

**REPORT OF THE 9<sup>TH</sup> STEERING COMMITTEE MEETING OF THE ASEAN-AVRDC  
REGIONAL NETWORK FOR VEGETABLE RESEARCH AND DEVELOPMENT  
(AARNET)**

**BANDUNG, INDONESIA  
11 TO 12 MARCH 2014**

**INTRODUCTION**

- 1 The 9<sup>th</sup> Steering Committee Meeting of AARNET was held on 11-12 March 2014 in Bandung, Indonesia.
- 2 The Meeting was held to update members on the status of the AARNET projects, and to discuss the actions to be taken to move them forward.
- 3 The Meeting was attended by delegates from ten ASEAN member countries, namely, Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, Philippines, Singapore, Thailand, and Vietnam, and AVRDC - The World Vegetable Center. The list of delegates appears as ANNEX 1.

**AGENDA ITEM 1: OPENING OF MEETING**

***Agenda 1.1: Opening Address by AARNET Chairman***

- 4 Ms Poh Bee Ling, on behalf of Dr Philip Chew Hong, AARNET Chairman, welcomed all the delegates to the Meeting. She thanked our host Indonesia, for arranging the meeting in Bandung, and AVRDC - The World Vegetable Center for the financial support and coordination to bring all 10 AMS to attend this meeting.
- 5 She highlighted that AARNET, now in its 9<sup>th</sup> year, has become more unified, with sustainability and continuity in our participation and activities. She encouraged AARNET members to continue to keep this up and prepare to celebrate AARNET's 10<sup>th</sup> Meeting next year.

***Agenda 1.2: Welcome Remarks by Director, Indonesian Vegetables Research Institute (IVegRI)***

- 6 Dr Liferdi Lukman, Director of IVegRI thanked AARNET for the honor of hosting the 9<sup>th</sup> AARNET Steering Committee Meeting. He opined that vegetable is an important commodity with local, regional as well as global markets. It is possible to cultivate vegetables using conventional or modern technologies, ranging from small to large scale production systems. Vegetable research and development is therefore challenged to meet the dynamic change of consumers and industry demands.
- 7 Appropriate germplasm of vegetables adapted for specific environment or marginal conditions, selection methods for particular traits, as well as post

harvest handling are needed to maintain quality and nutrition content, in addition to competitiveness and value-adding of the product. In Indonesia, shallot and chili pepper are priority crops for research and development. However, uncertain production because of climate anomalies, natural disaster, pest and disease, crop management, poor post harvest handling decrease their productivity and availability, resulting in price increases.

- 8 Dr Liferdi believed each country has a specific or common problem in term of vegetable production and utilisation. He hoped that through the meeting and discussion, technologies and advance genetic materials could be identified to adapt varieties for each country.

### **Agenda 1.3: Remarks by AVRDC**

- 9 Dr Jacqueline Hughes, the Deputy Director-General of Research, AVRDC-The World Vegetable Center, welcomed all ASEAN members. She thanked the host, Indonesia, and AARNET Secretariat for coordinating the meeting arrangements.
- 10 She commented that many AARNET activities had been carried out, which were not there nine years ago. She urged AARNET members to keep this momentum and continue to enhance vegetable cooperation and activities in ASEAN, and looked forward to a very successful 9<sup>th</sup> AARNET Meeting.

### **AGENDA ITEM 2: ADOPTION OF AGENDA AND ARRANGEMENT OF THE MEETING**

- 11 The Meeting adopted the Agenda, which appears as ANNEX 2 that was proposed by AARNET Secretariat.

### **AGENDA ITEM 3: UPDATE BY AARNET CHAIRMAN**

- 12 AARNET Chairman reported that the 20<sup>th</sup> ASWGC Meeting, held in Bandar Seri Begawan, Brunei Darussalam, 13-15 June 2013, agreed to support the identified vegetable R&D priorities for ASEAN as recommended by the 8<sup>th</sup> AARNET Steering Committee Meeting on the following areas:
  - a) Germplasm conservation, gene-mining and plant breeding,
  - b) Crop management, postharvest, marketing and nutrition.
- 13 ASWGC also discussed the reporting line for AARNET to ASWGC in response to the update by Thailand that ATWGARD had agreed to include the representation of AARNET in their future meetings.
- 14 Taking this into account, the ASWGC Meeting asked AARNET to conduct consultation on the possible change of reporting line for AARNET to ATWGARD considering the scope of its work and the rationale for the change. Outcomes of consultation are to be presented at the next ASWGC Meeting.

