United Nations Development Programme
United Nations Development Group Iraq Trust Fund

COMPLETION REPORT FOR PROJECT

REHABILITATION AND DEVELOPMENT OF THE NATIONAL SEED INDUSTRY IN IRAQ (A5-16)

Summary

Participating UN Organisation: FAO

FAO – Food and Agriculture Organization of the UN.

Cluster: A5

Old Cluster: Agriculture, Food Security, Environment and Natural Resources Management.

New Sector: Agriculture and Food Security

Project No. and Project Title:

A5 - 16

Rehabilitation and Development of the National Seed Industry in Iraq (OSRO/IRQ/502/UDG)

Project Location/Region/Province:

Iraq –Nationwide

Reporting Period:

18 May 2006 – 30 June 2010

Report Number:

9 and completion report.

Counterpart organisations / implementing partners:

MoA – Ministry of Agriculture

Project cost:

- Cost at Approval: USD 5 383 460
- Revised budget: Not applicable
- Cost at Completion: USD 5 378 190

(non final and provisional figure)

- Left over resources: USD 5 270

Abbreviations and acronyms:

MoA – Ministry of Agriculture
PSC – Project Steering Committee
SBSTC- State Board for Seed Testing and Certification
SBAR – State Board for Agricultural Research
AGPS – Seed and Plant Genetic Resources Service, FAO

Project Duration:

- Original project duration: 2 years from 18 May 2006 to 18 May 2008.
- Starting Date: 18 May 2006
- Extension: 18 May 2008 to 30 June 2010.

I. Purpose

Main objectives and outcomes expected as per approved Project/Programme/project document:

The development objective of the project is to improve food security and nutrition in Iraq through rehabilitation and improvement of the national seed programme, which will promote the availability and use of high quality seeds of adapted varieties to farmers and provide the foundation of a sustainable seed industry.

Expected outcomes are:

- Enhance the performance of the national seed industry through formulation of a national seed policy, review and up-grade of the seed legislation in place and improvement of the coordination and oversight arrangements
- Increase the capacity of the national seed industry through rehabilitation of the damaged infrastructure for variety development and evaluation, variety maintenance, initial seed multiplication and seed quality control.
- Improve the technical capacity of key human resources in the national seed industry through training.

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Agreed changes during the course of the project:

The first Project Steering Committee meeting held at Amman on 21-27 August 2006 agreed to limit the scope of the Project to cereals only and to remove potato from the activities. ,

Reference to how the programme/project related to the UN Assistance Strategy to Iraq and how it aimed to support Iraq national development goals and the Millennium Development Goals:

FAO ensures that project activities are integrated in the overall UN strategy for Iraq (which supports the Iraqi National Development Strategy and contributes to the Millennium Development Goals) designed to achieve the following outcomes:

- Enhanced sustainable long-term food production and natural resource management;
- Rehabilitation and reconstruction of infrastructure;
- Strengthened institutional development and capacity building;
- Support to legislation, policy and strategy formulation;
- Enhanced employment and income-generation;
- Enhanced environmental restoration and conservation.

Project Management arrangements

Programme/project implementation and supervision arrangements; in-country and region based capacity of organisation utilised:

This project has been executed by FAO and co-implemented by the Ministry of Agriculture. FAO ensured a timely recruitment of project personnel, in collaboration with the Ministry of Agriculture, including the National Project Coordinators (NPC) to coordinate project activities from Baghdad. The International Chief Technical Advisor (CTA) based in Amman has been in constant contact with the NPCs and FAO Headquarters. Besides this distant technical as well as operational management, intensive face-to-face meetings in Amman (and occasionally at FAO Headquarters in Rome) with the Ministry of Agriculture interlocutors plus the many training courses and workshops in Amman or overseas, have made a good and effective implementation possible though sometimes challenging.

Cornerstone of the supervision and monitoring system for this 'remote control' project implementation, have been the monthly reports prepared by the CTA on the basis of input from the NPCs in Baghdad. Furthermore, intensive e-mail and telephone contact between FAO headquarters, the CTA and the NPCs as well as periodic visits to Amman by the NPC and the counterparts provided for an adequate monitoring of the project implementation.

Due to the prevailing poor security situation at present in Iraq, management by international staff is done from FAO-Iraq offices in Amman Jordan. Management decisions are influenced by periodic progress reports from the field. The Chief Technical Adviser stationed in Amman will be in constant communication with the National Project Coordinator (NPC) in Iraq via telephone, e-mail and video conferencing. The NPC will also travel to Amman when necessary to discuss programme planning, monitoring, and technical specification and bids evaluation review on procurement issues. The Project Steering Committee also located in Amman, will provide guidance on the implementation of activities and recommend alternative course of actions when required.

Within the FAO system, the Special Emergency Programmes Service (TCES) of the Operations Division is responsible for operation of the project in the field and works together with the Technical Division (AGPS) which is the Lead Technical Unit for technical-backstopping and the Procurement Division (AFSP) for procurement of equipment.

Main international and national implementing partners involved, their specific roles and responsibilities in project implementation and their interaction with the agency:

The main implementing partners have been the Iraqi Ministry of Agriculture in general, and the State Board for Agricultural Research (SBAR) and the State Board for Seed Testing and Certifications (SBSTC) in particular for implementation of major activities and for seed quality control aspects, respectively. The SBAR has the mandate to undertake crop improvement programme and supply of early generation seeds, whereas SBSTC is the national seed certification agency for Iraq. These institutions under the MoA are directly responsible for seed improvement; breeders seed production and quality control issues and activities inside Iraq and are close counterparts of this FAO project. A close working collaboration with these two agencies would ensure the achievement of project objectives with regards to variety maintenance, seed production, processing, quality control, human capacity development and sustainability of the project.

The SBAR and SBSTC staff, as implementing partners, routinely participate in the process of rehabilitation and improvement of the infrastructures for their institutions through the scheduled assessments, development of required specifications and installation activities. The project has directly targeted, supported and collaborated with both the senior management and technical staff of these institutions. Whenever necessary the project collaborated with Universities, Agriculture Directorates in the Governorates, other Ministries and other seed sector enterprises (e.g. Mesopotamia State Seed Company, SSSC – public

sector, and Iraqi Company for Seed Production, ICSP- public+private). The FAO team has worked closely with its agricultural research and seed quality control counterpart colleagues in implementing the project in Iraq.

For implementing and delivering the extensive technical and management training component of the project, FAO has sought close collaboration with a variety of international expert institutions in research and training. These include the International Centre for Agricultural Research in the Dry Areas (ICARDA) in Syria, the Indian Agricultural Research Institute (IARI) and the International Crops Research Institute for the Semi-Arid Tropics (ICRISAT, India, Agricultural Research Centre (ARC), Cairo, Egypt. The other institutions FAO collaborated capacity building programme included Coffey International, Australia and AGROSAW, India.

