Regional Workshop on Protected Cultivation of High-Value Crops under Changing Climate Conditions

PROGRAM

September 11, 2017 (Monday)

Arrival of Overseas Participants
Stay at Palm Garden Hotel
Website: www.palmgarden.com.my
Address: IOI Resort City, 62502 Putrajaya, Selangor, Malaysia
Tel: +603-8943-2233
Fax: +603-8943-1122
Email: palmgarden@palmgarden.com.my
Distance from KL International Airport to hotel: 37 km
Distance from hotel to MARDI: 7 km
Shuttle services from airport and hotel: MARDI will provide

September 12, 2016 (Tuesday)

08:30- Hotel pick-up for MARDI

Venue: Tan Sri Mohamad Jamil Hall

08:30-09:00 Registration

09:00-10:00 Opening Session
MC: Nur Aida Binti Mohd Padzil

Welcome Address
Datuk Dr. Sharif Haron
Director General, MARDI

Opening Remarks
Dr. Kuo-Ching Lin
Director, FFTC for for the Asian and Pacific Region

Opening Remarks
Datuk Seri Dr. Ismail Bakar
Secretary General
Ministry of Agriculture and Agro-Based Industry, Malaysia

Gift Exchange

Group Photo

Press Conference
10:00-10:20 **Coffee Break**

**Session I**

**Keynote Session**
Moderator: Dr. Dennis S.S. Wang

Dr. Anne Elings
Wageningen UR Greenhouse Horticulture, Wageningen, the Netherlands

11:15-12:10 **Plant Factories in Japan–An Integrated Approach**
Dr. Akimasa Nakano
NARO Institute of Vegetable and Floriculture Science, Japan

12:10-13:10 **Lunch Break**

**Session II**

**Current Status of Protected Horticulture**
Moderator: Dr. Mat Sharif Ismail

*Venue: Tan Sri Anuwar Mahmud Meeting Room*

13:10-13:45 **Current Status of Protected Horticulture in Korea**
Dr. In-Ho Yu
Protected Horticulture Research Station, National Institute of Horticultural and Herbal Science

13:45-14:20 **Recent Development of Protected Cultivation in Taiwan**
Dr. Dennis S.S. Wang
Tainan District Agricultural Research and Extension Station

14:20-14:55 **Development of Protected Cultivation for Vegetables in Indonesia**
Dr. Nikardi Gunadi
Indonesian Vegetable Research Institute

14:55-15:30 **Protected Cultivation Technologies of Vegetable Production in Malaysia**
Dr. Farahzety Abdul Mutalib
Horticulture Research Centre, MARDI

15:30-16:05 **Recent Developments of Protected Cultivation in the Philippines**
Dr. Armando N. Espino, Jr.
Land and Water Resources Management Center, Central Luzon State University

16:05-16:25 **Coffee/Tea Break**

16:25-17:00 **Development of Greenhouse Crop Production in Thailand**
Dr. Thammasak Thongket
Department of Horticulture, Faculty of Agriculture at Kamphaeng Saen, Kasetsart University
17:00-17:35 Impacts of Climate Changes on Vegetable Production and Some Vegetable Development Strategies in Vietnam  
Dr. Pham Hong Hien  
Department of Science and International Cooperation, Vietnam Academy of Agricultural Sciences

20:00-22:00 Welcome Dinner (hosted by MARDI)

September 13, 2016 (Wednesday)

Venue: Tan Sri Anuwar Mahmud Meeting Room

Session III Greenhouse Structure and Control  
Moderator: Dr. Thammasak Thongket

09:00-09:40 Protected Cultivation Technology for High Tech Farming in the Changing Climate Situation in India  
Dr. Neelam Patel  
Centre for Protected Cultivation Technology, Indian Agricultural Research Institute

09:40-10:25 Design of Greenhouses for the Tropics and Sub-tropics  
Dr. Chih-kai Yang  
Agricultural Engineering Division, Taiwan Agriculture Research Institute

