

2006 N.Y. State District Senior Dairy Quiz Bowl Contest

Senior Packet 1, Phase A

- 1) If properly fed to dairy cattle, urea supplies a readily available and potent source of what chemical element?
-Nitrogen

- 2) Is sexed semen usually more or less expensive than non-sexed semen per unit?
-More expensive

- 3) What mineral is important for its role in immune function, as an antioxidant, and in the prevention of cystic ovaries and retained placentas?
-Selenium (HD, 6/05, pg. 447)

- 4) What type of immunity does a newborn calf receive from consuming colostrum?
- Passive immunity

Senior Packet 1, Phase B

- 1) List 4 signs of Bovine Viral Diarrhea.

-Diarrhea, lameness, abortion, congenital defects in calves, temp 104-106 degree F, test positive to serologic tests, bloody diarrhea, loss of appetite, loss of weight, dehydration

- 2) One of the measures of dairy farm competitiveness, in a cost control plan, is the milking herds feed cost per cwt. of milk sold. Name 3 factors affecting feed cost per cwt.

- Level of milk production
- Current market prices of feeds
- Quality of forages fed and the effect on purchased feed inputs
- Whether or not the ration is balanced
- Cull percentage
- Length of dry cow period
- Length of calving interval

- 3) Milk fever, also known as parturient paresis, is a metabolic disorder, which generally occurs, in more mature cows within 48 hours after calving. List 2 symptoms of milk fever and one treatment method.

Symptoms

- Hind limb stiffness, partial paralysis, unable to rise
- Poor appetite
- Dry muzzle
- Reduce rumen movement
- Slow respiration
- Low body temperature and cold ears
- Weak heart rate

- Treatment-Give calcium IV, Calcium gel orally, calcium under the skin

- 4) What is the function of the NYSCHAP?

- To control animal health, food safety and environmental issues. It is mainly a disease prevention program that provides best management practices and educational materials for preventing disease and spread of diseases.

Senior Packet 1, Phase C

- 1) If a certain percentage of cows are lying down in a group or herd is a good indicator of cow comfort. What is this percentage?
-85% (HD, 3/05, pg. 216)
- 2) What does the percent equity in the business represent?
-The percent of the business that the family owns
- 3) What was the first fast-food restaurant to use the 3-a-day logo?
- Wendy's
- 4) What is the name of the process in which vitamins are added to milk before packaging?
- Fortification
- 5) ME production is a way to compare younger cows against older herdmates. What do the letters ME stand for?
-Mature Equivalent (HD, 9/05, pg. 622)
- 6) What is another name for mucous membrane?
- Mucosa
- 7) What is the process called that changes cream to butter?
- Churning
- 8) Cows should spend how many hours a day resting and ruminating?
- 12 to 14 hours (HD, 10/05, pg. 658)
- 9) Which supermarket chain is the largest in the U.S?
- Wal-Mart (HD, 7/05, pg. 507)
- 10) The feed material found in the small intestine of a cow is called what?
- Chyme

11) Minerals that are required by the body in relatively large quantities are known as what?

- Macro minerals

12) What is the precursor for Vitamin A?

- Carotene

13) What soft drink company markets Bravo Milk Slammers?

- Coca-Cola Inc (HD, 1/06, pg. 13)

14) Who is the 2006 newly appointed New York Commissioner of Agriculture?

-Patrick Brennan

15) Milk production peaks after how many weeks of calving?

- 6 to 8 weeks

16) What temperature should milk in your bulk tank be cooled to?

-38 to 40 degrees (HD 12/05, pg. 828)

**2006 N.Y. State District Senior
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Senior Packet 2, Phase A

1) Name the feed ingredient that is leftover from squeezing apples for cider.

- Apple pumice or pulp

2) Niacin is a water-soluble vitamin added to feeds to prevent what?

- Ketosis

3) Why would you add straw to a dry cow's diet?

