

## 2015 NYS District Senior Dairy Quiz Bowl Contest

### Senior Packet 1, Phase A

1) What is the most common use on the dairy farm for the following 3 substances: copper sulfate, zinc-sulfate, and formalin?

- Foot bath

2) Cryptosporidiosis (Crypto) affects which part of the digestive system?

-

- Small intestine

3) Vitamin D helps prevent what nutritional disorder in calves?

- Rickets

4) What is the more common name for bovine respiratory disease?

- Pneumonia

## **Senior Packet 1, Phase B**

1) Name the 3 volatile fatty acids produced by the rumen bacteria.

- Propionic
- Acetic
- Butyric

2) Give 3 clinical signs of mycotoxins in dairy cattle.

- Lower milk production
- Manure is loose and variable
- Butterfat is low
- Somatic Cell counts are increased
- Fertility is decreased

3) Give three of the four methods in which pregnancy can be determined in dairy cattle.

- Rectal palpation
- Urine test
- Blood testing
- Ultrasound

4) Name 4 of the 10 essential amino acids.

- Phenylalanine
- Valine
- Tryptophan
- Treonine
- Isoleucine
- Methionine
- Histidine
- Arginine
- Leusine
- Lysine

### **Senior Packet 1, Phase C**

1) What percentage of ova are in a mature cow's ovaries when she is born?

- %100

2) What is the cattlemen's term used to describe the time between calving and the time you are willing to wait breed the animal again?

- Voluntary waiting period

3) What is the highest grade of butter sold in the United States?

- U.S. Grade AA

4) 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

5) What piece of equipment is used to fill the rows of white plastic bags that are filled with silage?

- Ag-bagger

6) To help correct or prevent the build-up of acid in the cow's stomach, what would the dairyman most likely feed to the cows?

- Buffer (sodium bicarbonate)

7) Calcium Glutamate is an intravenous injection for immediate and temporary treatment of what?

- Milk Fever

8) Ideally, how long can froze colostrum be stored?

- 1 year

9) What disease does the acronym BLV stand for?

- Bovine Leucosis Virus

10) What is the common term for the amount of money one owes to creditors?

- Debt

11) What is the name of the movie directed by James Moll that depicts the everyday life of 6 farmers and was in movie theaters across the country?

- Farmland

12) The governor of what state declared yogurt as the official state snack?

- New York

13) What metabolic disorder often occurs when a dairy cow eats too much grain?

- Acidosis

14) How is salmonella spread?

- Fecal to oral

15) How long does the average cow stand to be ridden while she is in heat?

- 30 seconds

16) What ionophore is approved for use in lactating dairy cows?

- Monensin

## **2015 NYS District Senior Dairy Quiz Bowl Contest**

### **Senior Packet 2, Phase A**

1) The two primary sources of exposure to environmental pathogens that cause mastitis in dairy cows are moisture and what else?

- Manure

2) The rectum, colon and what else make up the hindgut of the digestive system?

- Cecum

3) What is the ultimate factor affecting forage quality?

- Maturity

4) In regards to dairy cattle digestion, what do the initials HBS stand for?

- Hemorrhagic Bowel Syndrome

## **Senior Packet 2, Phase B**

1) In raising heifers the goal is to calve them in at how many months and at what percentage of their mature body weight?

- 22 to 24 months
- 90% of their body weight

2) What are the two major environmental factors that impact the amount of heat stress a dairy cow undergoes?

- Temperature
- Humidity

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

- Duodenum
- Jejunum
- Ileum

4) What does it mean if a cow is described as having a positive energy balance and what happens to the extra energy?

