

2021 NYS Regional Junior 4-H Dairy Quiz Bowl Contest

Junior Packet 1, Phase A

1) What are the building blocks of protein?

Amino Acids

2) What is the single greatest management factor impacting pre and post-fresh animals, abbreviated by DMI?

Dry Matter Intake

3) What is another name for Hypocalcemia?

Milk Fever

4) Regarding dairy cattle digestion, what do the initials HBS stand for?

Hemorrhagic Bowel Syndrome

Junior Packet 1, Phase B

1) Name the 4 components of the PDCA Dairy Cow Unified Scorecard.

Frame

Dairy Strength

Rear feet & legs

Udder

2) Name 3 cultured dairy products.

Acidophilus milk

Kefir

Buttermilk

Sour cream

Crème fraiche

Yogurt

3) Name 3 reasons fiber is needed in a dairy cattle ration

Maximize dry mater and energy intakes

Maintain normal rumen function/digestion

Maintain normal milkfat percentage

Protect against post calving difficulties

Maintain high production

Palatability

4) Name 4 reasons why an animal can be disqualified from being shown in the ring.

Changing the natural color of the animal

Permanent lameness

Total blindness

Freemartin heifer

Tampering to conceal faults

Junior Packet 1, Phase C

1) *At what lactation do dairy cows typically reach their mature body weight?*

3rd Lactation

2) The All-American Invitational Youth Dairy Cattle Judging Contest is held at the All-American Dairy Show in what city and state?

Harrisburg, PA

3) In regard to nutrition what does the acronym FFA stand for?

Free Fatty Acid

4) What year was the first dairy cooperative organized in the United States?

1810

5) What is the common name for the Corpus Luteum?

Yellow Body

6) What is the process called by which white blood cells engulf microorganisms?

Phagocytosis

7) Deficiency of what vitamin causes Rickets?

Vitamin D

8) Distillers grain is a byproduct of what common product?

Ethanol

9) What is the most effective management practice to control flies on a dairy?

Sanitization

10) The bacteria *Moraxella Bovis* causes what disease in dairy cattle?

Pinkeye

11) What is the technical term for the belching of gas by a ruminant as a natural way of releasing gases produced during the fermentation process?

Eructation

12)What is a KAMAR patch used for on dairy farms?

Heat detection aid

13)What does the acronym YDLI stand for?

Young Dairy Leaders Institute

14)Milk should be kept under what temperature in degrees Fahrenheit to maintain the best quality?

40°F

15)What is the term when a calf is born backwards and butt first?

Breech birth

16)What is the period of time called that is three weeks before calving to three weeks after calving?

Transition period

Junior Packet 1, Bonus Questions

- 1) Name three advantages of having high quality milk from a dairy producer's point of view.

Greater profitability

Increased milk yield

Low culling rates

Low treatment costs

Reduced labor and labor costs

Larger milk checks due to improved milk per cow and premiums

- 2) The Federal Milk Marketing Orders have four milk classes based on how milk is used by producers, Class I is beverage milks. Name the other three classes and one product from each class.

Class II – fluid cream products, yogurt, and other manufactured products

Class III – Cream cheese and other hard manufactured cheese

Class IV – Butter and milk in dried form

- 3) Name three reasons for culling a dairy cow from the herd.

Low production

Reproduction

Feet and legs

Injury

Mastitis

Udder

Disease

Disposition

Low genetic potential (genomic scores)

- 4) Name 3 methods that can be used to reduce soil erosion.

Contour cropping

Cover crops

Grass waterways

Reduced tillage

Soil seeding

Strip cropping

Terracing

Wind breaks

Junior Packet 2, Phase A

- 1) What is the term when the amount of energy taken into the body is less than the amount of energy required by the body?

Negative Energy Balance

- 2) What is the key to making winter forage a high-quality feed?

Harvest technique/timing

- 3) Regarding reproduction, what do the letters CIDR stand for?

Controlled Internal Drug Release

- 4) What is the technical term for mule foot, a condition where only one toe appears on the hoof?

Syndactylism

Junior Packet 2, Phase B

1) Name three main responses to heat stress in cattle.

Loss of appetite

Drop in production

Reduced reproduction performance

Increased respiration

2) Name two of the three hormones used in male reproduction.

