



**EAST ASIA PLANT VARIETY PROTECTION FORUM
WORKSHOP ON PLANT VARIETY PROTECTION:
SETTING UP EXAMPLE VARIETY FOR SELECTED CROPS (RICE)
(activity under East Asia Plant Variety Protection Forum)**

REPORT

Prepared by the Department of Agriculture, Malaysia

1.0 INTRODUCTION

Rice has been an important crop in PVP applications taking up 13% of total applications received since year 2008. In 2015, Malaysia is expecting approximately 15 varieties of rice to be granted PBRs. There are more applications on rice expected in years to come.

Due to the trend of number of applications received, presently, Malaysia had established a rice DUS Testing Center in the northern region for better monitoring and improving quality of DUS Testing on rice as previous tests were conducted at breeder's plot or rented plot due to absence of rice testing center. However, current set of example varieties for testing rice need to be improved and developed in a more proper way.

Result from the discussion in the 8th Meeting of East Asia Plant Variety Protection Forum (EAPVPF) in Seoul, Korea on 2nd September 2015, a workshop on plant variety protection for the regional countries has been proposed to be organized in Malaysia with the support from Japan and Vietnam. This course is one of the activities carried out aimed for harmonizing PVP system in the region.

Participants in this program include 4 rice experts from Japan and Vietnam as resource persons, 1 representative from EAPVP Forum office, 7 participants from EAPVPF member countries i.e. Cambodia, Lao PDR, Myanmar, Philippines, Thailand and Vietnam, 10 examiners from Department of Agriculture Malaysia, 4 officers from other agencies and secretariat from PVPRO, Malaysia.

The objective of this exercise is to work with dispatched experts in refining the techniques on selection of example varieties, which rice is used as study subject. The knowledge acquired will be applied in selecting example varieties of other crops.

2.0 PRESENTATIONS AND LECTURES



Figure 2.0.1 Group Photo: Workshop On Plant Variety Protection: Setting Up Example Variety for Selected Crops (Rice)

Opening address by Mr. Sulaiman bin Hashim, Deputy Director, Crop Quality Control Division, Department of Agriculture, Malaysia representing the Director for State of Perak and remarks by Ms. Kazue Matsubara, representative of East Asia Plant Variety Protection Forum (EAPVPF) Office, Japan.

2.1 Presentations

Presentation 1: Rice Breeding, Production and Distribution of Rice in Malaysia presented by Dr. Asfaliza binti Ramli, Deputy Director, Malaysia Agricultural Research and Development Institute (MARDI), Seberang Prai, Pulau Pinang.

Presentation 2: Protection of New Varieties of Rice in Malaysia presented by Mr. Sulaiman bin Hashim, Deputy Director, Crop Quality Control Division, Department of Agriculture, Malaysia.

2.2 Country Reports



Figure 2.2.1 Presentations of country reports by EAPVP member countries representatives.

- Cambodia** : Situation of Rice Production in Cambodia by Mr. Ngon Marinat, Technical Officer of Department of Rice Crop (DRC), Cambodia.
- Japan** : Outline of Examination System and Rice Breeding in Japan by Mr. Yoshiaki Takamatsu, Ministry of Agriculture Forestry and Fisheries (MAFF), Japan.
- Lao PDR** : Seed Development in Lao PDR by Mr. Vandy Phetpaseuth, Vice Director of Agronomy Management Division, Department of Agriculture, MAF, Lao PDR.
- Myanmar** : Country Report (Myanmar) by Ms. Chan Yan Win, Junior Research Assistant, Department of Agricultural Research, Myanmar.
- Philippines** : Philippines Rice Breeding and Production by Ms. Elvira D. Morales, Plant Variety Protection Office, Philippines.
- Thailand** : Country Paper (Thailand) by Dr. Somsong Chotechuen (Mr.), Rice Department, Ministry of Agriculture and Cooperative Thailand.
- Vietnam** : Situation for Rice in Vietnam by Mr. Mai The Tuan, National Center for Plant Testing (NCRT), Plant Variety Protection Office Vietnam.

2.3 Lectures



Figure 2.3.1 Lectures by rice experts from Japan and Vietnam.

Topic 1: Basic Rules of DUS Test by Mr. Tadao Mizuno, Former Chief Examiner, Plant Variety Protection Office, Ministry of Agriculture, Forestry and Fisheries, Japan.

Topic 2: Methods of Evaluation of Each Characteristics by Mr. Nguyen Quoc Phuong, National Center for Plant Testing (NCRT), Plant Variety Protection Office Vietnam.

Topic 3.1: Example Variety by Mr. Tadao Mizuno, Former Chief Examiner, Plant Variety Protection Office, Ministry of Agriculture, Forestry and Fisheries, Japan.

Topic 3.2: Selection of Example Varieties in NCSS by Mr. Koji Nakanishi, Nishi-Nihon Station for National Center for Seeds and Seedlings (NCSS), Japan.