Intra cluster cooperation and goods/services other agencies supplied/common services utilised:
Not applicable.

Procurement and transport arrangements:

Already in August 2004, FAO, in a written agreement with its key counterpart ministries, has obliged itself to assure a strong involvement of the ministries throughout the procurement process, which includes the following elements and which has been applied during the whole length of the project:

- Identification of inputs or services required undertaken jointly by FAO/Iraqi Line Ministry;
- Preparation of detailed specifications, bill of quantities, drawings, delivery time and destination by FAO/Iraqi Line Ministry and endorsed by the latter;
- List of local potential suppliers provided by Iraqi Line Ministry, to be included by FAO in its invitations to bid;
- Tenders launched by FAO inviting local and international potential suppliers;
- Technical review of the offers received and preparation of recommendation carried out jointly by FAO/Iraqi Line Ministry and endorsed by the latter;
- Purchase Orders or Contracts issued by FAO.

Regarding transport (and insurance) arrangements, we saw significant changes during the life of the project. FAO normally prefers to have the good it procures shipped and delivered at final destination under Delivered Duty Unpaid terms (DDU, Incoterms 2000). However, as a result of the worsening security situation, less and less suppliers have been either willing or been able to ship into Iraq, as it has become increasingly difficult for them to find freight forwarders and insurance companies that want to take up the job and cover the risks. As a result, FAO often had no choice but to take charge of the goods ex-factory, and hire a freight forwarder separately for the transport and delivery. In most cases use has been made of a standing contract with the company Kühne+Nagel, resulting from a worldwide tender that UNICEF floated, and to which also FAO adhered. Shipment through this company, which makes use of local forwarding agents inside Iraq, also includes adequate insurance of the goods.

Systems for programme/project monitoring, quality control (including financial tracking and accounting audit), quality control (including lesson learning and corrections) and impact assessment; methods for data collection and monitoring:

- In line with FAO policies and procedures, project progress monitoring has been done at all crucial stages of implementation of the project based on the measurable indicators and means of verification identified in the logical framework of the project document. Telephone calls, e-mails and formalized reports as well as periodic visits to Amman of National Project Coordinator and counterparts took place for monitoring, fact-finding, triangulation and follow up on implementation of the project. Continued copying of the

chain of events and correspondence to all pertinent parties also helped in performing monitoring of project activities.

- For monitoring of delivery of supplies to the project, a system has been put in place for all FAO projects, whereby independent inspection agents verify quantity, quality and integrity of the goods at loading at the supplier's warehouse as well as upon arrival on site. Without a cleared inspection report on the shipment on arrival, plus a CMR/waybill signed by the counterpart (GSCVS/MoA) for receipt of the goods, no payment takes place to supplier and freight forwarder.
- For monitoring of civil works and construction contracts implemented by private contractors, FAO always puts a Resident Engineer on site, responsible for progress monitoring through regular progress reports and certification of (quality of) works delivered. The delivery by contractor of construction works also needs the verifications from the counterpart official from the MoA. Again, without such certification and verifications no invoices are paid to the contractor.
- For financial monitoring and tracking, it should first of all be noted that all project related disbursements are being made either by the FAO offices in Iraq, Amman or Rome. No UNDG ITF funds are transferred to and disbursements made through the MoA counterpart. On the FAO side, a solid computerized financial accounting system is in place, to which all FAO offices have access for entering of commitments and expenditures as well as monitoring of budgets.
- With regard to auditing, the following relevant internal and external audits took place on the Iraq programme during the life time of the Project. Though not project-specific, its findings and recommendations also directly or indirectly benefited this project.
    - Review of TCE Iraq Trust Fund's Strategic and Operational Framework (FAO Internal Audit)
    - Review of TCE Iraq Trust Fund's Project Implementation (FAO Internal Audit)
    - Review of TCE Iraq Trust Fund's Personnel (FAO Internal Audit)

II. Resources

Total approved budget and summary of resources used for the programme/project from the UNDG Iraq Trust Fund (and non-Trust Fund resources where applicable):

UNDG ITF funds approved: USD 5 383 460

UNDG ITF funds received: USD 5 383 460

Project expenditure: USD 5 378 190

Amount still available to the project at completion of activities: USD USD 5 270

Use of Funds according to the 10 broad categories:

CATEGORY	UNDG ITF approved budget (As per Original Project Document)	Actual COST (as per 30/06/10 non-final and provisional figures)	Percentage of Approved	Budget Revision approved on 27/04/10	Percentage of revision
1. Personnel	737 000	917 320	125%	1 060 780	86%
2. Contracts	610 000	610 772	100%	690 000	89%
3. Training	927 500	116 334	13%	150 000	78%
4. Transport					
5. Supplies and commodities	200 000	6 400	3%	40 000	16%
6. Equipment	2 076 700	1 533 794	74%	1 955 976	78%

7. Travel	244 300	888 461	364%	898 744	99%
8. Security	98 339			98 339	
9. Miscellaneous	143 865	303 420*	125%*	143 865*	125%*
10. Agency Management Support	345 756	306 565	89%	345 756	89%
Total Expenditure	**5 383 460**			**5 383 460**	

*5028 general operating expenditure from the financial statement 30.06.10 has been taken as Miscellaneous cost (and includes security)

Explanation of deviations of project expenditure versus original budget:

Not applicable.

Approved budget revisions:

The following four budget revisions were approved by ITF:

1) Submitted 27/11/08, approved 01/12/08

Budget Category / Item Description	Total Budget USD	Revised Budget USD	Difference
Personnel			
Sub Total - National Staff	62 000	62 000	0
Sub Total - International Staff	540 000	483 280	56 720
Sub Total - National and International Consultant	135 000	317 620	-182 620
Contracts	610 000	800 000	-190 000
Training	927 500	400 000	527 500
Equipment	2 076 700	2 175 496	-98 796
Supplies and commodities	200 000	80 000	120 000
Transport and Travel	244 300	477 104	-232 804
Miscellaneous	143 865	143 865	0
Security	98 339	98 339	0
Administrative Management Support (AMS)	345 756	345 756	0
Total Project Cost USD	***5 383 460***	***5 383 460***	***0***

2) Submitted 29/03/09, approved 01/04/09

Budget Category / Item Description	Total Budget USD	Revised Budget USD	Difference
Personnel			
Sub Total - National Staff	62 000	63 380	-1 380
Sub Total - International Staff	483 280	603 280	-120 000
Sub Total - National and International Consultant	317 620	347 620	-30 000
Contracts	800 000	690 000	110 000
Training	400 000	150 000	250 000
Equipment	2 175 496	2 104 976	70 520
Supplies and commodities	80 000	40 000	40 000
Transport and Travel	477 104	796 244	-319 140
Miscellaneous	143 865	143 865	0
Security	98 339	98 339	0
Administrative Management Support (AMS)	345 756	345 756	0