Follicle Stimulating Hormone (FSH)

Luteinizing Hormone (LH)

Testosterone

3) Name three traits used in the Body Weight Composite Index for Holsteins.

Stature

Strength

Body depth

Rump width

Dairy form

4) Name 3 storage options for excess colostrum.

Add preservative acid

Fermentation

Frozen

Refrigerated

Junior Packet 2, Phase C

1) If a cow has a calving ease score of two, what type of birth was observed?

Slight problem

2) What type of cyst is thick walled and secretes low levels of progesterone?

Luteal cysts

3) No matter what solution is used, a footbath should be a minimum of how many feet long?

10 feet

4) What is the term describing a farm's total assets minus its liabilities?

Net Worth or Owners Equity

5) What is the term for the study of goats and goat husbandry?

Capriculture

6) What is the more common name for the subcutaneous abdominal veins?

Milk veins

7) NAILE is a well know cattle show held in Louisville, Kentucky. What does NAILE stand for?

North American International Livestock Exposition

8) What is the term for the use of ultrasonography to view the ovary while removing oocytes through the vagina using a needle?

Transvaginal aspiration

9) What is the contractile tissue that forces milk out of the alveoli?

Myoepithelium

10) When a calf dies, veterinarians can conduct a postmortem exam to find out the cause of the death. What is the technical name for this exam?

Necropsy

11)What is the average percent of ash content in grass forages?

6% (grasses) – 8% (alfalfa)

12)Where are the offices for the Council on Dairy Cattle Breeding located?

Bowie, Maryland

13)When looking at a fertilizer label you will see NPK listed. What does the K stand for?

Potassium

14)What is the name of the master gland that controls the estrus cycle?

Pituitary gland

15)A locus is the position that a given gene occupies on what?

A chromosome

16)What are plants that are seeded each year and whose growth are completed in one crop year?

Annual

Junior Packet 2, Bonus Questions

1) Name 3 different types of milking parlors.

Herringbone
Parallel
Para bone
Rotary
Side Opening
Flat barn
Tandem
Robotic

2) Legumes are commonly grown to feed cows on dairy farms. Name 3 legumes.

Alfalfa
Bird`s-foot Trefoil
Clover
Lespedeza
Peas
Vetch
Peanuts
Soybeans
Cicer milk-vetch

3) Name three environmental factors that can contribute to pneumonia in calves.

Drafts
Chilling
Dampness
Poor ventilation

4) Name the 3 parts of the small intestine in the dairy cow.

Duodenum
Jejunum

Ileum

Junior Packet 3, Phase A

1) How soon after a calf is born should its navel be dipped with a 7% iodine solution?

Immediately, once the calf is breathing well on its own

2) Where in the cow are fats broken down?

Small intestine

3) What volatile fatty acid is the primary source of energy and milkfat?

Acetic Acid

4) Brown midrib corn varieties have a lower lignin concentration which does what to fiber digestibility?

Increases (fiber digestibility)

Junior Packet 3, Phase B

1) What are 4 reasons to use artificial insemination over natural service?

Safety

Genetic improvement

Better disease control

Better record keeping

Easier to prove bulls

Less expensive than keeping a bull

2) Name 3 signs of a malfunctioning milking system.

Excessive vacuum fluctuation

Slow milking

Teat cups falling off

Flooded milk lines

Squawking teat cups

Uneven milk flow

3) Name 3 reasons why fiber is needed in a dairy cattle ration.

Maximize dry matter and energy intakes

Maintain normal milkfat percentage

Maintain normal rumen function

Protect against post-calving difficulties

4) Name 4 of the 6 udder traits that go into computing the udder composite index.

Udder depth

Udder width

Udder Height

Teat Placement

Fore udder attachment

Udder cleft

Junior Packet 3, Phase C

- 1) What are diseases and infections that can be transmitted between vertebrate animals and humans?

Zoonoses

- 2) What is the name of the dairy processing technique that removes some water, lactose, and a portion of the minerals from skim milk?

Ultrafiltration

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

None (0)

- 4) What is the name of the device that allows controlled, cyclic admission of air during cleaning and sanitizing to produce slug flow conditions?

Air injector

- 5) When is the most effective time to treat mastitis in a dairy cow?

