- 7) What is another name for eructation?

Belching

- 8) What is the name for an infection of the uterus of a cow?

Metritis

- 9) What is considered the largest cost to the producer for milk production?

Feed cost

- 10) What breed of dairy cattle are known for their "golden milk"?

Guernsey

- 11) What does the acronym VFA stand for?

Volatile Fatty Acid

- 12) What is often added to dairy cattle rations to improve taste and decrease dustiness?

Molasses

13)Who is the New York Commissioner of Agriculture?

Richard Ball

14)What general term is used to describe a situation when a piece of metal has been swallowed by a cow and collects in the reticulum?

Hardware disease

15)What does the acronym CMT stand for?

California Mastitis Test

16)Why might a dairy farmer use chalk or paint on the tail head of a cow?

Heat detection

## 2016 NY District Novice 4-H Dairy Bowl Contest

### Novice Packet 4, Phase A

1) True or False: Alfalfa is a legume.

True

2) What mineral is found in the greatest quantity in milk?

Calcium

3) When looking at a dairy cow's production records, what does the term 3X mean?

Milked 3 times per day

4) How often should a dairy farmer wash and sanitize the bulk tank?

Each time it is emptied

## Novice Packet 4, Phase B

1) Name 4 signs of illness in calves

Decreased appetite

Coughing

Heavy breathing

Nasal discharge

Watery manure

Droopy ears

Elevated/below normal temperature

Lack of energy

2) Name two ways a cow returns nutrients to the pasture while grazing

Manure

Urine

3) What are 3 types of silage storage systems?

Upright silos

Harvestore units

Bunk silos

Trench silos

Bags

Wrappers

Tube silo

4) Name 4 of the 6 nutrients that animals need

Water

Protein

Carbohydrates

Fats

Vitamins

Minerals

## Novice Packet 4, Phase C

- 1) What is the stick called that semen is frozen in?  
Straw
- 2) Which breed of dairy cattle arrived in the US in 1822 from Scotland?  
Ayrshire
- 3) How long is a cow's gestation period?  
280 days
- 4) When talking about a calf or heifer program, what do the initials ADG stand for?  
Average Daily Gain
- 5) What is the scientifically recommended as the best beverage for refueling after a workout?  
Chocolate milk
- 6) If a heifer is said to be overconditioned she is what?  
Too fat
- 7) Acidosis can be caused by feeding cows too much of what?  
Grain
- 8) What is a balling gun used for?  
To give a cow a pill
- 9) What does ADADC stand for?  
American Dairy Association and Dairy Council
- 10) What does it mean to cull a cow?  
Remove from the herd
- 11) How much time do cows usually spend laying down each day?  
8-16 hours
- 12) What state won the 2015 North American 4-H Dairy Quiz Bowl Competition?  
New York
- 13) What is the ideal age for a heifer to have her first calf?  
24 months (22 to 24 months)

14) Which stomach compartment of the cow is known as the “many plies”?

Omasum

15) What is an herbivore?

An animal that only eats plants

16) Which substance flows through a cow’s milk veins?

Blood

## 2016 NY District Novice 4-H Dairy Bowl Contest

### Novice Packet 5, Phase A

1) What does it mean if a cow has freshened?

She has given birth

2) What does the acronym USDA stand for?

United States Department of Agriculture

3) How many chambers are in the heart of a cow?

4

4) Which breed of dairy cattle is the smallest?

Jersey

## Novice Packet 5, Phase B

1) Name 4 external parts of a dairy cow's head

Poll

Eyes

Muzzle

Ears

Jaw

Forehead

Nostril

2) List 3 different types of non-permanent cow identifications

Neck straps

Eartags

Ankle straps

Crayons

External electronic devices

Brisket tags

3) What are the two types of parasites that can affect an animal?

External and internal

4) Name one method of giving medicine to a cow

Oral

Topical

Injection

Intra mammary injection

Intra muscular

Intravenous

Subcutaneously

## Novice Packet 5, Phase C

- 1) What foodstuff consist of leaves and stems of plants that are relatively high in fiber content?

Roughage

- 2) A condition where excess fluid collects in the udder is called what?

Udder Edema

- 3) Which state leads the nation in milk production?

California

- 4) Which month is National Dairy Month?

June

- 5) When judging dairy cows, what is worth 40 points on the PDCA score card?

Udder

- 6) How much water does an average dairy cow drink per day?

30-50 gallons

- 7) What is the legal limit for somatic cells in milk?

750,000 cells/milliliter

- 8) What disease can result from a deficiency in either Vitamin E or Selenium?

White Muscle Disease

- 9) Why should you treat a calf's navel with iodine after birth?

To help reduce infection

- 10)What is another name for Johne's disease?

