

Curriculum and Research Activities Related to Agro-ecology, Yezin Agricultural University, Myanmar

Nyein Nyein Htwe
Yezin Agricultural University

LOCATION



- Near Yezin village, Nay Pyi Taw
- Mid-Myanmar
- Transitional Agro Climatic Zone
- 283 km from Mandalay
- 410 km from Yangon



OUR VISION

To be a prime mover of
agricultural and rural development
in Myanmar through
human resource development and
a national supplier of
scientific knowledge and technology
innovation



OUR MISSION

To educate and train the national human resources to be professional agriculturists who will provide leadership to institutions in the agricultural sector and, in addition, supply science and technology and contribute to national and regional growth and development of agriculture



OUR MOTTO

**“DEVELOPING THE NATION THROUGH
AGRICULTURAL SCIENCE AND EDUCATION”**



“ pkdufysdK;ynm? jynf&GmzGHUNzdK; ”

FUNCTIONS OF YAU

1. Teaching and Training

2. Research

3. Extension



ACADEMIC DEPARTMENTS

- (1) Department of Agronomy
- (2) Department of Agricultural Botany
- (3) Department of Agricultural Chemistry
- (4) Department of Plant Pathology
- (5) Department of Entomology and Zoology
- (6) Department of Horticulture
- (7) Department of Agricultural Economics

