

2012 NY District Senior Dairy Quiz Bowl Contest

Senior Packet 1, Phase A

- 1) When comparing fertility in dairy animals, which of the following are usually the least fertile: heifers, second lactation cows, third lactation cows, or aged cows?
 - Aged cows
- 2) Of the following, which is the most economical method of cooling cows: fans, air conditioning or evaporative cooling?
 - Evaporative cooling
- 3) Of the following, which is the main advantage to using a Brown Midrib variety for corn silage: higher lignin content, lower lignin content and greater fiber digestibility or higher silage yields?
 - Lower lignin content and greater fiber digestibility
- 4) Which of the following is NOT a primary organism associated with mastitis: Brucella abortus, Streptococcus agalactia, Streptococcus uberus, or Staphylococcus aureus?
 - Brucella abortus

Senior Packet 1, Phase B

1) As your dairy business gets more complicated and or bigger, written contracts need to replace oral agreements. A heifer raising contract between a dairy producer and a heifer raising professional is a prime example of a written contract to benefit both parties.

Name 4 key critical areas that should be covered in the dairy producer/heifer grower contract.

- Contract start and renewal date
- Death, injuries and poor-doers (this would define the difference between death and injury via natural incidence vs. death or injury due to neglect)
- Vaccination and testing requirements
- Breeding program
- Animal health (Determine what, if any, part of the animal health is included in the base fee)
- Payment terms
- Communication and site visits (Spell out how often the dairy producer will visit the heifer-raising site)
- Contract cancellation (determine ahead of time the procedure to follow if either party wants to terminate the contract) (DHM, March 2011, pg. 19)

2) Name the 3 major Volatile Fatty Acids produced by the rumen.

- Acetic Acid
- Butyric Acid
- Propionic Acid

3) Name 4 recommended protein sources for milk replacers.

- Casein
- Dried skim milk
- Dried whey
- Dried whey products
- Dried whey protein concentrate
- Modified wheat protein
- Protein modified soy flour
- Soy protein concentrate
- Soy protein isolate

4) What are the 4 elements present in all proteins?

- Carbon
- Hydrogen
- Oxygen
- Nitrogen

Senior Packet 1, Phase C

- 1) What hormone suppresses other hormones during the estrus cycle and promotes pregnancy?
 - Progesterone
- 2) According to the Federal Milk Marketing Order, fluid milk is classified as which class?
 - Class 1
- 3) How many hours after calving should a cow pass the fetal membranes?
 - 8 to 12 hours
- 4) What is the part of the milking system that causes the alternate vacuum pressure between the teat cup shell and liner?
 - Pulsator
- 5) Who is the New York Commissioner of Agriculture?
 - Darryl Aubertine
- 6) In 2011 total U.S. milk production was how many billion pounds?
 - 196 to 197 billion pounds (NASS report)
- 7) How often are new genomic genetic evaluations released?
 - Every month
- 8) What is the primary acid formed during the fermentation of milk for the making of cheese?
 - Lactic
- 9) After peak milk production is attained, the cow's milk production starts to decline. What is the rate of decline or the steepness of the slope of milk production curve called?
 - Persistency

10) What is the name of the fast food chain that has partnered with the dairy check-off to promote its new espresso drinks that contain up to 80% milk?

- McDonald's

11) In which stomach compartment of the dairy cow does metal or hardware accumulate most often?

- Reticulum

12) When a cow is super ovulated and the resulting embryos are transferred to unrelated recipient cows, the calves that are born will be called what to each other?

- Full siblings

13) Corn distiller's grain is high in what amino acid that is essential for milk production?

- Methionine

14) In response to longer day length, what hormone is released by the pineal gland?

- Melatonin

15) What compartment of the ruminant stomach has a mucus lining to protect the surface from hydrochloric acid?

- Abomasum

16) Debt per cow is calculated by dividing total debt by what?

