Title

A Study of Soil Quality in Abandoned Rice Fields, Yan Ta Khao District, Trang Province

Researchers

Mr. Pisetthasuth Sriphet
Ms. Methawee Chuchat

Grade Level

Grade 11 (Matthayom 5)

Advisor

Ms. Kwanjai Kanjanasrimek
Ms. Narisara Akkayamat

School

Wichianmatu School, Mueang Trang District, Trang Province

Abstract

This environmental science research titled “A Study of Soil Quality in Abandoned Rice Fields, Yan Ta Khao District, Trang Province” aimed to

1. study the soil structure in abandoned rice fields in Yan Ta Khao District, Trang Province
2. study the soil pH
3. study soil moisture
4. study light intensity in abandoned rice fields

The study focused on the physical characteristics of soil, soil pH, soil moisture, and light intensity. The results showed that the soil in the abandoned rice fields had a pH value of 7, indicating neutral soil conditions. The average soil moisture was 93 percent, and the average light intensity was 983.33 lux.

Keywords

Soil quality, abandoned rice fields

Introduction

Rice fields are essential as a primary food source for Thai people. They generate income for farmers, help maintain ecosystems, and reflect the Thai way of life. Currently, many farmers have stopped rice cultivation, resulting in abandoned rice fields. These areas lack cultivation, leading to soil degradation, weed growth, and reduced fertility. Therefore, restoration is necessary so that these areas can be reused for agricultural purposes.

Abandoned rice fields are areas that have not been used for agriculture for a long period, which may cause changes in soil quality. Studying soil properties is important for planning soil improvement and for appropriate land reuse.

Research Questions

- What is the soil structure in abandoned rice fields?
- What is the soil pH in abandoned rice fields?
- What is the soil moisture level in abandoned rice fields?
- What is the light intensity in abandoned rice fields?

Research Hypotheses

- The soil structure in abandoned rice fields is suitable.
- The soil pH in abandoned rice fields is appropriate.
- The soil moisture level in abandoned rice fields is suitable.
- The light intensity in abandoned rice fields is suitable.

Materials and Methods

Materials and Equipment

pH meter, multipurpose measuring device, soil chart

Study Area

Abandoned rice fields in Yan Ta Khao District, Trang Province

Latitude and longitude: 7.395931, 99.662005

Research Procedures

1. Soil samples were collected from designated study points.
2. Soil structure was observed and recorded.
3. Soil pH, soil moisture, and light intensity were measured.

Results

The soil in the abandoned rice fields had a granular structure. The soil pH was 7, indicating neutral soil conditions suitable for plant growth. The average soil moisture was 93 percent, which was relatively low. The average light intensity was 983.33 lux, which was considered high. Overall, the area has potential for agricultural use; however, soil moisture improvement is recommended before utilization.

Research Findings

The study found that soil texture varied across different sampling points in the abandoned rice fields. Soil pH values differed depending on the study locations. Soil moisture and light intensity varied according to time and environmental conditions.

Conclusion and Discussion

The soil properties in abandoned rice fields reflect environmental conditions. The soil pH was neutral at 7, the average soil moisture was 93 percent, and the light intensity was high at 983.33 lux. These factors significantly affect soil quality. The results support the concept that soil properties influence agricultural land use. With appropriate soil improvement, abandoned rice fields can be restored and reused effectively.

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