- She is eating more energy that she is using
- It becomes fat

## **Senior Packet 2, Phase C**

- 1) What is the name given for the speed at which feed passes through the digestive tract?
  - Passage rate
- 2) How many cells are there in an embryo after 4 cell divisions?
  - 16
- 3) What are the hereditary units that are passed onto the offspring via the sperm and egg, which influences the expression of specific traits?
  - Genes
- 4) During which season are somatic cell counts generally higher?
  - Summer
- 5) Cows infected with the organism that causes Johne's disease often will begin shedding the organism at what age?
  - 2 years
- 6) The fermentation of starch results in the production of what in the rumen?
  - Propionate
- 7) OSHA has increased inspections of dairy farms in New York State recently. What does OSHA stand for?
  - Occupational Safety and Health Administration
- 8) How do you calculate the equity of a business?
  - Total assets minus total liabilities
- 9) What is the structure that holds the uterus and ovaries in their proper position?
  - Broad ligament
- 10) If a cow is described as being balanced in dairy femininity and strength, what section of the PDCA scorecard is she being evaluated under?
  - Dairy strength
- 11) What is the name of the new tagline that Milk Processor Education Program has launched?
  - Milk Life

12) What distinct type of ruminal acidosis is generally characterized by a rumen pH range between 5.0 to 5.5?

-Subacute ruminal acidosis (SARA)

13) Corn gluten meal is highest in which amino acid?

- Methionine

14) What must be fed with calf starter to help with the rumen development in calves?

- Water

15) The absorptive tissue that lines the small intestine is called what?

- Villi

16) Which professional sports league is partnering with the dairy check-off to promote child nutrition and fitness?

- National Football League (NFL)

## 2015 NYS District Senior Dairy Quiz Bowl Contest

### Senior Packet 3, Phase A

1) Of the following, which age of a cow is more likely to develop ketosis: a) 1<sup>st</sup> calf heifer, b) 2<sup>nd</sup> calf heifer, or c) aged cow?

- C) Aged cow

2) What is the pregnancy rate on a dairy farm if you have a 50 % heat detection rate and 40 % conception rate?

- 20%

3) If a heifer has a flight zone of 10 feet, what does this mean?

- It means when you get roughly 10 feet away from her before she will flight or move away from you

4) Which rear udder trait is measured horizontally across the top of the milk secreting tissue where the udder attaches to the body wall: a) udder tilt, b) rear udder height, c) rear udder width, or d) udder cleft?

- Rear udder width

### Senior Packet 3, Phase B

1) Name 2 functions of the large intestines in the dairy cow.

- Water absorption
- Storage of waste material

2) Which hormone is critical for the initiation and maintenance of lactation and what gland produces it?

- Prolactin (hormone)
- Produced by the pituitary gland

3) Give 3 advantages to a dairy producer who is using intensive rotational grazing for their herd.

- Low input cost
- Low Labor requirements
- Even manure distribution
- Reduced soil erosion
- Improved weed control

4) Name two minerals that, if fed in increased levels to your pre-fresh and or dry cows, can lead to increased incidences of milk fever.

- Potassium, calcium and phosphorus

### Senior Packet 3, Phase C

1) In the wake of numerous high-profile undercover investigations by animal rights groups, what is the name of the law that many states are passing that prevents the taking of videos and photos without the owner's permission?

- Ag-Gag Law

2) There have been more dairy farms beginning to use more automatic milking systems (AMS) to reduce labor cost and improve labor efficiency. What is the most common AMS seen on farms?

- Robotic milking system or robots

3) Essentially what will happen to the phosphorus consumed by a dairy animal that is above the NRC requirements?

- Excreted in manure

4) What percentage of US milk production was exported in 2013?

- 16 %

5) An inflammation of the uterine lining is called what?

- Endometritis

6) What is the process called where the poorest animals are culled and the best animals are allowed to be parents of the next generation?

- Selection

7) The bacteria *Moraxella bovis* causes what disease in dairy cattle?

- Pinkeye

8) What bodily fluid helps maintain optimum pH in the cow's rumen?

- Saliva

9) What acid is more desirable during ensiling?

- Lactic acid

10) What class of milk does butter belong to?

- Class IV

11) What is the primary way cows get a mastitis infection?

- Bacteria enter through the teat end

12) Which U.S state has the most organic dairy cows?

