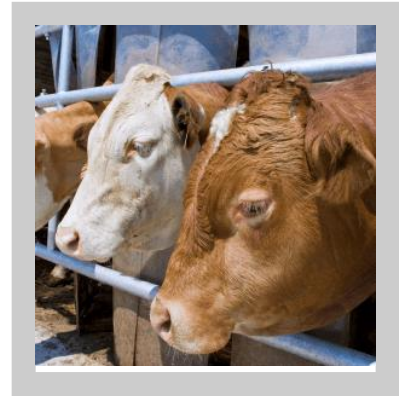


Name _____

Date _____

Concentrated Animal Feeding Operations

According to some estimates, if we could compile the amount of food, land, water, and energy used to raise the 10 billion animals slaughtered each year for meat, we could use those resources to feed every single starving person on earth. The majority of these resources are depleted by concentrated animal feeding operations (CAFOs). CAFOs are factory farms that mass-produce livestock—harming animals, the environment, and humans in the process. It is true that these farming methods provide an abundant source of food and employ thousands of workers across the country. However, CAFOs should be placed under more stringent restrictions because of their unfair treatment of animals and the harm they do to both the environment and humans.



One of the key controversies surrounding factory farms is animal rights. Factory farms raise livestock indoors, as opposed to allowing the animals to graze in fields and pastures. The farmers favor this overcrowded environment because it maximizes profits. Providing less space for the animals costs less money; filling pens to their maximum capacity ensures that no space is wasted. Consequently, animal pens are often so small that larger animals cannot lie down or turn around. In some cases, these small cages are beneficial for more than just maximizing capacity: calves, for example, do not gain muscle mass in this environment. This keeps their meat more tender, which makes it more attractive to consumers.

Livestock in CAFOs are often found living in their own urine and feces, stimulating the spread of diseases—such as avian flu, foot and mouth disease, and mad cow disease—among other animals on the farm. In order to combat this, farmers must give the animals antibiotics. In many cases, however, antibiotics are used for disease prevention instead of treatment. In addition to being used to combat the spread of disease, antibiotics are also commonly used to encourage faster growth in livestock. This overuse increases the risk of livestock developing immunity to antibiotics, ironically making animals even more susceptible to disease. After being digested, these antibiotics are released back into the environment in the form of milk, meat, and waste, which can affect the people who eat these products or the environment that absorbs them.

CAFOs also negatively impact the environment in the form of air and water pollution. Factory farms contribute to air pollution issues in the United States through the release of toxic gases and vapors and by burning fossil fuels to run farm machinery. These farms also have notable consequences for the environment in terms of water pollution. One characteristic of CAFOs that creates water pollution is the presence of a lagoon. Lagoons are artificial storage basins where animal excrement is temporarily contained; periodically, farmers flush this waste into ditches or nearby bodies of water.

This waste combines with runoff from fertilized fields to pollute the water sources surrounding CAFOs. It adds excess nutrients, pathogens, veterinary pharmaceuticals, heavy metals, and excreted hormones to the water sources. Such pollutants not only affect aquatic life, but can lead to severe impacts on human health.

Another negative environmental impact of factory farms is resource depletion. Factory farming uses more land than any other agricultural or industrial enterprise in the country. CAFOs consume a great deal of resources in terms of grain, energy, and land. There are far more efficient ways of using these resources to feed people. For example, it has been estimated that the grain used to feed livestock in the United States alone could feed up to 800 million people in one year. By contrast, the production of livestock in CAFOs is a wasteful use of energy. While both chicken meat and soybeans are good sources of protein, producing equivalent amounts of protein from chicken meat and soybeans does not require equivalent amounts of energy: chicken meat production consumes 14 times more energy than soybean production. Grain and energy supplies should be used more efficiently to produce food sources other than livestock.

In order to combat the unfair treatment of animals and the risks to environmental and human health, CAFOs should be placed under stricter guidelines. One such regulation would force factory farms to adhere to air and water quality protection standards from which they have previously been exempted, like those set forth by the Clean Water Act. Enforcing these standards would lead to banning environmental hazards such as waste lagoons, which in turn would reduce environmental pollution and human health liabilities.

Some have suggested that due to these environmental and human health concerns, factory farms should be banned outright. Advocates for CAFOs, however, argue that factory farming allows for lower production costs that translate into lower food prices for consumers. Organic and free-range products, they argue, do not allow for the large-scale production of livestock; prices for meat, eggs, and dairy would increase should the country shift towards organic products. Although this would be an inconvenience to consumers, a price increase would encourage people to eat a diet of less meat. This cultural change would assist in solving the broader resource crisis as fewer grain, energy, and land resources would be needed to support smaller-scale production. Better treatment of animals and more responsible environmental practices would protect humans more from infectious diseases and the effects of air and water pollution—a benefit everyone should embrace.

