Water Quality Management in Aquaculture

Bilingual Translation Activity: Maria's Daily Routine

English ↔ Español

Objective: Students will analyze parallel bilingual texts to identify vocabulary, grammatical structures, and translation strategies used in technical/professional contexts.

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 grows 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.

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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.

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

Good luck, future aquaculture professional!

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