UF IFAS UNIVERSITY of FLORIDA

2026 Top Rancher Challenge

Question	Answer	% Correct	Comments	Source
What is the recommended bull to cow ratio for a yearling bull?	1:15	57%	Yearling bulls are still growing and developing, so they have less breeding capacity than mature bulls. Limiting a yearling bull to about 15 cows helps ensure he can successfully breed all females and maintain good reproductive performance during the breeding season.	*https://ask.ifas.ufl.edu/publication/AN218*
In a rotational grazing system, what is the primary reason UF/IFAS recommends leaving adequate post-grazing stubble height? (Adjust answer)	To maintain root reserves and speed of regrowth.	98%	Production of new growth after grazing depends upon the amount of residual leaf and carbohydrate reserves because they will supply energy for plant growth. Rotational grazing with the correct stocking rate will maintain adequate stubble height and carbohydrate reserves after grazing to maximize forage regrowth.	*https://ask.ifas.ufl.edu/publication/AG268*
Which characteristic BEST distinguishes New World screwworm infestations from typical blowfly maggot infestations?	Larvae feed on living tissue, causing rapidly enlarging, deep wounds.	85%	Screwworm larvae feed on living tissue, whereas most other maggots found in wounds feed on dead tissue.eradication measures	*https://ask.ifas.ufl.edu/publication/IN1146*
If you want to fertilize your pasture with the least amount of blended fertilizer to achieve 60 lbs of N per acre, which of the (N-P-K) blends would you choose?	28-0-0	27%	Since you need 60 lbs of actual nitrogen per acre, the higher the nitrogen percentage, the less total fertilizer you have to haul and spread. With 28-0-0, you only need about 214 lbs of fertilizer per acre (60 ÷ 0.28), whereas 10-10-10 would require 600 lbs per acre. Higher nitrogen concentration = less bag weight to achieve the same result.	*https://ask.ifas.ufl.edu/publication/SS483*
Nonessential amino acids are amino acids that are not used by an animal.	False	79%	Amino acids that the cow's body (and rumen microbes) can produce on their own, so they don't need to be included in the cattle's feed. The cow still uses these amino acids for growth, milk production, and other body functions - they just don't have to come from the diet.	https://ask.ifas.ufl.edu/publication/AN334
A rancher observes patches of limpograss that appear drought-stressed despite recent rainfall, with leaves turning yellow and then red or purple before dying. What could be the cause of that?	Sap feeding by pasture mealybugs	27%	Pasture mealybugs damage grasses primarily by sucking plant sap and injecting toxic saliva, which directly injures plants and leads to discoloration and dieback, while secondary pathogens may occur later.	*EDIS coming soon!*
Within an hour after removing beef from a vacuum sealed package, the color will change from purple to bright red. What is that process called?	Blooming	44%	When beef is vacuum-sealed, there's no oxygen, so the myoglobin (the protein that gives meat its color) turns purplish. Once you open the package and expose the meat to air, oxygen binds to the myoglobin, forming oxymyoglobin, which has that bright cherry-red color we associate with fresh beef.	https://www.fsis.usda.gov/food-safety/safe-food-handling-and-preparation/food-safety-basics/color-meat-and-poultry
Which stomach compartment of a cow is the most similar to a human stomach	Abomasum	42%	The abomasum is similar to the human stomach because it is the “true stomach” of ruminant animals, where digestive enzymes and stomach acids break down food.	*https://extension.umn.edu/dairy-nutrition/ruminant-digestive-system*