- Straw is low energy resulting in fewer metabolic disorders after calving (Hoard's Dairyman, July 2005, page 471)

4) What is the recommended Body Condition Score for a cow in late lactation?

- 3.0 to 3.5 (Hoard's Dairyman, February 10, 2006, pg 100)

Senior Packet 2, Phase B

1) Name three Italian cheeses.

- Mozzarella, Provolone, Romano and Parmesan

2) Name two groups of dairy animals that are most susceptible to Mycoplasma on the farm?

- Incoming first calf heifers
- Other newly acquired animals
- Fresh cows
- Sick cows

3) What are the names of the two types of pasteurizers?

- Batch Pasteurizers
- HTST (High temperature, short time) (DHM 2/2005 p.40)

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

- Protozoa
- Fungi
- Bacteria (2006 Virginia 4-H Dairy Quiz Bowl Materials)

Senior Packet 2, Phase C

1) The best-known and most important drug obtained from cattle is made from the pancreas and is used to treat people who have a disease called sugar diabetes. Name the drug.

- Insulin

2) In the area of artificial insemination, what new technology has evolved?

- sexed semen (Hoard's Dairyman, May 25, 2005, page 396)

3) When looking for a job, what can you create that would be considered a "sales ad for you"?

- Resume (Hoards Dairyman, November 2005, pg 790)

4) When a cow cannot consume enough energy to support her requirements for maintenance and milk production, she is said to be in what?

- Negative Energy Balance (HD 12/2005 p. 813)

5) On a per episode basis, what is the average cost of a case of milk fever?

- \$334.00 (accept \$300-\$350) (DHM 11/2005 p.27)

6) Dairy cattle have how many pairs of ribs?

- 13 pairs (2006 V 4-H DQB materials)

7) What is endometritis?

- Inflammation of the inner surface of the uterus (HD. 3/05, pg. 217)

8) The ELISA test that is used to identify cattle with Johne's disease tests bacteria levels in what?

- Fecal or manure (HD, pg. 397)

9) A milking machine should be attached how long after teat/udder preparation?

- 60 to 90 seconds (HD 12/05, pg. 841)

10) Pasteurella pneumonia is more commonly known as what?

- Shipping fever

11) When looking at a ration for a milking cow, roughly what percent are typically forages?

-40 to 60 % (HD, 1/06, pg. 64)

12) Which vitamin can help prevent white muscle disease?

- Vitamin E

13) Where in the digestive system are fats broken down and digested?

- Small intestine (V 4-H DB materials)

14) Which jaw of the cow is the dental pad located on?

- Upper jaw

15) What is it called when you cut forage while wet, compact it and allow it to ferment?

- Silage

16) How much of the teat should be covered in teat dipping?

- Entire teat

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Senior Packet 3, Phase A

1) What is the single best monthly indicator of milk quality management?

-Average monthly somatic cell count (HD, 12/05, pg 836)

2) What would be your first step to being included in a national animal identification system?

- To register premises or registering your farm as a place that has animals (HD, 12/05, pg. 814)

3) What is backflushing when referring to milking procedures?

- System for sanitizing teat cup liners between milking's using water and sanitizer (V DQB study materials)

4) The greatest danger from silo gases occurs during the first _____ weeks after ensiling?

- 3 weeks

Senior Packet 3, Phase B

1) Give at least 2 management practices that can be used to halt mastitis in heifers.

- Separate calves to prevent sucking after feeding
- Don't feed infected milk
- Control flies
- Provide a clean, dry environment
- Freshen heifer in a clean facility
- Dry treat heifers
- Predip heifers daily when bagging up

2) Name 2 advantages to Net Wrap in reference to round baling.

- Faster wrap
- Less leaf loss during wrapping
- Better water shedding during storage
- Less storage loss (HD, 11/05, pg. 780)

3) Name the 3 parts of the teat through with milk passes.

- Teat cistern
- Sphincter muscle
- Streak canal or teat canal (V 4-H DQB study materials)

4) Name three of the four parts of an effective Integrated Pest Management System.

