

**THE EFFECT OF *Jussiaea octovalvis* WEED DENSITIES ON
THE GROWTH AND YIELD OF SEVERAL INTRODUCED
VIETNAM RICE (*Oryza sativa* L.) VARIETIES**

THESIS

BY



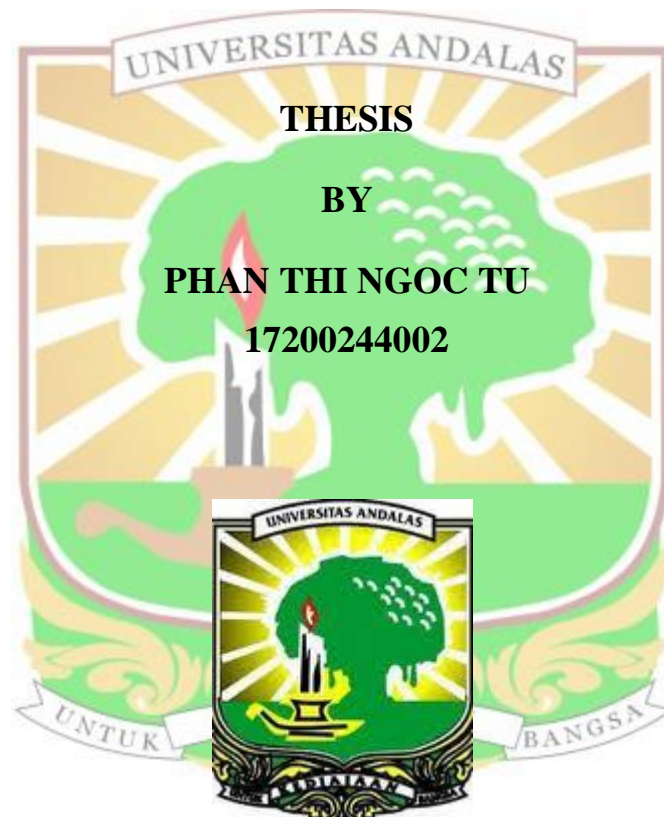
**MASTER PROGRAM IN AGRONOMY
FACULTY OF AGRICULTURE
ANDALAS UNIVERSITY**

PADANG

2020

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**PENGARUH DENSITAS GULMA *Jussiaea octovalvis* TERHADAP
PERTUMBUHAN DAN HASIL BEBERAPA VARIETAS PADI (*Oryza sativa*
L.) INTRODUKSI DARI VIETNAM**



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APPROVAL

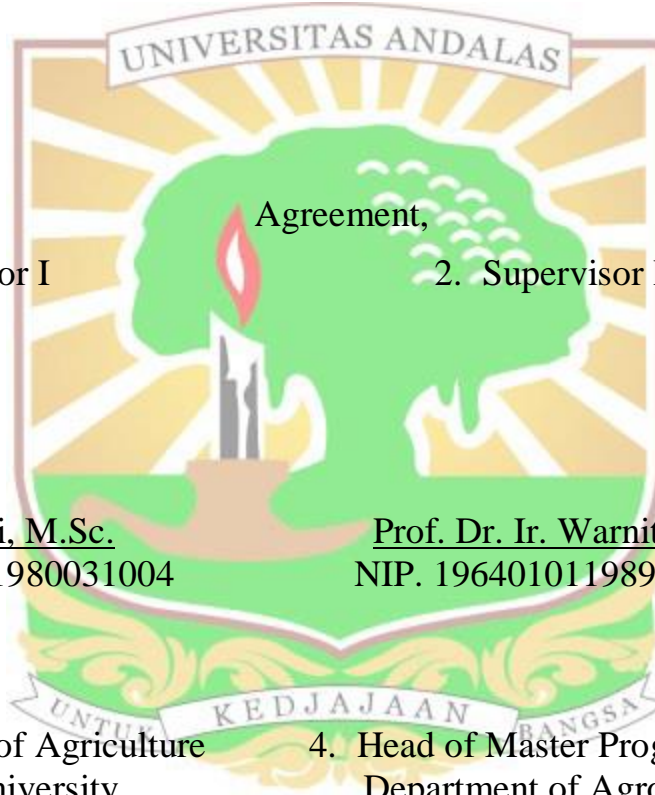
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Program Study: Agronomy

The thesis has been examined at the Department of Agronomy, Faculty of Agriculture, Andalas University on May 19, 2020 by