Paratuberculosis

- 11)What is the most effective way to prevent rabies in cattle?

Vaccination

- 12)If a cow is said to be cystic, what does she have difficulty doing?

Getting bred back

- 13)What is located between the dew claw and the hoof of a dairy cow?

Pastern

14) Which portion of the plant does grain generally come from?

Seed

15) What does an animal do with excess energy from its diet?

It stores it as fat

16) What happens to a cow's milk production as somatic cell count increases?

Production decreases

## 2016 NY District Novice 4-H Dairy Bowl Contest

### Novice Packet 6, Phase A

1) True or false: Homogenization kills harmful bacteria in milk.

False

2) In a dairy cow, what does the term open mean?

Not pregnant

3) Romano, parmesan, and mozzarella are all types of what?

Cheese

4) True or false: It is possible for a dry cow to get mastitis.

True

## Novice Packet 6, Phase B

- 1) Name 3 important factors to consider when choosing a dairy calf as a project animal

Age, breed, health, pedigree, conformation, cost/price, housing

- 2) Name 3 factors that can affect the quality of hay.

The kind of hay

Fertilizers

Age of maturity when it is cut and harvested

How well it is dried after cutting and before harvesting

Storage

Handling

- 3) What is the name of the organization that coordinates the northeast dairy industry's advertising and marketing programs?

American Dairy Association and Dairy Council

- 4) Name 4 pieces of information you would find on the nutritional label on a gallon of milk

Serving size

Servings per container

Ingredients

Calories

Fat content

Sodium

Cholesterol

Carbs

Protein

Where it was processed

Size of container

## Novice Packet 6, Phase C

1) What is the bush of hair at the end of a cow's tail called?

Switch

2) What is another name for a calf's mother?

Dam

3) What system in dairy housing includes curtains and fans?

Ventilation

4) How often should feeding utensils and equipment be cleaned for optimum health of your calves?

Daily

5) How long does it normally take for feed to pass through the digestive tract of a ruminant?

4 days

6) What is the term used to refer to the height of a calf or cow at the withers and hips?

Stature

7) On a dairy farm, what would the term herringbone refer to?

A type of milking parlor

8) What is the general term used to describe the condition in which a calf has runny manure?

Scours

9) When clipping a calf for the show, should you clip in the direction of hair growth or in the opposite direction?

Opposite direction

10) How do you place a magnet in the cow's reticulum?

Orally

11) Which system of the animal is affected by shipping fever?

Respiratory

12) How many knees does a cow have?

Two

13) What percentage of fat is found in skim milk?

0%

14) What is the name of the most valuable acid produced during ensiling?

Lactic acid

15) What do you call the cyclic opening and closing of the teat cup liner?

Pulsation

16) What term describes mating two purebred animals of different breeds?

Crossbreeding

## 2016 NY District Novice 4-H Dairy Bowl Contest

### Novice Packet 7, Phase A

- 1) When doing embryo transfer in dairy animals, what is the name given to the animal that has an embryo transferred into her from another cow?

Recipient

- 2) Limestone contains high amounts of what mineral?

Calcium

- 3) Who is the current United States Secretary of Agriculture?

Tom Vilsack

- 4) The solid portion of cheese is called what?

Curds

## Novice Packet 7, Phase B

- 1) What are the two parts of a cow's anatomy that may be twisted to one side and called Wry?

Face and tail

- 2) Name 3 pieces of information you would find on your animals registration paper.

Name

Sire

Dam

Date of birth

Owner

Breeder

Grandsire

Grand dam

Sex

Registration number

- 3) Name two options for storage of excess colostrum.

Freezing

Refrigerate

Ferment

Add preservative acid

- 4) Name 2 reasons why cattle should be dehorned

Prevent injury to other animals

Prevent injury to other people

Space - animals with horns require more space to eat

Horned animals will have difficulty fitting heads into headlocks

## Novice Packet 7, Phase C

- 1) What is the danger to a person when entering an upright silo too soon after filling?  
Toxic silo gases
- 2) What illness is a calf likely to develop if she is raised in a drafty environment?  
Pneumonia
- 3) What is the best protein source for feeding baby calves?  
Milk
- 4) What is the most popular cheese on pizza?  
Mozzarella
- 5) What is the process of squeezing two streams of milk by hand from the teat before putting on the milking machine called?  
Fore stripping
- 6) At a cattle show, what color clothing is best and preferred for a showmanship class?  
White
- 7) Where do heel flies lay their eggs on a dairy animal?  
On the lower legs
- 8) What month is National Grilled Cheese Month?  
April
- 9) What percentage of milk is digestible?  
96-98%
- 10) In what part of the dairy cow's digestive system do fiber digesting microbes live?  
Rumen
- 11) What is a lagoon used for on a dairy farm?  
Manure storage
- 12) What is the name for the membranes of pregnancy that pass out of the cow after she gives birth to a calf?  
Afterbirth or placenta

13)The period from conception to birth is called what?