3.0 PRACTICAL SESSION

Participants were divided into few groups with 4 to 5 person each. Each group was given a list of varieties to work with through the practical session. Instructions and explanations of the exercise were given by Dr. Ab. Rasip bin Ab. Ghani, Technical Consultant for PVPRO, Malaysia.

3.1 Exercise I: Observation and Measurement

Observation and measurement data were collected based on UPOV Technical Guidelines for Rice. Participants were guided by the experts from Japan and Vietnam during the session.



Figure 3.1.1 Practical session: observation and measurement at field.

3.2 Exercise II: Note Setting

Practical sessions were then continued with data key-in and data evaluation. By using Table 3.2.1, participants were given group task in setting up notes for selected measurement characteristic.

(13) Leaf blade: length

decimal point	Notes	1	2	3	4	5	6	7	8	9
1										
	range	z	z	z	z	z	z	z	z	z
	range/note									
	Mid point									

Table 3.2.1 Note Setting Table.

Later, notes for each variety were identified and were key-in in the table as showed below.

Characteristics		MS	
		QN	
		(13) Leaf blade: length	Notes
Unit		cm	
Variety			
1	MR71		
2	MR123		
3	MR 159		
4	MR167		
5	MR 185		
6	MR 211		
7	MR 219		
8	MR 220		
9	Ria		
10	Pulut Malaysia		
11	Mahsuri		
12	MRQ74		
13	MR 220 CL2		
14	Mat Chandu		
15	IRRI 124		
16	IRRI 126		
17	IRRI 129		
18	FR13A		
19	IR36		
	Max		
	Min		
	range		
	one note range		

Table 3.2.2 Selection of Example Varieties Table.

These steps need to be repeated for all characteristics in selecting a set of example variety. For practical reasons it is recommended to choose overall set of example varieties for Test Guidelines in a way that all the desired characteristics and states of expression are covered by the minimum total number of example varieties.



Figure 3.2.3 Discussion in group during group task.

3.3 Exercise III: Distinctness Test

Participants were given example case of Distinctness Test as showed in Figure 3.3.1. As result of this exercise, each group need to present list of distinct characteristics gained through discussion.

				candidate		similar	
				anthBNZL		Arizona	
1	QN	Plant: size	cm	5	25.3	6	41.5
2	QN	Leaf blade: length	cm	5	19.2	4	24.2
3	QN	Leaf blade: width	cm	5	10.5	6	13.7
4	PQ	Leaf blade: shape		3	narrow ovate	3	narrow ovate
5	QL	Leaf blade: lobing		9	present	9	present
6	QN	Leaf blade: relative position of lobes		2	free	3	touching
7	QN	Leaf blade: angle of distal part		1	acute	1	acute
8	PQ	Leaf blade: shape of tip		4	narrow acuminate	4	narrow acuminate
9	QN	Leaf blade: intensity of green color of upper side		5	medium	5	medium
10	QN	Leaf blade: blistering		5	medium	5	medium
11	QN	Petiole: length	cm	5	16.5	7	28.3
12	QN	Spathe: size	cm ²	5	104.2	6	126.0
13	PQ	Spathe: shape		4	ovate	3	almost round
14	QL	Spathe: lobes		9	present	9	present
15	QN	Spathe: relative position of lobes		2	free	4	overlapping
16	PQ	Spathe: shape of distal part		1	acute	3	rounded
17	PQ	Spathe: shape of tip		5	acuminate	6	broad acuminate
18	PQ	Spathe: main color of upper side			46B;146B (lower part of lob		45A
19	PQ	Spathe: main color of lower side			45C;146C (lower part of lob		45A
20	QN	Spathe: blistering		7	strong	7	strong
21	QN	Spadix: length	cm	5	3.3	7	5.5
22	QN	Spadix: width at the middle	mm	5	7.1	6	8.1
23	QN	Spadix: curvature of longitudinal axis		3	weakly incurved	3	weakly incurved
24	PQ	Spadix: main color of basal part		1	white	2	yellow
25	PQ	Spadix: main color of distal part		2	yellow	7	green

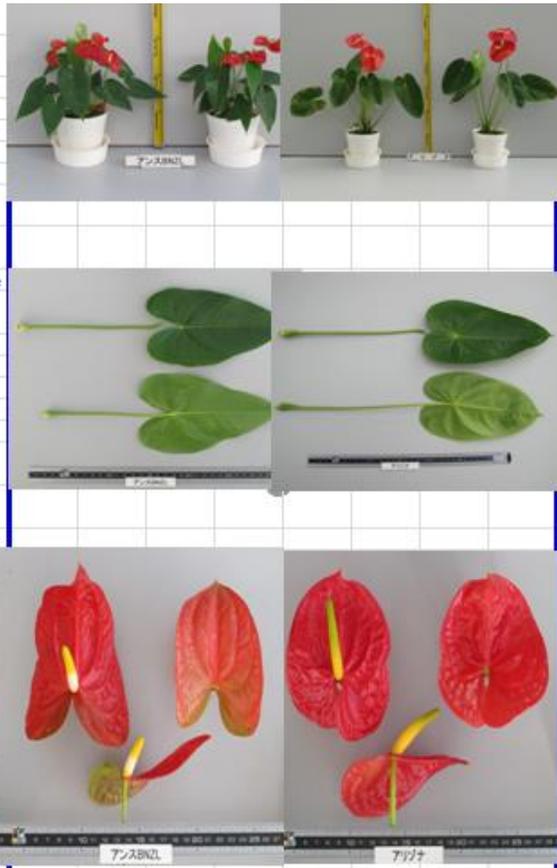


Figure 3.3.1 Distinctness Test.