## **AGENDA ITEM 4: REPORT ON STATUS AND DISCUSSION ON PROJECTS/ACTIVITIES**

### ***Agenda 4.1: Project on “Regional Cooperation to Enhance Vegetable Research and Development in ASEAN Region” – AVRDC-ESEA***

- 15 The delegate from AVRDC’s regional office for East and Southeast Asia (AVRDC-ESEA) updated on several projects in the ASEAN region, which appears as ANNEX 3. He reported that a draft proposal had been prepared to seek funding from ASEC for 2-3 representations of each AMS to attend the International Vegetable Training Course in Thailand. Besides capacity building, the training will also provide opportunity for participants to network and enhance regional cooperation. The proposal is for 3 years, with targeted 25 persons trained per year, expected budget needed of 7200 USD/pax for 75 persons equaling to 540,000USD. Participants can attend all 3 modules over 3 months or just a relevant module for a month. AVRDC-ESEA will circulate the proposal to AARNET members once it is ready.
- 16 The delegate from AVRDC-ESEA updated on the capacity building activities involving Cambodia, Indonesia, Lao PDR, and Myanmar, funded under The Network for Knowledge Transfer on Sustainable Agricultural Technologies and Improved Market Linkages in South and Southeast Asia (SATNET). A series of in-country trainings had been carried out or will be conducted in the next few months. Singapore and Lao PDR suggested for information on these trainings to be shared with other AMS, where interested AMS could participate at their own costs. AVRDC-ESEA will provide the information to AARNET Sec for dissemination to AMS.
- 17 The delegate from AVRDC-ESEA also reported on a German-funded pest management project of AVRDC with Lao PDR, Indonesia, and Malaysia, on the legume pod borer (*Maruca vitrata*), where a final project workshop on rearing of a parasitoid for biocontrol had been conducted in October 2013, and training was provided to Lao PDR, Malaysia, and Philippines. Other AMS interested in this project could contact AVRDC-ESEA for more information.
- 18 The delegate from AVRDC - The World Vegetable Center, commented that AVRDC had several projects in the ASEAN region and it will be useful to share snap-shots of these projects in future AARNET meetings. AARNET Sec will send a reminder to AVRDC Headquarters to submit these updates.

### ***Agenda 4.2: Project on “Extension of storage life and maintenance of quality of selected vegetables in ASEAN” – Malaysia/AMS***

- 19 The Meeting was reminded of last year’s deliberation on this project, where the suggestion was for Cambodia and Myanmar to explore the possibility of applying for funding to USAID through their missions.
- 20 The Meeting agreed that it will be helpful for Cambodia and Myanmar to talk to the postharvest experts during the Expert Consultation on “Postharvest Management of Vegetables in Southeast Asia: Opportunities and Challenges for

Research and Development” on 13 March 2014, to explore the possibility of putting up the proposal to USAID.

**Agenda 4.3: Project on “Competitive Trials on Promising Leafy Brassica Vegetable Varieties from Different AARNET Members” – Singapore**

- 21 As a follow-up of the first round of competitive trial by Singapore, Singapore is working with local suppliers on the possibility to import Caixin seeds from Vietnam. Singapore had requested for a second round of competitive trial on Xiaobaicai, and only Lao PDR had responded that it has OP varieties.
- 22 Other AMS (Brunei Darussalam, Cambodia, Indonesia, Malaysia and Myanmar) did not respond because they do not have commercial seed supply of Xiaobaicai. Thailand has a brassica breeding programme but has yet to identify promising lines for commercial production. Philippines and Vietnam are not aware of this request.
- 23 Singapore will review the project taking into account the feedback obtained from AMS.