1) The primary purpose of the passage is to

- A. persuade readers that factory farms should be more strictly regulated to minimize the harm they cause
- B. suggest economic alternatives to factory farms, such as organic farming and soybean production
- C. complain about the water pollution caused by the irresponsible practice of keeping waste lagoons on CAFOs
- D. educate readers about the pros and cons of CAFOs
- E. argue against the use of antibiotics for disease prevention in animals

2) Based on information in the passage, it can be inferred that animals raised on CAFOs live indoors because

- I. animals that live indoors require fewer antibiotics than animals raised outside
- II. some animals raised inside produce more appealing meat
- III. animals raised indoors are less expensive to maintain

- A. I only
- B. II only
- C. I and II only
- D. II and III only
- E. I , II, and III

3) The author describes CAFOs as having a negative impact on the environment for all of the following reasons EXCEPT

- A. animal waste pollutes water sources near factory farms
- B. exhaust from farm machinery contributes to air pollution
- C. animals that live in overcrowded environments waste energy
- D. fertilizer-rich runoff from farms contaminates the environment
- E. antibiotics enter the human food supply through meat and milk

4) Which of the following statements from paragraph 5 represents an opinion, as opposed to a fact?

A. "Factory farming uses more land than any other agricultural or industrial enterprise in the country."

B. "It has been estimated that the grain used to feed livestock in the United States alone could feed up to 800 million people in one year."

C. "Producing equivalent amounts of protein from chicken meat and soybeans does not require equivalent amounts of energy."

D. "Chicken meat production consumes 14 times more energy than soybean production."

E. "Grain and energy supplies should be used more efficiently to produce food sources other than livestock."

5) Which of the following details, if added to the passage, would best strengthen the author's argument made in paragraph 6?

A. People who reduce their intake of meat raised on factory farms reduce their chances of developing high blood pressure and heart conditions.

B. A town in North Carolina that used to be situated next to a hog waste lagoon reported 50% fewer cases of respiratory illness after the lagoon was shut down.

C. Factory farms that are forced to adhere to air and water quality protection standards often report a 30% decrease in annual profits.

D. Several animal rights groups have supported bills to force factory farms to abide by greater environmental protection standards.

E. The Clean Water Act was enacted in 1948 and expanded in 1972.

6) In the final paragraph, the author states that meat from animals raised on factory farms is cheaper than organic or free-range meat. The author most likely admits this fact in order to

A. provide a balanced perspective before concluding that the drawbacks of CAFO-produced meat outweigh the economic benefits

B. give readers enough information so that they can come to their own conclusions about CAFOs' benefits and drawbacks

C. warn readers about the economic dangers that would result from shutting down CAFOs

D. criticize supporters of CAFOs for being more concerned with the economy than the environment

E. argue that it is more important to address the broader resource crisis than to worry about food prices

7) As used in the final paragraph, which is the best synonym for **advocates**?

A. critics

B. founders

C. supporters

D. censors

E. followers

8) Which of the following statements contains a valid objection to the author's argument in the final paragraph that he or she does not address in the passage?

A. Not everyone wants to be a vegetarian.

B. An increase in food prices is more than just an inconvenience for many households; it can mean the difference between having enough to eat or not.

C. Factory farm owners pay taxes just like everyone else, and therefore they should be allowed input in the creation and modification of environmental policy.

D. If farms move toward producing more organic products, food prices will likely go up.

E. It is illegal to ban factory farms on the basis of current laws.

Answers and Explanations

1) A

Core Standard: **Integration of Knowledge**

In the final sentence of paragraph 1, the author states his or her main argument: “CAFOs should be placed under more stringent restrictions because of their unfair treatment of animals and the harm they do to both the environment and humans.” Throughout the passage the author provides evidence about the CAFOs’ unfair treatment of animals, their pollution of the environment, and the dangers they pose to human health. In paragraph 6, the author restates his or her point in light of the evidence presented: “In order to combat the unfair treatment of animals and the risks to environmental and human health, CAFOs should be placed under stricter guidelines.”

Throughout the passage the author’s tone is persuasive. From this we can determine that the primary purpose of the passage is to persuade readers that factory farms should be more strictly regulated to minimize the harm they cause to animals, to the environment, and to human beings. Therefore **(A)** is correct.

Although in paragraph 5, the author does mention economic alternatives to factory farms, this is only a minor point in the passage and thus does not represent the primary purpose. This makes **(B)** incorrect.