10:25-10:45 Coffee/Tea Break

10:45-11:30 Design Optimization of Greenhouse Environment in Tropical Climate Using Specific Air space Stratification Technique  
Dr. Mat Sharif Ismail  
Engineering Research Centre, MARDI

11:30-12:15 Application of Integrated Sensing and Automation Technology, and Preventive Bio-Control Agent for Greenhouse Precision Cultivation  
Dr. I-Chang Yang  
Jianon Enterprise Co., Ltd., Taiwan

12:15-13:15 Lunch Break

Session IV Crop and Pest Management for Greenhouse Operations  
Moderator: Dr. Armando N. Espino, Jr.

13:15-14:00 Overview of the Contribution of WorldVeg in Developing Protected Cultivation and its Use of Integrated Pest Management  
Dr. Abdul Rasheed War, World Vegetable Center - South Asia

14:00-14:45 Reviving the Old Solar Sterilization Method by Monitoring the Soil Temperature  
Dr. Tomoyoshi Hashimoto  
Division of Soil Science and Plant Nutrition, Central Region Agricultural Research Center, NARO, Japan
14:45-15:20  **Integrated Management of Tomato Production in the Greenhouse**  
Ms. Han-Chun Hsu  
Tainan District Agricultural Research and Extension Station, Taiwan

15:20-15:55  **Soil Steaming for Field and Greenhouse Operations**  
Mr. Luuk Runia  
Asian Perlite Industries Sdn Bhd - Greenhouse Solutions Asia, Malaysia

15:55-16:15  **Coffee/Tea Break**

16:15-17:15  **Roundtable Discussion**

Panelists: Anne Elings, Armando N. Espino, Jr., Thammasak Thongket, Dennis S.S. Wang, Chih-kai Yang

Rapporteurs: FFTC and MARDI staffs

Focal points of discussion:

- Major knowledge gaps on greenhouse technology yet to be filled
- Potential areas of North-South, South-South and Public-Private partnerships on the development of greenhouse technology

17:15-17:30  **Closing Ceremony**

20:00-22:00  **Appreciation Dinner (Hosted by FFTC)**

**September 14, 2016 (Thursday)**

**Session IV Field Visits**

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<thead>
<tr>
<th>Time</th>
<th>Activity</th>
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<tbody>
<tr>
<td>08:30-10:00</td>
<td>Depart from the hotel to Green World Genetics Sdn Bhd, Rawang, Selangor</td>
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<tr>
<td>10:00-12:00</td>
<td><strong>Visit Green World Genetics Sdn Bhd (GWG)</strong></td>
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<td>12:00-13:30</td>
<td><strong>Lunch at GWG</strong></td>
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<td>13:30-15:00</td>
<td>Depart for Engineering Research Centre, MARDI, Serdang, Selangor</td>
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<td>15:00-16:30</td>
<td><strong>Visit Control Environment Mushroom House, MARDI</strong></td>
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<tr>
<td>16:30</td>
<td>Depart for hotel</td>
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**About GWG**

Green World Genetics Sdn Bhd is a well-integrated total food value chain organization, with strong focus on research and development of tropical hybrid seeds as well as improvement of agricultural produce. GWG products range from seeds to fresh produce covering field crops, fruits, vegetables and flowers. The hybrid seeds that have been developed by GWG are melon, watermelon, maize, sweet corn, cucumber, hot chili, tomato, sweet pepper, and rice. Since its incorporation in Malaysia, GWG has expanded
its diversified operations across the Asia Pacific region. It is recognized as one of the very few pioneering organizations that engage in multi-disciplinary crop improvement research program. In addition, GWG is awarded with BioNexus status, which awards to qualified international and Malaysian biotechnology companies, and is participating in few of the government initiated projects.

September 15, 2016 (Friday)

**Departure of Overseas Participants**

MARDI will provide shuttle service from the hotel to KL International Airport