**Agenda 4.4: Project on “Vegetables Trials on Panels of Promising Vegetables Varieties from AVRDC” – AVRDC and Participating Countries**

- 24 Each AMS reported on vegetable trials conducted using the promising vegetable lines obtained from AVRDC:
  - a) Brunei Darussalam had tested tomato and chili pepper lines in both greenhouse and open area. Results are expected in early April 2014.
  - b) The delegate from Cambodia commented that OP varieties are needed for farm-saved seeds in Cambodia, and if using local varieties as control rather than hybrids, AVRDC lines could perform better. Cambodia was asked to make another request of the desired lines to AVRDC as the previous request had not materialized.
  - c) Indonesia tested 15 tomato lines of which all were resistant to bacterial wilt disease except two lines. Out of the 14 chili pepper lines tested, two lines were promising with high fruit weight, four lines were resistant to anthracnose disease in the field, and three lines were resistant to Gemini virus.
  - d) Lao PDR had obtained 13 mung beans lines in December 2013, which had not been grown due to the cold weather in the season; these lines are scheduled to be grown in May 2014.
  - e) Malaysia had evaluated 15 lines of lowland tomato at two different locations. Two promising lines with low incidence of bacteria wilt were identified. Requests for other vegetable seeds such as chili pepper, bittergourd and minicucumber were pending AVRDC’s shipments.

- f) Myanmar had started growing 64 lines for seed multiplication including mung bean, vegetable soybean, pepper, tomato and pumpkin. The evaluation trials will begin in September.
  - g) Philippines had started the evaluation trials for tomato, mungbean and eggplant. The eggplants were damaged by insect pests, and request was made for more seeds to repeat the trial.
  - h) Singapore presented on the results of the vegetable evaluation trials conducted for promising Chinese cabbage and Gailan lines obtained from AVRDC, which appears as ANNEX 4.
  - i) Thailand reported that since four years ago, evaluation of 14 OP lines had been conducted including dietary fiber analysis of these lines. Under Thailand's national brassica breeding programme, there were successful crosses between AVRDC's and commercial lines and currently back-crossing is carried out to produce OP lines. Thailand is also evaluating three OP lines each of tomato and chili pepper which are supposed to be resistant to leaf curl virus.
  - j) Vietnam had evaluated 77 lines including 17 chili pepper, 35 bitter gourd, 10 vegetable soybean, 6 yardlong bean and 9 melon lines, and identified some good lines that are resistant to major diseases (*Phytophthora* chili pepper, powdery mildew for bitter gourd).
- 25 The delegate from AVRDC - The World Vegetable Center requested for participating AMS to provide feedback to AVRDC on the results of the evaluation. She commented that AVRDC provides a small quantity of seeds for evaluation purpose and AMS should carry out multiplication in their own country. Nevertheless, AVRDC will try to help AMS that required more seeds.

***Agenda 4.5: Regional Symposium on Sustaining Small-Scale Vegetable Production and Marketing Systems for Food and Nutrition Security (SEAVEG 2014: Families, Farms, Food) – Thailand, AVRDC.***

- 26 The delegate from AVRDC-ESEA reported that SEAVEG 2014 was held from 25-27 February in Bangkok, Thailand, and attended by 203 participants from 23 countries, where 63 papers were presented. Participants also feedback to continue with another SEAVEG Symposium two years later.
- 27 The Meeting endorsed SEAVEG 2016. The delegate from AVRDC - The World Vegetable Center informed that Malaysia had offered to host SEAVEG 2016. Other AMS were also invited to consider hosting the Symposium.

***Agenda 4.6: Cucurbit Breeding Programme – AVRDC***

- 28 The delegate from AVRDC-ESEA reported on the global cucurbit breeding programme in Thailand, where disease tolerant lines had been bred and tested in Cambodia, Lao PDR and Vietnam. Bittergourd lines tolerant to powdery mildew, and pumpkin lines with desirable fruit shape and size had been identified. Another project funded by Deutsche Gesellschaft für Internationale

Zusammenarbeit (GIZ) GmbH (German Society for International Cooperation), had also started to breed pumpkin lines suitable for home/school garden.

- 29 The delegate from Myanmar registered her interest to participate in the cucurbit breeding programme especially for pumpkin breeding.