(8) Department of Animal Science

(9) Department of Agricultural Engineering

(10) Department of Myanmar

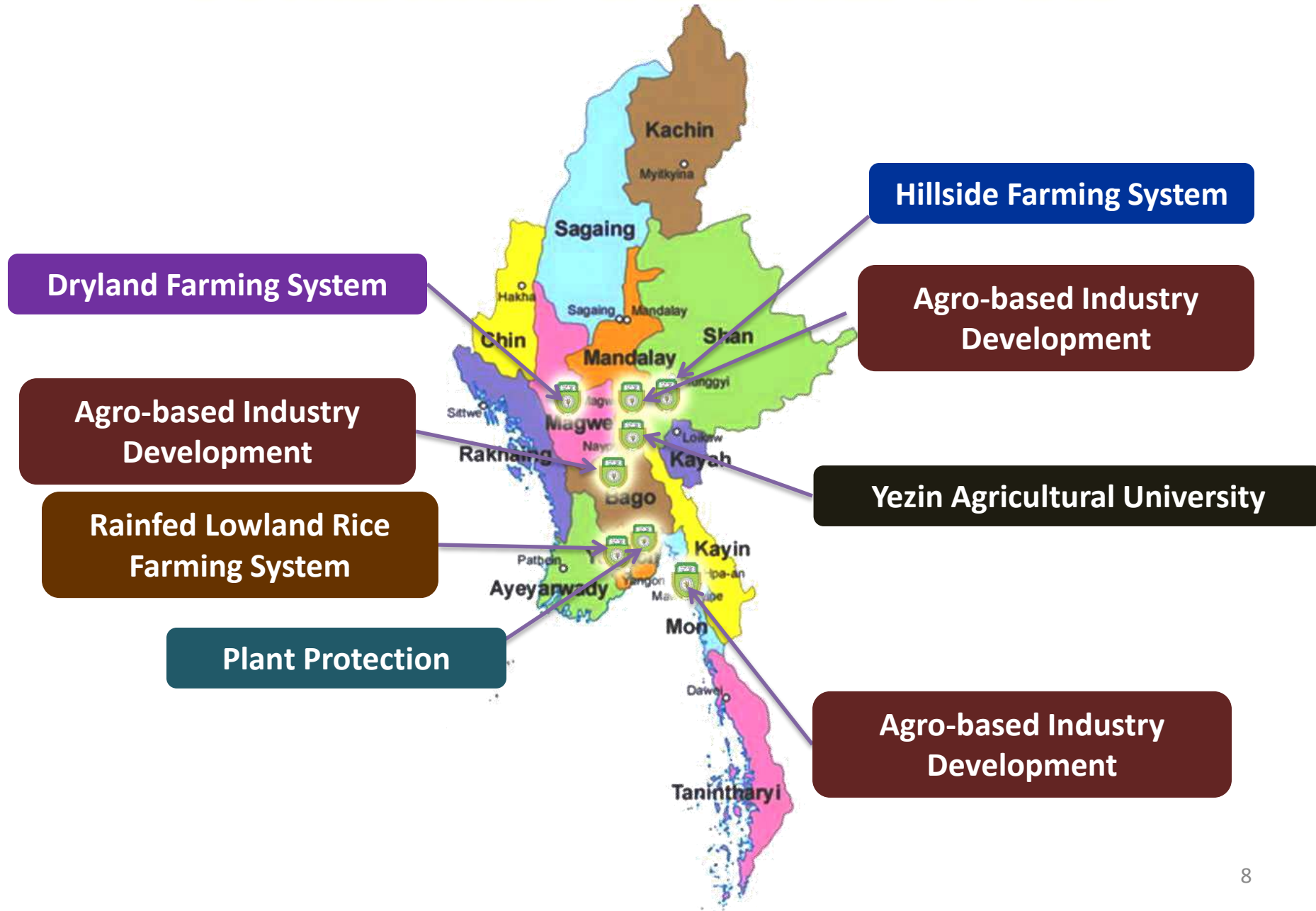
(11) Department of English

(12) Department of Physics

(13) Department of Mathematics



OUTREACHED CAMPUSES OF YAU



CURRICULUM

	DEGREE	RESIDENCY (YEARS)	NO. OF STUDY PROGRAM
1	B.Agr.Sc.	5	7
2	Postgrad Dip.Agr.Sc.	1.5	7
3	M.Agr.Sc.	3	7
4	Ph.D.	5	7
5	M. Phil.	2	7

Medium of instruction : English

Curriculum related to Agro-ecology

Department of Agronomy

Course Title

Undergraduate

AGY- 4101: Integrated Farming System
Management

AGY- 5102: Crop Planning and
Management

Postgraduate
(M.Agr.Sc.)

AGY- 662: Crop and Water Management

Postgraduate (Ph.D)

AGY- 711: Agro-ecology

AGY- 714: Precision Agriculture

Curriculum related to Agro-ecology

Department of Plant Breeding, Physiology and Ecology

Course Title

Undergraduate	BPE-4106: Concept of Plant Ecology
Postgraduate (Diploma)	DB-123 Plant water relationships
Postgraduate (M.Agr.Sc.)	PTY-631: Plant water Relationships
	PTY-661: Ecology of Crop Plants

Curriculum related to Agro-ecology Department of Soil and Water Science

	Course Title
Undergraduate	SWS-4101: Environmental Soil Science
Postgraduate (Diploma)	DC- 114: Crop Water Requirement
	DC-122: Fundamentals of the use of Animal Manure and Green Manure
Postgraduate (M.Agr.Sc.)	AGC-612: Soil Water Plant Relationships

Curriculum related to Agro-ecology Department of Plant Pathology

Course Title

Undergraduate	PTY-4102: Control of Plant Diseases I: Integrated Diseases Management
Postgraduate (M.Agr.Sc.)	PTY- 662: Integrated Diseases Management

Curriculum related to Agro-ecology

Department Entomology and Zoology

Course Title

Undergraduate	ENT-4101: Insect Ecology
	ENT- 4104: Biological Control of Insect Pests
Postgraduate (Diploma)	DE- 112: Integrated Pest Management
Postgraduate (M.Agr.Sc.)	ENT-604: Integrated Pest Control
	ENT-613: Insect Ecology

Curriculum related to Agro-ecology Department Agricultural Economics

Course Title

Undergraduate

AEC 4102: Natural Resource
Management and Environmental
Economics





Postgraduate (M.Agr.Sc.)

AEC-651: Natural Resource Economics

Postgraduate (Ph.D)




AEC-715: Natural Resource Management

Research activities related to Agro-ecology (Organic Fertilizers/ Manure)

Research Title	Collaborative Organization/ research grant
 Effect of organic manures and inorganic fertilizers on Nitrogen use efficiency, growth and yield attributes of Palethwe-1 (<i>Oryza sativa</i> L.)	
 Long-Term Effects of Organic and Inorganic Fertilizers on Soil Quality and Yield of Rice (PaleThwe-1)	
 Evaluation of organic amendments on fruit quality traits of Myanmar tomato landrace	Misubishi
 Effects of different organic nitrogen sources on nitrogen use efficiency and yield of rice (<i>Oryza sativa</i> L.)	