- Sanitation
- Adequate ventilation
- Chemical alternatives
- Monitoring pest population

Senior Packet 3, Phase C

- 1) Corona virus and Potavirus both cause what in young calves?
 - Diarrhea
- 2) What is the scientific name for “milk veins”?
 - Subcutaneous abdominal veins
- 3) Which part of the ruminant’s stomach removes water from the digesta?
 - Omasum
- 4) What is the name of the condition where one or both testes remain in the abdomen?
 - Cryptorchid
- 5) The Sediment test is used to measure the amount of what in milk?
 - Soil/ dirt
- 6) Low selenium in the diet has been linked to what reproductive disorder?
 - Retained placenta (HD, pg. 623)
- 7) What is the name of the product made by removing water from pasteurized skim milk?
 - Nonfat Dry Milk
- 8) Who is Mike Johanns?
 - US Secretary of Agriculture
- 9) Properly fermented silage contains what acid?
 - Lactic acid
- 10) Milk sold per worker equivalent measures what efficiency on a dairy farm?
 - Labor or worker efficiency
- 11) What part of the cell are chromosomes found?
 - Nucleus

12) What does the term “sex linked lethal” mean?

- Females transmit sex-linked recessive causing death of male zygotes (Dairy Cattle-PPP and P, pg. 66)

13) What percentage of dietary protein is in the form of rumen degradable protein?

- Approximately 65% (HD, 1/10/06, pg. 28)

14) What California based cheese company has plans to open a cheese plant in 2007 in Amarillo, Texas?

- Hilmar Cheese Company

15) The trading of cheese and butter in what city has a huge impact on milk prices?

- Chicago (HD, 4/05, pg. 286)

16) Calves with diarrhea can lose in large amounts of which major mineral through the feces that can cause dehydration?

- Sodium (HD, 1/25/06, pg. 50)

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Senior Packet 4, Phase A

- 1) What do elevated NEFA levels within 2 weeks prior to calving indicate?
 - Negative energy balance, increased chance of fresh cow problems (DM, Dec. 04, pg. 38)

- 2) What is a transition cow?
 - A cow going from non-lactating/pregnancy to a lactating cow (NEDB, 9/05, pg. 30)

- 3) When talking about labor efficiency and farm management, what is cows per hour a measurement of?
 - Parlor through put (HD's, pg., 743)

- 4) After the discovery of BSE in the US, what kind or type of cows were banned from entering the food chain?
 - Non-ambulatory or downer cows

Senior Packet 4, Phase B

- 1) What two fast food chains are now offering milk in resealable containers?
 - McDonalds and Wendy's (DHM 04)

- 2) Nutrients are substances that provide nourishment to the body. Name 5 of the 7 classes of nutrients essential for every living animal for survival.
 - Water
 - Energy
 - Protein
 - Carbohydrates
 - Fats
 - Vitamins
 - Minerals

- 3) What are two signs or symptoms, which might indicate a cow, is suffering from acidosis?
 - Low milk fat test
 - Low milk protein
 - Sore hooves
 - Fluctuating feed intake
 - Diarrhea
 - Limited cud chewing
 - Reduced milk production
 - Feces foamy (HD's, pg. 716, 2004)

- 4) Decomposing manure typically produces 4 gases that can reach toxic levels. Name 3 of the 4 gases.
 - Carbon dioxide
 - Ammonia
 - Methane
 - Hydrogen Sulfide