**Agenda 4.7: Expert consultation on Home, School and Other Public Facility Vegetable Gardens – AVRDC and Participating Countries**

- 30 Since the Expert Consultation in 2012, Cambodia, Lao PDR, Myanmar, Philippines, Thailand and Vietnam had started small pilot projects on home/school vegetable gardening. The updates on the projects are as follows:

- a) Cambodia has submitted a proposal to its government for nation-wide integrated student school and home garden.
- b) Lao PDR had conducted a field survey with farmers to obtain their views about the home garden. The report of the survey will be sent to AARNET Sec for dissemination to members.
- c) Myanmar had launched school-based gardens in the rural area of Nay Pyi Taw.
- d) Philippines had a nation-wide project for the school gardens, where a contest was held for the best school garden, and cash award will be given to the winner.
- e) Thailand had incorporated green city concept (including home/school vegetable gardening) into its national agenda.

- 31 Other AMS also updated on their national home/school vegetable gardening activities:

- a) Brunei Darussalam had incorporated vegetable gardening into the curriculum of some selected schools.
- b) Indonesia had initiated a home gardening program in several districts, with positive development for the community. This has been a national program since 2011.
- c) Malaysia had developed small kits which are convenient for use by the housewife and school children. In addition, a National Urban Horticulture Conference will be held on 15-17 April, in Johor Bahru, Malaysia, and all AARNET members are welcome to attend.
- d) Singapore's community vegetable gardening was carried out in residential estates, and was initiated by the community.

- 32 The delegate from AVRDC-ESEA informed of FAO's interest to propose to ASEAN Secretariat (ASEC) of an ASEAN-wide initiative on home/school vegetable gardening. The Meeting endorses this initiative.

**Agenda 4.8: Expert Consultation on Vegetable Research and Development Priorities in Southeast Asia – AVRDC, Participating Countries**

- 33 As ASWGC had endorsed the list of vegetable R&D priorities recommended by AARNET, AARNET Chairman requested AMS to monitor and align the national vegetable research priorities and to update ASWGC in two years' time. AARNET Sec will send a template for update by each AMS by the next AARNET meeting.

**Agenda 4.9: Expert Consultation on “Postharvest Management of Vegetables in Southeast Asia: Opportunities and Challenges for Research and Development” – AVRDC**

- 34 The delegate from AVRDC-ESEA updated on the Expert Consultation to be held on 13 March, where there will be opportunity to exchange information and learn from AVRDC postharvest experts as well as each other. For the 2016 meeting, AARNET Sec will send a template for update on the progress made in each AMS on the outcomes of the Expert Consultation.
- 35 The Meeting agreed to AARNET Chairman's suggestion that the next Expert Consultation could focus on climate change mitigation and adaption strategies for vegetables. The delegate from Lao PDR also highlighted the need for technologies to address food security for small-holder farmers.

**Agenda 4.10: New initiate on urban/peri-urban agriculture (UPA) – AVRDC, AMS**

- 36 The delegate from AVRDC-ESEA informed that the project on urban food mapping in Thailand had been completed in September 2013. All AMS are welcome to tap into this technology if there is interest to map out the area and locations of vegetable plots in any urban city.
- 37 The delegate from Thailand informed that after the FAO-organized Urban/Peri-urban (UPA) workshop in Thailand two years ago, FAO had drafted a list of recommendations for UPA, of which some are adopted into Thailand's national agenda. Thailand would send the list of recommendations to AARNET Sec for dissemination to AARNET members.

**Agenda 4.11: Translation of two technical materials published by AVRDC: “Insect and mite pests on eggplant” and “Safer tomato production techniques” into local national language – AVRDC, Participating Countries**

- 38 Most countries had translated the eggplant and tomato guides into their national languages. Myanmar had published the guides in its biweekly agricultural journal in its native language. As Brunei Darussalam and Malaysia use standard Malay, Brunei Darussalam will work on the eggplant guide while Malaysia will work on tomato guide. Malaysia also requested for the guides in Bahasa Indonesia to be sent to them as it will be easier to translate into Malay.
- 39 The delegate from AVRDC - The World Vegetable Center reiterated that there is no copyright for AVRDC's materials, which are international public goods. If any country is printing the materials to share with farmers, she requested that

AVRDC logo be used, to keep the front page with layout and authors' names, and to keep the authors informed.

- 40 The delegate from AVRDC-ESEA also informed of other information materials, such as, "Safer tomato production techniques", "Save your own vegetable seed", "Grafting tomato technology", "Vegetables Postharvest", "SEAVEG2012 Proceedings" which are available from AVRDC website for download.