- California

13) What is the term used for the financial obligations incurred by an individual or business which include current, intermediate, and long-term obligations?

- Liabilities

14) In the fall of 2013 the announcement of Dairyalea Cooperative voted to merge with what other company?

- Dairy Farmers of America (DFA)

15) Legume roots are a host for which type of nitrogen-fixing bacteria?

- Rhizobia

16) What is the name of the reproductive procedure that is being described when a veterinarian uses an ultrasound- guided needle to aspirate follicles off the cow's ovary through the vaginal wall?

- In-vitro Fertilization (IVF)

## 2015 NYS District Senior Dairy Quiz Bowl Contest

### Senior Packet 4, Phase A

1) In a higher producing, early lactation dairy cow, what happens to her body weight when she enters a negative energy balance phase?

- It decreases

2) What is the major symptom of winter dysentery?

- Diarrhea

3) Has the Carbon Footprint per cow Increased, Decreased, or Remained the same since the 1940's?

- Decreased

4) Legislation requires that homebuyers who move within one mile of farms be informed that agriculture can be noisy, smelly, and dusty and that farmers have what right?

- Right to Farm

## Senior Packet 4, Phase B

1) Name 4 things a contract heifer grower should include in a contract with a dairy farmer.

- Fees for raising heifers or negotiated price
- Statement of who owns the heifer
- % of calves that must have IgG levels of 5 g.dl
- Plan for calves that are sick or hurt
- Number of AI services before clean-up bull
- Arrival and return criteria for heifers
- Cost for transportation and who is responsible
- Payment policy
- Who is responsible if heifer dies
- Who is responsible for insurance cost of heifers
- Acceptable culling rate
- Who pays for veterinarian cost
- Who pays for breeding cost
- How will the contract be dissolved

2) What 3 things does a bull's NAAB code tell you about the bull?

- What bull stud
- What breed
- The bull's number

3) If your haylage is 55% moisture, how many pounds of dry matter are in 80 pounds of haylage?

- 36 pounds

4) Name the two most important management practices done on the farm that can reduce foot problems for dairy animals.

- Foot baths and Foot trimming

## Senior Packet 4, Phase C

1) What is the technical name for a short estrus cycle?

- Premature luteolysis

2) When using an on-farm mastitis culturing set-up, why is an incubator needed?

- To maintain an even warm temperature for bacteria to grow

3) What is the SCC requirement for dairy producers whose milk is being used to produce products for European consumption?

- 400,000 Cells per millimeter or less

4) Subclinical rumen acidosis can occur when the pH of the cow's rumen drops below what level?

- 5.8

5) A soil penetrometer is used to measure what?

- Soil compaction

6) What percentage of nitrogen is found in most proteins?

- 16%

7) How soon after filling a silo does the formation of dangerous silo gases peak?

- 1 to 2 days

8) The secretion of prostaglandin causes destruction of which reproductive structure?

- Corpus luteum

9) How many inches wide should a freestall be for a 1600 lbs. cow?

- 48 to 54 inches

10) How many pounds of milk does it take to make one pound of authentic Greek yogurt?

- 4 pounds

11) What is another name for direct-fed microbial' s that are fed to cattle to increase feed efficiency?

- Probiotics

12) What is the term used to describe the period of increased growth rate that follows a growth restriction imposed earlier in a heifers life?

- Compensatory Growth

13) What percentage of the A. I. breeding population are genomic bulls?

- 52%

14) Which major food company recently entered into a joint venture with the German company Theo Mueller Group to produce Greek-style yogurt in the U.S?

- Pepsi Co.

15) What does the financial statement Assets minus Liabilities yield?

- Net worth

16) What is the name for the long-term storage of carbon in soil or plant biomass?

- Carbon Sequestration

- **2015 NYS District Senior  
Dairy Quiz Bowl Contest**

**Senior Packet 5, Phase A**

1) The failure to absorb enough antibodies despite being fed adequate levels of IgG at birth is called what?

- Passive transfer failure?

2) How is feed Shrink calculated?