Total Project Cost USD	***5 383 460***	***5 383 460***	***0***

3) Submitted 31/08/09, approved 02/09/09

Budget Category / Item Description	Total Budget USD	Revised Budget USD	Difference
Personnel			
Sub Total - National Staff	63 380	63 380	0
Sub Total - International Staff	603 280	603 280	0
Sub Total - National and International Consultant	347 620	392 620	-45 000
Contracts	690 000	690 000	0
Training	150 000	150 000	0
Equipment	2 104 976	1 955 976	149 000
Supplies and commodities	40 000	40 000	0
Transport and Travel	796 244	900 244	-104,000
Miscellaneous	143 865	143 865	0
Security	98 339	98 339	0
Administrative Management Support (AMS)	345 756	345 756	0
Total Project Cost USD	***5 383 460***	***5 383 460***	***0***

4) Submitted 31/03/10, approved 27/04/10

Budget Category / Item Description	Total Budget USD	Revised Budget USD	Difference
Personnel			
Sub Total - National Staff	63 380	64 880	-1 500
Sub Total - International Staff	603 280	603 280	0
Sub Total - National and International Consultant	392 620	392 620	0
Contracts	690 000	690 000	0
Training	150 000	150 000	0
Equipment	1 955 976	1 955 976	0
Supplies and commodities	40 000	40 000	0
Transport and Travel	900 244	898 744	1 500
Miscellaneous	143 865	143 865	0
Security	98 339	98 339	0
Administrative Management Support (AMS)	345 756	345 756	0
Total Project Cost USD	***5 383 460***	***5 383 460***	***0***

Other funding sources available to the project: None

Human Resources

- International: 1 Chief Technical Advisor/Project Manager
- National: 2 National Project Coordinators
- Various international backstopping officers, specialist consultants, trainers
- Other programme management and administrative staff co-shared with other projects

Main Project Assets

- Office automation, data processing and communication equipment: US$ 19 865;
- Farm machineries, seed processing plants and laboratory equipment: US$ 1 628 762
- Seed testing laboratory buildings: US$ 365 054

- Greenhouses: US$ 131 480

Complete final resources utilisation overview at annex 2.

III. Results

An assessment of the extent to which the programme/project component / programme /project has achieved the outcomes and outputs expected

Main and overall achievement of the project is fully in line with the main objective of rehabilitation of the damaged infrastructure in the government research centres and the State Board for Seed Testing and Certification as well as through revision of the existing seed legislation, formulation of a national seed policy, improving coordination and oversight arrangements and the training of selected personnel in key seed industry disciplines.. All of the supported facilities are fully operational and functioning again after having been found to be closed down before due to lack of equipment, lack of trained staff, having been looted etc.

- *Iraq National Seed Policy and Seed Act:*

The adoption by the Government of the newly formulated National Seed Policy provides for a blueprint for way forward in Iraq's seed sector. This is a comprehensive seed policy to provide framework for all seed related activities for further development of Iraq's seed industry. It prescribes strategies and modalities to establish short, medium and long-term goals and programmes for various Iraqi seed sector components.

In line with the Seed Policy provisions, preparation of the draft of Seed Act was undertaken following review of existing pieces of Iraqi legislations affecting seed sector and holding of series of legislative review meetings. The Government is under process of validation, promulgation and adoption into law following necessary procedures. It is anticipated that the Seed Law upon enactment will provide an enabling environment as regulatory framework towards further growth and development of the Iraqi seed sector.

- *Professional training updates provided to technical professional on seed technology:*

6 out-of-country training courses (detailed in below activities) including workshops and study tours for 39 seed experts have been carried out in the fields of crops varietal development and evaluation, variety maintenance, seed production and marketing, seed quality control, varietal verification and GMO detection and seed processing.

The participants of 6 external training of trainers (ToT) programme have transferring newly acquired skills and techniques in the areas of seed technology to Iraqi technical staff numbering 167 with implementation of in-service training within the country. It was possible through the internal training process to disseminate technologies among a larger number of national technical manpower in order to enhance seed programme technical capacity

- Seeds infrastructures restored in research stations and quality control services in the with procurement of equipment, provision of supplies and rehabilitation of physical infrastructure::

The supply and delivery of essential equipment, goods and materials such as office automation and data processing equipment, seed production farm equipment, seed processing plants, seed testing equipment has contribute to enhanced capacity for variety maintenance, production of breeders and foundations classes seeds, seed multiplication and quality control for growth and development of national seed industry.

The completion and handover to the Government, of the seed testing laboratory buildings has strengthened the seed testing and quality control capacities of the MoA by providing the ideal infrastructures for installation and use of the project delivered seed testing equipments.

Commissioning of the climate-controlled greenhouses contributed positively in improved varietal screening and evaluation capacities of the MoA.

- Laboratory capacity re-established and strengthened for seed quality control service:

The supply and delivery of essential laboratory equipment and supplies as well as refresher and advanced technical training courses to laboratory staff have enhanced the laboratory capacity for seed routine and pathological tests. The equipment procured and training provided has imparted skills to Iraqi scientists in the varietal verification (identification) and detection of genetically-modified organisms (GMOs) in the seed with the use of advanced technology of polymerase chain reaction (PCR) that is available in few countries in the region. ..

Main activities undertaken and achievements/ impacts:

Policy and Legislation

- National Seed Policy for Iraq was formulated through holding of a national seed policy forum attended by seed industry stakeholders. The forum itself was final stage among a series of consultative processes and interactions.
- Seed Act for Iraq was drafted in line with the National Seed Policy already promulgated by the Government. The draft preparation resulted with holding of legislative review meetings where existing Iraqi pieces of legislation affecting the seed sector was extensively reviewed by experts from FAO and Iraq.
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Procurement

