

2025 NY Regional 4-H Beginner  
Dairy Quiz Bowl Contest

**Beginner Packet 1, Phase A**

1. What is the name of the first milk produced by a cow after she gives birth?

Colostrum

2. Where do heel flies lay their eggs?

On the lower legs of the cow

3. What is a young female cow that has not yet had a calf called?

Heifer

4. What does it mean to cull a cow?

To remove an animal from the herd

## **Beginner Packet 1, Phase B**

1. Name the four compartments of the mature dairy cow's stomach:

- Rumen
- Reticulum
- Omasum
- Abomasum

2. Name three parts of a dairy cow's mammary system:

- Teats
- Rear udder
- Fore udder
- Rear udder attachment
- Fore udder attachment
- Milk veins
- Milk wells
- Median suspensory ligament

3. Name two options for storing excess colostrum:

- Freezing
- Refrigerate
- Ferment
- Add preservative acid

4. Name two different forages.

- Corn silage
- Haylage
- Balayage
- Shredlage

## **Beginner Packet 1, Phase C**

1. When breeding a heifer, what is the most important factor used in deciding when to breed her?

Size

2. What is the term for taking a young animal off milk as its main source of nutrition?

Weaning

3. What is the name for the type of barn in which the animal is free to come and go to the bunch and stalls?

Freestall

4. What do we call an animal that another organism lives on as a parasite?

Host

5. Which breed is the smallest out of the 6 major dairy breeds?

Jersey

6. What is the danger to a person when entering an upright silo too soon after filling?

Toxic silo gases

7. An adult cow has how many upper teeth?

Zero

8. The term gestation is used to describe the length of what?

Pregnancy

9. What vitamin is routinely added to milk?

Vitamin D

10. In which state is the World Dairy Expo held each year?

Wisconsin

11. What do the letters TMR stand for?

Total Mixed Ration

12. An infection of the udder is called what?

Mastitis

13. What is a bulk tank used for?

Storage/ holding of milk

14. What is the name for an animal doctor?

Veterinarian

15. Where is a cow's blind spot located?

Directly behind her

16. When is National Dairy Month?

June

## **Beginner Packet 1, Bonus Questions**

1. Name three ways a dairy cow loses water:

- Breathing
- Sweating
- Feces
- Milk
- Urine

2. Name three types of storage facilities for silage:

- Bunker silo
- Trench silo
- Upright or tower silo
- Ag bag
- Oxygen limiting silo (harvester)

3. Name three other cloven-hooved animals, other than cows:

- Goats
- Sheep
- Pigs
- Camels

4. Name three Class I dairy products:

- Chocolate milk
- Whole milk
- Reduced fat milk (2%)
- Low fat milk (1%)
- Fat free milk

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**Beginner Packet 2, Phase A**

1. What dairy breed, on average, has the highest milk production?

Holstein

2. What is a group of cattle called?

A Herd

3. An adult cow has how many incisor teeth?

8

4. A by-product called Whey is produced from making what?

Cheese

## **Beginner Packet 2, Phase B**

1. Name two different types of milking parlors:

- Herringbone
- Parabone
- Parallel
- Rotary
- Side Opening
- Flat barn
- Tie stall