- Total amount grown or purchased minus the amount that is actually consumed by cows

3) What is the term used to describe an animal that is infected with a disease but has no clinical signs?

- Carrier

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

- Diuretics

## Senior Packet 5, Phase B

1) Name 3 causes of feed shrink.

- Feed left in the field because harvester missed it
- Feed spilled during harvest
- Dry matter loss due to fermentation
- Feed that spoils during storage
- Feed that is spilled or blown away during feeding
- Feed eaten by birds or rodents

2) Name 3 of the 4 Dairy Records Processing Centers (DRPC's) in the U. S.

- AgriTech Analytics
- DHI Provo
- AgSource Cooperative
- Dairy Records Management System

3) The PDCA scorecard has four major breakdowns for dairy cattle. Name each of the breakdowns and the number of points for each on the scorecard.

- Udder-40 points
- Dairy Strength- 25 points
- Rear feet and legs- 20 points
- Frame- 15 points

4) Which entities are the three largest suppliers in the global dairy export market?

- New Zealand
- European Union
- United States

## Senior Packet 5, Phase C

1) How long does it take an egg to go through the oviduct of a cow?

- 4 days

2) Cows positive for which virus can develop lymph sarcoma or lymphoma cancer?

- Bovine Leucosis Virus (BLV)

3) What is the name given to the portion of feed that remains after water has been removed by drying?

- Dry Matter

4) MUN shows how well nitrogen and fermentable carbohydrates are balanced in the ration. What do the initials MUN stand for?

- Milk Urea Nitrogen

5) What is calculated when looking at the number of times per minute that the pulsator opens and closes?

- Pulsation Rate

6) What is the name used for the relationship when two living organisms or creatures live in harmony with each other and both benefit from the relationship?

- Symbiosis

7) Heat stress may reduce the ability of a cow's liver to make what sugar?

- Glucose

8) Which dairy industry logo was sent to pasture last year after 20 years of use?

- "Got Milk"

9) What is the name of the master gland that controls the estrous cycle?

- Pituitary gland

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) What country developed and launched a routine evaluation for mastitis resistance with the release of December 2013 bull proofs?

- Canada

12) What nutrient is like antifreeze for alfalfa and will help reduce winterkill rates?

- Potassium

13) How many inches of mercury should the teat and vacuum pressure measure during milking?

- 12 -13 inches

14) What counteracts the acid produced from the digestion of starches and sugars by stimulating saliva production to buffer the rumen?

- Chewable or effective fiber

15) What is the international standard limit for Somatic Cell counts?

- 400,000 /ml

16) What is the threadlike linear strand of DNA that carries genes and functions in the transmission of hereditary information?

- Chromosome

## 2015 NYS District Senior Dairy Quiz Bowl Contest

### Senior Packet 6, Phase A

1) What is the name given to mineral elements which have a negative charge?

- Anions

2) What is the main advantage for using a brown midrib variety for corn silage?

- Lower lignin content and greater fiber digestibility

3) In the dairy cow, what is the name of the thick-walled fibrous tube that serves as a gateway between the vagina and the uterus?

- Cervix

4) When grass or alfalfa silages are not ensiled properly, what strong odor organic acid is produced?

- Butyric Acid

## Senior Packet 6, Phase B

1) Name 4 pieces of information that can be found on milk check stub.

- Producers name
- Producers number
- Milk sold/Month
- Milk sold/picked-up
- Butterfat
- Proteins
- Other solids
- SCC
- Bacteria
- Freeze pt.
- Sediment test
- Price
- Premiums
- Deductions

2) Macro minerals are generally required in large quantities and are stated as a percent of the rations dry matter. Name 4 of the 7 macro minerals.

- Calcium
- Chloride
- Magnesium
- Phosphorus
- Sodium
- Sulfur
- Potassium

3) ADF consists of 2 components and NDF consists of 3 components: What are the 2 components in ADF and what are the 3 components in NDF

- ADF-Cellulose and lignin
- NDF-Hemicellulose, cellulose and lignin

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

- Stillbirth
- Retained placenta
- Metritis
- Ketosis
- Milk fever

## Senior Packet 6, Phase C

1) What is the common name for Pneumonic Pasteurellosis?