At drying off

- 6) What is the milk mineral deposit on milk handling equipment called?

Milk Stone

- 7) Water in the soil is known as what?

Groundwater

- 8) What does the acronym FSA stand for regarding government agencies?

Farm Service Agency

- 9) What is the name given to a person who believes that animal lives are equal to human lives and seek to eliminate all systems that involve the use of animals by humans?

Animal Rights Activist

10)What is the main reason that a dairy cow will refuse to use a freestall?

Improper stall size

11)Regarding reproduction, what do the letters IVF stand for?

In Vitro Fertilization

12)*What is the name of the test that detects rancidity in milk?*

Acid degree value

13)What is the term for any of the alternative forms of a gene that may occur at a given locus?

Allele

14)In young ruminants, what is the name of the anatomical structure that sends milk from the esophagus to the abomasum?

Esophageal groove

15)What is the fertile life of an ovum after its release from the follicle?

6 to 12 hours

16)What is the average mature body weight of a Jersey?

1,000lbs

Junior Packet 3, Bonus Questions

1) Name the three informational components that an Animal Model uses when making its evaluation.

Parents (pedigree)
Individual performance
Progeny (offspring)

2) Name three undesirable recessive traits in Brown Swiss cattle.

Weaver
Spiderleg
Spinal Dysmyelination
Spinal Muscular Atrophy

3) What 3 breeds have their breed association headquarters in Ohio?

Ayrshire
Guernsey
Jersey

4) Name three production components of Organic dairy farming that is different from conventional.

No hormones to promote growth
No mammalian or poultry by-products in feed
No antibiotics
100% organic feed

Junior Packet 4, Phase A

1) What is the more common name for the disease known as acetonemia?

Ketosis

2) What is the technical term for the act of giving birth?

Parturition

3) What is the primary process that occurs in the rumen?

Fermentation

4) What is the condition when a cow's teats point out too much?

Strutting

Junior Packet 4, Phase B

1) Name the three of the four basic elements that are present in all proteins.

Carbon

Hydrogen

Oxygen

Nitrogen

2) Name 3 factors that must be considered when separating and regrouping your milking herd.

Body condition

Production level

Stage of lactation

Lactation number

Reproductive status

Health

Stocking density

3) Name three methods of dehorning calves.

Paste

Cut or Gouge

Electric or gas burning

4) *Name 3 different areas on the farm that contribute waste to their nutrient management program.*

Feeding area,

Housing or loafing area,

Holding pen,

Return alley,

Foot baths,

Milking parlor,

Run-off areas

Junior Packet 4, Phase C

- 1) What group of hormone-like substances produced in the uterus, that cause the regression of the corpus luteum and the contraction of the uterus?

Prostaglandins

- 2) What enzyme functions to break down fats or lipids?

Lipase

- 3) What is the name of the toxic pigment that can be found in whole cottonseed?

Gossypol

- 4) Regarding milk marketing what do the letters COOL stand for?

Country of Origin Labeling

- 5) In terms of cow health, what do the letter HIR stand for?

High Immune Response

- 6) What is the highest grade of butter sold in the U.S.?

Grade AA

- 7) The teat canal is the cow's first line of defense against mastitis, what is the second natural line of defense?

Leukocytes

- 8) What substance containing many enzymes is found in the lining of a calf's stomach?

Rennet

- 9) How many pounds of whole milk does it take to make a pound of butter?

21.2

- 10) High numbers of somatic cells in milk is generally an indication that what is present?

An infection/mastitis

11)Where would you find a crowd gate on a dairy farm?

In the holding area

12)What is the scientific name for Hardware disease?

Traumatic gastritis

13)*Regarding farm safety, what do the letters SMV stand for?*

Slow moving vehicle

14)In pounds, how much does a bushel of soybeans weigh?

60 pounds

15)*In the PDCA Dairy Cow Unified Scorecard, how many points are allotted to Dairy Strength?*

25 points

16)*What disease does the pathogen "Klebsiella" cause in lactating dairy cows?*

Mastitis

Junior Packet 4, Bonus Questions

1) Name three signs of illness in calves.

- Poor appetite
- Nasal discharge
- Lack of energy
- Cough
- Droopy ears
- Elevated temperature
- Watery manure
- Dull eyes

2) Name three major factors that affect a dairy herd's pregnancy rate when using AI.

