

1.0 INTRODUCTION

1.1 Background of the Study

The damaging effects of flooding remain as major sources of concerns among millions of rice farmers worldwide. The weather change due to various reasons causing unexpected and sudden flood recently in Nigeria has negative impacts on rice farming and people's life. This research project is to evaluate the effect of flooding on the growth of three varieties of rice grown in Abakaliki Ebonyi State and to see how it influences people and agriculture. The extent of the damage of flooding on rice is related to at least three factors. The temperature of the water, the amount of water motion and the duration of the flood.

Temperature affects the speed of respiration. The faster the respiration, the quicker the oxygen is depleted and the sooner fermentation begins.

Warm water speeds respiration, oxygen use and cell death. The faster water moves the greater the degree of turbulence. This water turbulence oxygenates

the water slightly. Increasing oxygen content of the water slightly decrease's the impact of flooding on plants. Duration of the flood is important because

many of the effects of low oxygen on plants are reversible if the duration is not too long. Long durations allow for increased oxygen depletion and build up of

harmful chemicals. Although local conditions influence the effects, 36 to 48 hours is the tolerable limit.

In general rice cannot tolerate flooding better than other plants. But, if flooding occurs in the spring, the rice growing point is near the soil surface (below or

above) making it likely to be submerged longer. Soil water logging and submergence (collectively termed flooding) are abiotic stresses that influence species composition and productivity in various type of rice, worldwide.

In rice farming, flooding species are manipulated (e.g. Ofada, upland and Nerica rice) or are accommodated by genotype selection. There have also been recent advances towards developing cultivators for low land areas prone to short-duration flash flooding. For most of this rice, excess water is a constraint to growth and productivity in many regions and this adversely affecting the growth of various types of rice.

Finally, rice are often damaged and thus, more susceptible to disease organisms.

Disease symptoms may not appear until several weeks or even months after the flood event.

1.2 Objectives of the Study

The main objective of the study is to evaluate the effect of flooding on the growth of three varieties of rice grown in Abakaliki Ebonyi State.

Specifically the objectives or aim of this project are:-

1. To determine the effect

of flooding on three varieties of Rice. (*Oryza Sativa*)

2. To examine three varieties of Rice on a flooded land and Non-flooded conditions.
3. To know the nutritional evaluation of the effect of flooding on three varieties of Rice.
4. To study the flooding characteristics of various varieties of Rice.
5. Provide strategies on handling the effects of adverse flooding.
6. To make recommendations and profound solutions to the problems.

1.3 Justification of the Study

The main purpose of this research work is to determine weather flooding affect the growth of three varieties of rice (A case study of Abakaliki Ebonyi State).

Recent heavy rains in some parts of Nigeria have promoted injuries of flooding and its effects.

The extent to which flooding injures rice is determined by several factors, including plant stage of development when flooding occurs, the duration of flooding, and air/soil temperatures, rice can survive only 2-4 days of flooded conditions. Once rice has reached the silking stage shallow depths of flooding usually cause a noticeable amounts of damage.

If excess moisture in the early growth stages retards rice development, rice may be subject to greater injury during a dry summer because root systems are not sufficiently developed to access available subsoil water. Seed treatments are usually effective but can provide protection only so long; if seedling development is slowed or delayed 2-3 weeks. There is limited resistance to these diseases and predicting damage is difficult because symptoms do not appear until later in the growing season. Rice should be cultivated in a favourable climatic condition for increasing its rice production and rapidly moving to self-sufficiency in rice.

This study has thoroughly discussed and offered clear indications of priority among

these challenges as well as pointers to their solution.

EVALUATION OF THE EFFECTS OF FLOODING ON THREE VARIETIES OF RICE (A CASE STUDY OF ABAKALIKI, EBONYI STATE)

The complete project material is available and ready for download. All what you need to do is to order for the complete material. The price for the material is NGN 3,000.00.

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