- Shipping Fever

2) What is the name for a crop that is planted to shield the soil from erosion, add organic matter, and captures nutrients that otherwise would be lost to runoff?

- Cover crop

3) What hormone suppresses other hormones during the estrus cycle and promotes pregnancy?

- Progesterone

4) What class of milk is yogurt classified as?

- Class 2

5) In the animal world, what does NADC stand for?

- National Animal Disease Center

6) What deadly gas can gypsum bedding release when stored in long-term manure storage?

- Hydrogen sulfide

7) What is the name for the type of corn silage that is made by shredding the entire corn plant longitudinally while simultaneously shattering the kernel and has a longer chop length than conventional corn silage?

- Shredlage

8) According to the FDA, the official term for the ongoing relationship between a farm manager and veterinarian is called what?

- Veterinary Client Patient Relationship (VCPR)

9) What do we call a financial statement that shows a business' income and expenses for a specific time period?

- Income statement

10) What is the most reliable way of knowing the nutrient content of forages?

- Forage testing

11) On mostly larger dairy farms, what piece of equipment is the biggest cause of soil compaction?

- Liquid manure spreader

12) Healthy cows will have how many rumen contractions per minute?

- 1 to 2

13) What is the most commonly used method to detect estrus on US dairy farms?

- Visual observation

14) What is the DHI Hot Sheet used for in dairy herd management?

- To help producers manage the herd SCC

15) According to the PMO, a milking system must be washed at least how often?

- Every 24 hours

16) ) When silage temperatures exceed 100 ° F during fermentation, what nutrient is broken down and the remains of it are heat damaged and unavailable to the cow?

- Protein

## **2015 NYS District Senior Dairy Quiz Bowl Contest**

### **Senior Packet 7, Phase A**

1) Autotoxicity describes the process in which an established plant produces chemicals that escape into the soil and reduce the establishment and growth of new plants. What is the name of this plant?

- Alfalfa

2) In the dairy cow, where are B-complex vitamins and Vitamin K produced?

- Rumen

3) What specific term is used to describe the number of days from calving until first breeding date?

- Days to first service

4) What condition can develop in the dairy cow's feet if she has rumen acidosis?

- Laminitis or Founder

## Senior Packet 7, Phase B

1) Name 4 common components found on a forage analysis report.

- Dry Matter
- NDF
- ADF
- Crude protein
- Soluble protein
- Total digestible nutrients
- Net energy of lactation
- Ash

2) In the dairy industry, name four animal welfare issues being faced by dairy producers.

- Tail docking
- Dehorning practices
- Confinement housing
- Lameness
- Down cow handling
- Vaccinations
- Hormones use
- Injections
- Calf hutches

3) Name three tests that milk plants use to determine the quality of raw milk.

- Acid degree value
- Antibiotic test
- Flavor
- Freezing point
- Leukocyte or somatic cell count
- Preliminary incubation (PI) count
- Sediment test
- Standard plate count

4) If you herd is averaging 80 pounds of milk and you receive \$20 per hundred weight and it cost \$8 per day to feed your cows, what is your income of feed cost?

- \$8.00

### Senior Packet 7, Phase C

1) When a cow with milk fever is treated with calcium, which hormone is released to decrease blood calcium levels?

- Calcitonin

2) Approximately how many pounds of blood are pumped through the cow's udder to produce one pound of milk?

- 400 Pounds

3) What is the crude protein percentage in accelerated milk replacer?

- 26 -30% (anything in this range)

4) It is recommended that a robotic milking system be washed at least every how many hours?

- 8 hours

5) Who is the current Commissioner of Agriculture in New York?

- Richard Ball

6) Glucose and galactose combine to form what disaccharide?