- Procurement of office automation and data processing equipment: 10 scanners, 2 digital cameras, 2 photocopiers, 3 Global Positioning System (GPS), 10 desktop personal computers (PC), 8 laptop (notebook) computers, and 10 printers (100% of planned);
- Procurement of seed production farm equipment: 5 tractors 85hp, 1 land plane/drag scraper, 1 land plane/multi scraper, 2 ridgers, 2 seed bed preparatory equipments, 1 three-furrow mould board plough, 2 two-furrow mould board ploughs, 4 levy cleaners, 5 trailers, 5 fertilizer spreaders, 4 corn shellers, 4 multi-crop threshers (model one), 3 single plant threshers (low profile thresher), and 3 ridgers for 70-80hp tractor (100% of planned);
- Procurement of seed laboratory equipment: 1 top loading electric balance (220g,0. 001), 2 top loading electric balance (65g,0. 0001), 2 top loading electric balance (65g,0. 01), 7 balances, 3 autoclaves, 3 laboratory mills, 2 laboratory seed blowers, 5 germination tray hydration systems, 5 VAC-A samplers, 5 seed germinators, 2 Polymerase chain reaction (PCR) machines, 2 Gel documentation systems, 2 sample preparatory equipment, 5 desiccators, 3 convection ovens, 2 laboratory ovens, 2 incubators, 3 hand test screen sets, 10 portable moisture testers, 2 biology hoods, 2000 seed containers, 5000 seed storage containers, 5 laboratory rotary dividers, 50 sample containers, 25 Crucible tongs, and 3 laboratory corn shellers (100% of planned);
- Procurement of seed processing equipment: 3 dryers for corn, 3 platform balance, 8 mobile seed processing plants, 2 fork lift trucks, 8 heavy duty blowers, 8 portable bag stitchers, 8 vertical bucket elevators (VBE), 8 Universal seed treaters, 8 diesel generator sets (silent type (100% of planned);
- Procurement of seed laboratory materials: 50 boxes (each with 2000 sheets) seed germination papers, 1000 pack filter papers, 700 000 seed certification tags (100% of planned);
- Procurement of rice seed laboratory equipment: 1 laboratory precision divider, 1 laboratory rice miller (polisher), 1 laboratory rice sheller, 1 Falling number 1700, 1 precision laboratory mill , 1 Impact bran finisher, 1 microscope with UVL, 2 laboratory testing huskers, 1 testing rice grader, 1 testing mill, 1 milling meter, 7 seed germinators (100% of planned);

Training

Training activity comprised of seed sector study tour abroad by officials of the Ministry of

Agriculture and other seed industry stakeholders, overseas training (as training of trainers, ToT programme) of technical personnel in seed technology and in-service training of staff in the country by the participants of the ToT programme (100% of planned):

- Study tour programme: the following 2 study tours were organized:
  - Seed sector study tour to India, Australia and Egypt. Participated by 2 senior officials of the Iraqi Ministry of Agriculture (MoA) for a total duration of 1 month (27 February 2007 to 21 March India and Australia; 17 - 25 June 2007 Egypt
  - Seed sector study tour to Syra. Participated by 3 seed specialists of MoA and 2 seed grower farmers for 1 week duration (11-15 January 2009
- External training programme: the following overseas training programme were organized::
  - Training of trainers on seed production and marketing. Participated by 6 technical personnel belonging to SBAR, SBSTC, and Mesopotamia State Seed Company. Venue: Indian Agricultural Research Institute, New Delhi, India. Duration 6 weeks (12 September 2007 to 25 October 2007);
  - Training of trainers on seed quality control. Participated by 9 technical personnel belonging to SBAR and SBSTC. Venue: Indian Agricultural Research Institute, New Delhi, India. Duration 6 weeks (14 November 2007 to 26 December 2007);
  - Training of trainers on variety development and evaluation. Participated by 10 technical personnel belonging to SBAR, SBSTC, and State Company for Industrial Crops (SCIC). Venue: Indian Agricultural Research Institute, New Delhi, India. Duration 6 weeks (13 February 2008 to 29 March 2008);
  - Training of trainers on variety maintenance. Participated by 5 technical personnel belonging to SBAR and SBSTC. Venue: International Centre for Agricultural Research in the Dry Areas (ICARDA), Aleppo, Syria. Duration 2 months (31 March 2008 to 29 May 2008);
  - Training on maize seed dryer installation, operation and maintenance. Participated by 2 technical personnel of Mesopotamia State Seed Company (MSSC. Venue: AGROSAW, Ambala, Haryana, India. Duration 1 week (04 – 10 November 2009);
  - Training on varietal verification and genetically-modified organisms (GMOs) detection. Participated by 4 seed experts and researchers belonging to SBAR and SBSTC. Venue: International Centre for Agricultural Research in the Dry Areas (ICARDA), Aleppo, Syria. Duration 1 month (25 March 2009 to 26 April 2009);
- In-service training programme: the following national training courses were organized locally with participants of the overseas ToT as resource persons:
  - National training course on variety maintenance and database management. Participated by 30 technical staff belonging to SBAR and SBSTC. Venue: SBSTC, Abu-Ghraib, Baghdad. Duration 1 week (19 – 23 July 2009);
  - National training course on seed production and marketing. Participated by 25 technical staff belonging to SBAR, SBSTC, MSSC and Directorate of Agriculture/Wassit. Venue: SBSTC, Abu-Ghraib, Baghdad. Duration 1 week (03 – 07 August 2008);
  - National training course on seed quality control. Participated by 30 technical staff of SBSTC. Venue: SBAR, Abu-Ghraib, Baghdad; SBAR, Al-Mishkhab, Al-Najaf, SBSTC, Al-Mansur, Baghdad; SBSTC, Al-Qadisiyah, SBSTC, Al-Mosul, Ninewa. Duration 1 week (23 – 27 November 2008);
  - National training course on varietal development and evaluation. Participated by 30 technical staff belonging to SBAR and SBSTC. Venue: SBSTC, Abu-Ghraib, Baghdad. Duration 1 week (24-29 May 2009);
  - National training course on operation and maintenance of mobile seed processing plant. Participated by 15 technical staff belonging to SBAR and Directorate of Agriculture/Al-Anbar. Venue: SBSTC, Abu-Ghraib, Baghdad. Duration 1 week (02-

06 February 2009);

- Seed sector training and visit programme for farmers. A two-days training and visit programme for farmers was organized in the governorate of Babylon during 21-22 April 2010. The participants comprised of 18 farmers coming from Baghdad, Al-Najaf, Al-Qadisiyah and Babylon governorates. The experts from SBAR acted as resources persons.

Physical infrastructure

On 14 April 2009 , a contract was signed with an Iraqi contractor, Al Ardh Al Khadhra'a Company for General Contract Co. Ltd for the construction of two seed testing laboratory buildings in the following locations of the State Board for Agricultural Research (SBAR), Ministry of Agriculture:

- Al-Qadisiyah Research Station, Al-Qadisiyah Governorate;
- Al-Suwaira Research Station, Wassit Governorate.

Completion of construction and hand-over to the beneficiary at Al-Qadisiyah location was done on 05 January 2010, and that at Al-Suwaira was done on 17 January 2010.

The Project Steering Committee (PSC) meeting at different dates had excluded rehabilitation work at Al Rashidiya (Ninewa Governorate) due to timely unavailability of necessary documentations, cancelled the construction for Al-Basrah (Basrah governorate) as the land title was not available, and the Government itself built seed testing laboratory at Al-Mishkhab (Al-Najaf governorate),

On 15 October 2008, a purchase order was issued to a Lebanese supplier, ARD (Unifert) SAL for supply, erection, testing and commission of 4 units of climate-controlled greenhouses in the following locations:

- SBAR, Abu-Ghraib Research Station, Baghdad Governorate – 3 units;
- SBSTC Laboratory at Al-Zaafarniya, Baghdad Governorate – 1 unit.

Hand-over of the completed greenhouses to the beneficiaries was completed on 10 June 2010.

