

STUDIES ON CULTURAL PRACTICES FOR SUNFLOWER
(Helianthus annus L.) GROWN AFTER
WETLAND RICE


AYE THAW
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Submitted to the Faculty of the Institute of Graduate Studies,
Central Luzon State University, Muñoz, Nueva Ecija,
Philippines, in partial fulfillment of the
requirements for the degree of

MASTER OF SCIENCE IN CROP SCIENCE
(Agronomy)

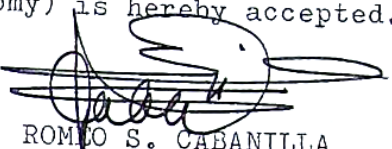
March 1988

This thesis entitled, STUDIES ON CULTURAL PRACTICES FOR SUNFLOWER (Helianthus annuus L.) GROWN AFTER WETLAND RICE, prepared and submitted by AYE THAW, in partial fulfillment of the requirements for the degree of MASTER OF SCIENCE IN CROP SCIENCE (Agronomy) is hereby accepted.


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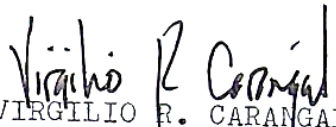
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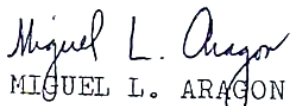
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BIOGRAPHICAL SKETCH

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ACKNOWLEDGMENT

The author wishes to express sincerely his heartfelt gratitude and profound appreciation to his adviser and chairman of the advisory committee, Dr. Miguel L. Aragon, Assistant to the Dean for Graduate Research, CLSU, for having rendered to the author time, guidance, criticisms, and encouragement from his arrival at CLSU in 1986 up to the preparation and completion of the thesis.

Thanks are also due Dr. Virgilio R. Carangal, Head, Rice Farming Systems Program, IRRI, and co-chairman of advisory committee for his invaluable assistance, guidance and cooperation; Dr. Josue A. Irabagon, Dean College of Agriculture, and Prof. Romeo S. Cabanilla, secretary-Registrar of the IGS, CLSU, who served as members of his advisory committee. To the examining committee members: Dr. Guillermo C. Rillon as Chairman and Prof. Quirino dela Cruz as member, his heartfelt appreciation for their understanding and constructive criticisms during his thesis defense.

Profound appreciation is due Dr. Salvador P. Neric, Dean, IGS, CLSU and Prof. Danilo T. Eligio, chairman, Department of Crop Science, for his help and suggestions.

Heartfelt and sincere acknowledgment is also extended to the following for providing him the opportunity to

pursue graduate studies in the Philippines: The Ministry of Agriculture and Forest, The Socialist Republic of the Union of Burma; U Khin Win, former Managing Director, Agriculture Corporation, Burma andd Visiting Scientist, IRRI, and U Tin Hlaing, Managing Director, Agriculture Corporation, Burma.

Heartfelt thanks are also extended to Dr. Kaung Zan, former Liaison Scientist, IRRI, his wife and daughter, Dr. R. K. Palis, F. S. Agronomist/Project Leader, Burma-IRRI Farming Systems Project, Burma and his wife, U Ngwe Hnin, Assistant General Manager, Agriculture Corporation, Burma and his wife, for their help, moral support, and encouragement.

The author appreciates very much the kind help of Mr. Boonchairt Vimolsutjarit (Thailand), Mr. Ma Hong Su (China), Mr. Francis Onyango (Kenya), Ma. Luisa Villanueva Thaw (Roxas City), Remedios T. Vivas, secretary, RFSP, IRRI, Los Baños, Laguna, U Moe Hein, and U Maung Maung Lay, UPLB, and U Ye Win, CLSU, for their warmth and unique companionship in sharing his joys and sorrows to make his stay in the Philippines enjoyable and memorable.

His sincere thanks and gratitude go to his parents, brothers, sisters, relatives and mother-in-law, for their moral and spiritual support; to his beloved mother for her

prayers and patience, and to his late father for his legacy of discipline and hard work which have always been his source of inspiration and guidance.

Greatest appreciation and immense love are due his wife Daw Aye Thein (Aye) and sons Ko Oo, Ko Myoe and daughters Sint, San, Moe and Hlaing, for their love, understanding, patience, and sacrifice which serve as inspiration in all his endeavors and ambition in life. To them, this work is affectionately dedicated.

Finally, he offers his thanks to the Almighty Gautama Buddha, Dhamma, Sangha, Parents and Teachers for giving him moral and spiritual strength and good health to finish his study.

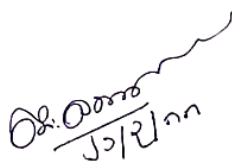

AYE THAW

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ABSTRACT

THAW, AYE, Institute of Graduate Studies, Central Luzon State University, Muñoz, Nueva Ecija, Philippines, March 1988. STUDIES ON CULTURAL PRACTICES FOR SUNFLOWER (Helianthus annus L.) GROWN AFTER WETLAND RICE.

Adviser : Dr. Miguel L. Aragon

Three field experiments were conducted on a Maligaya clay to determine the yield performance of sunflower grown after wetland rice as affected by tillage and **fertilizer** level (Experiment 1), irrigation frequency and plant density (Experiment 2), and intercropping with field legumes (Experiment 3). The experiments were undertaken at the College of Agriculture Experimental Area, Central Luzon State University, during the dry season, crop year 1987.

Both tillage and fertilizer treatments significantly affected the yield performance of sunflower. Maximum tillage produced significantly higher seed yield (2.34 t/ha) than medium (2.12 t/ha) and minimum (1.90 t/ha) tillage operations. Application of 120 kg N/ha was needed to obtain optimum yield of 2.40 t/ha. At each level of N, application of P and K at the rate of 60 kg/ha did not further result in higher seed yield.

The yield performance of sunflower was also markedly affected by irrigation frequency and plant density. Regardless of plant density, plants irrigated six times had significantly higher seed yield than those irrigated four times. Plants grown at 53, 333 plt/ha and irrigated six times increased the seed yield by 43.79% compared to plant density of 44,444 plt/ha and irrigated four times.

Intercropping field legumes such as mungbean, cowpea, and soybean did not affect the yield performance of sunflower. The seed yield of these field legumes was significantly reduced in an intercropping system as compared to monocropping system. The seed yield reduction was 93.79% for mungbean, 107.48% for cowpea, and 139.41% for soybean.

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