- Lactose

7) In the dairy cow, which stomach compartment are you most likely to find an ulcer?

- Abomasum

8) The digestibility of plants becomes less digestible as they become more mature. What cell wall component causes the decrease in digestibility?

- Lignin

9) What is the name of the environmental, unicellular, colorless, chlorophyll-lacking alga that thrives in moist, humid environments with ample organic matter and when it gains access to the mammary gland it causes a mastitis that resists all treatment therapies?

- Prototheca

10) What is the industry recommendation for the IgG level of colostrum to provide adequate antibody transfer?

- 50 mg/ml

11) In reference to CAFO legislation, what does BAT stand for?

- Best Available Technology

12) The financial measure of pounds of milk sold per worker is an important tool for evaluating the productivity of cattle and what?

- Workers

13) First lactation cows are different from multiple lactation cows in the way they partition their feed intake. A larger part of a first lactation cow's feed intake goes where as compared to a multiple lactation cow?

- Growth

14) What is the name for the important measure calculated by dividing milk production by dry matter intake?

- Feed efficiency

15) What immunoglobulin does the mucosal immune system produce?

- IgA

16) The average herd size for dairy animals in the U.S grew by nine cows this past year. With that information, what is the nation's current average herd size?

- 196 cows (accept 195 to 200)

## 2015 NYS District Senior Dairy Quiz Bowl Contest

### Senior Packet 8, Phase A

1) What is the more scientific name for the disease in cattle known as circling disease?

- Listeriosis

2) What percentage of nitrogen do most proteins contain?

- 16%

3) What is the more common name for papillomas?

- Warts

4) What compartment of the cow's stomach is most commonly punctured when she has hardware disease?

- Reticulum
-

### **Senior Packet 8, Phase B**

1) OSHA inspectors began inspecting dairy farms in 2014. Name 3 areas on the “Dairy dozen” list that inspectors look at.

- Manure storage and collection facilities
- Bull/cow handling facilities
- Electrical systems
- Skid steer operations
- Tractor operation
- PTO guards
- Power transmission/functional component guards
- Hazardous energy control during equipment maintenance
- Posted warnings of farm hazards
- Confined spaces
- Bunker silos
- Noise

2) Dystocia is hard on the calf, the cow and the people who are providing assistance. In working with maternity and fresh cow management on the dairy, give 3 positive management practices that should be used in assisting with anytime of dystocia.

- Proper training
- Optimal restraining of the animal
- Proper cleaning of the cow
- Use of lubricant
- Use of obstetric gloves
- Clean equipment

3) Give 3 reasons why vaccines may fail to work when administered.

- Incorrect administration
- Improper handling
- Choosing the wrong vaccine to prevent the disease
- Animals are stressed and don't respond to the vaccine
- Pathogen load is already too high in the herd

4) Name 4 types of flies that are commonly found on a dairy farm.

- House fly
- Stable fly
- Face fly
- Heel fly
- Deer fly

### Senior Packet 8, Phase C

1) What is the name of the enzyme that reacts with the fat in milk causing the release of fatty acids and results in rancidity?

- Lipase

2) In regards to milk production what does BTSCC stand for?

- Bulk tank somatic cell count

3) How long after breeding are most embryo transfers conducted?

- 7 to 8 days

4) What is the most economically detrimental parasite in dairy cattle?

- Brown stomach worm

5) What metabolic disorder in dairy cattle is associated with a magnesium deficiency?

- Grass Tetany

6) If the fetal membranes remain attached to the caruncles greater than 24 hours post calving, we call this condition what?

-Retained placenta

7) What does the acronym PCDART stand for?

- Personal computer direct access to records by telephone

8) The Smith-Lever Act was signed in 1914 establishing what?

-Cooperative extension service

9) What is the legal limit for bacterial counts in raw milk in the U.S.?

- 100,000 cfu (colony forming units)/ml

10) How many breeds are represented in the Hoard's Dairyman Cattle Judging Competition each year?

- 5

11) What type of pathogen is rabies?