2. Give the common name for the three different stages of a female dairy animal from birth to production:

- Calf
- Heifer
- Cow

3. Fawn is an acceptable color for which two major dairy breeds:

- Guernsey
- Jersey

4. Name the two main gases that are produced in the rumen:

- Methane
- Carbon Dioxide

## **Beginner Packet 2, Phase C**

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

Mucous

2. Why would you groove floors in a free stall?

To prevent slipping

3. On a dairy operation, what is a lagoon used for?

Manure Storage

4. What direction do you move when leading an animal in the show ring?

Clockwise

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

60%

6. What country did Holsteins originate from?

The Netherlands

7. What is the name of the storage structure used to store feed and allows it to ferment?

Silo

8. What is used to wipe teat dip off teats before putting the milking machine on?

Cloth or paper towels

9. What is considered the largest cost to the farmer for milk production?

Feed

10. What Vitamin helps maintain healthy skin and vision?

Vitamin A

11. Homogenization breaks up what in milk?

Fat globules

12. A gallon of colostrum is how many quarts?

4 quarts

13. What is the scientific name for cattle?

Bovine

14. What stomach compartment in a cow is most like a human?

Abomasum

15. Regarding milk quality, what do the letters CMT stand for?

California Mastitis Test

16. What dark, liquid feed added to dairy cattle rations improves taste and helps reduce dustiness?

Molasses

## **Beginner Packet 2, Bonus Questions**

1. Name three different types of non-permanent cow identifications:

- Neck straps
- Ear tags
- Ankle straps
- Crayons
- External electronic devices
- Brisket tags

2. Name three different materials that a halter can be made of:

- Leather
- Rope
- Chain
- Nylon

3. Name the three main purposes for which cattle are used across the world:

- Meat
- Milk
- Labor

4. Name three parts of a dairy cow's reproductive tract:

- Vulva
- Vagina
- Cervix
- Ovaries
- Oviduct
- Uterus

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**Beginner Packet 3, Phase A**

1. What percent fat is found in skim milk?

0%

2. How long is a cow's gestation period?

280 days or 9 months

3. What is the most important nutrient a cow needs to live?

Water

4. How many chambers are in the heart of a cow?

4

### **Beginner Packet 3, Phase B**

1. Ear tattoos are recognized as the preferred method of permanent identification in 3 dairy cattle breeds. Name them:
  - Brown Swiss
  - Jersey
  - Milking Shorthorn
  
2. Name four different pieces of information you would find on the nutrition label on a container of milk:
  - Serving size
  - Servings per container
  - Ingredients
  - Calories
  - Fat content
  - Cholesterol
  - Sodium
  - Carbohydrates
  - Protein
  
3. Name two things that can cause diseases in animals:
  - Viruses
  - Bacteria
  - Parasites
  - Poor nutrition
  - Genetic defects
  - Poor environmental conditions
  
4. Spell Ayrshire. *A-Y-R-S-H-I-R-E*

### **Beginner Packet 3, Phase C**

1. Where in the body is calcium stored?

Bones and teeth

2. What vitamin, found in green leafy feeds, is important for the blood clotting process?

Vitamin K

3. What is the name for a bull calf that has been castrated?

Steer

4. How much time is required after milking for the teat end to close entirely?

1 hour

5. What is the most effective way to prevent rabies in cattle since we can't eliminate exposure of cattle to wildlife?

Vaccinate

6. Where on a cow's body is the poll?

On the top of the head

7. When showing a heifer, which leg should be placed further back when setting her up?

The rear leg nearest the judge

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

DA or displaced abomasum

9. One stick of butter is equivalent to how many cups?

1/2 cup

10. What popular feed stuff is a by-product of sugar beet processing?

Beet Pulp

11. What does the orange triangle sign on the back of a wagon mean?

Slow Moving Vehicle

12. What is another name for diarrhea in calves?

Scours

13. What is the name for a dairy animal's personal space?

Flight zone

14. Where is the median suspensory ligament found on a dairy cow?

The udder

15. What is the name for the brush of hair at the end of a cow's tail?

The switch

16. When talking about a dairy cow, what does the term "open" mean?

She is not pregnant

## **Beginner Packet 3, Bonus Questions**

1. Name three signs of sickness in calves:

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

2. Name three pieces of information you would find on your animal's registration paper:

- Name
- Sire
- Dam
- Date of birth
- Owner
- Breeder
- Grandsire
- Granddam
- Sex
- Registration number

3. Name the three ways that a pathogen can enter a newborn calf's body.

- Mouth
- Naval
- Nose

4. Name three methods used to dehorn calves:

- Paste (caustic potash)
- Cut or gouge (Barnes type dehorner)
- Electric

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**Beginner Packet 4, Phase A**

1. Who invented the pasteurization process?

Louis Pasteur

2. What is the most common reason that a cow does not come into heat?

Pregnancy

3. What is another name for the subcutaneous abdominal veins in the dairy cow?

Milk veins

4. On the PDCA scorecard, which category is worth the most points?

Udder

## **Beginner Packet 4, Phase B**

1. What are the four main processes for which a cow uses her feed:
  - Growth
  - Maintenance
  - Production
  - Reproduction
  