Senior Packet 4, Phase C

- 1) What is a voluntary waiting period?
 - The time between calving and eligibility for first breeding (DHM, Feb 05, pg. 32)
- 2) What hormone is injected to speed up the cow's milk let down process?
 - Oxytocin (HD's, 2/10/05, pg., 119)
- 3) Which government organization must approve all new types of food additives?
 - Food and Drug Administration
- 4) At how many days is it possible to determine pregnancy on a cow through using rectal palpation diagnosis?
 - 35-40 days (HD's, Feb 10, 05, pg., 81)
- 5) In newborn calves, what stomach compartments are not developed?
 - Rumen and reticulum
- 6) A procedure using hormones to alter the estrous cycle of cows to bring them into heat at the same time is called what?
 - Estrus synchronization
- 7) Why do you warm frozen colostrums slowly?
 - Thawing in too hot of water can destroy the natural antibodies
- 8) At what stage of lactation can body condition be most efficiently restored in cows?
 - Late lactation
- 9) How many times a year are A.I. proofs updated in the U.S?
 - 4 times a year (HD's, pg. 548)
- 10) On which side does more displaced abomasums occur?
 - Left side

11) In a cash accounting system, when are milk sales recorded?

- When the check is received

12) What are the basic building blocks of carbohydrates?

- Monosaccharides or simple sugars

13) What metabolic disorder are you treating when you drench your cow with Propylene glycol?

- Ketosis

14) What are lysine and methionine?

- Amino Acids

15) Which protein is unique to milk and contributes 82% of the total milk proteins?

- Casein

16) What does a feedbunk score of 0 to 1 indicate about the feeding program and the herd?

- Cows are underfed (HD's, pg. 453)

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Senior Packet 5, Phase A

- 1) This forage is commonly used as a cover crop because it does well in heavy soils where corn and alfalfa rotations are limited. It is a cross between wheat and rye.

- Triticale (NEDB, 2/04, pg. 10)

- 2) Calf pens should be cleaned and remain empty for how many days between calves to minimize the number of disease causing organisms?

- 10 to 14 days (HD's, 5/04, pg., 359)

- 3) The ultimate goal of the USDA National Animal Identification System, when up and running, is to have a traceback on an animal in how many hours?

- 48-hour traceback (DT, 2/05, pg. 10)

- 4) The government has recently changed the daily servings for milk and dairy products. What is the new recommendation to follow for a healthy diet?

- Three servings of low fat or fat free dairy products every day (DHM, 2/05, pg. 66)

Senior Packet 5, Phase B

1) Name two reasons why a dairy producer would consider shortening the dry period from 60 days to 40 days.

- Allows to only feed one dry cow ration
- Less movement between groups therefore less overcrowding
- Less ration changes to help keep intakes up on pre-fresh cows
- Extra milk profits on the end of the lactation due to milking the cow longer (NEDB, 6/04, pg. 17)

2) Name three advantages of corn silage as dairy forage.

- It is palatable forage with relatively consistent quality and higher yields and energy content than most forages.
- It has a harvest window that is less dependent on multiple days of dry weather such as with dry hay.
- Easily ensiled and may require significantly less labor and machinery time due to single harvest activity.
- Has a cost per ton of dry matter lower than most other harvested crops.
- It is a good crop to recycle nitrogen and phosphorous nutrients from dairy and manure to maintain water quality and meet other environmental demands.
- Well suited for modern storage, mixing and feeding systems especially as cow numbers grow.
- Has a growing number of hybrid varieties with specific feeding qualities. (NEDB, 11/04)

3) List the specific timing and hormones used in the Traditional Ovsync program.

- Day 0- inject GnRH
- Day 7- inject prostaglandin
- Day 9- inject GnRH
- 10-24 hours after second GnRH-timed AI breeding

4) Name 3 biosecurity tips for animal transport on and off a dairy operation.

- Trucks and trailer must be clean, washed, disinfected and dry before arriving on your farm.
- The truck driver should inform staff on his arrival by honking the horn. Do not allow him or her to walk the grounds or enter animal areas.
- Who every meets the driver should instruct the driver to wash his hands, put on boots and dip or wash the boots in disinfectant that the farm site provides.
- Record the truck drivers name and vehicle number in your farm animal movement log
- Thoroughly clean the loading ramp or area after each use.
- Clean and disinfect the sorting area and on-farm loading area after each load of animals has arrived or left the farm
- All entry and exit areas should be well lit.
- Follow the same biosecurity protocols to haul animals even when using your own trailer.
- Have designated loading and unloading area on the farm.
- Have truck and trailer unload animals, especially show animals away from other animal areas and barns. (DHM, Feb 05, pg., 23)