- Average number of cows

2012 NY District Senior Dairy Quiz Bowl Contest

Senior Packet 2, Phase A

- 1) When is it most efficient for a dairy cow to regain body condition?
 - In late lactation
- 2) Please calculate your heifer's average daily gain if she weighs 80 pounds at birth and weighs 480 pounds at 200 days of age.
 - 2 pounds per day ADG
- 3) Dairy cattle are most comfortable when the environmental temperature is within a certain range. What is this temperature range called?
 - Thermo-neutral zone
- 4) What is the common name of the condition that can develop in the rumen of a dairy cow when we feed too much grain and not enough effective fiber, which causes the pH of the rumen to drop to a low level?
 - Acidosis

Senior Packet 2, Phase B

- 1) NYSCHAP (New York State Cattle Health Assurance Program) has recently initiated what certification program that farmers can be part of, if specific guidelines are met, to help lower consumers concern about the treatment of animals?
 - Cattle Welfare Certification Program
- 2) In the connection with milk quality what are the 2 major characteristics of thermotolerant bacteria?
 - Heat resistant bacteria that are not killed during pasteurization
 - Will not cause sickness to people
- 3) Mastitis is one of the most costly diseases in dairy cattle and for the dairy producer. Name 4 mastitis related costs on a farm.
 - Reduced milk production
 - Increased cull rate
 - Lost milk premiums
 - Discarded milk
 - Veterinarian expenses
 - Reduced cow sale values
 - Drugs cost for treating mastitis
- 4) Research in the last decade has concluded that milk has numerous benefits to the human body's health, including a reduction in some cancer types and improving intestinal health. Name 3 other positive benefits that milk attributed to.
 - Control blood pressure
 - Reduce heart disease risk
 - Support healthy weight
 - Enhance satiety (fullness when eating)
 - Bone health
 - Reduce the risk of Type 2 diabetes (blood sugar control)

Senior Packet 2, Phase C

- 1) The recent increase in the production of ethanol has increased the cost of which feed commodity?
 - Corn
- 2) Which Volatile Fatty Acid, if produced during silage fermentation, has a rank, rancid or even fishy smell?
 - Butyric Acid
- 3) Bovatec, Rumensin, and Deccox are all examples of what type of calf feed additive?
 - Anticoccidial or Coccidiostat or Coccidiocide
- 4) Who invented the centrifugal cream separator for milk?
 - Dr. DeLaval
- 5) In regards to crossbreeding, what does F1 refer to?
 - The first cross or first generation
- 6) The protein percentage of first milking colostrum is approximately how many times more of that found in normal whole milk?
 - 5 times more
- 7) In a dairy cow, what is the name of the thick-walled fibrous tube that serves as a gateway between the vagina and the uterus?
 - Cervix
- 8) What component of milk is estimated by the milk cryoscope test?
 - Water
- 9) What term is used to describe an infertile heifer born twin to a bull?
 - Freemartin
- 10) When measuring a dairy farms competitiveness and business management, an important tool for evaluating the productivity of workers and cattle is measured by what?
 - Pounds of milk sold per worker

11) Which region of the U. S. has the most dairy farms?

- Midwest

12) At what stage of bloom should red clover be cut to yield its highest feeding value?

- Half bloom

13) If a cow is infected with Neospora, what is the most common result?

- Abortion

14) The tight muscle at the teat end which helps prevent foreign substances from entering the udder is called what?

- Sphincter muscle

15) What are the genes called that occupy corresponding loci in homologous chromosomes but affect the same character in different ways?

- Alleles

16) What is the name of the toxic substance that is often present in frost-damaged sorghum?

