



2024 Top Rancher Challenge

Question	Answer	% Correct	Comments	Source
What is the period which lasts 20 to 40 days post-partum that precedes the first estrus cycle called?	Uterine involution	26%	Uterine involution is the process of the uterus returning to its pre-pregnancy size and condition after calving, affecting how soon a cow resumes cycling, breeding, and the calving interval. Effective management through proper nutrition, health monitoring, and timely veterinary care when needed can expedite this process. Addressing placenta retention or infections promptly and using reproductive vaccines can mitigate potential delays.	https://edis.ifas.ufl.edu/publication/AN277
Potassium is an important nutrient for plants. The lack of K fertilization has been linked to a reduction in _____ in bahiagrass.	Persistence (bahiagrass decline)	30%	Potassium (K) is often a neglected nutrient when fertilizing pastures in Florida, especially given the current high cost of fertilizer. While nitrogen provides fuel for growth, K is related to the plant's ability to withstand stress. A recent research study on Florida ranches showed that K and low pH were common denominators in pastures experiencing bahiagrass decline	https://hayandforage.com/article-2364-finding-a-solution-to-declining-bahiagrass-pastures.html
What are the main purposes of conservation easements?	To protect a property's natural state, and to ensure that the property is available for use in agriculture, forest, recreation or open space	95%	Conservation easements are legally binding agreements that restrict the development and use of land to protect its conservation values. They aim to preserve the natural state of the property while allowing sustainable agriculture, forestry, recreation, and open space uses.	https://www.nrcs.usda.gov/programs/initiatives/acep-agricultural-conservation-easement-program/florida/agricultural
Which of the following is true about conservation easements?	Restrict the type and amount of development in exchange for compensation, bind the current and future owners in perpetuity to the restrictions	82%	Conservation easements typically involve limiting development rights to protect the land's ecological or agricultural value. These restrictions are permanent, applying to all future property owners, ensuring long-term conservation goals.	https://www.nrcs.usda.gov/programs/initiatives/acep-agricultural-conservation-easement-program/florida/agricultural
What is the purpose of estrus synchronization protocols?	All of the above (facilitate artificial insemination, induce cyclicity in anestrus cows, stimulate maturity in peri-pubertal heifers)	80%	Estrus synchronization protocols are used to manage and control the reproductive cycles of livestock, making artificial insemination more efficient. These protocols help induce cyclicity in cows that are not naturally cycling and stimulate reproductive maturity in young heifers, improving herd fertility management.	https://journals.flvc.org/edis/article/download/12776/3/128248
What impact do feed additives, like nitrates, fatty acids and others, have on methane emissions from beef cattle?	They can reduce methane emissions	55%	Feed additives such as nitrates and fatty acids have been shown to reduce methane emissions in beef cattle by altering rumen fermentation processes. These additives can inhibit the activity of methane-producing microbes, thereby decreasing the overall production of methane, a potent greenhouse gas.	https://clear.ucdavis.edu/explainers/how-can-cattle-feed-additives-reduce-greenhouse-gas-emissions
Loss in body condition score (BCS) and weight during pregnancy could represent a risk for:	All of the above (<i>the cows</i> , because they calve with a low BCS, they will need time for postpartum recovery; <i>the calves</i> , because the cows will not produce enough milk in the subsequent lactation; <i>the fetuses</i> they are carrying, because this undernutrition could impact their development and therefore have permanent consequences during adulthood.	89%	Cows that calve with a low BCS require more time for postpartum recovery, which can delay their return to estrus and affect their ability to conceive in the next breeding season. Additionally, low BCS can lead to inadequate milk production during lactation, adversely affecting calf growth. Undernutrition during pregnancy can also impair fetal development, potentially resulting in long-term health and productivity issues for the offspring.	https://edis.ifas.ufl.edu/publication/AN319