Senior Packet 5, Phase C

- 1) What is the seed portion of the plant called?
 - Grain
- 2) How is *Leptospira harjovovis* commonly spread?
 - Through urine
- 3) What are Acetate, Propionate, and Butyrate classified as?
 - VFA's
- 4) First calf heifer's account for what % of calvings on most dairies?
 - 30-50 % (NEDB, 2/05, pg. 58)
- 5) What is the acceptable level of SCC (Somatic Cell Counts) in Europe?
 - 400,000 cells/ml (DHM, 2/05, pg. 6)
- 6) For a cow to be comfortable and clean, how many square feet are recommended per cow on a bedded pack?
 - 80 to 100 square feet
- 7) What common dairy practice does the American Veterinary Medical Association now oppose because it stresses cattle and limited research show no benefits?
 - Tail docking (HD, 8/04, pg. 476)
- 8) What category was recently removed from the PDCA scorecard?
 - General appearance
- 9) What is the name for the milk quality organization that have the acronym QMPS?
 - Quality Milk Promotional Services
- 10) To the nearest tenth of a pound, how much does 1 gallon of milk weigh?
 - 8.6 lbs

11) Strep Ag has long been known as one of the leading causes of what infection in dairy cows?

- Mastitis

12) What is the term describing the curdling or clotting of milk caused by the presence of the enzyme rennin?

- Coagulation

13) What mineral is provided in the US diet mainly by dairy products?

- Calcium

14) Calves that have symptoms of poor appetite, high fever, thickened navel cord probable have what disease?

- Navel ill

15) What is the common name of the condition caused by acute gaseous distention of the rumen?

- Bloat

16) What is the predominant type of farm system used by dairy producers in New Zealand?

- Intensive grazing operations

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Senior Packet 6, Phase A

1) In the USDA's plan of the National Animal Identification System there are basically two parts; livestock premise identification and individual animal identification. At this time both parts are voluntary except for in which state, which will require premise identification by Nov 1, 2005?

- Wisconsin (DT, 2/05, pg., 14)

2) If you purchase one ton (2,000 pounds) of dairy feed that contains 22% protein, how many pounds of protein did you buy?

- 440 pounds (2,000 x .22)

3) A deficiency of fiber in the lactating dairy cow's diet can have what effect on milk fat?

- Low milk fat test

4) What does the term gestation mean?

- The time a mother carries her calf

Senior Packet 6, Phase B

1) Name 3 of 5 rules that dairy operation should adhere to if they are going to have bulls on the premise.

- Treat every bull as if he's a known killer, especially Jersey bulls.
- Never turn your back on a bull.
- Always have an escape plan in mind before entering a pen with a bull.
- Look for and report to management any warning signs of aggression, such as pawing, head down, or side stance.
- Beef bull at the first sign of problems such as those mentioned above or at 2.5 years of age, which ever comes first. (DHM, 4/05, pg. 16)

2) People for the Ethical Treatment of Animals (PETA) have launched campaigns at retailers and foodservice operators in the food chain like, McDonalds, Burger King and Wendy's. These campaigns by PETA from 1999 to 2001 against these foodservice operators as has initiated these companies to institute what to their suppliers.

- Animal Welfare Standards or Guidelines (Food System Insider, 11/04, pg. 4)

3) What are 3 of the 5 places a BLV infected cow can develop tumors?

- Uterus
- Abomasum
- Heart
- Spinal Cord
- Lymphoid tissue, Lymphoid glands

4) Name 2 tools that can be used for mastitis diagnosis.