Research Title

Collaborative
Organization/
research grant







 Effect of Manure and Chemical Fertilizer on Growth and Yield of Rice Variety in Maubin Township	IRRI Project
 Effect of Different Organic Nitrogen Sources and Urea Fertilizer on Growth and Yield of Maize (<i>Zea mays</i> L.)	AWBA private Company
 Effect of cow-dung and chemical fertilizers on the growth and yield of cabbage production in Southern Shan State	Mercycorps
 Effects of manure and phosphorus application on growth and yield of upland rice, <i>Oryza sativa</i> L. (CV.YAR 9)	
 Mineralized nitrogen released by the application of different organic manures in a flooded paddy soil	

Research Title





Collaborative
Organization/
research grant

-  Effect of organic and chemical fertilizers on growth and yield of tomato (*Lycopersicon esculentum* Mill.) and some physico-chemical properties of Yezin soil
-  Growth and yield of black glutinous rice varieties under upland condition with application of organic and inorganic fertilizers
-  Effects of organic manures on rice production and nitrogen availability in paddy soils
-  Organic fertilization as different nitrogen sources on wetland rice system for sustainable agriculture




Research related to Agro-ecology Residual Management

Research Title	Collaborative Organization/ research grant
 Effects of crop residue management on growth and yield of rice (<i>Oryza sativa</i> L.)	AWBA private Company
 Balanced Fertilizer Application and Residue Management on Green gram under Rice-Pulses Cropping System in Maubin and DaikOo	IRRI Project
 Effect of mulching with crop residue on water use efficiency and crop yield in selected dryland cropping patterns of magway township	
 Evaluation of soil nutrient supplying capacity for rice (<i>Oryza sativa</i> L.) production by site-specific nutrient management	
 Effects of residue management on growth and yield of rice (<i>Oryza sativa</i> L.)	
 Effects of some maize-based cropping patterns and crop residue managements on soil fertility, yield and yield	




Research Activities related to Agro-ecology (Organic Insecticides)

Research Title	Collaborative Organization/ research grant
 Effects of chemical and organic insecticides to control diamondback moth, <i>Plutella xylostella</i> (L.) (Lepidoptera: Plutellidae) on cabbage	Mercycorps
 Effect of some plant powders on lesser grain borer <i>rhizophorthera dominica</i> (Fabricius) (coleoptera: bostrichidae) in stored rice	
 Evaluation of some plant extracts against the pod borer, <i>Helicoverpa armigera</i> (Hubner) (Lepidoptera : Noctuidae) on chickpea	
 The effect of neem and some other insecticides against the diamondback moth <i>Plutella xylostella</i> L. (Lepidoptera : Yponomeutidae) on cabbage	

Research Activities related to Agro-ecology



Research Title	Collaborative Organization/ research grant
 Biodiversity of rice insect pests and their natural enemies on monsoon rice in Nyunglaypin Township	
 Biology and ecology of oriental fruit fly, <i>Bactrocera dorsalis</i> Hendel (Diptera : Tephritidae) in mango and its bioassay	
 Establishment of Major Insect-Pest Warning Model through Defining Distribution Map for Insect Pests and Natural Enemies on Rice and Pulses	JICA

Research related to Agro-ecology (Socio-economics)





Research Title	Collaborative Organization/ research grant
 Farmers' environmental awareness and willingness to accept the organic vegetable farming in Pyin Oo Lwin township	
 Determinants of environmental awareness index and pesticide demand of tomato farmers in Inle lake	
 Factors affecting adoption on soil conservation measures using organic materials in oil seed crops-based farming system at Magway Township, central dry zone of Myanmar	

Research related to Agro-ecology

Integrated Disease Management

Research Title	Collaborative Organization/ research grant
 Integrated disease management of banded leaf and sheath blight of maize caused by <i>Rhizoctonia solani</i>	
 Effect of some plant extracts on bacterial blight of rice caused by <i>Xanthomonas oryzae</i> pv. <i>oryzae</i>	

