



Technical Report

**TRAINING COURSE
ON
Seed Processing and Storage**

22 – 26 February, 2016

Terbol, Lebanon

**Japan International Cooperation Agency (JICA)
and**

International Center for Agricultural Research in the Dry Areas (ICARDA)



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EXECUTIVE SUMMARY

Name of the project

Capacity Development for Agriculture for Afghanistan and Regional countries

Partners

Japan International Cooperation Agency (JICA)
International Center for Agricultural Research in the Dry Areas (ICARDA)
Lebanese Agricultural Research Institute (LARI)

Purpose

To enhance Capacity Development of government officials and researchers who are engaged in agricultural development in Afghanistan and other countries.

Specific objectives of the training course on Seed Processing and Storage

Up-to-date knowledge and enhanced capacity on Seed Processing and Storage.

Specific outputs

Nine professionally-trained NARS partners from Afghanistan, 2 from Lebanon and 8 from other countries: 2 from Syria, 1 from Iraq, 1 from Mauritania, 1 from Jordan, 1 from Palestine, 1 from Somalia, and 1 from Sudan on Improving Seed Processing and Storage with emphasis on dry land agriculture. While 9 Afghanis, 2 Lebanese, 1 Syrian and 1 Egyptian were funded by JICA, the others are sponsored by Arab Fund for Economic and Social Development (AFESD).

Specific outcomes

Design, implement, manage, analyze and report on research and development in Seed Processing and Storage and acquire up-to-date information on research and practical activities in Seed Processing and Storage in each participating country.



GENERAL OVERVIEW

The aim of seed processing and storage is to provide crop producers with quality seed to increase crop productivity and quality and achieve food security and poverty reduction. Seed processing is an integral part of seed production in all functional national seed supply systems. To improve crop productivity for greater food security, the Japanese International Cooperation Agency (JICA) funded a third-party training project for Afghanistan and selected countries in the West Asia and North Africa (WANA) region covering a wide range of agriculture research for development disciplines including seed. This course was one of three courses on the seed-related issues to be organized in 2016.

PURPOSE

The course aimed at providing the seed processing operators from Afghanistan and the seed programs in the region with technical know-how on seed processing techniques and implications for seed production and use.

TARGETED AUDIENCE

A total of 19 trainees (primarily seed specialists and researchers, details in Annex III) from 8 countries (Afghanistan, Sudan, Egypt, Iraq, Palestine, Jordan, Syria and Lebanon) participated in the course. While 9 Afghanis, 2 Lebanese, 1 Syrian and 1 Egyptian were funded by JICA, the others are sponsored by Arab Fund for Economic and Social Development (AFESD).

ORGANIZING COMMITTEE

Mr. Charles Kleinermann, Head, Capacity Development Unit (CDU) - c.kleinermann@cgiar.org

Dr. Zewdie Bishaw, Head, Biodiversity & Integrated Gene Management (BIGM) - z.bishaw@cgiar.org

Dr. Abdoul Aziz Niane, Scientist, BIGM - a.niane@cgiar.org

For list of trainers, please refer to Annex II.

COURSE STRUCTURE

The course program consisted of class room lectures, technical visits and practical sessions on seed processing and storage (Annex I). A total of four training manuals on seed science and technology and soft copies and reference materials of power point presentations on seed processing and storage were distributed to the trainees. All the training materials were provided to the trainees at the end of the course.

COURSE IMPLEMENTATION

The 5-day course was designed to cover seed processing, quality attributes and evaluation, and storage principles and application.

The first day: Prior to the course introduction, a zero assessment test was held to examine the background knowledge of the trainees in order to ensure that the level of lecturing, practical



sessions, and exercises were adapted to the level of knowledge of the group. Following the zero assessment, Dr. Bishaw and Dr. Niane introduced national seed program components and functions and also seed principles and application.

The second day included a visit to the Advancing Research Enabling Communities Center (AREC) in American University of Beirut, and the trainees explored a series of demonstration session on seed processing followed by lectures on seed storage principles and application by Dr. Bishaw and Dr. Niane.

The third day began with an introduction of seed quality attributes and evaluation followed by a visit of the seed processing and storage facilities in LARI.

The fourth day introduced seed health testing in quality seed production and trainees visited the ICARDA seed health testing facilities in Terbol accompanied by Dr. Safaa Kumari.

The last day was used for discussion and providing a final assessment to evaluate the trainees' improvement. The assessment indicated an average score of 62.6% and an average improvement of 19.1% (for more information about the zero assessment scores, please refer to Annex IV).



Group photo at the opening ceremony chaired by the ICARDA country manager in Lebanon, Dr. Hassan Machlab, second from right

Mrs Joelle Braidy, head of the LARI genebank and course participant explaining her work to the course trainees during the technical visit to LARI





GROUP ASSESSMENT

A zero assessment was conducted on the first day of the training. The results showed that the knowledge of the trainees was basic: 6 trainees received a score under 40%; 5 Trainees received a score between 40 and 60%. For more information, please refer to Annex IV. The average percentage group score at the zero assessment reached a score of 43.5%.

In order to evaluate the knowledge the trainees gained after a week training a final assessment was conducted and the results showed a tangible improvement. The percentage group score increased by 62.6%, and a 19.1% of average gain in knowledge. Three trainees received a score between 70 and 80% while 3 trainees score more than 60% (See details in Annex IV).

GENERAL COURSE EVALUATION by TRAINEES

Overall, the evaluation of the course by the trainees was positive (details in Annex V). The list of the three most interesting ideas/concepts that the trainees learned in the course included all course topics. This shows on the one hand the heterogeneity in the scientific and professional background of the trainees but also that all topics were relevant to the trainees. They stressed that the main relevant topics were on how to manage seed processing, seed health and storage.

CONCLUSION

The trainees nominated for the course were of high quality and appeared eager to participate. The mixture between lectures and discussions appeared to work well, and the enthusiasm of the trainees over the five day course appeared to remain high. The course evaluations support the approach taken, and the pre and post knowledge assessment tests show an overall improvement in understanding the material. This course should be seen as part of a capacity building approach of national governments towards seed processing and storage.

The financial support of JICA and the logistic arrangements made by the ICARDA CDU, the ICARDA country office of Lebanon were crucial in the organization and success of the course. The technical visit to the Lebanese Agriculture Research Institute (LARI) and the demonstration of their seed processing and storage facilities and management practices were critical complements to the theoretical concepts presented during the course. The lectures and practical sessions from the Seed Health group were highly appreciated. Special thanks goes to Ms. Ghinwa Salhab for the exceptional logistic support provided throughout the course.