2. Name four potential causes of mastitis:
  - Failure to teat dip
  - Poor housing/environment
  - Poor sanitation
  - Faulty milking equipment
  - Poor milking practices
  - Stray voltage
  - Improper dry cow management
  - Decrease milk production
  
3. Name two of the five major categories of evaluation on the Dairy Cow Unified Score card:
  - Frame
  - Dairy Character
  - Body Capacity
  - Udder
  - Feet and Legs
  
4. Name two things that the milk-hauler does before loading milk onto the truck:
  - Check the temperature of the milk
  - Measure the amount in the tank (lbs.)
  - Checks milk for "off" odors
  - Removes a sample of the milk for future testing

## **Beginner Packet 4, Phase C**

1. If a farmer said they were feeding an 18% dairy feed, what does the 18% refer to about the feed?

The protein content of the feed

2. What is the process called that is done to milk to destroy harmful bacteria?

Pasteurization

3. When the rumen in the dairy animal is distended with gases of fermentation, what do we call this condition?

Bloat

4. What is the name of the paper that accompanies a purebred animal and certifies his or her parentage?

Registration paper

5. What is the most popular grain fed to dairy cows in the US?

Corn

6. What is the most popular variety of cheese sold in the US?

Mozzarella

7. What is usually used to disinfect a newborn calf's navel?

Iodine

8. What term refers to all vegetation on which animals graze?

Pasture

9. What is used to give cows pills or boluses?

Balling gun

10. . What is the most common name for brucellosis?

Bang's disease

11. What is the number one reason for culling in U.S. dairy herds?

Reproductive failure

12. What is given to an animal to prevent hardware disease?

A magnet

13. What does the acronym ADA stand for?

American Dairy Association

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

Dirty milking equipment

15. What hormone causes milk letdown?

Oxytocin

16. What is the most reliable way of knowing nutrient content of forages?

Forage testing

## **Beginner Packet 4, Bonus Questions**

1. Name three symptoms of a cow with clinical mastitis:
  - Flakes
  - Clots
  - Hot quarter
  - Stringy milk
  - Water milk
  - Swollen quarter
  - Presence of blood
  
2. Name three materials commonly used for bedding dairy cattle:
  - Newspaper
  - Recycled manure solids
  - Sand
  - Sawdust
  - Shavings
  - Straw
  - Old hay
  
3. Name three external parts of a dairy cow's head:
  - Poll
  - Eyes
  - Muzzle
  - Ears
  - Jaw
  - Forehead
  - Nostril
  
4. A cows day consists of five primary activities. Name three of them:
  - Eating, resting/laying down, standing, milking, drinking

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**Beginner Packet 5, Phase A**

1. True or false: Sand is an organic bedding choice

False

2. True or false: Chyme is the digested feed material found in the small intestine

True

3. True or false: Hardware disease occurs in the Reticulum

True

4. True or false: The inflation (teat cup liner) touches the cow during milking

True

## **Beginner Packet 5, Phase B**

1. Name two important practices for the reduction of foot problems on a dairy farm:
  - Hoof trimming and hoof/foot baths
  
2. Mastitis causing organisms can be divided into two sources. What are they?
  - Environmental
  - Contagious
  
3. Name 4 different dairy products:
  - Milk
  - Ice cream
  - Yogurt
  - Cheese
  - Butter
  - Cottage cheese
  - Sour cream
  - Cream cheese
  - Frozen yogurt
  - Nonfat dry milk
  
4. Which two parts of the stomach are not fully developed in a newborn calf?
  - Rumen and reticulum

## **Beginner Packet 5, Phase C**

1. What is the major solids component in milk?

Lactose

2. How many pounds of whole milk does it take to make a gallon of ice cream?

12 pounds

3. Which stomach compartment is known as the fermentation vat?

Rumen

4. What is the condition called where an excessive amount of lymph accumulates between the skin and secretory tissue of the udder?