Alternative Wetting and Drying

Research Title	Collaborative Organization/ research grant
 Increasing crop water Productivity in Irrigated Lowland Rice System in Myanmar Using AWD water Saving Technology	IRRI – CORGAP Project
 Response to Yield, Water and Nitrogen Use of Hybrid Rice under AWD and Controlled Release Nitrogen Fertilizer	AWBA private Company
 Effect of organic manure and Water Management on Methane Emission of Paddy Field	
 Effect of alternative wetting and drying on rice productivity and water saving	





System of Rice Intensification

Research Title	Collaborative Organization/ research grant
 Effect of Basal Organic Manures Application on Yield and Yield Components of Sin Thu Kha Variety (<i>Oryza sativa</i> L.) under System of Rice Intensification (SRI)	ACIAR- IRRI Project
 Effect of spacing and seedling age on the growth and yield of Yezin Lone Thwe variety in the system of rice intensification (SRI)	
 Evaluation of weed management practices in the system of rice intensification (SRI)	

Site Specific Nutrient Management

Research Title	Collaborative Organization/ research grant
<p>Site-specific nutrient management and balanced nutrient application</p> <ul style="list-style-type: none">– SSNM research for Rice and Corn in three locations, Taung Gu, Yezin and Tet Khone townships	

Research related to Agro-ecology

Research Title	Collaborative Organization/ research grant
 Evaluation of submergence tolerant rice (<i>Oryza sativa</i> L.) varieties in selected flood - prone areas of AYEYARWADDY and BAGO (East) regions	
 Farmer Participatory Selection for Biotic and Abiotic Tolerant Rice Varieties in Selected Area of MMR	JICA
 Evaluation of Salt and Drought Tolerance on Rice Varieties in Terms of Agronomic Parameters and Water Use Efficiency	JICA
 Intercropping systems in some agroecological zones of Myanmar and effects of maize-mungbean intercropping patterns on yield and weed suppression	

University- based Extension Service

- One of three main pillars of YAU is education outreach;
- YAU is involved in doing extension education with farmers by
 - giving training,
 - conducting on-farm trials and demonstration plots related to crop management,
 - broadcasting farmer channel