- Prussic acid

2012 NY District Senior Dairy Quiz Bowl Contest

Senior Packet 3, Phase A

- 1) Many people are concerned now with “food miles” and are buying locally grown foods. What is the definition of food miles?
 - The miles between the consumer and the producer

- 2) What is the predominant acid in anaerobically fermented corn silage?
 - Lactic acid (also accept lactate)

- 3) What is the name of the process where in the presence of light, chlorophyll-containing plants convert carbon dioxide and other elements into carbohydrates and oxygen?
 - Photosynthesis

- 4) What is the name of the contractile tissue that, when stimulated by oxytocin, forces milk out of the alveoli in the mammary gland?
 - Myoepithelium or myoepithelial cells

Senior Packet 3, Phase B

- 1) Name three different types of milking parlors.
 - Rotary
 - Parallel
 - Herringbone
 - Swing
 - Parabone

- 2) Providing a cow calves on or close to her due date and colostrum is milked out within 4 hours of calving, what are two variables that can affect the antibody level in the colostrum?
 - Disease exposure of the cow, infection
 - Length of dry period
 - Age of cow, older cow
 - Cow's vaccination program

- 3) The MILC program financially compensates dairy producers when domestic milk prices fall below a specified level. What does the acronym MILC stand for and what organization administers the program?
 - Milk Income Loss Contract
 - Administered by Farm Service Agency (FSA)

- 4) Name 2 commercial prostaglandin products.
 - Estrumate
 - Lutalyse

Senior Packet 3, Phase C

- 1) The PDCA organization makes the scorecards for classifying dairy cattle. What does PDCA stand for?
 - Purebred Dairy Cattle Association
- 2) When pre-dipping a cow before milking, how much of the teat should be covered?
 - The entire teat, 100%
- 3) What is the recommended temperature for washing the bulk tank, milk lines, and other milking equipment?
 - 160 degrees F
- 4) When looking at the performance records for making matings and sire selection decisions, what does CE stand for?
 - Calving Ease
- 5) Which dairy breed has the highest average percentage of inbreeding at 7.23 %?
 - Jersey
- 6) What is the primary way genomics increases genetic progress?
 - By reducing generation interval
- 7) What is the name of the process where legume plants like alfalfa and clover convert atmospheric nitrogen into nitrogenous compounds that are useful to the plant?
 - Nitrogen fixation
- 8) What is the technical term for the class of chemicals used to kill internal parasites in cattle?
 - Anthelmintics (also accept dewormers)

9) What unit are vitamins measured in?

- International units

10) When working in the area of financial management, what is the statement used to measure the profitability of the business by measuring all sales receipts and expenses used?

- Income statement

11) Why is it a good management practice to rotate between different herbicides used on your fields?

- To reduce weed resistance

12) What is the name for a written plan for the land application of manure and fertilizer to meet crop needs?

- Nutrient Management Plan

13) In reproduction, what is the term for the uterus's button-like structures that attach the uterus to the developing fetal membrane?

- Caruncles

14) According to State labor laws, what is the minimum age a person can be to perform any job declared hazardous?

- 16

15) Researchers are looking at earlier starting points for management intervention and new cost effective ways to cool cows with the creation of THI. What does THI stand for?

- Temperature Humidity Index

16) How many calories are in one cup of 2% milk?

- 120 calories

**2012 NY District Senior
Dairy Quiz Bowl Contest**

Senior Packet 4, Phase A

- 1) Which of the following terms refers to scours: acetoneuria, pneumonia, enteritis, or brucellosis?
 - Enteritis

- 2) Of the following, which is a fat soluble vitamin: Vitamin K, Niacin, Vitamin B 12, or Vitamin C?
 - Vitamin K

- 3) Which of the following contains the most energy: fiber, fat, protein, or carbohydrates?
 - Fat

- 4) Of the following which is the protein hormone that is associated with ovulation; somatotrophin, cortisol, LH, or adrenaline?
 - LH

Senior Packet 4, Phase B

- 1) Pregnancy testing using an ELIZA test looks for the presence of PSPB. What does PSPB stand for?
 - Pregnancy Specific Protein B
- 2) Name the 3 types of fiber found in a dairy cow's ration.
 - NDF(neutral detergent fiber)
 - ADF (acid detergent fiber)
 - Lignin-effective fiber
- 3) There have been numerous stories in the media about ICE raids on dairy farms. What does ICE stand for?
 - Immigration and Customs Enforcement
- 4) If a dairy herd's conception rate is 50 %, and the heat detection rate is 50%, what is the pregnancy rate (PR)?
 - 25%

