Title : The Comparison of Water Quality to be Suitable for Fish in Floating Basket in Tha Klai

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Abstract or summary

The project was conducted with an objective to compare the quality of water images in two areas in the floating basket and natural water sources at Tha Klai, Thung Krabue Subdistrict, Yan Ta Khao District, Trang Province for oxygen in water and water transparency .

The result of the research is the pH of the water from the highest water source is the natural water source (8.33) with the base value, the highest water temperature is the natural water source (28.33°C), the highest oxygen value in the water is in the floating basket (8.66 mg/l), the highest water transparency is the natural water source (48.66 cm).

Keywords: floating basket , water quality, natural water sources

Introduction

Fish farming in floating basket is widely popular in major river basins throughout the country because it is important to promote and support for the development of quality of life with the lifestyle in the watershed and the agricultural economic conditions. Make a career available for the convenience of food that used for raising has a good return. It takes a short rearing period but the yield per area is high. However, dense cage farming will inevitably affect the environmental quality of rivers and nearby ecosystems, both water quality and soil sediment. This is due to the fact that the fish's food and excrement are too much to exceed the natural capacity of waste and purification of water bodies such as industrial plants, municipal

wastewater, causing severe water pollution problems and affecting water ecosystems. Therefore, the researcher considers that the impact on water quality from fish farming in cages should be studied to monitor the quality of water appropriately. This includes balancing water resources in the ecosystem for freshwater fish farming in floating basket.

Research objectives

To compare water quality in floating basket, including water temperature, transparency, pH, and measure in Tha Klai, Trang Province.

Scope of study

Tha Klai, Thung Krabue Subdistrict, Yan Ta Khao District, Trang Province**.**

The site will be conducted to collect samples in 2 areas: the area in the floating basket and the area in the natural water source.

Research question

Does water quality affect fish farming in floating basket?

Research hypothesis

Water quality affects fish farming in floating basket.

Methods and Materials

1.Materials and equipment

1) Thermometer 2) Universal Indicator Paper

3) Dissolved oxygen content test kit 4) Secchi Disk

5)Beaker

2.Procedure

1)Water temperature measurement

1.1. Dip the thermometer in water about 10 centimeters deep about 3-5 minutes.

1.2. Read the thermometer at eye level for the thermometer bulb must remain in the water.

1.3. Dip the thermometer for 1 minute. For the 2nd and 3rd measurements by changing the reader of the thermometer .

1.4. Read the unit temperature in degrees Celsius(•C) A total of 3 measurements were taken.

2)Measurement of pH of water

Pour the sample water into the beaker, dip in the Universal Indicator paper. In the sample water, leave the pH value constant, comparing the measured pH. Measure 3 times in total to collect the result.

3) Oxygen content measurement in water

3.1. Rinse the sample cylinder with water 2-3 times and fill it with water.

3.2.Gently open the lid of 2 drops of #4 solution and 2 drops of #4 solution and close the lid, taking care not to let air bubbles to enter.

3.3.Shaking while the lid is closed, a yellow-brown sediment will form for indicating the presence of oxygen.

3.4.Wait for the sediment to fall about half the cylinder.

3.5. Open the lid of 5 drops of #3 solution into the sample and close the lid, being careful not to let the air in, shake it well, wait until the sediment is completely gone, the sample turns yellow.

3.6.Pour the sample from item 5 new test tube to the limit of 5 ml.

3.7..Add one drop of #4 reagent at a time, shake well, count the number of stops used when the color of the sample starts to fade yellow. So I dripped 2 drops of #5 solution.

3.8.The sample will turn blue with drops #4 and continue counting the drops until the sample turns colorless.

3.9.Take the number of counted droplets, read the results, show the value in milligrams per liter of oxygen from the table.

4) Water Transparency Measurement

4.1. Slowly pour the sample water into the transparency measuring tube gradually. Notice the black and white on the round plate at the bottom of the tube and continue pouring until the visible white and black fade as you look from the mouth of the transparency tube to the black and white palette at the bottom of the tube. The transparency measuring tube should also be rotated at the same time to notice the difference between white and black on the plate at the bottom of the tube.

4.2. Record the readings in the log worksheet. If the reading is fractions of a centimeter, make up the closest integer, e.g. 2.1 centimeters, recorded as 2 centimeters.

4.3. When the sample water is fully filled, the transparency measurement tube is filled. If the color is still visible on the measuring plate, record that the transparency of the water is greater than (>) the length or height of the transparency tube.

4.4. Repeat the experiment according to the methods in items 1 – 3 at least 2 times to control the measurement quality and transparency of the measurement. From the same sample water, the difference must not exceed 10 centimeters.

Data analysis

1) Use the obtained data to analyze and compare, such as water temperature, water pH.

DO value of water Water transparency value

2) Make a graph showing the comparative data average.