- Heat detection
- Herd fertility rates
- Semen fertility
- Inseminator proficiency

3) Name three of the many essential amino acids that must be provided in a cow's diet.

- Arginine
- Histidine
- Isoleucine
- Leucine
- Lysine
- Methionine
- Phenylalanine
- Threonine
- Tryptophan
- Valine

4) Name 3 items that are important for tractor safety.

- Good tires
- Slow moving vehicle sign

Seat belt

Roll over protection bars

Lights

PTO shield

Sound protection

Brakes

No rider

Junior Packet 5, Phase A

1) *What volatile fatty acid is the precursor for glucose?*

Propionic Acid

2) *What is an infection of the uterus called?*

Metritis

3) How many weeks does it take for a follicle to develop and mature?

10 weeks

4) What vitamin plays an important role in the coagulation of blood?

Vitamin K

Junior Packet 5, Phase B

1) Name 3 physiological functions of water in the body.

- A medium to transport nutrients
- To carry waste products to the point of excretion
- Functions as a universal solvent
- To cool the body at high environmental temperatures
- Serves as a fluid to lubricate joints
- Serves as a substrate for metabolic reactions
- Serves as a fluid base for milk

2) Name the three parts of the teat in which milk passes through.

- Teat cistern
- Sphincter muscle
- Streak/teat canal

3) Name three conditions that will cause a decrease in a milk fat test.

- Finely chopped feeds*
- Extremely hot weather*
- Estrus*
- Low fiber content in ration*
- Illness*
- Too much fat in the cows diet*

4) What do the 4 Hs of 4-H stand for?

- Head
- Hands
- Heart
- Health

Junior Packet 5, Phase C

1) What term describes an animal infected with a disease that shows no clinical symptoms?

Carrier

2) What structure connects muscle to bone?

Tendon

3) *What are the small, finger-like projections that line the wall of the rumen called?*

Papillae

4) How many ounces of milk are in one serving?

8 ounces

5) What is the name of the instrument that is used to test the freezing point of milk, to determine if water has been added or not?

Cryoscopy

6) What is the condition where one or both testes fail to descend from the abdomen into the scrotum?

Cryptorchidism

7) *What is the term used to describe the process when minerals, especially nitrogen, are removed from the soil by water?*

Leaching

8) What organ in the dairy cow produces urine?

Kidneys

9) What is a bio filter used for on a farm?

Filter air or water to reduce farm pollution

10) What primary hormone is critical in the initiation and maintenance of lactation?

Prolactin

11) Butter must contain what percent fat?

80% fat

12) *What is the term used to indicate how well cows convert feed into milk?*

Feed efficiency

13) What disease is caused by the bacterium *Mycobacterium paratuberculosis*?

Johne's Disease

14) *What is the most frequent cause of high bacteria counts in milk?*

Dirty equipment

Poor pre milking hygiene

15) *In pounds, how much does a bushel of corn weigh?*

56 pounds

16) How many days are between heat periods in dairy cows?

21 days (18 to 23)

Junior Packet 5, Bonus Questions

1) Name three of the major nutrients which are contained in feedstuffs.

Energy

Protein

Vitamins

Minerals

Water

2) Name three symptoms of clinical mastitis.

Flakes

Clots

Presence of blood

Stringy milk

Watery milk

Swollen quarter

Hot quarter

Ropy milk

Decreased milk production

3) Name three of the top five considerations for optimal calf housing

Ventilation

Comfort

Isolation or group housing

Labor efficiency

Cost

4) Name the three main structures that provide support to the cow's udder.

Median suspensory ligament

Lateral suspensory ligament

Skin

Junior Packet 6, Phase A

1) What organ in the cow secretes digestive enzymes into the small intestine?

Pancreas

2) Regarding goal setting what does the letter 'M' stand for in the acronym SMART?

Measurable

3) *What disease stopped the importation of cattle from Europe in 1905?*

Foot and Mouth Disease

4) *Dry matter of feed is determined after what substance has been removed?*

Water

Junior Packet 6, Phase B

1) What are the two general classes of probiotics?

Fungi and bacteria

2) Name four types of bedding typically used for dairy cattle.

