

## **PhD THESIS INFORMATION PAGE**

**Thesis title: “ Study on the effective farming techniques of flooding rice fields in Bu Dop district, Binh Phuoc province ”**

Field: Crop Science.

Code: 62. 62. 01:10

PhD candidate name: Nguyen Van Bac

Supervisors: Dr. Tran Van Thuy

Dr. Nguyen Van Thuong

Faculty: Faculty of Agronomy

Institution: Tay Nguyen University

### **1. SUMMARY OF THE THESIS CONTENT**

#### **1.1 Objectives of the study**

To select new rice (Summer - Autumn crop), maize and soybean varieties (winter-spring crop) showed high yield, stability and good resistance to the conditions of production in Bu Dop district, Binh Phuoc province.

Determining the suitable fertilizer formula for rice, soybean and corn grown on wet rice land in Bu Dop district, Binh Phuoc province.

To select the rotation crop with wet rice suitable to natural conditions in Bu Dop district, Binh Phuoc province

#### **1.2. Research content of the thiesis**

- To identify appropriate rice, soybean and maize varieties adapted Bu Dop condition.
- To determine appropriate fertilizer levels for rice (summer-autumn crop) and plants planted in paddy rice fields (maize, soybean: winter-spring crop) in Bu Dop.
- Performing demonstration models for rice, soybean and maize varieties that has been selected with farming techniques and to evaluate the economic efficiency of crop rotation.

### **2. NEW FINDINGS OF THE THESIS**

To select VN 121 rice variety, LVN 154 maize variety and HLDN 29 soybeen with high yield, good resistance to production in Bu Dop district, Binh Phuoc province. Since then, enriched varieties of rice, maize, soybean in the cropping system in Bu Dop district; as a scientific basis for restructuring the agricultural sector of the district, contributing to

exploiting land resources more effectively.

The studies has identified suitable fertilizer formulas for the following crops: 8 tons of manure + 90 kg N + 70 kg P<sub>2</sub>O<sub>5</sub> + 100 kg K<sub>2</sub>O for VN 121 rice variety (Summer-Autumn crop); 5 tons of manure + 60 kg N + 70 kg P<sub>2</sub>O<sub>5</sub>+ 90 kg K<sub>2</sub>O for HLDN 29 soybean variety; 8 tons of manure + 200 kg N + 90 kg P<sub>2</sub>O<sub>5</sub> + 120 kg K<sub>2</sub>O for LVN 154 corn soybean (Winter-Spring crop) on wet rice land in Bu Dop district, Binh Phuoc province.

The economic efficiency of the rotation formulas has been determined: wet rice (Summer-Autumn crop) – maize (winter-spring crop) and wet rice (Summer-Autumn crop) – soybean (winter-spring crop) in Bu Dop district, Binh Phuoc province.

The topic is a first comprehensive study of crop structure, rotation on wet rice land, and the fertilizer regime for each experimental crop. This result is very significant in diversifying the cultivation system of short-term crops on the basis of meeting the requirements of sustainable agricultural production in Bu Dop district.

### **3. APPLICATIONS ABILITY IN PRACTICE**

The most suitable set of plant varieties on wet rice land in Bu Dop district, Binh Phuoc province is rice variety VN 121, HLDN 29 soybean variety and LVN 154 maize variety.

On the wet rice land in Bu Dop district, it is recommended to apply the most suitable fertilizer N, P, and K for rice variety VN 121 which is 90 kg N + 70 kg P<sub>2</sub>O<sub>5</sub> + 100 kg K<sub>2</sub>O, the HLDNN 29 soybean variety is 60 kg N + 70 kg P<sub>2</sub>O<sub>5</sub> + 90 kg K<sub>2</sub>O and LVN 154 corn seed are 200 kg N + 90 kg P<sub>2</sub>O<sub>5</sub> + 120 kg K<sub>2</sub>O.

On the wet rice land in Bu Dop district, it is recommended to apply rice-corn rotation instead of fallow winter-spring crop.

Supervisors

PhD candidate

*Tran Van Thuy*

*Nguyen Van Thuong*

*Nguyen Van Bac*

**CERTIFICATION OF TRAINING FACILITIES  
PRINCIPAL**