What happens to beef cows in Florida that calved with a body condition score (BCS) below 5 (scale 1 to 9) but maintained or gained BCS from calving until the start of the breeding season?	They achieve similar pregnancy and calving percentages compared to cows that calved with a BCS ≥ 5 but lost BCS after calving.	35%	In terms of cow reproductive performance, despite the lower BCS at calving, thinner cows that maintained or gained BCS from calving until the start of the breeding season achieve similar pregnancy percentage, calving percentage, and early calving distribution compared to cohorts that calve with a BCS ≥ 5 and lost BCS after calving.	*https://ask.ifas.ufl.edu/publication/AN397*
Which criterion is used to calculate a beef carcass quality grade?	Marbling at the 12th rib	47%	Graders evaluate the ribeye muscle between the 12th and 13th ribs because it's a standardized spot that's easy to access and gives a reliable indication of marbling throughout the carcass.	https://www.beefresearch.org/Media/BeefResearch/Docs/beef-grading_10-26-2020-122.pdf
Screwworm is not here yet, but if it comes, which management action is MOST critical if screwworm is suspected in a herd?	Immediately report the case to FDACS.	80%	Suspected screwworm cases must be reported immediately because it is a reportable, economically devastating pest, and rapid response by animal health authorities is critical to prevent spread and initiate eradication measures.	*https://ask.ifas.ufl.edu/publication/IN1146*
Which phase of the cattle cycle is typically associated with the highest calf prices?	Early Herd Rebuilding	33%	When significant heifer retention begins, prices are expected to rise to a peak as less feeder cattle are available in the market.	*https://blogs.ifas.ufl.edu/rcrec/2026/02/09/cattle-industry-update-why-2026-looks-to-be-another-favorable-year-for-beef-cattle-producers/*
Which mineral is essential for cattle but not for plants and is deficient in Florida soils, this is always required in supplements?	Selenium (Se)	63%	Selenium is critical for cattle health, it supports immune function, muscle development, and reproduction. Plants don't need selenium to grow, so Florida's naturally selenium-deficient soils don't affect the pasture grass itself. But, when cattle eat that forage, they're not getting the selenium they need.	*https://ask.ifas.ufl.edu/publication/AN348/pdf*
Which hormone is responsible for maintaining pregnancy in beef cattle?	Progesterone	67%	Progesterone is essential for maintaining pregnancy in cattle by supporting the uterine environment and preventing estrus and ovulation during gestation	*https://edis.ifas.ufl.edu/publication/AN277*
What is usually the most critical factor in determining when to start planting and whether establishment will be successful?	Soil moisture	68%	While factors like soil fertility, temperature, and seed quality all influence pasture establishment, adequate soil moisture is the most critical. Without sufficient moisture, seeds cannot germinate, regardless of how ideal the other conditions may be. Therefore, timing planting to coincide with favorable moisture conditions is essential for successful establishment.	*https://edis.ifas.ufl.edu/publication/AG107*
A rancher can either sell a replacement-quality heifer today or retain her for breeding. The value of the income forgone by not selling her today is called:	Opportunity Cost	57%	The income forgone by retaining a heifer and not selling her today is referred to as the opportunity cost.Understanding the opportunity cost aids in the decision making process of which option is more economically feasible for an operation.	*https://ask.ifas.ufl.edu/publication/FE1153*
President Rick Moyer identifies himself as a first-generation cattleman but still challenges members to “Lead the Way.” Based on his message, what does “Lead the Way” MOST likely mean in this context?	Taking initiative to mentor others, engage in the industry, and help shape its future regardless of background.	87%	Moyer emphasizes that even as a first-generation rancher, leadership comes from engagement, mentorship, and involvement, showing that “leading the way” is about contribution to the industry—not how many generations you come from.	*https://www.floridacattlemen.org/post/july-2025-president-s-message*

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2026 Youth Rancher Challenge

Question	Answer	% Correct	Comments	Source
What is the primary purpose of maintaining financial records on a cattle operation?	To improve decision-making and evaluate profitability	67%	Record keeping reveals opportunities to adjust management strategies and resources to meet or exceed goals in good and bad years. Decisions made from intentional records can improve the long-term production and profitability of an operation.	https://blogs.ifas.ufl.edu/rcrec/2025/03/19/the-importance-of-record-keeping-in-a-good-year/
What is the recommended bull-to-cow ratio for a yearling bull?	1:15	52%	Yearling bulls are still growing and developing, so they have less breeding capacity than mature bulls. Limiting a yearling bull to about 15 cows helps ensure he can successfully breed all females and maintain good reproductive performance during the breeding season.	https://ask.ifas.ufl.edu/publication/AN218
Stems that grow laterally underground that have nodes and modified leaves are called:	Rhizomes	27%	Rhizomes grow underground, stolons grow aboveground, both spread horizontally and create new plants at their nodes.	https://ask.ifas.ufl.edu/publication/AG107
Why is maintaining adequate body condition score (BCS) in cows before calving so important?	It increases reproductive success in the next breeding season	81%	A cow's body condition at calving directly affects how quickly she'll cycle and breed back after giving birth. Cows that are too thin (low BCS) at calving take longer to start cycling again, may have weaker heats, and lower conception rates.	https://ask.ifas.ufl.edu/publication/AN387
Which mineral is essential for cattle but not for plants and is deficient in Florida soils, thus is always required in supplements?	Selenium (Se)	42%	Selenium is critical for cattle health, it supports immune function, muscle development, and reproduction. Plants don't need selenium to grow, so Florida's naturally selenium-deficient soils don't affect the pasture grass itself. But, when cattle eat that forage, they're not getting the selenium they need.	https://ask.ifas.ufl.edu/publication/AN348/pdf
What is the primary hormone that maintains pregnancy?	Progesterone	31%	Progesterone is essential for maintaining pregnancy in cattle by supporting the uterine environment and preventing estrus and ovulation during gestation	https://edis.ifas.ufl.edu/publication/AN277
Within an hour after removing beef from a vacuum sealed package, the color will change from purple to bright red. What is this process called?	Blooming	25%	When beef is vacuum-sealed, there's no oxygen, so the myoglobin (the protein that gives meat its color) turns purplish. Once you open the package and expose the meat to air, oxygen binds to the myoglobin, forming oxymyoglobin, which has that bright cherry-red color we associate with fresh beef.	https://www.fsis.usda.gov/food-safety/safe-food-handling-and-preparation/food-safety-basics/color-meat-and-poultry
What is the purpose of a biosecurity plan?	Prevent disease spread	54%	A biosecurity plan is your defense strategy to keep diseases from entering your herd and spreading between animals. It includes protocols like controlling who enters your property, quarantining new animals, disinfecting equipment, and managing animal movement.	https://ask.ifas.ufl.edu/publication/AN194