4.0 CONCLUSION



Figure 4.0.1 Group Photo: Wrap up Session

In conclusion, the main objective of this workshop, which is to provide participants with better understanding on selection of example varieties and to acquire better skills on how to observe and evaluate characteristics of plants, has been achieved.

Further collection and evaluation of observations and measurements data need to be done for at least two continuous years. A good set of example variety should be used for as many characteristics as possible.

Nevertheless, this workshop did provide excellent opportunity for the participants to build rapport with trainers and experts too. The knowledge acquired will be applied in selecting example varieties of other crops.

ANNEX 1 – AGENDA OF THE COURSE

Date	Time	Program	Remarks / Venue
23 Nov 2015 MON	2000 2130	Opening and Welcoming dinner	Bukit Merah Lake Town Resort, Perak
24 Dec 2015 TUE	0800 0830	Registration	Titi Serong Agricultural Center, Perak
	0830 0900	<u>Presentation 1</u> : Rice breeding, production and distribution in Malaysia <i>by Dr. Asfaliza Ramli, Senior Research Officer, Malaysian Agricultural Research & Development Institution (MARDI)</i>	
	0900 0930	<u>Presentation 2</u> : Protection of New Varieties of Rice in Malaysia <i>by Mr. Sulaiman Hashim, Deputy Director, Crop Quality Control Division, Department of Agriculture, Malaysia</i>	
	0930 1040	<u>Country report</u> (10 min. per country) Cambodia - <i>by Mr. Ngoun Marinat</i> Japan – <i>by Mr. Yoshiakki Takamatsu</i> Lao PDR – <i>by Mr. Vandy PHETPASEUT</i> Myanmar – <i>by Ms. Chan Yan Win</i> Philippines – <i>by Ms. Elvira D. Morales</i> Thailand – <i>by Dr. Somsong Chotechuen</i> Vietnam – <i>by Mr. Mai The Tuan</i>	
	1040 1100	Group photo & Refreshment	
	1100 1230	<u>Topic 1</u> : Basic rules of DUS Test <i>by Mr. Tadao Mizuno, Former Chief Examiner, Plant Variety Protection Office, Ministry of Agriculture, Forestry and Fisheries, Japan</i>	
	1230 1400	Lunch & Prayer	
	1400 1500	<u>Topic 2</u> : Methods of Evaluation of each Characteristics <i>by Mr. Nguyen Quoc Phuong, National Center for Plant Testing (NCRT), PVP office Vietnam</i>	
	1500 1515	Refreshment	
	1515 1545	<u>Topic 3.1</u> : Example Varieties <i>by Mr. Tadao Mizuno Mr. Tadao Mizuno, Former Chief Examiner, Plant Variety Protection Office, Ministry of Agriculture, Forestry and Fisheries, Japan</i>	

Date	Time	Program	Remarks / Venue
	1545 1630	<u>Topic 3.2:</u> Selection of Example Varieties in NCSS <i>by Mr. Koji Nakanishi, Nishi Nihon Station for National Center for Seeds and Seedlings (NCSS), Japan</i>	
25 Nov 2015 WED	0830 1000	<u>Exercise 1:</u> DUS Test, making a test report (including 15 minutes explanation)	Titi Serong Agricultural Center, Perak
	1000 1015	Refreshement	
	1015 1230	<u>Exercise 1:</u> DUS Test, making a test report	
	1230 1400	Lunch & Prayer	
	1400 1700	<u>Exercise 1:</u> DUS Test, making a test report	
26 Nov 2015 THU	0830 1000	<u>Exercise 2:</u> Selection of Example Varieties (including 15 minutes explanation)	Titi Serong Agricultural Center, Perak
	1000 1015	Tea Break	
	1015 1230	<u>Exercise 2:</u> Selection of Example Varieties	
	1230 1400	Lunch & Prayer	
	1400 1700	<u>Exercise 2:</u> Selection of Example Varieties	
27 Nov 2015 FRI	0800	Check-Out	Hotel Melor Inn @ Perak
	0830 1000	Group presentation of DUS Test & Selection of Example Varieties	Titi Serong Agricultural Center, Perak
	1000 1030	Tea break	
	1030 1130	Wrap-up Discussion Q&A	
	1130 1200	Closing ceremony	
	1200 1300	Lunch	
	1300 1700	Field Visit to Sekinchan Rice Museum	

ANNEX 2 – LIST OF PARTICIPANTS

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