Udder edema

5. What U.S. fast food chain uses the most amount of milk?

McDonalds

6. Metritis is an infection of what?

The uterus

7. The demand for milk is highest during what season?

Fall

8. What disease does your animal have that is characterized by gray crusty patches on the skin usually found on the head and shoulders?

Ringworm

9. In a pregnant cow, what organ carries the calf?

Uterus

10. What is the name of the tube that connects the mouth to the stomach?

Esophagus

11. . What is the recommended servings of dairy products per day?

3 servings

12. Frozen semen is stored in the liquid form of what element?

Nitrogen

13. In months, what is the ideal age for a heifer to have her first calf?

22-24 months

14. What does it mean if a calf is born polled?

Born without horns

15. Where would you find the dewclaws on a dairy cow's body?

Foot

16. What is the name for the membranes of pregnancy that pass out of the cow after she gives birth to a calf?

Afterbirth or Placenta

## **Beginner Packet 5, Bonus Questions**

1. Name the three liquid diet choices of pre-weaned calves:
  - Whole milk
  - Milk replacer
  - Colostrum
  
2. Name three advantages of calf hutches:
  - Easily moveable
  - Prevent disease from spreading from one calf to another
  - Better Ventilation
  
3. Name three factors that can influence milk composition:
  - Age of cow
  - Breed
  - Environmental temperature
  - Estrus
  - Genetics
  - Milking procedures
  - Nutrition
  - Season
  - Somatic cell count
  - Stage of lactation
  
4. Name three methods to reduce soil erosion:
  - Contour cropping
  - Grass waterways
  - Soil seeding
  - Terracing
  - Cover crop
  - Reduced tillage
  - Strip cropping
  - Wind breaks

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**Beginner Packet 6, Phase A**

1. What percent of milk is water?

87%

2. What is the best way to tell if a calf is sick?

Check her temperature

3. What is known as a record of ancestry?

Pedigree

4. What is the general name for all animals that give birth to live young and suckle their offspring after birth?

Mammal

## **Beginner Packet 6, Phase B**

1. Salt is composed of which two minerals?
  - Sodium
  - Chloride
  
2. Spell Guernsey: *G-U-E-R-N-S-E-Y*
  
3. Name two methods for reducing heat stress in dairy cows
  - Shade
  - Ventilation
  - Cooling
  - Sprinklers
  - Fans
  - Free choice water
  
4. What are two types of parasites that can affect an animal?
  - External and internal

## **Beginner Packet 6, Phase C**

1. On average, how many minutes does it take to milk a cow?

5-7 minutes

2. When doing embryo transfer, what is the cow called that the embryos come from?

Donor

3. What does it mean if a cow has "freshened"?

She just gave birth

4. What stomach compartment is called manyplies?

Omasum

5. In the area of herd health, what are small sensitive bumps or large cauliflower-like masses on the skin called?

Warts

6. What does the acronym USDA stand for?

United States Department of Agriculture

7. What position do calves drink from a bottle best?

Standing up

8. What does it mean if a feed is palatable to a dairy cow?

The animal likes the taste and will eat it

9. What federal class of milk is fluid milk marketed in?

Class 1

10. On average, cows have a flight zone of how many feet?

5 feet

11. What parent determines the sex of a calf?

The sire

12. Where did the Jersey breed originate?

Isle of Jersey

13. When clipping a calf for the show, what direction do you clip compared to hair growth?

Opposite way of hair growth

14. How many pasterns does a cow have?

4

15. What month is National Grilled Cheese month?

April

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

Dry cow treatment

## **Beginner Packet 6, Bonus Questions**

1. Name 3 factors to consider when grouping the milk herd:

- Size
- Age or lactation number
- Stage of lactation
- Production level
- Reproductive status
- Body condition
- A2A2 positive milking group

2. Name 3 common external parasites of cattle:

- Biting lice
- Sucking lice
- Ticks
- Mites
- Heel flies
- Horn flies
- Black flies
- Mosquitoes
- Horse flies
- Deer flies