Senior Packet 4, Phase C

- 1) What is the name for a disease that can be transferred between humans and animals?
 - Zoonotic
- 2) Mastication is another word for what when talking about the dairy animal?
 - Chewing
- 3) What is a bio filter used for on the farm?
 - Filter air or water to reduce farm pollution
- 4) How old is a calf when it starts to chew its cud?
 - 2 to 3 weeks
- 5) What alters rumen fermentation by boosting the production of propionate acid and reducing the production of acetic acid?
 - Ionophores
- 6) Lifetime net merit is an index used to rank both bulls and females. How many traits does it include?
 - 9 traits
- 7) The release of which hormone causes the uterus to contract more forcefully and initiates the expulsion of the fetus?
 - Oxytocin
- 8) What is the name of the metabolic disorder that can occur in early lactation dairy cows and mild cases are often treated with propylene glycol?
 - Ketosis
- 9) How many pounds of hard cheese will one thousand pounds of milk yield?
 - 100 pounds of hard cheese
- 10) What is the recommended cutting height for alfalfa to obtain the highest yields?
 - 2 to 2 ½ inches

11) In the area of dairy nutrition, what is the name for the important measure calculated by dividing milk production by dry matter intake?

- Feed efficiency

12) The three major factors that influence the energy requirements of dairy heifers are environment, growth rate and what?

- Size

13) When talking about the onset of postpartum estrus cycle, what does the term anestrus mean?

- Lack of estrus or lack of estrus cycle

14) What is the main characteristic of non-ambulatory cattle?

- Animals are unable to move on their own

15) When a cow is pregnant, what is the name for the days between conception and calving?

- Gestation

16) What is the name of the category on the PDCA Dairy Cow Unified Scorecard that replaced body capacity and dairy character?

- Dairy Strength

2012 NY District Senior Dairy Quiz Bowl Contest

Senior Packet 5, Phase A

- 1) What is the name of the Greek yogurt that is produced by the largest yogurt manufacturer in New York?
 - Chobani
- 2) What type of organism causes Bovine Leucosis?
 - Virus
- 3) What is the name of the hormone that is critical in the initiation and maintenance of lactation?
 - Prolactin
- 4) If you have a predominant x-bearing sperm cell in a semen fraction, what are you trying to accomplish?
 - Sexed semen and trying to get a heifer calf

Senior Packet 5, Phase B

1) What are the four phases of a fly's life cycle?

- Egg
- Pupa
- Larvae
- Adult

2) Name 4 signs of estrus in a dairy cow.

- Standing to be mounted
- Mounting other cows
- Following and smelling other cows
- Bellowing
- Restlessness
- Red and swollen vulva
- Clear mucus discharge from Vulva

3) The net merit index includes 9 traits. Name 4 of them.

- Protein lbs.
- Fat lbs.
- Productive life
- Somatic cell score
- Daughter pregnancy rate
- Udder composite
- Feet and legs composite
- Body size
- Calving ability

4) How long and at what temperature should colostrum be pasteurized?

- 140 degrees F for 30 minutes

Senior Packet 5, Phase C

- 1) The immunity a calf gets from its mother through colostrum is classified as what type of immunity?
 - Passive immunity
- 2) The introduction of which disease in dairy cattle halted the transporting of cows from Canada to the United States?
 - BSE (Bovine Spongiform Encephalopathy) or Mad Cow Disease
- 3) Which infectious hoof disease is caused by the spirochete bacteria?
 - Heel warts or digital dermatitis
- 4) What is the name of the major artery that supplies blood to the udder?
 - External pudic artery
- 5) When monitoring for heat stress, what symptom can be observed in cattle before an increase in body temperature?
 - Increased respiration rate
- 6) What are erythrocytes commonly called?
 - Red blood cells
- 7) What feed additive is added at harvest to stimulate fermentation and reduce dry matter loss?
 - Silage Bacterial Inoculants
- 8) Diarrhea is one of the most common diseases during the first how many days of life of a calf?
 - 10 to 14 days
- 9) What hormone is injected into dairy cattle to cause superovulation?
 - Follicle Stimulating Hormone (FSH)
- 10) What is the name of the absorptive tissue that lines the small intestines?
 - Villa

11) The process for the release of an egg from a follicle is called what?