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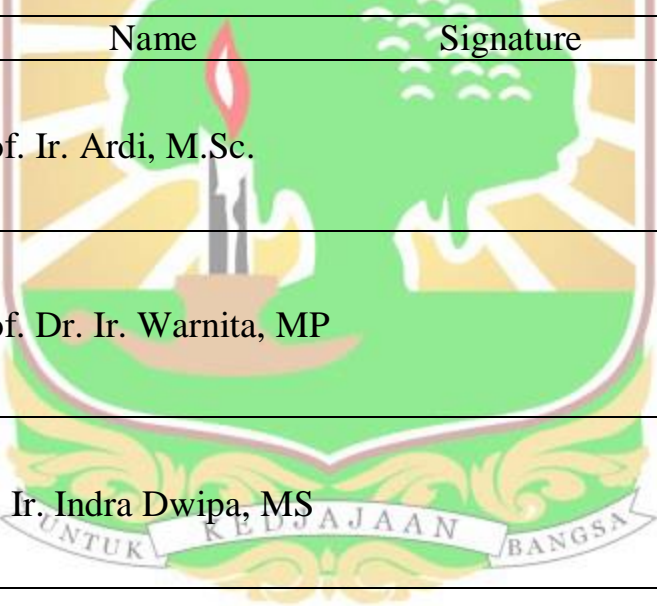
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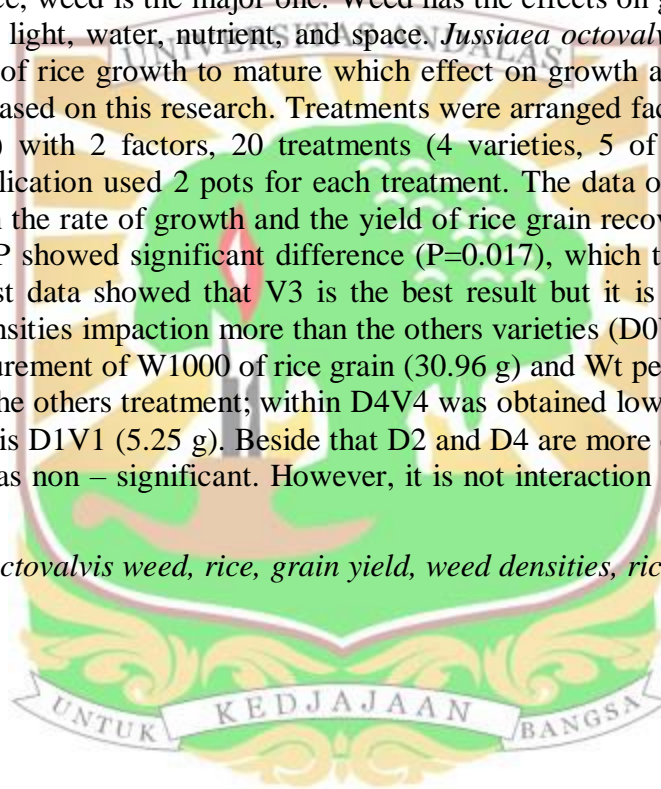
By: PHAN THI NGOC TU

(Supervisors: Prof. Ir. Ardi, M.Sc. and Prof. Dr. Ir. Warnita, MP)

ABSTRACT

Rice is staple grain production play an important role for food security and the socioeconomic value of agriculture in South East Asia countries. Among the factors that have negative effects on rice, weed is the major one. Weed has the effects on growth and yield of rice by competition about light, water, nutrient, and space. *Jussiaea octovalvis* is a kind of weed in the field during time of rice growth to mature which effect on growth and yield of rice but not significant different based on this research. Treatments were arranged factorially in Randomized Block Design (RBD) with 2 factors, 20 treatments (4 varieties, 5 of weed densities) and 4 replications, each replication used 2 pots for each treatment. The data of the study showed that had different between the rate of growth and the yield of rice grain recovery product; especially at data of LL 58 DAP showed significant difference ($P=0.017$), which the highest rate is 59.13 cm of V2; for harvest data showed that V3 is the best result but it is also a sensitive one in condition of weed densities impaction more than the others varieties ($D0V3=620.5$; $D4V3=438$). In addition, the measurement of W1000 of rice grain (30.96 g) and Wt per pot (20.01 g) of D0V3 is weight more than the others treatment; within D4V4 was obtained lowest of W1000 (19.26 g) and the lowest of Wt is D1V1 (5.25 g). Beside that D2 and D4 are more effective on growth and yield of rice and it was non – significant. However, it is not interaction between weed densities and varieties rice.

Keywords: Jussiaea octovalvis weed, rice, grain yield, weed densities, rice variety.



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(Pembimbing: Prof. Ir. Ardi, M.Sc. and Prof. Dr. Ir. Warnita, MP)

ABSTRAKT

Beras adalah bahan makanan pokok yang memainkan peran penting bagi ketahanan pangan dan nilai sosial ekonomi pertanian di kawasan Asia Tenggara. Di antara faktor-faktor yang berdampak buruk pada padi adalah gulma yang berdampak pada pertumbuhan dan hasil padi dengan adanya kompetisi terhadap cahaya, air, nutrisi, dan ruang, *Jussiaea octovalvis* adalah jenis gulma yang tumbuh di lapangan selama masa pertumbuhan padi sampai matang yang berpengaruh pada pertumbuhan dan hasil padi tetapi tidak berbeda nyata berdasarkan penelitian ini. Perlakuan dalam penelitian ini disusun secara faktorial menurut Pacangan Acak Kelompok (RAK) dengan 2 faktor, 20 perlakuan (4 varietas, 5 kerapatan gulma) dan 4 ulangan, masing-masing menggunakan 2 pot untuk setiap perlakuan. Data penelitian menunjukkan bahwa ada perbedaan antara laju pertumbuhan dan hasil gabah; terutama pada data LL 58 DAP menunjukkan perbedaan yang signifikan ($P = 0,017$), yang tingkat tertinggi adalah V2 59,13 cm; untuk data panen menunjukkan jumlah malai V3 adalah hasil terbaik tetapi juga sensitif pada kondisi kepadatan gulma lebih dari varietas lain ($D0V3 = 620,5$; $D4V3 = 438$). Selain itu, pengukuran W1000 gabah (30,96 g) dan Wt per pot (20,01 g) menunjukkan D0V3 lebih berat daripada perlakuan lainnya; dalam D4V4 diperoleh terendah W1000 (19,26 g) dan terendah Wt adalah D1V1 (5,25 g). Selainnya, D2 dan D4 lebih efektif pada pertumbuhan dan hasil dan tidak signifikan. Namun, hasil dari penelitian ini tidak ada interaksi antara gulma dan varietas padi.

Kata kunci: gulma, *Jussiaea octovalvis*, padi, kerapatan gulma, varietas padi, gulma.