Impacts:

- The Iraq National Seed Policy by the Government has provides blue print for seed industry development in the country. Seed Act draft upon enactment will give enough teeth as regulatory mechanism for implementation of the Seed Policy guidelines. Availability of Policy and seed act has filled a big void felt in seed sector strategy, planning and programming.

- Provision of essential equipment such as data processing tools, farm equipment, seed processing machines, seed testing equipment, and building of seed testing laboratory buildings and commissioning of greenhouses has rehabilitated the damaged infrastructures in the research stations and laboratories and now the crop improvement, breeders seeds and other early generation seed production, seed processing and quality control capacity has improved significantly with quality certified seeds of cereals and increased quantity available for farmers use.

- Study tour and training programme abroad has enabled the Iraqi the seed experts to enlighten themselves on the seed policy and regulatory framework followed in developed counties, and to learn the state of the art techniques in various areas of seed technology so as to bring into the country the new knowledge and techniques for adoption and use in Iraq and disseminate to large number of technical personnel through in-service organized locally.

Implementation constraints, lessons learned from addressing these and knowledge gained from assessments, evaluations and studies that have taken place during the project:

- The security situation made the provision of technical assistance to the Ministry of Agriculture in Iraq difficult. The security situation also hampered the delivery to destination of the farm equipment and thus the delivered had to be revised to central warehouse at Al-Feidaliyah, Baghdad that delayed the delivery to different stations.
- The institutional capacity of the MoA remains weak, so that implementing field programs continues to be difficult. In fact, more and more senior seed sector counterpart staff members have left their jobs and/or country during the life of the project.
- Security issues prevent on-site project management and implementation is necessarily conducted by remote control and through third parties.
- The process for obtaining MoA approved and cleared nominations of individuals with a suitable background and professional history for training programs is very slow and often has an uncertain outcome, frequently leading to postponing or canceling of activities as no nominations are received in time.
- Obtaining visa for out-of-country training often appears to be difficult, and even impossible for certain countries. This was the case when British visa was denied and programme finalized with National Institute of Agricultural Botany (NIAB), Oxford UK for training of 24 MoA technical personnel was cancelled. Organizing the training in alternate venue at IARI, India delayed the training programme.
- Delay was experienced in the finalization of the design and the preparation of the bill of quantities of the seed testing laboratory buildings due to unavailability of adequate technical resources in the line ministry. Collection of soil samples from construction sites and preparation of analysis report took longer than anticipated.
- Delay in procurement of certain equipment (e.g. rice seed testing equipments) and laboratory materials (e.g. seed certification tags, repair of greenhouses damaged) is being experienced due to the need for repeat tendering in absence of adequate number of responses and time taken for providing the samples meeting quality standards by suppliers.

Lessons learned:

- Although Iraqi authorities are to provide the technical specifications of the equipment required for procurement, due to inadequacy of technical resources within the line Ministry and cooperating agencies, it hardly becomes practical. Therefore, the Government should continue playing a major role in needs assessment; however specification writing should be mainly done by FAO. This in order to avoid delay in finalizing items for purchase.
- Be very cautious in selecting the implementation sites within Governorates with regard to security conditions. This should be done in full coordination with MoA and other reliable sources of security information.
- Remote management and monitoring, difficult as it is, implies the enhancement of well-qualified and motivated national staff in the field and working with the in-country counterpart organizations in order to link the Amman management structure with the field activities.
- Training courses and study tours outside Iraq, albeit in the region, provide an extra and valuable added dimension as they allow for learning from more technically advanced and diversified countries with more sophisticated livestock systems. Utmost care should be taken that identification and selection of trainees is started as early as possible given current constraints and time required for official MoA nomination procedures, visa, travel etc. Given these constraints, and to the extent possible under the current security situation, consideration will also be given to in-country training.
- In order to avoid the last minute constraint in visa availabilty for external training programme, a pre-gathering of information from proper authority about the host country’s

policy towards Iraqi nationals entry will be necessary.

- Given the time requirements, avoid whenever possible to include major civil works in any project proposal, especially if construction/rehabilitation of facilities is a pre-condition to start the implementation of other project activities. With delay experienced in the construction activities of the present on-going project, it would be wise for future projects to have the Government of Iraq take responsibility of such civil works.
- Taking into consideration the need to enhance the Iraqis' capacity to handle the supplied equipments, training on operation and maintenance of equipments by the suppliers should be part of the procurement process.
- Continued close coordination with the counterpart Ministry is fundamental to achieve project goals and objectives.

Key partnerships and inter-agency collaboration, impact on results:

The project is operated in collaboration with the Iraqi Ministry of Agriculture, specifically the State Board for Agricultural Research (SBAR) and the State Board for Seed Testing and Certification (SBSTC). This partnership has proven essential in identifying needs, formulating policy and drafting law, finalizing equipment specifications, equipment delivery and infrastructure rehabilitation and implementing the training programmes

Furthermore, FAO cooperates closely with international research and training agencies in areas of seed improvement and capacity building programmes

Highlights and cross cutting issues pertinent to the results e.g. gender disaggregation, policy engagement and participation of the public:

Were the needs of particularly vulnerable or marginalised groups addressed?

The priority needs of this population are food security, improved nutrition and well-being which have been improved with improved production and productivity of major food crops with availability of quality seeds in increased quantity

How did the beneficiaries of the programme/project participate in its development and delivery?

The majority of project activities have been conducted with the effective participation of the existing national institutions and relevant technical divisions of the Ministry of Agriculture. National staff has been involved in the necessary monitoring, training sessions, technical meetings and workshops of particular importance. Participation of farmers has been achieved through extension campaigns for awareness of the importance of quality seeds through organization of farmers visit and training programme.

How did men and women benefit from the programme/project? How was gender inequalities handled?

Both men and women have been benefiting from the activities of the project including its training programmes and extension activities. For the training programme about one-third of the trainees were female.

Were there any specific issues in relation to the security situation?

- Field work, extension activities, and data collection are very difficult to be done in-country;
- Transportation and delivery of equipment were sometimes delayed and even halted by the prevailing security situation.
- Inability of international consultants to visit Iraq hampered direct and on site project implementation and follow-up of project management matters.

How did the project contribute to capacity building in ministries and elsewhere?

- Most essential government services in the seed sector had collapsed during the last war in 2003 and the period that followed. Now, thanks to the project a very important part has been rehabilitated and is properly functioning again;
- National counterpart staffs working in the seed sector have acquired, through various training courses and workshops, new knowledge and skills, and have now the capacity for effectively undertake again breeding programme and early generation seed production impart quality control services.