Retaining a cow in the herd that did not get pregnant this year is a good idea because?	It is not a good idea	75%	Keeping a cow that failed to conceive during the breeding season is generally not advisable because it represents an economic loss. Non-pregnant cows contribute to maintenance costs without providing the return on investment through calf production. Culling such cows helps optimize herd fertility and productivity, ensuring resources are allocated to more productive animals.	https://edis.ifas.ufl.edu/publication/AN323
The best herbicide for goatweed control is _____ in bahiagrass and _____ in bermudagrass, stargrass, and limpgrass.	2,4-D; metsulfuron (Escort, MSM60, Chaparral)	32%	2,4-D has the best activity of any active except metsulfuron, however, metsulfuron cannot be used in bahiagrass (especially Pensacola types.) Aminopyralid has no activity on goat weed.	https://edis.ifas.ufl.edu/publication/WG006
The horn fly is one of the most serious pests of cattle in Florida. Horn fly numbers of ___ or more per beef cow are considered to be of economic importance.	200	29%	Horn flies are significant pests for cattle, causing irritation and blood loss, which can lead to reduced weight gain and milk production. Management practices include the use of insecticide ear tags, back rubbers, and pour-on treatments.	https://edis.ifas.ufl.edu/publication/IN952
For bahiagrass maintenance at low fertilization level we recommend the application of 60 lb of nitrogen per acre early in the spring. How many pounds of fertilizer with a N-P-K formula of 20-15-14 do we need to apply per acre?	300	34%	An NPK Formula of 20-15-14 indicates that the fertilizer contains 20% N, 15% equivalent P2O5, and 14% equivalent K2O. To achieve 60 lbs of actual nitrogen per acre, we need to apply 300 lbs of this fertilizer, or 60 lb target / 0.2 concentration.	https://aesl.ces.uga.edu/oil/fertcalc/
Which of the statements below is true about vaccinations?	Vaccines are important for both cow and calves to prevent many diseases including IBR, BVD, clostridiums, leptospirosis and more.	96%	Vaccinations are a critical component of herd health management, helping to prevent a range of infectious diseases that can affect both cows and calves. Furthermore, vaccinated calves can bring added value in the market.	https://www.aces.edu/blog/topics/beef/vaccinations-for-the-beef-cattle-herd/
Which agency oversees the National Animal Identification System (NAIS) for cattle traceability?	USDA	81%	This system helps in disease control, food safety, and rapid response to animal health emergencies, and can provide consumers with information on cattle raising practices which can increase the value of products.	https://www.aphis.usda.gov/livestock-poultry-disease/traceability
What mineral deficiency can lead to white muscle disease in calves?	Selenium	47%	White muscle disease is characterized by muscle degeneration and weakness. While Selenium is adequate in forages in other regions, it is frequently deficient in Florida because of our poor soils.	https://animal.ifas.ufl.edu/beef_extension/bcsc/2010/pdf/arthington.pdf or https://edis.ifas.ufl.edu/publication/VM245
How much crude protein (CP) and energy (TDN) is required in a weaned calf diet?	11% CP and 65% TDN	34%	Weaned calves are growing body frame and size, which requires protein and energy. The whole diets for weaned calves needs to have at least 11% CP and 65% TDN, which is normally achieved by supplementing forage-based diets with higher CP and energy concentrates.	https://edis.ifas.ufl.edu/publication/AN305
How much of Florida is covered by grazing lands?	Depending on the source and how it is accounted, this number can be between 15 and 20%. Thus, we removed this question from the challenge.	88%	According to the last USDA census, Florida has 3.9 million acres of pastures, and about 1 million acres of grazed pastureland.	https://www.nass.usda.gov/Publications/AgCensus/2022/Full_Report/Volume_1_Chapter_1_State_Level/Florida/st12_1_011_012.pdf
Since its founding in 1999, this organization that partners with the Florida Cattlemen's Association is a statewide accredited land conservancy working to conserve Florida's water, wildlife, wild places, and protect the Florida Wildlife Corridor, and has so far helped protect over 32,000 acres in Florida.	Conservation Florida	53%	Conservation Florida is a nonprofit land trust dedicated to conserving the natural landscapes of Florida.	https://conservationfla.org/cf/news/2023/7/20/conservation-florida-cattlemens-association-unite