Gestation

14)What do we call a paper that accompanies a purebred animal and certifies his or her parentage?

Registration paper

15) What direction do you move when leading a dairy animal in the show ring?

Clockwise

16)How many points are given to dairy strength on the PDCA unified scorecard?

25

## 2016 NY District Novice 4-H Dairy Bowl Contest

### Novice Packet 8, Phase A

- 1) The cultured dairy product with a sour taste that is made by adding a starter bacteria culture and often flavored with fruit is called what?

Yogurt

- 2) What is the term used for the study of the inheritance of traits?

Genetics

- 3) What is the most common disease caused by staph aureus, strep ag, and klebsiella?

Mastitis

- 4) In which season of the year are lice most prevalent for dairy animals?

Winter

## Novice Packet 8, Phase B

- 1) Name 3 things you should do within the first hour after a calf is born to keep a newborn calf healthy.

Check to see if it is breathing normally

Be sure the calf is in a clean and dry environment

Dip the navel with iodine

Feed a colostrum

Give any medications that the farm is using

- 2) Name 3 things that the milk- hauler does before pumping the milk from the bulk tank on to the milk truck.

Checks the temperature of milk

Takes a sample of the milk for testing

Checks milk for off odors

Measures the amount of milk in the tank

Agitates the milk before taking the sample

- 3) Name 3 parts of the cow's reproductive tract.

Vulva

Vagina

Cervix

Ovaries

Oviduct

Uterus

- 4) Name 3 different materials that a halter can be made of?

Leather

Rope

Chain

Nylon

## Novice Packet 8, Phase C

1) What does the "Real Seal" mean on a food product?

It means it is a genuine dairy product

2) What is the name of the process in which the cow relaxes and releases the milk in the udder so it can be milked out?

Milk letdown

3) What is meant by the term grade dairy cow?

An animal not registered with any breed association

4) What is the name of the medication that is put in all four of a cow's teats to help prevent mastitis when she becomes a dry cow?

Dry cow treatment

5) What does a pH of 4 indicate?

Acidic condition

6) What does it mean if a feed is palatable to a dairy animal?

The animal likes it and will eat it

7) What are gray, crusty patches on the skin, usually found on the head and shoulder region of animals?

Ringworm

8) What vitamin in milk helps maintain normal vision and skin?

Vitamin A

9) On average, cows have a flight zone of how many feet?

5 feet

10) What is the name of the substance in colostrum that provides protection against diseases through passive immunity?

Antibodies or immunoglobulins

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

305 days

12) If a farmer said he was feeding an 18% dairy feed, what does the 18% refer to about the feed?

The protein content of the feed

13) What is the material that must be cleaned out of a newborn calf's nose and mouth called?

Mucous

14) What do we call an animal that another organism lives on as a parasite?

Host

15) When looking at a cow, what body part is located between the cow's hip bones and pin bones?

Thurls

16) When showing, what side of the animal are you on?

Left side

**2016 NY District Novice  
4-H Dairy Bowl Contest Extra Questions**

- 1) Where is the best place on a cow to give an intravenous injection?  
Jugular vein on the neck
- 2) What is a newborn calf's navel often dipped with?  
7% tincture iodine
- 3) What is used to wipe teat dip off of teats before putting the milking machine on?  
Cloth or paper towels
- 4) Where is the median suspensory ligament found on a dairy cow?  
The udder
- 5) What fast food chain uses the most milk in the U.S.?  
McDonalds
- 6) What term describes a substance that can reduce changes in pH when an acid or base is added to a solution?  
A buffer
- 7) What is the most expensive disease in dairy cattle?  
Mastitis
- 8) Of the following choices, which feed is considered a forage: cottonseed, soybean meal, or corn silage?  
Corn silage
- 9) What does NYCHAP stand for?  
New York State Cattle Health Assurance Program
- 10) Cows excrete how many pounds of manure for every pound of milk they produce  
**2** pounds
- 11) What vitamin deficiency causes the disease "Rickets"  
Vitamin D
- 12) What do the initials BVD stand for?  
Bovine Viral Diarrhea

## Extra Team Questions

- 1) Name the 3 of the 5 major categories of evaluation on the Dairy Cow Unified Score Card.

Frame

Dairy Character

Body Capacity

Udder

Feet and Legs (PDCA)

- 2) Name 3 things that can cause diseases in animals

Viruses

Bacteria

Parasites

Poor nutrition

Genetic defects

Poor environment

- 3) Name 2 different forages.

Corn silage

Haylage

Balelage

Shredlage

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

Calf

Heifer

Cow