IV. Follow up actions and sustainability

Priority actions that should be supported/implemented following completion of project to build on achievements and partnerships rectify shortcomings encountered and use the lessons learned during the project with strong emphasis on achieving sustainability of the outcomes:

With the implementation of this project, significant progress has been made in initial rehabilitation of damage infrastructure and refreshing the technical capacity have been achieved; adoption by Government of the National Seed Policy should be taken as milestone in providing the blueprint for future works in Iraqi seed sector that remains to be done. Iraq National Seed Policy envisions a sustainable seed programme for Iraq where in the long-term the seed requirements of major strategic crops would be addressed indigenously with significant participation of the private sector in all aspects from crop improvement to marketing.

It is noteworthy to mention that UNDG ITF support for the second seed project "Rehabilitation and development of the national vegetable seed industry in Iraq" will be terminated in April 2010. As the title gives, this project supported rehabilitation of vegetable seed sector.

Both these projects were formulated and implemented as emergency (early recovery) projects. Building on the achievements of these projects, Iraq requires further assistance in making the step from transition from emergency restoration of essential government services in the seed sector towards implementation of comprehensive seed improvement and multiplication programme in major strategic crops. The next phase of see programme will have to be medium to long-term with significant investment needs in crop improvement (research), breeders seed production, multiplication and enhanced capacity building . Such a programme will ensure the continuity of the programmes, policies and services developed under the project and enable the Iraqi's to achieve a sustainable seed production and supply mechanism for Iraq.

The next phase of support for Iraq will have to be integrated seed programme to be geared towards objective of not only the need of Iraq to meet the UN Millennium Development Goal (MDG) on food security but also to put in place programme to mitigate the negative effects of ***Climate Change***. These can be achieved by only with increased production and productivity of major food crops to result from massive use of quality seeds. For this the private sector will play very crucial role.

Indication of major adjustments in the strategies, targets or key outcomes and outputs:

Future programme will have to be for development purpose from the existing emergency (early recovery) thrust. .

Estimated Budget required:

USD 15 million for a period of 5 years.

Annex 1: Key Performance Indicators – Logical Framework Matrix

a	Measurable indicators	Means of verification	Outcomes
Development Objective			
To improve food security and nutrition in Iraq through rehabilitation and improvement of the national seed programme thereby promoting the availability and use of high quality seeds of adapted varieties by farmers and provide the foundation of a sustainable seed industry.	Rehabilitated infrastructures in agricultural research centres and in SBSTC A new seed law and a national seed policy in place	New equipment and machines procured and installed Buildings repaired and/ replaced Documents on the seed law and seed policy available	Office automation and database management equipment, seed production farm equipment, seed processing plants, and seed laboratory equipment procured. Greenhouses installed. Seed testing laboratory buildings constructed. National Seed Policy formulated. Seed Law drafted.
Immediate Objectives:			**(Immediate Objective to Development Objective)**
- Enhance the performance of the national seed industry through formulation of a national seed policy, review of the seed legislation in place and improvement of the coordination and oversight arrangements	A national seed policy formulated Seed legislation reviewed and upgraded Existing National Seed Board restructured and strengthened	New document on seed law available A national seed policy document available Documents on new structure mandate and functions. Meetings held	Seed Act for Iraq drafted. The newly formulated Iraq National Seed Policy adopted by the Government. The National Seed Policy provides for restructuring of the existing National Seed Board into the National Seed Council with broad based representation from seed industry stake-holders.
- Increase the capacity of the national seed industry through rehabilitation of the damaged infrastructure for variety development and evaluation, variety maintenance, initial seed multiplication and seed quality control.	Rehabilitated infrastructures in agricultural research centres and in SBSTC Initiation of process of variety maintenance, production of breeder and foundation seeds and activation of seed quality control activities	New equipment and machines procured and installed Buildings repaired and replaced Trained staff in variety maintenance, initial seed production and quality control	Office automation and database management equipment, seed production farm equipment, seed processing plants, and seed laboratory equipment procured. Greenhouses installed (Annex 5)) Seed testing laboratory buildings newly constructed at Al-Qadisyah and Wassit Governorates Overseas training and in-service training conducted.

- Improve the technical capacity of key human resources in the national seed industry through training	24 Iraqi scientists/technicians trained abroad 2 Senior staff of MOA complete study tours abroad 165 local staff trained in several seed-production related courses	Institutions abroad where training and study tours took place Timing and locations where local courses held	37 Iraqi scientists/technicians trained abroad. 2 Senior officials of MoA undertook seed sector study tour abroad. 167 local staff trained in several seed technology courses
Outputs:			**(Outputs to immediate objective)**
- Existing pieces of seed legislation reviewed and appropriate recommendations given for further actions on improvement of national seed legislation	Draft national seed law available	Meetings/seminars with seed industry stakeholders	Iraq Seed Act drafted following holding of legislative review meetings among le seed industry stakeholders.
- A clear and concise national seed policy formulated through a participatory process and launched by the Ministry of Agriculture to serve as the blue print for guiding the development of the national seed industry	A national seed policy document prepared Official promulgation of the document by MOA	A national seed workshop held Number and type of institutions represented in the workshop Documentation of promulgation	A National Seed Policy formulated with holding of National Seed Policy Forum and a National Seed Workshop. The participants for the Forum and Workshop came both from public and private sector in seed industry, including the seed traders and farmers. The National Seed Policy document was promulgated by the Government with the signature of the H.E. Minister of Agriculture, Iraq.
- A strong and clearly mandated National Seed Board with Government representatives in the executive position and non voting private sector representatives of seed industry stakeholders in an advisory capacity put in place and functioning	A reactivated National Seed Board in place	New structure and mandate Number of reconstituted membership and represented institutions Timing and place of meetings held by new Board	The National Seed Board is re-structured into the National Seed Council (NSC) as provide in the National Seed Policy document. The newly re-structured NSC has an expanded membership of 14 representing related Ministries, Departments, University, seed traders and seed producer farmers.
- Full specifications developed for the required repairs and construction of buildings	Available detailed specifications	Timing, locations and participants in the needs assessments	Detailed technical specifications and bill of quantities prepared as per seed testing laboratories in the Governorates.
- Essential buildings repaired and new ones constructed	Repairs and construction works completed	Restored and newly constructed buildings in use	Seed testing laboratory buildings at 2 sites Al-Qadisiyah (Qadisiyah Governorate) and Al-Suwaira (Wassit Governorate) handed over to SBAR for their use.
- Thirty tonnes of wheat breeder seed, 47 tonnes barley breeder seed, 1 tonne rice breeder seed and 0.20 tonnes maize breeder seed locally produced	Breeder seed locally produced: 30 tonnes wheat, 47 tonnes barley, 1 tonne rice and 0.20 tonnes maize	Field inspection reports of SBSTC, production records of research centres, processed and stored breeder	Breeder seeds locally produced: wheat 118 MT, barley 10.04 MT, rice 2 MT and maize 0.87 MT (SBAR/MoA data)