- Ovulation

12) In what part of the digestive tract are IgG's absorbed into the bloodstream in a newborn calf?

- Small intestine

13) When we want to determine a feeds dry matter content, what is removed from the feed?

- Water

14) How many days are there in the life cycle of a fly to grow from an egg to an adult?

- 10 days

15) What breed of dairy cattle has the longest gestation period?

- Brown Swiss

16) The detoxification of metabolites and production of bile is the function of what organ?

- Liver

2012 NY District Senior Dairy Quiz Bowl Contest

Senior Packet 6, Phase A

- 1) What is genomics?
 - The study of genes or gene products in an organism
- 2) What is the technical name for the milk veins?
 - Subcutaneous Abdominal Veins
- 3) Lactobacillus bacteria are the good bacteria that are found in what dairy product humans consume?
 - Yogurt
- 4) Describe ropy milk.
 - Contains strings of white blood cells

Senior Packet 6, Phase B

1) Name 4 proper handling practices for teat disinfectants.

- Store in cool, dry areas
- Don't allow disinfectant to freeze
- Keep containers closed to prevent contamination
- Do not use after expiration date
- Do not assume that teat disinfectant will kill all pathogens
- Follow label instructions
- Use teat disinfectant in recommended concentration
- Do not dilute unless indicated on the label
- Use clean container for diluting if recommended and thoroughly mix the final product
- Never pour used disinfectant back into the original container
- Disinfectant cups should be emptied and cleaned as part of the routine wash-up after each milking or if they become contaminated during milking

2) Cows having twins have higher incidences of health issues. Name 4 of them.

- Stillbirth
- Retained placenta
- Metritis
- Ketosis
- Milk fever
- Displaced abomasum
- Longer days open
- Less milk production
- Higher incidence of culling

3) Name 2 ways dairy farmers can market their milk.

- Direct marketing
- Wholesaling

4) Name the 3 organisms that live in the rumen and digest feed.

- Bacteria
- Fungi
- Protozoa

Senior Packet 6, Phase C

- 1) In what year was the World Dairy Expo founded and the host for the first show?
 - 1967
- 2) What is the acronym for Deficiency of Uridine Monophosphate Synthase?
 - DUMPS
- 3) The process of recombining fatty acids to glycerol that is suitable for body fat storage is known as what?
 - Lipogenesis
- 4) What is another name for a fertilized ovum?
 - Zygote
- 5) What does the acronym BTMC stand for?
 - Bulk Tank Milk Culture
- 6) What is the name for the feed material found in the small intestine of a dairy cow?
 - Chyme
- 7) What is the name of the acid that is found primarily in the abomasum?
 - Hydrochloric Acid
- 8) What is fortification?
 - The process by which vitamins are added to milk
- 9) In the area of herd management, what does the acronym DNB stand for?
 - Do Not Breed
- 10) What is the standard length of a DHIA record?
 - 305 days

11) What is an herbicide used for?

- Weed control

12) What fast-food chain is looking at how its suppliers can cut down on methane produced from cow flatulence?

- McDonalds

13) How many days does it normally take cows to adjust to a new group environment?

- 3 to 5 days

14) What is an elevation in the normal core body temperature of an animal called?

- Fever

15) What year was sexed semen made available commercially?

- 2003

16) In 2011, milk fat content average dropped from 3.6 % to what percentage?