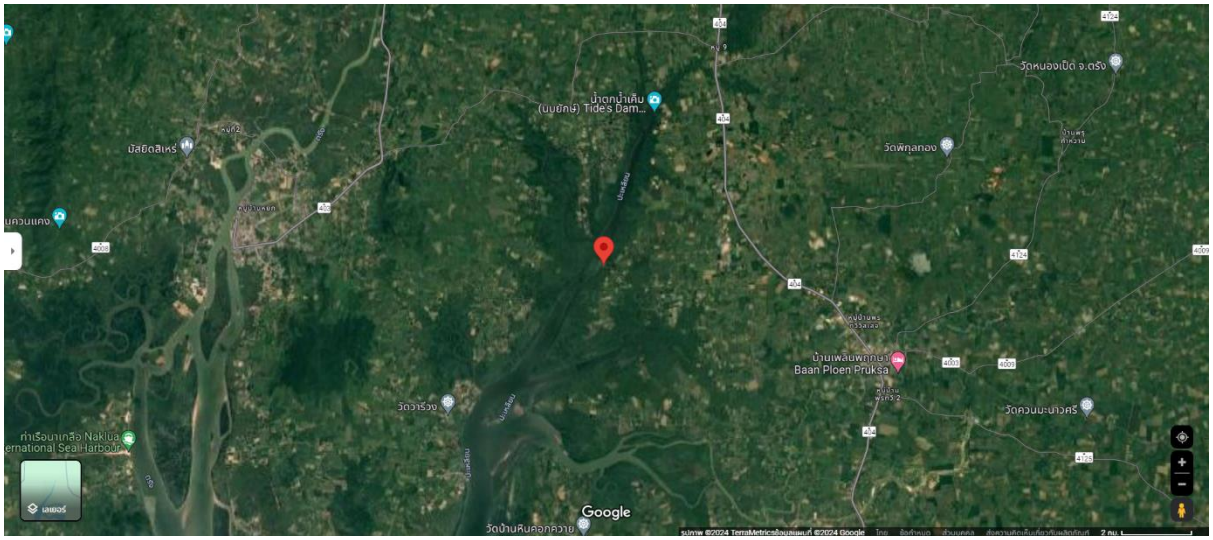
3) Make conclusion.

Geographic coordinates

Table 1 Geographical coordinates

Study point

For the study was conducted in Tha Klai, Thung Krabue Subdistrict, Ta Khao District, Trang Province by conducting field visits to collect samples from 2 sources with coordinates as shown in Table 1 .



zone	Geographical coordinates	
	Latitude (N)	**Longitude (E)**
Floating basket for fish	7.401358	99.605068
Natural Water Sources	7.401676	99.605163

Results and data

1.Water temperature in each area

The floating basket area has an average temperature of 26.33°C that the natural water area has an average temperature of 28.33°C from Table 2.

Table 2 shows the water temperature in Tha Klai, Trang Province.

Study area	Water temperature (degrees Celsius)			
	1st time	2nd time	3rd time	average
Water in the floating basket	26	26	27	26.33
Natural Water Sources	29	28	29	28.33

2.pH in water

From Table 3 : The acidity-base of the water in Tha Klai, Trang province found that the water in the floating basket that it has a pH of 8 water in the area of natural water sources. pH 8.33

Table 3 pH in water

Study area	Acidity Base (pH) in water			
	1st time	2nd time	3rd time	average
Water in the floating basket	8	8	8	8
Natural Water Sources	8	9	8	8.33

3.DO value of water

Water in the floating basket has an average DO of 8.66 mg/l, natural water sources have an average DO of 8.66 mg/l from Table 4.

Table 4 Show the DO value of water in Tha Klai, Trang province.

Study area	Oxygen content in water (milliliters per gram)			
	1st time	2nd time	3rd time	average
Water in the floating basket	9	8	9	8.66
Natural Water Sources	7	8	8	7.66

4.Water transparency value

From Table 5: The water transparency value showed that the water in the floating basket area averaged 43.66 cm, the water in the natural water source area averaged 48.33 cm.

Table 5 shows the water transparency value of Tha Klai Area, Trang Province

Study area	Water transparency (centimeters)			
	1st time	2nd time	3rd time	average
Water in the floating basket	44	43	44	43.66
Natural Water Sources	48	48	49	48.33

Discussion

pH of water

A study of the pH of water showed that the water in both areas had the same base values.

Water temperature

According to the study, the water temperature in the floating basket was 26.33 degrees Celsius. The temperature is less than the natural source with a temperature of 28.33 degrees Celsius.

Transparency

According to the transparency study, the water in the coop area is 43.66 centimeters transparent, which is 48.66 centimeters less transparent than natural sources.

Oxygen in water

A study on oxygen in the water showed that the water in the coop area had 8.66 degrees Celsius of oxygen in the water. It contains more oxygen in the water than natural sources at 7.66 degrees Celsius.

Conclusion

From the study on the comparison of water quality to be suitable for the floating basket in Tha Klai area it is a study of water quality.

-Water quality in floating basket in terms of temperature is 26.33 degrees Celsius, for acidity base in the oxygen base in the water is 8.66 milligrams per liter. Transparency is 43.66.

- Water quality in natural water sources is 28.33 degrees Celsius for acidity base in the oxygen base in water that is 7.66 milligrams per liter. In terms of transparency, it is worth 48.66 cm.

It was found that there was not much difference in the water in the two areas so there was no need to adjust the water before raising fish in the floating basket.

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Citations

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