



EFFECT OF D.I GROW ENHANCER ON ORYZASATIVA PRODUCTION IN SERAYU VARIETY, INDONESIA

Jeane Catty Loing¹ | Budi Setiawan²

¹ Sam Ratulangi University, Department of Animal Sciences, Social Economics, Unsrat Campus Street, Manado 95114, North Sulawesi, Indonesia.

² Budi SetiawanBrawijaya University, Department of Agricultural Economics, Faculty of Agriculture, Veteran St. Malang 6545, East Java, Indonesia

ABSTRACT

The objective of the research was to know the production of *Oryza Sativa-L* (Paddy) for the treatment of Grow Technology (Organic Fertilizer) and without its treatment, also their comparison. D.I Grow Enhancer use for increasing the rice production in Serayu to stimulate vegetative grow of the paddy. In other words, this study aimed to assess the effect of D.I grows enhancer on the paddy production in Serayu, Indonesia. Methods: Utilization of (Urea, JSP36, KCL) fertilizer and rice production data were collected from 48 respondents in Serayu, Indonesia. They used (Urea, JSP36, KCL) fertilizer and D.I grow enhancer in farming area to know the difference effect in rice production. Results: The rice production can increase 3 times when using D.I grow as organic fertilizer than (Urea, JSP36, KCL) fertilizer. Conclusion: There are great potentials D.I grow enhancer as organic fertilizer for increasing rice production.

KEYWORDS: D.I grow enhancer, paddy production, Serayu.

Introduction

There are 99.6 millions Ha or 69% of Indonesia upland cultivated in a productively manner.⁽¹⁾Hidayat and Mulyani, 2005. need a running of production called environment care.⁽²⁾Taufiq and Widjanarko, 2007.the production of soybean to raise with a good technique and development. ⁽³⁾Taqhizadeh, R.Y.,Fathipour and K. Kanali, 2008, studying about the influence of temperature on life-table parameters of *Stethourusgilvifrons*/(Mulsant) (Cleoptera). Mating of Mulsant was also observed to be more frequent during clear weather either in the morning or in the late noon and less frequent during cloudy weather. The three authors above proofed that the researches were looking of what is to be better of the plantation care or improved. Rice (*Oryza sativa L.*) is one of the most important cereal crops of the world, grown in wide range of climatic zones, to nourish the mankind ⁽⁴⁾Place, 1970. It holds pivotal food as daily nutritious consumption for the biggest population in Southeast Asia, partially Indonesia. Thousand varieties of *Oryza sativa L.* has been recognized as a result of domestication plant since 2300 BC. In Indonesia, a hundred varieties have improved as an answer to fulfill population consumption. Each of these variants has distinct treatment to grow ⁽⁵⁾Setyaningsih, 2014.

Nowadays, using fertilizer from one month of the plantation until three months is one of strategy to increase the rice production. The presence of fertilizer in number, type, quality, price, place, and time will determine the quantity and the quality of agricultural products produced ⁽⁶⁾Chaturvedi, 2005. Fertilizer contributed 20% to the success of improvement production agriculture, including agricultural rice products which achieved self-sufficiency in 1984. Fertilizer consumption reached 73.3 million tons by the year 2000 ⁽⁷⁾Ahmed, 1994.



Photo of Oryza Sativa, Serayu variety was just planted. Before seeding in another place.

One of the plantation care produce by fertilizers used is called a technology breakthrough or an innovation in growing plantation. The definition of innovative from ⁽⁸⁾Business Dictionary.com, 2014. as "the process of translating an idea or invention into a good service that creates value for which customers will pay, is synonymous with risk taking and organizations that create revolutionary products of technologies take on the greatest risk because they create new markets.

Fertilizer used is a must for the plantation nowadays, wether organic fertilizer or anorganic fertilizer used. Without using fertilizer the production of the plantation would be unsatisfy the planter, and also the producer, namely the owner of the land and the cultivator. According to ⁽⁹⁾Warr, 2005. fertilizer used 53,9 % of total cost compare to labours used is 4,3% of the total cost.

Fertilizers used in *Oryza Sativa-L*. In the location of the research were wellknown since the introduction till nowadays. *Oryza Sativa L.* Include varieties seed of 1. Variety of IR64 2. Variety Serayu and 3. Variety Super Win. 1. IR 64 is palatable eat by the consumer from one until 10 days after milling and cooking, and have no contact with water before. Serayu is also palatable eat by the consumer from one to fourteen days after milling and cooking and have no contact with water before, while Super Win is the most palatable eat by the consumer from one to 21 days after milling and cooking and have no contact with water before.



Photo of Oryza Sativa/Serayu variety in 30 days planted.

Variety Serayu harvest after 90 days of plantation time not included of seeding about 21 days, while Variety Super Win harvest after 120 days of plantation time not included of seeding about 21 days. Variety IR64 harvest after 90 days of plantation time not included of seeding about 21 days. ⁽¹⁰⁾Alexander Decker, 2013.

The fertilizer used in the location of oryza sativa L. Plantation known as One, Urea, or JPU, the total used of each farmer ; two, SP36, or JPSP36, the total used of each farmer, three, KCL, or JPKCL or the total used of each farmer as follows: The total of forty eight farmers used of Urea fertilizer for three months plantation of paddy was 9830 Kg. The total of forty eight farmers used of SP36 fertilizer was 5258 Kg, and the total of fifty farmers used of KCL for three months was 4276 Kg. The average used of Urea was 204 Kg, SP36 was 109 Kg and the used of KCL was 89 Kg. They depend on the availability in kiosk ⁽¹¹⁾Loing, J. 2013.