- 3.3 %

2012 NY District Senior Dairy Quiz Bowl Contest

Senior Packet 7, Phase A

- 1) Ultraviolet radiation is used to do what to raw milk?
 - Pasteurization
- 2) What volatile fatty acid is the precursor for glucose?
 - Propionic Acid
- 3) What is the term that describes the amount of income that occurs after feed cost are calculated?
 - Income over feed cost (IOFC)
- 4) When a calf nurses or suckles a bottle, what directs milk from the esophagus past the rumen and directly into the omasum?
 - Esophageal groove

Senior Packet 7, Phase B

1) Name 4 ways a cow can lose water?

- Milk
- Urine
- Sweating
- Breathing
- Feces

2) Name the 3 sections of the small intestine.

- Duodenum
- Jejunum
- Ileum

3) What are the 2 main functions of the large intestine?

- Water absorption
- Storage of waste materials

4) Who is the current U.S. Secretary of Agriculture and where does that person work?

- Tom Vilsack
- Washington DC

Senior Packet 7, Phase C

- 1) New York is one of 39 states that allows the sale of this type of milk on the farm?
 - Raw milk
- 2) What term is used to describe a cow who's rear hocks are too close?
 - Cow-hocked
- 3) Consuming what dairy product will help alleviate bad breath after eating garlic?
 - Milk
- 4) What is the name given to the mineral elements that have a negative charge?
 - Anions
- 5) What are the most common molds found in corn silage?
 - Penicillin
- 6) How much is frame worth on the Unified Score Card?
 - 15%
- 7) What is the common name for Hypocalcemia?
 - Milk fever
- 8) Approximately 70 % of all costs associated with mastitis is from what?
 - Loss of milk production
- 9) What country is home to the most milking cows in the world?
 - India
- 10) What is the primary key to effective fly control?
 - Sanitation

11) Where does New York rank in milk production nationally for 2011?

- 4th

12) What shape is the 2010 USDA food guide?

- Round (plate)

13) How much does a kilogram weigh in pounds?

- 2.2 pounds

14) What is another name for the omasum?

- Manypiles

15) What is colostrogenesis?

- The process of making colostrum

16) A sperm produces what during metabolism?

- Lactic acid

2012 NY District Senior Dairy Quiz Bowl Contest

Senior Packet 8, Phase A

- 1) Below what rumen pH does subclinical acidosis occur?
 - 5.8
- 2) What type of mastitis is characterized by visual abnormalities in the udder and or milk?
 - Clinical mastitis
- 3) The corpus luteum secretes what hormone?
 - Progesterone
- 4) What is the system called that evaluates the thinness or fatness of dairy cattle that uses a score based on a five-point scale and can be used to evaluate nutrition and health.
 - Body Condition Scoring

Senior Packet 8, Phase B

- 1) Name 4 of the 10 essential amino acids for milking cows.
 - Arginine, Histidine, Isoleucine, Leucine, Lysine, Methionine, Phenylalanine, Threonine, Tryptophan, Valine

- 2) List the 4 categories that make up the PDCA Dairy Cow unified scorecard and give the point value for each category.
 - Frame-15 pts
 - Dairy Strength-25 pts
 - Rear feet and legs- 20 pts
 - Udder- 40 pts

- 3) Name 3 diseases in dairy cattle that are caused by a clostridial organism.
 - Black leg
 - Malignant edema
 - Overeating disease
 - Tetanus

- 4) Give 3 reasons why fiber is needed in dairy cattle rations.
 - Maximize dry matter and energy intake
 - Maintain normal rumen function
 - Maintain normal milk fat percentage
 - Protect against post calving difficulty