Which stomach compartment of a cow is the most similar to a human stomach?	Abomasum	48%	The abomasum is similar to the human stomach because it is the “true stomach” of ruminant animals, where digestive enzymes and stomach acids break down food.	https://extension.umn.edu/dairy-nutrition/ruminant-digestive-system
A rancher observes patches of limpograss that appear drought-stressed despite recent rainfall, with leaves turning yellow and then red or purple before dying. What could be a cause of that?	Sap feeding by pasture mealybugs	23%	Pasture mealybugs damage grasses primarily by sucking plant sap and injecting toxic saliva, which directly injures plants and leads to discoloration and dieback, while secondary pathogens may occur later.	EDIS coming soon!
According to UF/IFAS, why has the amount of greenhouse gases emitted by the beef industry decreased over time?	Improvements in production efficiency have reduced emissions	48%	The adoption of technology has helped enable cattle farmers and ranchers to minimize the environmental impact of food production.	https://ufdcimages.uflib.ufl.edu/IR/00/00/68/67/00001/AN30200.pdf
What purpose does United States Department of Agriculture Food Safety and Inspection Service serve?	evaluates wholesomeness and safety of meat products	52%	The USDA's Food Safety and Inspection Service (FSIS) is the watchdog for meat, poultry, and egg products. They inspect processing plants, monitor slaughter and processing operations, and make sure products meet safety standards before they reach consumers.	http://www.fsis.usda.gov/inspection/inspection-programs/inspection-meat-products
What does TDN stand for?	Total Digestible Nutrients	29%	Total digestible nutrients - TDN: a standard measurement used in agriculture and animal nutrition to evaluate the energy content of livestock feed	https://ask.ifas.ufl.edu/publication/AN190
A producer delays bermudagrass harvest from 4 weeks to over 6 weeks of regrowth. What forage quality change is most likely?	Lower crude protein and high fiber concentrations.	25%	As bermudagrass matures, it produces more stems and structural fiber and fewer leafy tissues. This increases fiber concentration and decreases crude protein, resulting in lower forage quality and digestibility.	https://extadmin.ifas.ufl.edu/media/extadminifasufledu/cflag/image/docs/pdfs/spring-ranchers-forum/2015/Adesogan.pdf
Nonessential amino acids are amino acids that are not used by an animal.	False	48%	Amino acids that the cow's body (and rumen microbes) can produce on their own, so they don't need to be included in the cattle's feed. The cow still uses these amino acids for growth, milk production, and other body functions - they just don't have to come from the diet.	https://ask.ifas.ufl.edu/publication/AN334
Some weeds are prohibited in certified seed lots because they threaten agriculture, native ecosystems, and livestock health. What are those weeds called?	Noxious Weeds	50%	Noxious weeds are a legal designation of invasive, hard to control weeds that are forbidden in certified seeds.	https://www.fdacs.gov/Agriculture-Industry/Pests-and-Diseases/Plant-Pests-and-Diseases/Noxious-Weeds
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