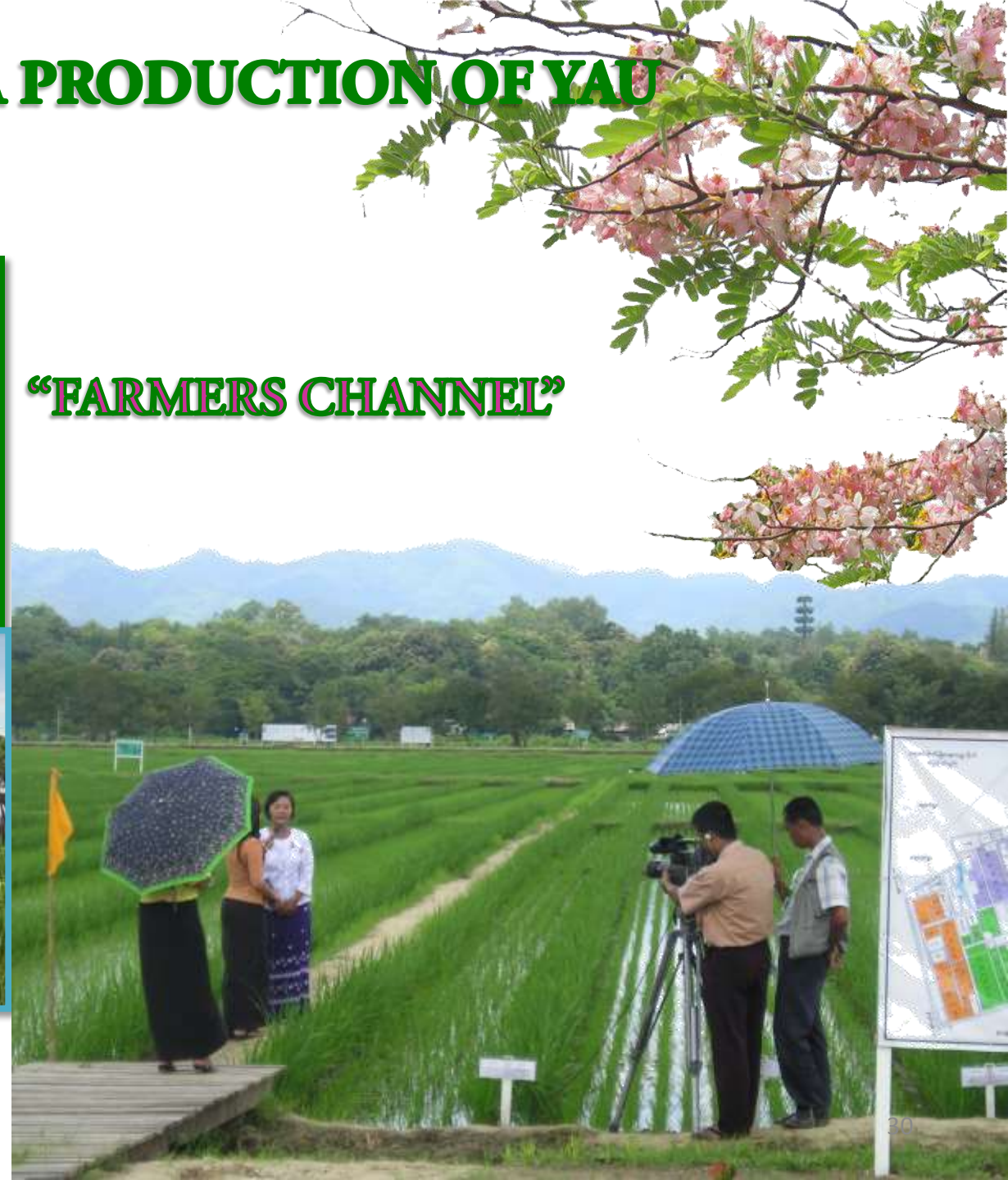


Diagram illustrating a sequence of 10 boxes. The first three boxes are yellow, the next four are white, and the last three are blue. The fourth box is empty, and the fifth box contains the expression $(\frac{1}{2})$.



MEDIA PRODUCTION OF YAU

“FARMERS CHANNEL”



TRAINING
RESEARCH
EXTENSION

Challenges and Opportunities

Challenge

- Insufficient number of highly qualified staff specialized in agro-ecology

Challenges and Opportunities

Opportunities

- Outreach campus from various agro-ecology zones
- Collaboration with International and National organizations
- Broadcasting Farmer Channel to dissemination of Agro-ecological practices

Needs for Curriculum Development and Research Activities

- Development of new and improvement of curriculum based on agro-ecological zones in different areas of study
- In- country trainings
- Short-term trainings
- Long term trainings (Post graduate courses)
- Strengthen laboratory equipment and skillful technicians

Conclusion

- Yezin Agricultural University (YAU), only one higher agricultural educational institution in Myanmar
- Main producer of human resources for the agriculture and relevant sectors
- Contributing to agro-ecological or organic agriculture, teaching, research activities in some extent
- To upgrade on teaching, research and extension activities related to agro-ecological aspects, we would like to more collaborate with regional and international agencies in the future.

THANK YOU

Nyein Nyein Htwe
Associate Professor
Department of Agronomy
Yezin Agricultural University
htwe1971@gmail.com

RETA 8163: Implementing the GMS CASP: Final Evaluation Report _ December 2016, Myanmar



GREATER MEKONG
SUBREGION
CORE AGRICULTURE
SUPPORT PROGRAM

Theingi Myint, Nyein Nyein Htwe and Yin Mar Soe

Yezin Agricultural University

Nay Pyi Taw

- Evaluation of Climate-Friendly Agriculture (CFA) Project Sites
- Evaluation of Nitrogen Cycle Management (NCM) Project Sites
- Evaluation of Green Water Management (GWM) Project Sites
- Evaluation of Participatory Guarantee System (PGS) Projects Sites
 - Social, Environmental and economic impact and marketing



The 10th Agricultural Research Conference on

“Climate Resilient Agriculture”



Impact of Climate Change on Livelihood Assets in Farming Community

Nyein Nyein Htwe (Ph.D)
Associate Professor
Department of Agronomy

Yezin Agricultural University,
Nay Pyi Taw

11 January 2017