		seed	
- Variety maintenance techniques and procedures for the target crops developed	Field application of maintenance techniques and procedures	Number and training conducted for variety maintenance Improved quality of breeder seed from inspection records of SBSTC in the research stations.	An over-seas training of trainers on variety maintenance organized at ICARDA (Syria) and in-service training organized locally for staff. Provision of seed production farm equipment and processing machines improved quality of breeders seed produced
- Existing database for seed quality control operations improved and strengthened	A new functional database A varietal catalogue detailing the characteristics of available varieties produced.	10 new computers procured and installed 25 staff members of SBSTC trained in the use and management of database	Procured and installed office automation and database management equipment included: 10 desktop personal computers (PC), 8 laptop (notebook) computers, and 10 printers 10 scanners, 2 digital cameras, 2 photocopiers, 3 Global Positioning System (GPS), 30 staff of SBSTC provided in-service training on database management.
- Transportation and communication system in SBSTC for field inspection, seed processing plants and other seed quality control operations improved	4 new vehicles imported 12 non-functioning vehicles repaired 5 units of communication systems imported and installed	New and repaired vehicles in use for field activities Communication equipment in use	Transportation vehicle taken on rent as per agreed with the Government based on new assessment of needs and situation. Internet connected and telephones provided.
- Exposure of 24 Iraqi scientists and 2 senior staff to the latest international technologies and developments in improving national seed industry in variety development and evaluation, variety maintenance, seed production and marketing systems and seed quality control	24 Iraqi scientists trained abroad 2 senior staff complete study tours abroad	Institutions in which training and study tours were carried out Training reports of fellows and reports of study tours by senior staff	A total of 37 Iraqi scientists and seed specialists were trained abroad (Annex 6) 2 senior officials of the MoA undertook a one month study tour to 3 countries
- In service training conducted for staff involved in various components of the national seed programme	4 courses conducted involving a total of 115 staff	Timing, venue and number of participants in each course	A total of 167 Iraqi staff took part in in-service training programme involving 5 courses. Additionally a training-visit was organized for 18 seed grower farmers (Annex 7)

Annex 2: PROJECT COSTS

CATEGORY	UNDG ITF approved budget (As per Original Project Document)	Actual COST (as per 30/06/10 non-final and provisional figures)	Percentage of Approved	Budget Revision approved on 27/04/10	Percentage of revision
1. Personnel	737 000	917 320	125%	1 060 780	86%
2. Contracts	610 000	610 772	100%	690 000	89%
3. Training	927 500	116 334	13%	150 000	78%
4. Transport					
5. Supplies and commodities	200 000	6 400	3%	40 000	16%
6. Equipment	2 076 700	1 533 794	74%	1 955 976	78%
7. Travel	244 300	888 461	364%	898 744	99%
8. Security	98 339			98 339	
9. Miscellaneous	143 865	303 420*	125%*	143 865*	125%*
10. Agency Management Support	345 756	306 565	89%	345 756	89%
Total Expenditure	**5 383 460**			**5 383 460**	

*5028 general operating expenditure from the financial statement 30.06.10 has been taken as Miscellaneous cost (and includes security)

Annex 3: List of contract awards by procurement method

Procurement Method *	Country of Origin of Supplier	Award Year	Goods/Services/Works	Award Date	Supplier	Value in USD
CB	Lebanon	2007	Seed laboratory equipment	17/07/07	ARD	61 053.70
CB	Austria	2007	Seed production farm equipment	23/05/07	WINTERSTEIGER	88 160
CB	India	2007	Seed processing plant	07/05/07	AGROSAW	355 194
CB	Denmark	2007	Office automation system	13/09/07	DAN	13 272.45
CB	Iraq	2007	Digital camera, photocopier, GPS	10/10/07	MAZEN	5 620
CB	Italy	2007	Seed production farm equipment	27/06/07	OFFICINE	52 715
CB	Italy	2007	Seed production farm equipment	15/05/07	GHERARDI	8 738.68
CB	Italy	2007	Seed production farm equipment	22/05/07	INTERTRADE	59 608.87
CB	Jordan	2007	Fork lift truck	08/06/07	EMDAD	73 608
CB	Austria	2007	Seed testing equipment	14/09/07	AMEX	17 122.30
CB	Jordan	2007	Seed production farm equipment	24/05/07	ANTEMINA	56 462.50
CB	Jordan	2007	Seed testing equipment	21/11/07	ANTEMINA	15 077.90
CB	Italy	2007	Seed testing equipment	14/11/07	INTECH	114 411
CB	Italy	2007	Polymerase chain reaction	04/10/07	INTECH	23 963.50
CB	Italy	2007	Seed testing equipment	03/09/07	CHIMICA	13 139.70
CB	Austria	2008	Gel documentation system	22/04/08	AMEX	16 696
DC?	Denmark	2008	Freight and insurance	12/03/08	KUHNE-NIGEL	11 890
CB	Lebanon	2008	Greenhouses construction	15/08/08	ARD	131 480
CB	Iraq	2008	Seed laboratory materials	21/09/08	AL-HUSAM	4 950
DC	USA	2008	Single plant thresher	12/03/08	ALMACO	106 349.25
CB	Jordan	2008	Seed testing equipment	20/12/08	OSAMA	4 159.70
CB	Iraq	2009	Seed testing laboratory building construction	14/04/09	AL ARDH	365 054
CB	Iraq	2009	Laptop computer, printer and scanner	14/09/09	FMC	973

CB	Jordan	2009	Seed laboratory materials	26/02/09	AL-FAIHA	8 900
CB	Italy	2009	Seed processing equipment	15/04/09	OFFICINE	16 070
DC?	Denmark	2009	Freight and insurance	15/04/09	KUHNE-NIGEL	7 445
DC	India	2009	Vertical bucket elevator	14/05/09	AGROSAW	21 560
CB	Lebanon	2009	Tractor and ridger	21/03/09	ARD	163 363.85
CB	Italy	2009	4-WD small tractor	11/11/09	GOLDONI	51 544.40
CB	Austria	2010	Rice seed laboratory equipment	09/06/10	AMEX	112 939.20
CB	Germany	2010	Rice seed laboratory equipment	08/06/10	LABSCO	177 489.18
CB	Jordan	2010	Seed certifications tags	22/06/10	SAMA	34 500

***) Procurement method:**

CB: Competitive bidding.
DC: Direct contracting, due to prioprietary goods, works or services; standardization needs; urgency of action, etc, as permitted under UN Financial Regulations/Rules.