- Culturing
- CMT
- Electrical conductivity
- Minnesota Easy Culture System
- Minimum inhibitory concentration
- Strip cup (HD, 12/04)

Senior Packet 6, Phase C

- 1) What is the word used to describe animals grouped together who have free physical contact?
 - Commingling (USDA)
- 2) Recently rumensin has been approved by the FDA as a feed ingredient for lactating and dry cows to increase MPE. What does MPE stand for?
 - Milk-production efficiency
- 3) In raising heifers, what is the biggest expense?
 - Feed costs
- 4) What is the most critical requirement to achieve active fermentation in making silage?
 - Adequate moisture (HD, ¾, pg. 223)
- 5) An accumulation of keratin, collagen, and dead cell layers at the end of the teat canal is known as what?
 - Hyperkeratosis (HD, 11/04, pg. 738)
- 6) In October of 2004, what ionophore was approved for lactating cows?
 - Rumensin (DT, 11/04, pg. 46)
- 7) Who invented the pasteurization process?
 - Louis Pasteur
- 8) In which country was the first robotic milking unit used?
 - Netherlands
- 9) What is the name given to an electrical current greater than one-half volt resulting from improper grounding, which shocks cows?
 - Stray voltage or current
- 10) Grazing cattle have higher levels of this in their milk and meat.
 - CLA –Conjugated linoleic acid (DHM, 12/04, pg. 40)

11) Hispanic labor has become very prominent on many dairy farms, making Spanish important in communicating with employees? How do you say “milk” in Spanish

- Adequate amount of dry calf starter (HD, 2/04, pg. 93)

12) What acid when present in silage has a rotten or rancid smell and only takes a small amount in the feed to cause problems?

- Butyric Acid

13) EZ feed, Feedwatch and Feed Supervisor are commercially available software programs to track the composition of what?

- TMR-Total Mixed Rations

14) What is the recommended percent of iodine to be used to prevent against contagious mastitis organisms?

- 1 % iodine

15) What is the system of crop and livestock production that promotes and enhances the health of agricultural and ecosystems, while producing pure and healthy food?

- Organic Agriculture (DHM, 6/04, pg. 41)

16) What is the name of the hormone produced by the ovaries that make cows come into heat?

- Estrogen

**2006 N.Y. State District Senior
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Senior Packet 7, Phase A

- 1) Name the muscular structure in the lower end of the esophagus, which when closed forms a tube from the esophagus to the omasum which allows milk consumed by young ruminants to bypass the undeveloped rumen and reticulum.

- Esophageal groove

- 2) What is the name used to describe the ability of microbes to overcome the effects of antibiotics and to survive and grow?

- Antibiotic resistance

- 3) The _____ produced by the fermentation of grain and hay triggers the development of the rumen and reticulum in calves

- Volatile Fatty acids

- 4) What does NAIS stand for and who is developing it?

- National Animal Identification System and it is being developed by the USDA (DHM, 12/04, pg. 5)

Senior Packet 7, Phase B

- 1) Why is the National Animal Identification System being developed and name 4 of the 9 categories of animals to be included?

The NAIS is being developed for all animals that will benefit from rapid tracing or trace back in the event of a disease outbreak.

Groups of animals include:
Cattle & bison, Swine, Sheep, Goats, Horses, Poultry, Deer & Elk, Llamas & Alpacas (DT, 1/05, pg. 23)

- 2) Name 3 things that may cause teat end lesions?

Teat dip too strong
Improper teat end vacuum
Physical injury
Frostbite
Virus
Improper pulsation ratio
Over milking

- 3) What are two reasons for the increase in the price of replacement heifers?

Farmers wanting to expand their herds, higher demand for animals to expand herds and with many farmers wanting to expand, leaves high demand and limited number of heifer available

Closing of the Canadian border (DHM, 5/04, pg. 5)

- 4) Name 3 ways to prevent the spread of bovine Leukosis virus (BLV).