3. Name three parts of the milking machine:

- Air tubes
- Shell
- Pulsator
- Claw
- Milk tubes

4. Tell us what mastitis is and name two of the four kinds:

- Inflammation of the udder/mammary gland
- Acute
- Chronic
- Clinical
- Subclinical

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**Beginner Packet 7, Phase A**

1. The crop alfalfa is which of the following: a grass, a legume, or a grain?

A legume

2. What is the most common disease caused by staph aureus, strep ag, and klebsiella?

Mastitis

3. Romano, Parmesan and Mozzarella are all types of what?

Cheese

4. What is the term for a sterile heifer born twin to a bull?

Free martin

## **Beginner Packet 7, Phase B**

1. Name 4 things that a judge looks for in a fitting and showmanship class:
  - Animal's condition
  - Cleanliness
  - Clipping
  - Grooming
  - Appearance of exhibitor
  - Leading of the animal
  - Posing of the animal
  - Showing the animal to the best advantage
  - Poise, alertness and attitude of the showman
  
2. Give 3 reasons why a dairy farmer might cull or remove a cow from his herd:
  - Unhealthy
  - Mastitis
  - Reproduction
  - Feet and leg issues
  - Disposition
  - Age
  - Low production
  
3. Name three heat detector aids used to help identify cows:
  - Chalk markers
  - Kamar detectors
  - Rump mounted patches
  - Tail paint
  - Pedometers
  - Solution monitors
  
4. When talking about farm machinery, what do the three letters PTO stand for?

Power take off

## **Beginner Packet 7, Phase C**

1. What usually happens to a cow's milk production as somatic cell count increases?

It usually decreases

2. What happens to the nutrient value of high-moisture corn with the growth of mold in it?

It decreases or is less palatable

3. What are curtains and fans used for in a dairy barn?

Ventilation

4. The Milking Shorthorn is from what country?

England

5. Which dairy product is made by fermenting milk and cream with bacteria cultures?

Yogurt

6. What is the respiratory rate of a healthy lactating dairy cow?

30 breaths per minute

7. Limestone contains high amounts of what mineral?

Calcium

8. What does the Babcock test measure?

Butterfat composition

9. What is another name for ascorbic acid?

Vitamin C

10. What substance flows through a cow's milk vein?

Blood

11. Acidosis is a condition that occurs when cows are fed too much what?

Grain

12. How much time do cows usually spend laying down each day?

8-16 hours

13. How many pairs of chromosomes do dairy cattle have?

30 pairs

14. What are the small finger-like projections that line the wall of the rumen called?

Papillae

15. What are the units called when breaking a large grazing area into smaller sections?

Paddocks

16. What do you call the small individual calf buildings that are popular for housing young calves outside?

Calf hutch

## **Beginner Packet 7, Bonus Questions**

1. What do three of 4-H's stand for in the 4-H pledge?
  - Head, heart, hands, health
  
2. Name 3 parts of the cow's digestive system:
  - Mouth
  - Esophagus
  - Rumen
  - Reticulum
  - Omasum
  - Abomasum
  - Small intestine
  - Large intestine
  - Colon
  - Rectum
  
3. Name three mastitis related costs:
  - Reduced milk production
  - Discarded milk
  - Early cow replacement costs
  - Reduced cow sale value
  - Drugs/medicine
  - Veterinarian
  - Labor
  
4. Name three signs that a cow is ready to have her calf:
  - Full udder
  - Restlessness
  - Enlarged vulva
  - Mucus discharge
  - Relaxation of ligaments at tail head

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**Beginner Packet 8, Phase A**

1. True or false: Amino acids are the building blocks of protein

True

2. True or false: New York ranks 3rd in dairy production across the U.S.

False (we rank 5th)

3. True or false: All cows contribute somatic cells to the bulk tank

True

4. True or false: Supernumerary teats are not useful

True

## **Beginner Packet 8, Phase B**

1. Name the two main crops that are grown to feed cows in the United States:
  - Corn
  - Alfalfa
  
2. What are three critical factors in colostrum management?
  - Quantity
  - Quality
  - Timing
  - Cleanliness
  
3. Name three pieces of paperwork you should have when exhibiting your animal at the county fair:
  - Registration papers or official identification sheets for your cattle
  - Veterinary Health Certificate that shows current vaccinations including rabies
  - Proof of negative BVD test
  - Your Premium Book
  - Most current official production sheets
  - Emergency contact information to include your parent/guardian, home/work/cell numbers, veterinarian etc.
  