The author discusses the problems with waste lagoons in paragraphs 4 and 6, but he or she uses this evidence to support the larger argument that CAFOs harm the environment as well as humans and animals. Because it is too narrow in scope, **(C)** is incorrect.

Educating readers about the pros and cons of CAFOs suggests a neutral, informative tone. However, the author’s tone is persuasive and he or she takes a clear position on the issue. Therefore **(D)** is incorrect.

In paragraph 3, the author describes the problems with the use of antibiotics on factory farms, but he or she does not explicitly argue against their use in disease prevention. Furthermore, this is a minor point in the passage used to support the larger argument that CAFOs cause harm. This makes **(E)** incorrect.

2) D

Core Standard: **Integration of Knowledge**

In paragraph 3, the author writes, “Livestock in CAFOs are often found living in their own urine and feces, stimulating the spread of diseases—such as avian flu, foot and mouth disease, and mad cow disease—among other animals on the farm. In order to combat this, farmers must give the animals antibiotics.” From this we can infer that living indoors increases the amount of antibiotics required by animals, so they likely require more, not fewer, than animals raised outside. This eliminates **option (I)**.

In paragraph 2, the author writes of animals raised indoors: “Calves, for example, do not gain muscle mass in this environment. This keeps their meat more tender, which makes it more attractive to consumers.” This means that some animals raised inside produce more appealing meat. This supports **option (II)**.

In paragraph 2, the author writes, "The farmers favor this overcrowded environment because it maximizes profits. Providing less space for the animals costs less money; filling pens to their maximum capacity ensures that no space is wasted." This means animals raised indoors are less expensive to maintain. This supports **option (III)**. Therefore **(D)** is correct.

3) C

Core Standard: **Key Ideas and Details**

In paragraph 5, the author writes, "CAFOs consume a great deal of resources in terms of grain, energy, and land. There are far more efficient ways of using these resources to feed people." From this we can infer that the author believes that factory farms in general waste energy. However, the author does not specifically pinpoint overcrowded environments as the cause of this waste. In fact, if the animals bred by factory farms lived outside instead of inside in crowded pens, the farms would likely consume even more land and energy resources. The author does not claim that CAFOs have a negative impact on the environment because animals that live in overcrowded environments waste energy. Therefore **(C)** is correct.

In paragraph 4, the author writes, "Lagoons are artificial storage basins where animal excrement is temporarily contained; periodically, farmers flush this waste into ditches or nearby bodies of water. This waste combines with runoff from fertilized fields to pollute the water sources surrounding CAFOs." This means **(A)** is incorrect.

In paragraph 4, the author writes, "Factory farms contribute to air pollution issues in the United States through the release of toxic gases and vapors and by burning fossil fuels to run farm machinery." This means **(B)** is incorrect.

In paragraph 4, the author writes, "This waste combines with runoff from fertilized fields to pollute the water sources surrounding CAFOs." This means **(D)** is incorrect.

In paragraph 3, the author writes, "After being digested, these antibiotics are released back into the environment in the form of milk, meat, and waste, which can affect the people who eat these products or the environment that absorbs them." This makes **(E)** incorrect.

4) E

Core Standard: **Integration of Knowledge**

A fact is something known to exist or be true as a result of experience or observation. Facts can be proven. An opinion is a belief or judgment that rests on grounds insufficient to produce complete certainty, such as an emotion or personal bias. Opinions cannot be proven true or false. For example, it is a *fact* that roses are flowers, but an *opinion* that roses smell nice. The author states that grain and energy supplies should be used more efficiently to produce food sources other than livestock. Because he or she is claiming something should be done, it is an opinion. The owners of CAFOs, for example, would likely disagree with this statement. Therefore **(E)** is correct.

Choices **(A)**, **(B)**, **(C)**, and **(D)** all contain facts based on experience or observation. These statements can be proven. Therefore they are incorrect

5) B

Core Standard: **Integration of Knowledge**

In paragraph 6, the author argues that CAFOs should be placed under stricter environmental guidelines. To illustrate the benefits of these stricter regulations, he or she states that “enforcing these standards would lead to banning environmental hazards such as waste lagoons, which in turn would reduce environmental pollution and human health liabilities.” If a town in North Carolina reported fewer cases of illness after a nearby hog waste lagoon shut down, then this evidence would directly support this claim, thus strengthening the author’s argument. Therefore **(B)** is correct.

The argument in paragraph 6 is about environmental guidelines, not personal diet choices, so **(A)** is incorrect.

A decrease in profits for those farms forced to comply with strict environmental guidelines would weaken, not strengthen, the author’s argument. This makes **(C)** incorrect.