#### ***Agenda 4.12: Update of AARNET Website – AARNET Sec***

- 41 AARNET Sec had sent out invitation and reminder to AMS to provide inputs for the website. To-date, no response had been received.
- 42 The Meeting agreed to proactively contribute more articles to strengthen AARNET's visibility and presence. Indonesia will share an article on xiaobaicai, while Lao PDR will upload technical articles that are not related to AARNET activities but still relevant for members' information. Singapore will upload the presentation on the results of the trials on promising vegetable lines from AVRDC.

### **AGENDA ITEM 5: OTHER MATTERS**

#### ***Agenda 5.1: Reporting Line for AARNET***

- 43 AARNET was tasked by ASWGC to discuss the change of reporting line for AARNET to ATWGARD. In general, most AMS (Brunei Darussalam, Indonesia, Lao PDR, Myanmar, Philippines, Thailand and Vietnam) were supportive that AARNET reports to ATWGARD because of the related scope in carrying out R&D. However, Cambodia and Malaysia were unsure of the benefits to change the reporting line to ATWGARD.
- 44 The delegate from AVRDC - The World Vegetable Center commented that AARNET had made a clear niche for itself in the ASEAN framework with ASWGC, and that there are no clear benefits to move to ATWGARD. Furthermore, as ATWGARD is currently focused on cash crops such as rice, soybean and corn, this may restrict AARNET's ability to influence the policy and R&D of vegetables in ASEAN.
- 45 The Meeting agreed to AARNET Chairman's suggestion to refrain from making the decision now, but to send a representation to ATWGARD Meeting to understand better the scope and activities of ATWGARD.

#### ***Agenda 5.2: Venue of Next Meeting***

- 46 The delegate from Lao PDR offered to host the 10<sup>th</sup> AARNET Steering Committee Meeting and the "Expert Consultation on Climate Change Mitigation and Adaptation Strategies for Vegetables", tentatively in March 2015, and the Meeting agreed. Lao PDR would inform the Meeting later of the specific location, either in Champesak or Luang Prabong Province.



## AGENDA ITEM 6: RECOMMENDATION TO ASWGC AND SOM-AMAF

- 47 The Meeting had reviewed the status of the AARNET projects and activities and would continue with them as reported in Agenda 4. The Meeting would like to highlight the following for ASWGC's attention:
- a) **SEAVEG 2016:** SEAVEG is an initiative by AARNET and two Symposia had been held. Participants of the recent SEAVEG2014 had feedback for the Symposium to continue two years later. AARNET endorses SEAVEG2016 and Malaysia has offered to host the Symposium.
  - b) **ASEAN-wide Home/School Vegetable Gardens:** All AMS had started some form of home/school vegetable gardens. AARNET endorses FAO's ASEAN-wide initiative on Home/School Vegetable Gardens.
  - c) **Expert Consultation on "Postharvest Management of Vegetables in Southeast Asia: Opportunities and Challenges for Research and Development"** which will be held on 13 March for AMS to share knowledge and learn from AVRDC postharvest experts.
  - d) **Expert Consultation on "Climate Change Mitigation and Adaptation Strategies for Vegetables"** is proposed by AARNET, to be held back-to-back with the 2015 AARNET Steering Committee Meeting, as this topic is opportune and needed by AMS to address the impact of climate change on vegetable production.
  - e) **Sharing of technical information:** AARNET and AMS had translated two AVRDC technical guides into several national languages, which are available for download from AVRDC/AARNET web-site.
  - f) **Consultation on Reporting Line of AARNET:** AARNET would like to better understand the scope and activities of ATWGARD through attendance at ATWGARD meetings before deciding whether it will be beneficial for AARNET to change its reporting to ATWGARD.

## AGENDA ITEM 7: ADOPTION OF REPORT

- 48 The Meeting reviewed and adopted the Report to ASWGC and SOM-AMAF.

## AGENDA ITEM 8: CLOSING OF THE MEETING

- 49 The delegates from Brunei Darussalam, Cambodia, Lao PDR, Malaysia, Myanmar, Philippines, Singapore, Thailand, Vietnam and AVRDC expressed their sincere thanks and appreciation to Indonesia for the excellent arrangements made for the Meeting and for the warm hospitality accorded to them.
- 50 The Meeting was held in the traditional spirit of ASEAN cooperation and cordiality.

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