4. Name 3 ways to treat your animal with a dewormer:
  - Boluses or pills
  - Paste
  - Drenches
  - Injectables

## **Beginner Packet 8, Phase C**

1. What do the initials NDF stand for?

Neutral Detergent Fiber

2. When a dairy farm decides to go organic, how long must the dairy animal be fed and managed organically for the milk produced to be classified as organic milk?

One year

3. A newborn calf's navel should be dipped with what percent iodine?

7%

4. How many riders are allowed on a tractor?

One person per seat

5. What does a breach birth mean?

A calf that is delivered with butt first

6. What does the acronym PDCA stand for?

Purebred Dairy Cattle Association

7. On a cow's production record, what would 3x indicate?

She is milked 3 times a day

8. What dairy breed makes up the largest proportion of the US cow population?

Holstein

9. Pinkeye is spread by what common pest?

Face fly

10. . What part of the body does mastitis-causing bacteria enter the cow's udder?

The teat canal

11. What is the name for the part of the milking system that causes the alternate vacuum pressure between the teat cup shell and liner?

Pulsator

12. What is the word for a sale where animals are sold to the highest bidder?

An auction

13. What is most commonly used to dehorn calves?

Electric dehorner

14. What is the small stick called that frozen semen is contained in?

Semen straw or straw

15. What is the meat from a young calf called?

Veal

16. What connects the fetus to the navel and carries nutrients between the mother's body and the fetus?

Umbilical cord

## **Beginner Packet 8, Bonus Questions**

1. Name three types of flies commonly found on dairy farms:
  - House fly
  - Stable fly
  - Face fly
  - Horn fly
  - Heel fly
  - Deer fly
  
2. Name the 6 of the 7 major breeds of dairy cattle:
  - Brown Swiss
  - Jersey
  - Holstein
  - Milking Shorthorn
  - Red and White Holstein
  - Guernsey
  - Ayrshire
  
3. Name two fat soluble vitamins (Team Question):
  - Vitamin A
  - Vitamin D
  - Vitamin E
  - Vitamin K
  
4. What is any act, omission, or neglect done by a person or organization that causes or permits unnecessary treatment to an animal is called and what are 2 of those general unnecessary treatments
  - Animal abuse
  - Pain, suffering, death, starvation, poor living conditions, no water

## **2025 NYS 4-H Beginner Dairy Quiz Bowl Extra Questions**

1. What is the technical name for the act of calving or freshening?

Parturition

2. What is the highest that a Holstein cow has ever been classified?

97 points

3. What is dehydration?

Lack of water

4. If a cow has interdigital foot infection, where is it specifically located?

Between the toes

5. How many pounds of whole milk does it take to make a pounds of cheese?

10 pounds

6. What is another name for eructation?

Belching

7. Which bodily system of the animal is affected by shipping fever?

Respiratory

8. In inches, what is the PDCA maximum allowable limit for topline hair in the show ring?

1.5 inch

9. . Snaplage is produced from what plant?

Corn

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

Stature

11. What type of crop shields the soil to reduce erosion?

Cover crop

12. What state leads the U.S. in milk production?

California

13. What is the name of the process in which the cow relaxes and releases her milk in the udder?

Milk letdown

14. 14. What percentage of a cow's feed must be organic in order for her to be considered organic?

100%

15. Corn grain is a good source of what when added to a ration?

Energy

16. What do the initials VFA stand for?

Volatile Fatty Acid

17. What is a fertilized egg called?

Zygote

18. Within how many seconds after prepping should a milker be put on a cow?

60-90 seconds

19. What is known as the gold standard for bedding?

Sand

20. When talking about a calf or heifer raising program, what does ADG stand for?

Average Daily Gain

21. What is the name for an infection of a cow's uterus?

Metritis

22. What does the acronym GMO stand for?

Genetically Modified Organism