RESPONSES OF TRANSPLANTED AND DIRECT SEEDED ONION (*Allium cepa* L.) TO THE PRESENCE OF GLOBE FINGERUSH WEED [*Fimbristylis miliacea* (L.) Vahl]

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ACCEPTANCE SHEET

This undergraduate thesis entitled **"RESPONSES OF TRANSPLANTED AND DIRECT SEEDED ONION (*Allium cepa* L.) TO THE PRESENCE OF GLOBE FINGERUSH WEED [*Fimbristylis miliacea* (L.) Vahl],"** prepared and submitted by **KAISER ANGELO A. MORLA,** in partial fulfillment of the requirements for the degree of **BACHELOR OF SCIENCE IN AGRICULTURE (CROP PROTECTION-Weed Science)**, is hereby accepted:

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BIOGRAPHICAL SKETCH

The author was born in Gabaldon, Science City of Muñoz, Nueva Ecija on the 14th day of May, 1999. He is the eldest child of Mr. Marlon O. Morla and Mrs. Amor A. Morla.

He finished his primary education at Gabaldon Elementary School in 2011 at Gabaldon, Science City of Muñoz, Nueva Ecija. He completed his secondary education in 2015 at Muñoz National High School at Science City of Muñoz, Nueva Ecija.

His perseverance led him and had the chance to continue his tertiary education in one of the greatest universities in the Philippines, the Central Luzon State University, where he took up his Bachelor of Science in Agriculture major in Crop Protection with Weed Science as his field of specialization.

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ABSTRACT

MORLA, KAISER ANGELO A., Department of Crop Protection, College of Agriculture, Central Luzon State University, Science City of Muñoz, Nueva Ecija, Philippines, **September 2019, RESPONSES OF TRANSPLANTED AND DIRECT SEEDED ONION (*Allium cepa* L.) TO THE PRESENCE OF GLOBE FINGERUSH WEED [*Fimbristylis miliacea* (L.) Vhal]**

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Infestation of *F. miliacea* in onion communities bring impact on onion plant. Determining the competitive ability through crop-weed competition provides information on weed control measures appropriate to used.

The study was conducted to determine the yield loss of onion due to infestation of *F. miliacea* and the degree of their competitiveness. The study was composed of five treatments that were replicated four times in a Randomized Complete Block Design arrangement. All the data gathered were subjected to analysis of variance (ANOVA) using Statistical Tool for Agricultural Research (STAR, 2013) while treatment means were compared using least significant difference (LSD) at 5% level of significance.

Different densities of *F. miliacea* (10, 15, 20, and 25) negatively affected the yield parameters of onion bulb particularly the weight of bulbs. Except for bulb weight, agronomic parameters of transplanted onions were not significantly affected by the presence of *F. miliacea* Percent yield loss on transplanted onion ranged from 11 to 38 %. Meanwhile, *F. miliacea* significantly affected the plant height at 70 to 91 DAS, and number of leaves at 43 to 91 DAS for direct seeded onion. Biomass and dry weights of bulb and leaves, and leaf length were also significantly reduced. Yield loss on direct seeded onion

due to competition by *F. miliacea* at different densities (10, 15, 20, and 25) were 76 to 90%.

Keywords: competitive ability; crop-weed competition; yield loss; onion; *Fimbristylis miliacea*

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