

Water Quality Management in Aquaculture

READING COMPREHENSION

 Reading Passage: "A Day in the Life of an Aquaculture Technician"

Maria's Daily Routine

Maria works as an aquaculture technician at a tilapia farm. She starts her day at 5:30 AM. Every morning, she follows a strict monitoring protocol to ensure optimal water quality.

First, Maria measures dissolved oxygen (DO) in all tanks. The fish need at least 5 mg/L of DO to breathe properly. If the level drops below this, she immediately activates the aeration system. Next, she tests pH and ammonia levels. The ideal pH for tilapia ranges from 6.5 to 8.5. Ammonia must stay below 0.02 ppm because it causes severe stress and gill damage.

Maria also monitors water temperature. Tilapia grow best at 25-30°C. When the temperature rises above 32°C, fish metabolism increases, and they require more oxygen. In the afternoon, Maria checks nitrite and nitrate levels. Beneficial bacteria in the biofilter convert toxic ammonia into nitrite, then into less harmful nitrate through nitrification.

Every Friday, Maria calibrates all testing equipment to ensure accuracy. She records all parameters in a digital logbook. The farm manager reviews this data weekly. If any parameter fluctuates outside the safe range, Maria takes corrective action: she exchanges 20% of the water, adds a buffer to stabilize pH, or increases aeration.

Maria's careful monitoring prevents disease outbreaks and maintains healthy fish growth. She loves her job because she knows her work directly impacts fish welfare and farm productivity.

Reading Comprehension Exercises

Exercise A: True/False/Not Given

Mark T (True), F (False), or NG (Not Given).

1. Maria starts work at 6:00 AM.
2. Tilapia need at least 5 mg/L of dissolved oxygen.
3. Maria tests pH only once a week.
4. Ammonia levels must stay below 0.02 ppm.
5. High temperature decreases fish metabolism.

6. ___ Bacteria convert ammonia into nitrate directly.
7. ___ Maria calibrates equipment every Friday.
8. ___ The farm manager checks the data daily.
9. ___ Maria exchanges 50% of the water when parameters are abnormal.
10. ___ Maria believes her work is important for fish health.

Exercise B: Wh- Questions

Answer in complete sentences.

1. What does Maria measure first every morning?

2. Why is ammonia dangerous for fish?

3. What happens when water temperature rises above 32°C?

4. How do beneficial bacteria help the aquaculture system?

5. What corrective actions does Maria take when parameters fluctuate?

Exercise C: Vocabulary in Context

Find words in the text that mean:

1. A set of rules to follow (paragraph 2): _____
2. Activate or switch on (paragraph 2): _____
3. Very serious (paragraph 2): _____
4. Helpful, positive (paragraph 4): _____
5. Change or vary (paragraph 5): _____
6. Disease or infection (paragraph 6): _____
7. Well-being (paragraph 6): _____
8. Output or yield (paragraph 6): _____

Exercise D: Grammar Hunt

Find and write 5 examples of Present Simple from the text:

1. (Fact) _____
2. (Routine) _____
3. (3rd person -s) _____
4. (Negative) _____
5. (General truth) _____

Keep this handout in your portfolio! You will use these terms and grammar structures throughout your aquaculture career.

Good luck, future aquaculture professional! 🐟 📚