Noting that animal rights groups support bills to enforce stricter environmental guidelines for factory farms only provides evidence that there is support among the public for such guidelines; it does not suggest that these guidelines would be effective. Since this fact does not specifically support the author’s claim that enforcing these environmental standards would reduce pollution and human health liabilities, **(D)** is not the best choice.

While the author mentions the Clean Water Act in paragraph 6, providing information about when the Clean Water Act was enacted merely adds background information. It does not strengthen the author’s claim that enforcing these environmental standards would reduce pollution and human health liabilities, so **(E)** is incorrect.

6) A

Core Standard: **Integration of Knowledge**

In the final paragraph, the author states, “Advocates for CAFOs, however, argue that factory farming allows for lower production costs that translate into lower food prices for consumers.” Including an opposing point of view can strengthen an author’s argument because it shows the reader that the author has carefully considered both sides of the issue before coming to his or her conclusion.

Providing a balanced perspective can also make an author appear more reasonable to readers, making them more willing to consider the author’s argument. In this case, the author likely includes this fact about food prices to provide a balanced perspective before concluding that the drawbacks of CAFO-produced meat outweigh the economic benefits. Therefore **(A)** is correct.

Careful readers will note that the author is not particularly interested in readers coming to their own conclusions; the author wants the reader to agree with his or her position. This makes **(B)** not the best choice.

The author does not go so far as to characterize higher food prices as “economic dangers.” In fact, he or she later argues that there would be a benefit to higher food prices: “A price increase would encourage people to eat a diet of less meat. This cultural change would assist with solving the broader resource crisis as fewer grain, energy, and land resources would be needed to support smaller-scale production.” From this information we can understand that the author does not intend to warn readers about economic dangers of shutting down CAFOs. This means **(C)** is incorrect.

Although the author implies that supporters of CAFOs are likely more concerned with the economy than the environment, the author's tone here is conciliatory, not critical. This means **(D)** is incorrect.

The author agrees that it is more important to address the broader resource crisis than to worry about food prices, but that is not the reason he or she likely includes the information that a move away from factory farms would lead to higher food prices. He or she includes this fact as a concession to opponents of his or her argument rather than as a piece of evidence supporting his or her main argument. This makes **(E)** incorrect.

7) C

Core Standard: **Craft and Structure**

Advocate (*noun*): one who shows support for or promotes an idea.

In the final paragraph, the author writes: "Advocates for CAFOs, however, argue that factory farming allows for lower production costs that translate into lower food prices for consumers." Since advocates for CAFOs argue that factory farms help consumers save money, we can infer that these *advocates* support factory farming. This means that *supporters* is a good synonym. Therefore **(C)** is correct.

Critics are people who find fault with something. We can understand that these advocates see the benefits of factory farms rather than their faults. This means **(A)** is incorrect.

Founders are people who establish something. Supporting factory farms does not necessarily mean that one has established a factory farm. This makes **(B)** incorrect.

Censors are people who find fault with something. We can understand that these advocates see the benefits of factory farms rather than their faults. This means **(D)** is incorrect.

Followers are people who subscribe to a belief, or disciples. While these advocates support factory farms, this does not mean that they are disciples of factory farms. This eliminates **(E)**.

8) B

Core Standard: **Key Ideas and Details**

In the final paragraph, the author argues that the economic drawbacks of moving away from factory farms, particularly higher food prices, would be outweighed by the benefits to the environment and to people. He or she states, "Although this would be an inconvenience to consumers, a price increase would encourage people to eat a diet of less meat. This cultural change would assist in solving the broader resource crisis as fewer grain, energy, and land resources would be needed to support smaller-scale production." However, the author does not consider that for some people, higher food prices would be more than just an inconvenience, but a real hardship. It could mean the difference between having enough to eat or not. We know that the author is concerned about the problem of hunger, as he or she mentions in paragraph 1 that "if we could compile the amount of food, land, water, and energy used to raise the 10 billion animals slaughtered each year for meat, we could use those resources to feed every single starving person on earth." It is a valid objection that higher food prices could be more than just an inconvenience, but could actually contribute to the hunger problem. Since the author does not address this objection, **(B)** is correct.

The author does not argue that everyone should be a vegetarian, or cut out meat entirely. He or she merely claims that there would be benefits if people ate a diet of less meat. This means **(A)** is incorrect.

The author does not argue that factory farm owners should or should not be allowed input in environmental policy, so **(C)** is incorrect.

It is a valid objection to the author's argument that if farms move toward more organic products, food prices will likely go up. However, the author acknowledges this objection and addresses it. This means **(D)** is incorrect.

The author does not argue that factory farms should be banned; he or she merely states that "some" people believe they should be. The author's own argument is for more stringent regulations. This makes **(E)** incorrect.