Annex 4: List of equipment procured and quantity

S.N.	List of Equipment	Qty
	1. Office automation and data processing equipment	
1	Scanner	10
2	Digital camera	2
3	Photocopier	2
4	Global Positioning System (GPS)	3
5	Desktop Personal computer (PC)	10
6	Laptop (notebook)	8
7	Printer	10
	2. Seed farm equipment	
1	Wheel tractor with spare parts	1
2	Land plane/drag scraper	1
3	Land plane/Multi scraper	1
4	Ridger	2
5	Seed bed preparator	2
6	Three-furrow mould board plough	1
7	Two-furrow mould board plough	2
8	Levy cleaner	4
9	Trailer	5
10	Fertilizer spreader	5
11	Corn sheller	4
12	Multi-crop thresher (Model one)	4
13	Single plant thresher (Low profile thresher)	3

14	tractor 85hp	4
15	Ridger for 70-80hp tractor	3
	3. Seed laboratory equipment	
1	top loading electric balance (220g,0. 001)	1
2	Top loading electric balance (65g,0. 0001)	2
3	Top loading electric balance (65g,0. 01)	2
4	Balance	7
5	Autoclave	3
6	Laboratory mill	3
7	Lab seed blower	2
8	Germination tray hydration system	5
9	VAC-A sampler	5
10	Seed germinator	5
11	Polymerase chain reaction (PCR) machine	2
12	Gel documentation system	2
13	Sample preparator	2
14	Desiccator	5
15	Convection oven	3
16	Laboratory oven	2
17	Incubator	2
18	Hand test screen sets	3
19	Portable moisture tester	10
20	Biology hood	2
21	Seed containers	2000
22	Seed storage containers	5000
23	Laboratory rotary dividers	5
24	Sample containers	50
25	Crucible tongs	25
26	Laboratory corn sheller	3
	4. Seed processing equipment	
1	Dryers for corn	3
2	Platform balance	3
3	Mobile seed processing plant	8
4	Fork lift truck	2
5	Heavy duty blowers	8
6	Portable bag stitchers	8
7	Seed treater	8
8	Vertical bucket elevator	8
	5. Other equipment	
1	Hand held planter	5
2	Hydraulic pallet truck	5
3	4WD Small tractor	2
4	Mini hydro-thermograph	3
	6. Seed laboratory materials	
1	Seed germination paper	50 boxes (each with 2000 sheets 10x15in dimension)
2	Filter paper	1000 pack
3	Seed certification tags	700 000

	7. Construction	
1	Construction of seed testing laboratory buildings	2
2	Greenhouse	4
	8. Rice seed laboratory equipment	
1	Laboratory precision divider	1
2	Laboratory rice miller (polisher)	1
3	Laboratory rice sheller (including spare parts for 2 years)	1
4	Falling number 1700	1
5	Precision laboratory mill with spare parts	1
6	Impact bran finisher	1
7	Microscope with UVL (including filter system, illumination box and coloured plastic screen)	1
8	Laboratory testing husker	2
9	Testing rice grader	1
10	Testing mill	1
11	Milling meter	1
12	Seed germinator	7

Annex 5: List of study tour and external training undertaken

A. Study Tour Programme:

1. Title: Seed Sector Study tour to India, Australia and Egypt
India, Australia (dates 27/02/2007 – 21/03/2007)
Egypt (dates 17/06/2007 – 25/06/2007)
Duration: 1 month total
No. of participants: 2

2. Title: Seed Sector Study tour to Syria
Dates: 11/01/2009 – 15/01/2009
Duration: 1 week
No. of participants: 5

B. External Training Programme:

1. Course Title: Training on Seed Production and Marketing
Venue: Indian Agricultural Research Institute, New Delhi, India
Training dates: 12/09/2007 – 25/10/2007
Training duration: 6 weeks
No. of participants: 6

2. Course Title: Training on Seed Quality Control
Venue: Indian Agricultural Research Institute, New Delhi, India
Training dates: 14/11/2007 – 26/12/2007
Training duration: 6 weeks
No. of participants: 9
3. Course Title: Training on Variety Development and Evaluation
Venue: Indian Agricultural Research Institute, New Delhi, India
Training dates: 13/02/2008 – 29/03/2008
Training duration: 6 weeks
No. of participants; 10

4. Course Title: Training on Variety Maintenance
Venue: International Centre for Agricultural Research in the Dry Areas (ICARDA), Aleppo, Syria
Training dates: 31/03/2008 – 29/05/2008
Training duration: 2 months
No. of participants: 6

5. Course Title: Training on Maize Seed Dryer Installation, Operation and Maintenance
Venue: AGROSAW, Ambala, Haryana, India
Training dates: 04/11/2009 – 10/11/2009
Training duration: 1 week
No. of participants: 3

6. Course Title: Training on Varietal Verification and Genetically-Modified Organism (GMO) Detection
Venue: International Centre for Agricultural Research in the Dry Areas (ICARDA), Aleppo, Syria
Training dates: 25/03/2009 – 26/04/2009
Training duration: 1 month
No. of participants: 4

Annex 6: List of national training courses for technical personnel and farmers training organized

A. In-Service Training for Technical Personnel

1. National Training Course on Seed Production and Marketing:
Venue: State Board for Seed Testing and Certification (SBSTC), Abu-Ghraib, Baghdad
Training dates: 03/08/2008 – 07/08/2008
Training duration: 1 week
No. of training participants: 25 (SBSTC, SBAR, MSSC, Wassit Directorate)

2. National Training Course on Seed Quality Control:
Training dates: 23/11/2008 – 27/11/2008
Training duration: 1 week
No. of training participants: 30 (SBSTC)
Training participants:

3. National Training Course on Operation and Maintenance of Mobile Seed Processing Plant
Venue: SBAR, Abu-Ghraib, Baghdad
Training dates: 02/02/2009 – 06/02/2009
Training duration: 1 week;
No. of training participants: 15 (SBAR);

4. National Training Course on Verietal Development and Evaluation
Venue: SBSTC, Abu-Ghraib, Baghdad
Training dates: 24/05/2009 – 29/05/2009
Training duration: 1 week
No. of training participants: 30 (SBAR, SBSTC)

5. National Training Course on Variety Maintenance and Database Management:
Venue: State Board for Seed Testing and Certification (SBSTC), Abu-Ghraib, Baghdad
Training dates: 19/07/2009 – 23/07/2009
Training duration: 1 week

No. of training participants: 30 (SBSTC, SBAR)

B. Farmers Training

1. Seed Sector Training and Visit Programme for Farmers:

Venue: Babylon Governorate
Training dates: 21/04/2010 – 22/04/2010
Training duration: 2 days
No. of training participants: 20 (coming from Baghdad, Al-Najaf, Al-Qadisiyah, Babyon governorates);

Annex 7: Breeders, foundation and certified seed production data (year 2006 – 2009) (qty: metric tonne)*

Seed class	Crops	Year				Total
BS		2006	2007	2008	2009	
	Wheat	28	35	25	30	118
	Barley	3	2.04	3.5	2	10.04
	Rice	1	0.5	1		2
	Maize	1	0.35	0.02		0.87
FS		2006	2007	2008	2009	
	Wheat	58	300	316	350	1024
	Barley		28	1	6	35
	Rice	9	12	9		30
	Maize			80		80
CS		2006	2007	2008	2009	
	Wheat				37000	37000
	Barley				18	18
	Rice				65	65
	Maize					

* Source: MoA