Straw

Sand

Recycled manure solids

Newspaper

Sawdust

Shavings

Old hay

Wood chips

Baled corn stalks

Almond hulls

Rubber mats

Feed by-products

3) Name 3 methods of charging for heifer grower services.

Per animal per day

Per animal

Per pounds of gain

Feed plus yardage

Option to purchase

4) Name three internal parasites found in dairy cattle.

Lung worms

Round worms

Stomach worms

Liver flukes

Coccidian

Junior Packet 6, Phase C

1) Regarding cow health, what do the letters DA stand for?

Displaced Abomasum

2) Regarding animal health, what does the acronym ELISA stand for?

Enzyme-Linked Immunosorbent Assay

3) What month is National Grilled Cheese Month?

April

4) What breed of dairy cattle have the longest gestation period?

Brown Swiss

5) During hot weather, what time of the day does a cow's body temperature often peak?

Midnight

6) Bulls are often known to be aggressive, what hormone is responsible for this behavior?

Testosterone

7) Where did the Guernsey breed originate?

Isle of Guernsey

8) How many weeks old is a calf when it begins to chew its cud?

2 to 3 weeks

9) Who regulates the Federal Milk Marketing Orders?

The Secretary of Agriculture

10) How many gallons of blood are in a 1,400-pound cow?

9 to 9 ½ gallons

11) *What is the maximum amount of milk fat contained in Half and Half?*

18%

12) If you are trading on the future's market, what marketing tool would be used by someone who owns a commodity such as milk and will sell it sometime in the future?

Short hedge

13) *Calves are expected to at least double their birth weight by what age?*

8 weeks

14) Regarding financing and banking, what do the letters FCS stand for?

Farm Credit Services

15) What hormone can interfere with milk letdown when a cow becomes frightened?

Adrenaline/Epinephrine

16) What country considers the cow to be Holy?

India

Junior Packet 6, Bonus Questions

1) Name three types of manure storage facilities.

Solid manure storage (dry stack barn)

Slurry manure storage

Liquid manure storage (lagoon)

2) Name three advantages of calf hutches.

Easily moved

Provide better ventilation

Prevent disease from spreading from one calf to another

3) Name 3 physiological functions of water in the body.

Medium to transport nutrients

Functions as universal solvent

Serves as a fluid to lubricate joints

Serves as a fluid base for milk

Carry waste products to the point of excretion

Cool the body at high environmental temperatures

Serves as substrate for metabolic reactions

Saliva

Rumen fluid

Osmosis

4) Name the 3 of the 4 stages of a fly's life cycle.

Egg, larvae, pupa, and adult

Junior Packet 7, Phase A

- 1) Which of the following is the main reason newborn calves are kept separate from each other?

To prevent the transmission of diseases

- 2) What is meant by the term “weaning”?

The act of stopping the feeding of milk

- 3) True/False. Because it is not organic in composition, sand is an excellent choice for bedding in free stalls.

True

- 4) *Which season of the year is consumer demand for dairy products typically the lowest?*

Summer

Junior Packet 7, Phase B

- 1)** List 2 reasons why straw is added to a dairy cow's feed ration.

Increase fiber content

Slow down digestion rate

Lower ration feed cost

Expand gut

- 2)** Name 3 pieces of information that should be written down by the trimmer when hoof trimming dairy cattle.

Cow's name/ID number, date, lesion, and treatment was applied, location of lesion, severity of lesion, follow-up treatment needed, foot that is treated or abnormal, wrapped or not.

- 3)** Give 3 reasons for a cow going lame.

Abscess,

Foot rot

Infection

Injury

Soft sole syndrome

Laminitis

Trimming too close

- 4)** Give 3 of 5 things that would classify a herd as not being closed?

Cows bought or boarded,

Cows return after leaving farm: boarded, shows

Cattle pasture shares fence with cattle from another farm

Bulls are bought, borrowed, or loaned

Cows transported by someone else or in someone else's vehicle

Junior Packet 7, Phase C

1) Regarding animal health, what do the initials BLV stand for?

Bovine Leukosis Virus

2) What type of pathogen causes ringworm?

Fungus

3) What unit are vitamins measured in?

International Units

4) What is the desired pH for properly fermented corn silage?

4.0 or less

5) Which of the six major dairy breeds originated in the United States?