- Avoid reusing needles and syringes
- Avoid reusing breeding sleeves from cow to cow...one sleeve, one cow
- Disinfect dehorning between each animal
- Disinfect tail-docking equipment between each animal
- Disinfect milking equipment
- Disinfect hoof-trimming knives
- Identify positive cows and separate
- Use AI breeding
- Clean maternity pen between calvings (DHM, 11/04, pg. 16)

Senior Packet 7, Phase C

- 1) What is the name of the process that breaks up the fat globules so that they are evenly distributed in the milk?
- Homogenization
- 2) The condition in which a cow comes into heat every few days is called what?
- Being Cystic
- 3) Drought-stressed forages, especially following a rain, can be toxic to dairy animals due to high concentration of what?
- Nitrates
- 4) On a DHIA record, what does “days to first service mean”?
- Days from calving until first breeding date
- 5) When should a newborn calf receive its first feeding of colostrums?
- As soon as possible, preferably within the first 30 minutes of life
- 6) On a milking machine, if the milk to rest pulsation ratio is set at 65:35, what percent of the time is the inflation closed?
- 35% of the time
- 7) One point of body condition scores equates to how many pounds of weight?
- 125 pounds
- 8) Predips need to cover at least the bottom three-quarters of a teat and remain on for how many seconds to be effective?
- 20 to 30 seconds (HD, 6/04)
- 9) The process by which manure is decomposed anaerobically producing biogas is known as what?
- Methane digestion
- 10) Where did the Holstein cow breed originate?
- Netherlands

11) What is the term for the highest level of production a cow reaches in her lactation curve?

- Peak milk

12) What is the name of the budget that is an estimate of cash receipts and expenditures for a specific time period usually in the future?

- Cash flow budget

13) What is the process of shedding a follicle by the ovary?

- Ovulation

14) Which amino acid are soybeans low in?

- Methione

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

Milk Fever

16) When organizing a milking herd schedule, when should mastitis infected cows be milked?

Last and the system should be washed afterwards

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Senior Packet 8, Phase A

- 1) When a farm is analyzing their animal health records, what is meant by the Morbidity rate?
 - The number of sick animals or number of animal that are getting sick

- 2) Would nitrogen-fixing bacteria be associated with pea plants or timothy grass?
 - Pea plants (Virginia 4-H DQB materials)

- 3) Which of the following has the greatest impact on improving producer income: raising your own feeds, increasing the % of registered cows in the herd, increasing the calving interval, or decreasing Somatic cell counts
 - Decreasing somatic cell counts

- 4) What on farm management practice should you do to take full advantage of manure's fertilizer value and to make sure you are using the correct application rates that are uniform.
 - Manure spreader calibration (DHM, 3/05, pg. 25)

Senior Packet 8, Phase B

- 1) Tractor safety is a big issue for dairy farms. When conducting tractor safety, what are 3 areas you should look at?

- Lighting, Slow moving vehicle sign, PTO shield, roll over protection, Seat Belt, Tires (HD's 2004, pg. 660)

- 2) In managing our dairy herds and analyzing our DHI records, there are 5 key production indicators we should monitor. Name 3 of the 5 indicators.

- Milk per cow, Days in Milk, Pregnancy rate, Somatic Cell counts, Cull Rate (HD, pg. 9)

- 3) Name 2 advantages to 4x or 6x milking of fresh cows for a limited amount of time in early lactation.

- Attaining levels of peak milk

- Produces more milk during 305 day lactation

- Maintains a higher milk production curve for the first five months

- Lactation average somatic cell counts or linear scores are lower (NEDB, 11/04)

- 4) The United States Animal Identification Plan is a plan that calls for every farm in the country with livestock to be identified with standardized premise identification. The proposed nation plan will be implemented in three stages. State the three phases.

- Phase 1: Premise ID

Livestock producers will register their operations with the state department of agriculture or equivalent entity, to receive a premise identification number.

- Phase 2: Interstate movement

All cattle that move across state lines must receive an individual animal ID by July 2005.