- Virus

12) When washing the bulk tank, milk line, and other milking equipment, what temperature should the water be?

- 160 degrees F

13) What company currently holds the rank as the North America's top dairy processor?

- Nestle, USA

14) In the Agricultural Act of 2014 or the farm bill, what is the dairy portion called?

- Margin Protection Program

15) What is the suggested mowing height for forage grasses and alfalfa grasses?

- 4 inches

16) The metabolic disorder acetonemia is more commonly referred to as what?

- Ketosis

### 2015 NYS District Senior Dairy Bowl Extra Questions

1) 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
- Displaced abomasum
- Longer days open
- Less milk production
- Higher incidence of culling

2) Name three diseases that can cause abortions in dairy cattle.

Brucellosis  
Vibriosis (Campylobacteriosis)  
Chlamydia  
IBR  
Leptospirosis  
Listeriosis  
Neospora  
Trichomoniasis

3) Name four calf hood vaccinations that should be considered in a calf and heifer management.

- IBR
- BVD
- Brucellosis
- Clostridia
- Malignant edema
- Scours
- Blackleg
- Leptospirosis
- PI3

4) Name four signs of illness in calves

Poor appetite  
Cough  
Watery manure  
Nasal discharge  
Drooping ears  
Dull eyes  
Lack of energy  
Elevated temperature  
Rough hair coat

5) Name three uses that a farmer or dairy nutritionist would use a forage particle separator for.

Evaluate whether there is enough fiber in the ration  
Check for over mixing and particle size reduction  
Check ration uniformity  
Determine optimum mixing order of ingredients  
Evaluate if particle size changes with hay quality  
Check for sorting  
Develop baseline particle size information for comparison

### **Toss-up**

6) In reproduction, what does the acronym SCR stand for?

- Sire conception Rate

7) Diseases and infections that are transmitted between vertebrate animals and human beings are called? -

- Zoonoses

8) Fats are the most concentrated energy source in dairy cattle rations and contain how much more energy than starch?

- 2.25 times

9) Reduced fat, low fat and skim milk must be fortified with what vitamin to be nutritionally similar to whole milk?

- Vitamin A

10) What is another name for extra teats?

- Supernumerary teats

11) The belching of gas by ruminant animals as a natural way for releasing gases produced during the fermentation process is called what?

- Eructation

12) What is the name of the contractile tissue that forces milk out of the alveoli upon action of oxytocin?

- Myoepithelium

14) 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

15) In the right composting environment, decomposition of a mature dairy cow carcass will take approximately how many months?

- 6 to 8 months

16) How much does a bushel of soybeans weigh?

- 60 pounds

17) A plan for the land application of manure and fertilizer to meet crop needs is called what?

- Nutrient Management Plan

18) What type of gas do anaerobic digesters burn?

- Methane

19) According to the AVMA, the condition in which animals experience good health, are able to effectively cope with their environment, and are able to express a diversity of species-typical behaviors is known as what?

- Animal Welfare or Animal well-being

20) What toxin does wilted cherry tree leaves and frosted sedan grasses have in common?

- Cyanide

21) What is the target body condition score for an early lactation animal?

- (2.5)

22) What is often added to fat free milk to “whiten” the milk?

- Titanium Dioxide

23) What does the acronym CIDR stand for?

- Controlled Internal Drug Release

24) The percentage of cows that become pregnant out of those cows eligible to become pregnant in a 21 day period is called what?

- Pregnancy rate

25) Heel warts or digital dermatitis is an infectious hoof disease caused by what bacteria?

- Spirochete

26) What is a bio filter used for on the farm?

- Filter air or water to reduce farm pollution

27) What is the name of the popular program that is a partnership between the National Dairy Council and National Football League and is the nation’s largest in-school wellness program?

- Fuel up to Play 60

28) What state is number one in yogurt production as of January 2014?

- New York State

29) What type of units are vitamins measured in?

- International units

30) Which hormone does the calf secrete from its adrenal glands to initiate calving?

- Cortisol