None

6) *When using a Delvotest or Penzymetest to test milk from your bulk tank, what are you testing for?*

Antibiotics

7) 7. What is the term used to describe a heifer that is too fat?

Over conditioned

8) *How many seconds should pre-dip be left on before wiping off?*

20 to 30 seconds

9) What is the proper site on the cow to administer intramuscular (IM) injections?

Neck (triangle zone)

10) What is the approximate percentage of solids in normal milk?

13%

11) What is the term used in dairy cattle judging when a cow is close at the hocks?

Cow hocked

12)What is the common name for papillomatous digital dermatitis?

Hairy heel warts

13)What instrument is used to puncture the rumen in cases of bloat?

Trocar

14)What flavor is added to cheese and butter to improve the taste?

Salt

15)At what age does a calf have a fully developed rumen?

4 months

16)What mammal produces milk that is used for Romano cheese?

Sheep

Junior Packet 7, Bonus Questions

1) Name 3 consequences of long pre-milking stimulation.

Lower production

Slower milking time

Higher somatic cell count (mastitis problems)

Less let down

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

Brown Swiss

Jersey

Milking Shorthorn

3) Name 3 factors that can cause pneumonia.

Bacteria

Viruses

Parasites

Molds and yeast

Foreign objects

4) . Give 3 reasons why dry matter intake would be overestimated.

Failure to account for feed refusal

Inaccurate weights of feeds

Overestimating body weight

Ration miscalculations

Junior Packet 8, Phase A

1) If a pH of 7 is neutral, what is a pH lower than 7 indicate?

Acidic condition

2) What are you trying to estimate when you measure the heart girth of a dairy heifer with a special tape?

Body weight

3) True/False. There are 2 uterine horns in the reproductive tract of a dairy cow.

True

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

Cow is milked 3 times daily

Junior Packet 8, Phase B

1) Name 2 methods of temporary identification.

Ear tag

Neck chain

Tail tag

Brisket tag

Leg band

Paint brand

Back tag

2) Name two ways a cow can return nutrients to the pastures while grazing?

Urine

Manure

3) Name the 2 primary purposes of fore stripping prior to attaching the milking unit.

Detection of abnormal milk (mastitis)

Stimulation of let-down.

Flushes bacteria from the teat canal

4) When developing a dairy management team for your farm, name 3 non-farm professionals should be invited to be on the team?

Veterinarian

Hoof Trimmer

Ag Lender

Milk Inspector

Nutritionist

Crop Consultant

Equipment Dealer

Building Contractor

AI Technician

Junior Packet 8, Phase C

1) What is a course textured grain fed to baby calves called that is necessary for rumen development?

Calf starter

2) What is the name used to describe the class of chemicals used for weed control?

Herbicides

3) What is the name of the on-farm test that uses a white paddle and solution to detect subclinical mastitis?

California Mastitis Test (CMT)

4) Vitamin C is also known as what?

Ascorbic acid

5) What is the condition where the physical signs of heat are difficult to detect?

Silent heat

6) What intravenous injection is used for the immediate and temporary treatment of milk fever?

Calcium gluconate

7) What class of drugs is used when treating udder edema?

Diuretics

8) As part of the NMC mastitis control program it is recommended to apply teat disinfectant immediately following the removal of the milking unit. What does NMC stand for?

National Mastitis Council

9) Where is the site of semen deposition in a natural bull service?

Vagina

10) Regarding animal health, what do the letters MLV stand for?

Modified Live Virus

11) What is the common name for Listeriosis?

Circling disease

12) What do the letters CNMP stand for in reference to CAFO legislation?

Comprehensive Nutrient Management Plan

13)Regarding goal setting what does the letter 'S' stand for in the acronym SMART?

Specific

14)At what stage of plant development are small grains harvested?

Boot or soft dough stage

15)What does the acronym GTPI stand for?

Genomic Total Performance Index

16)What is the name of the instrument used to give an animal a pill or bolus?

Balling bolus pill gun

Junior Packet 8, Bonus Questions

- 1) You are entering the showmanship ring at your county fair. Name 3 things that a showmanship judge may be looking for when reviewing you and your animal while you are in the ring.