- Phase 3: 100 percent compliance

All animal species will be able to develop specific implementation plans for their respective species. Dairy animals will most likely receive individual ID tags. (DHM, Feb.04)

Senior Packet 8, Phase C

- 1) What nutrients analysis is an important tool for determining the adequacy of protein feeding and is identified with the initials MUN?
- Milk Urea Nitrogen (HD's 03)
- 2) What disease is caused by the bacterium mycobacterium paratuberculosis?
- Johne's (HD's pg. 877)
- 3) What is a freemartin?
- Heifer born twin to a bull (HD's, pg. 810)
- 4) What term is used to describe a mastitis case cured without treatment?
- Spontaneous recovery
- 5) What does the abbreviation CAFO stand for?
- Concentrated Animal Feeding Operations (HD's, pg. 355)
- 6) If a calf is described as PI for a disease such as BVD, what does the PI stand for?
- Persistently infected (NEDB, 11/04, pg. 30)
- 7) Known as a "yellow body", this endocrine gland on the ovary is responsible for the production of progesterone during pregnancy and mid-cycle.
- Corpus Luteum
- 8) Name the tube connecting the ovary and the uterus?
- Fallopian tube or oviduct
- 9) Who is known as the animal welfare expert?
- Temple Grandin
- 10) According to research at the University of Wisconsin, the average heat detection rate for lactating dairy cattle is what percent?
- 40 % to 45 % (DHM, April 04)

11) What are monosaccharides?

- Simple Sugars

12) Where are rubber surfaces most needed for cows?

- Where cows walk long distances or on slopes (HD's, 10/04, pg. 626)

13) When working with animals, there comes a point in which an animal will back away when a person approaches. What do we call this?

- Flight Zone

14) According to state labor laws, in general, what is the minimum age someone can perform any job declared hazardous?

- 16 years old

15) Determining the amount of waste produced on the farm is the first step in designing what?

- Comprehensive nutrient management plan

16) How does the fineness of chop affect the accuracy of forage moisture testing?

- The finer the chop, the more accurate the measurement

Extra Questions
2006 N.Y. State District Senior
Dairy Quiz Bowl Contest

- 1) A dry period of how many days is most common on US dairy farms?
 - 60 days (HD, 4/05, pg.)
- 2) Nitrogen fixing bacteria are associated with growing what type of plant?
 - Legumes (V 4-h DQB study materials)
- 3) What do we call milk showing clinical symptoms of mastitis characterized by strings of white blood cells?
 - Ropy milk (V 4-H DQB study materials)
- 4) Parturition is the act of doing what?
 - Giving birth (V 4-H DQB study materials)
- 5) What is the goal when fitting a heifer's topline?
 - To make it look straight across the top
- 6) Which county has the highest total milk production in NY?
 - Wyoming (HD's, pg. 575)
- 7) Why are bacterial direct-fed microbials (DFM's) fed to cows?
 - They improve the animal's balance of intestinal bacteria
- 8) Feeding what has been shown to improve hoof health?
 - Biotin
- 9) What hormone is responsible for causing the regression of the Corpus Luteum toward the end of the estrus cycle?
 - Prostaglandin
- 10) In the Net Merit value calculated by USDA, what component carries the highest weight in the formula?
 - Protein (pounds)

11) Approximately how much land is required per cow?

1 acre per cow, based on soil type (NEDB, pp.23)

12) In regards to a Holstein/Jersey crossbreed, what does F1 stand for?

First generation cross (HD's, 1/ 25/ 04)

13) Colostrum should be refrigerated at what temperature range?

33 to 35 degrees F (HD's, 1/10/04)

14) What should a grazing farmer do before applying lime or fertilizer to a pasture?

Perform a soil test (NEDB, pp.26)

15) GnRH acts on the cow's hypothalamus to secrete which hormones?

LH and FSH (HD's, 5/25/04, pg. 359)

16) Which nutrient requires the most land for balancing application rates?

Phosphorus

17) What product do plants convert nitrogen into?

Protein

18) What component of the milking machine produces a cyclic change from atmospheric pressure to partial vacuum?

Pulsator

19) If gases are not belched up in a cow, what would happen?

The animal would bloat

20) How many teeth does a cow have on the front of the upper jaw?

None