Senior Packet 8, Phase C

- 1) What test is used to determine if raw milk has been added to pasteurized milk?
 - Phosphatase Test
- 2) In reference to milk quality testing, what does P.I. stand for?
 - Preliminary incubation
- 3) The natural protective agent mucin is found in what part of the digestive system?
 - Intestines or large intestine
- 4) Trichomonas causes infertility, abortions and pyometria in dairy cows. How is Trichomonas spread?
 - Semen
- 5) Where in the reproductive tract does fertilization of the ova take place?
 - Oviduct
- 6) What is the enzyme that humans need to digest lactose?
 - Lactase
- 7) The management practice that is implemented on the farm that helps to reduce the introduction and spread of diseases on the farm is called what?
 - Biosecurity
- 8) What is the most important factor in stimulating how well a calf's immune system can fight off diseases, providing the dry cows have a good vaccination program?
 - Getting 1 gallon of good colostrum into a calf within the first six hours of birth
- 9) How much are dairy producers assessed per hundredweight of milk to support dairy promotion activities?
 - 15 cents

10) The victory lane bottle of milk is presented each year to the winner of which famous car race?

- Indianapolis 500

11) What term defines a legal entity that allows you to hold and manage assets?

- Trust

12) By feeding less of this type of feed nutrient, ammonia emissions are reduced. What is the feed nutrient?

- Protein

13) A veterinarian can use this large blood vein visible in the neck of a dairy cow to draw blood from or I.V. fluids in. What is the name of this vein?

- Jugular vein

14) During the digestion process, what is the name of the enzyme that's function is to break down fat or lipids?

- Lipase

15) If refrigerated properly, pasteurized and homogenized milk remains fresh for how many days after the expiration date?

- 7 to 10 days

16) The Concentrated Animal Feeding Operation, CAFO, is regulated by what organization in New York State?

- N. Y. State DEC (Department of Environmental Conservation)

Extra Questions- 2012 NY District 4-H Dairy Quiz Bowl Contest

- 1) In order to be considered stray voltage, the voltage level of the electricity current must be greater than what?
 - ½ volt

- 2) What is the mineral in milk that is most readily absorbed by the human body?
 - Calcium

- 3) What does calcium propionate do for the cow?
 - Raises blood glucose and calcium

- 4) What are erythrocytes commonly called?
 - Red blood cells

- 5) A vessel between the milk system and the air system that limits the movement of liquids and other contaminants between the two systems is called what?
 - Sanitary trap

- 6) Who invented the milk bottle?
 - Dr. Thatcher

- 7) What substance in corn is likely to increase to toxic levels during a drought?
 - Nitrate

- 8) The main reason you would add soybean meal to a calf starter is to provide what?
 - Protein

- 9) Give the name of the first cow clone to be genetically altered with a gene for producing lysozyme.
 - Annie

10) What is the product “Today” (cephapirin sodium) used to treat?

- Mastitis

11) What is the common name for ruminal tympany?

- Bloat

12) What type of bond joins amino acids together to form a protein?

- Peptide bond

13) On most dairy farms, which type of silage storage facility offers the least cost per ton of silage stored?

- Bunker silo

14) Define the term morbidity rate.

- Number of sick animals in a given period of time

15) What type of credits can farmers buy through the Chicago Climate Exchange that certifies reduction in greenhouse gas emissions?

- Carbon credits

16) Typical milking unit inflations have a useful life of about how many milking's?

- 1,200 (accept 1,000 to 1,200)

17) Name the virus that causes small blisters on the teats followed by sores and scabs and is spread by the milker.

Cow pox

18) Why is manure run-off or leaching more of a problem in fields where the manure is applied in the fall?

- No growing crop to uptake manure nutrients

Team:

1) Forage crops are commonly harvested as hay, haylage, or silage. One criteria of deciding which class they fit into is dry matter content. Three samples have the following dry matter contents: 55, 88, and 32%. Which one would be hay? Silage? Haylage?

- Hay—88%,
- Silage—32%,
- Haylage—55%

2) Name the two enzymes secreted by the abomasum.

- Pepsin
- Rennin

3) Name two deductions found on a milk check.

- Dairy promotion
- Health insurance
- Hauling fee

4) Please list three functions of saliva in dairy cattle.

- Moistens Food,
- Acts as a Buffer,
- Lubricates Food,
- Provides Fluid base for many nutrients
- Provides the proper environment for bacterial growth