Cleanliness

Quality of clipping

Animal condition

Appearance of the exhibitor

Grooming

How well the animal is led

Posing of the animal

Sportsmanship

Poise, alertness, and attitude

- 2) Name 3 common off flavors in milk.

Bitter

Fruity

Lacks freshness

Rancid

Fermented

High acid

Oxidized

Sour

- 3) Lifetime Net Merit is a genetic index which combines many traits for Holsteins & Brown Swiss. Name 3 of the traits which make up Lifetime Net Merit.

Milk

Daughter Pregnancy Rate

Fat

Heifer Conception Rate

Protein

Cow Conception Rate
Somatic Cell Score
Calving Ability (only for Holstein & BS)
Productive Life
Cow Livability
Feet & Legs Composite
Udder Composite
Body Weight Composite

4) Name three consequences of inbreeding.

Decreased general vigor
Decreased production
Decreased reproductive performance
Increased calf mortality
Increasing similarity between animals
Smaller mature size
More recessive genes exposed
Slower growth rate

2021 NYS Regional 4-H Junior Dairy Quiz Bowl Extra Questions

- 1) Traditionally, what is the recommended length for a cow's dry period?
45 – 65 days
- 2) How often should the bulk tank be washed and sanitized?
Every time it is emptied
- 3) A dry cow requires the largest quantity of what mineral?
Potassium
- 4) To maximize efficiency, soil samples should be taken at least every how many years?
3 years
- 5) How many pounds of whole milk does it take to make a gallon of ice cream?
12 pounds
- 6) Cultured dairy products are dairy foods that have been fermented with what type of bacteria?
Lactic Acid Bacteria
- 7) If a dairy cow is chronically getting mastitis infections, the best solution is to do what?
Cull her from the herd
- 8) What is the recommended temperature for washing the bulk tank, along with all other milking equipment?
160°F
- 9) *What is the name given to the spherical clusters of secretory cells in the mammary gland that are arranged in grape like structures?*
Alveoli
- 10) What should a cow's body condition score be at calving?
3.0 – 3.25
- 11) When sampling square bales of hay for forage testing, how many bales should be sampled?
20 bales
- 12) On average, how many gallons of water does a cow drink a day?
30 to 50 gallons
- 13) What stomach compartment is most similar to a human's stomach?
Abomasum

- 14)**Regarding nutrition, what do the letters ADF stand for?
Acid detergent fiber
- 15)**The leading causes of death in young calves are scours and what other infection?
Pneumonia
- 16)***What is the first organ to receive blood from the small intestine?*
Liver
- 17)***What substance used on many farms is an excellent source of calcium?*
Limestone
- 18)**What is the name of the component that stirs milk in the bulk tank to help with cooling along with keeping the milk in uniform condition?
Agitator
- 19)**ADG is a significant factor in monitoring growth rates in dairy heifers, what does ADG stand for?
Average Daily Gain
- 20)**Milk contains casein proteins and what other type of proteins?
Whey proteins
- 21)**Why are pigmented milk cartons used?
To prevent an oxidized flavor
- 22)**Regarding dairy nutrition, what do the letters DCAD stand for?
Dietary Cation-Anion Difference
- 23)**Vacuum pressure at the end of milking should be at how many inches of mercury?
12 – 13 inches

Extra Team Questions

- 1) Name three advantages of high-quality milk from a processor's point of view?
 - Improved flavor
 - Longer shelf life
 - Increased cheese yield
 - Reduced hauling costs (due to low quality milk not having to be diverted to an alternative use)

- 2) Name three components that increase in concentration when mastitis is present.
 - Chloride
 - Immunoglobulins
 - Leukocytes
 - Lipase
 - Sodium
 - Trace Minerals

- 3) Name three contagious mastitis causing pathogens that spread from cow to cow.
 - Staphylococcus aureus (Staph. aureus)
 - Mycoplasma species
 - Streptococcus agalactiae (Strep. ag.)

- 4) By-products can be successfully used as feed for dairy cows, but farmers need to be cautious about what they decide to incorporate. Name three factors that should be considered before including a given by-product to the diet.
 - Nutrient composition
 - Availability
 - Storage
 - Ability to feed/use
 - Cost
 - Palatability
 - Consistency

- 5) Name three ways that a dairy cow excretes or loses water.
 - Breathing, feces, milk, sweat and urine