



COMPLETION REPORT FOR PROJECT

REHABILITATION AND DEVELOPMENT OF THE NATIONAL VEGETABLE SEED INDUSTRY IN IRAQ (A5-25)

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 - 25
Rehabilitation and Development of the National Vegetable Seed Industry in Iraq (OSRO/IRQ/703/UDG)

Project Location/Region/Province:

Iraq –in the Governorates of Baghdad, Kerbala and Babil

Reporting Period:

07 October 2008 – 10 March 2012

Report Number:

Final report.

Counterpart organisations / implementing partners:

MoA – Ministry of Agriculture

Project cost:

- Cost at Approval: USD 2,828,263
- Revised budget: Not applicable

Abbreviations and acronyms:

MoA – Ministry of Agriculture
PSC – Project Steering Committee
SBSTC- State Board for Seed Testing and Certification
SCHF – State Company for Horticulture and Forestry
AGPS – Seed and Plant Genetic Resources Service, FAO

Project Duration:

- Original project duration: 2 years from 07 October 2008 to 07 October 2010.
- Starting Date: 07 October 2008
- Extension: 07 October 2010 to 30 September 2011.
- Extension: 30 September 2011 to 10 March 2012

I. Purpose

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

Main Outcomes:

- Rehabilitated damaged infrastructure in the vegetable seed sector.
- Enhanced technical capacity in vegetable seed research and production.
- Supported Private sector in the vegetable seed industry

Main Objectives:

- Improve food security and nutrition for the Iraqi people.
- Increased domestic production of vegetable crops.
- Rehabilitation of damaged infrastructure in the vegetable seed sector.
- Enhance technical capacity in vegetable seed research and seed production and provision of support to the private sector in vegetable seed industry.

Expected outputs

- Greenhouses for varietal improvement and seed production procured and installed.
- Equipment for seed production, processing and quality control procured and installed.
- Vegetable crops improvement programme rehabilitated.
- Model production farm, processing plant and quality control laboratories for vegetable seed established.
- Modules for vegetable seed sector study tour, overseas and in-country training developed and implemented.
- GOI assisted in the implementation of seed policy and regulatory framework.
- Skills and knowledge constraints of the workers at the sectoral level overcome.
- Vegetable seed production added value created.
- Module of business development designed for capacity building.

Agreed changes during the course of the project:

Not applicable. ,

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 Company for Horticulture and Forestry (SCHF) 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 SCHF has the mandate to undertake vegetable 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 SCHF 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, MSSC – 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 Indian Agricultural Research Institute (IARI), New Delhi, India, the General Netherlands Inspection Service for Agricultural Seeds and Seed Potatoes (NAK), Emmeloord, the Netherlands, and the Federal University of Pelotas (UFPEL), Pelotas, Brazil, Italian Seed Certification Agency (ENSE), Milan, Italy

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, had obliged itself to assure a strong involvement of the ministries throughout the procurement process, which included 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 2,828,263

UNDG ITF funds received: USD 2,828,263

Explanation of deviations of project expenditure versus original budget:

Not applicable.

Other funding sources available to the project: None

Human Resources

- International: 1 Chief Technical Adviser/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: USD 8 455;
- Laboratory and office furniture: USD 10 559;
- Vegetable seed production farm machineries: USD 290 653.69;
- Vegetable seed testing equipments: USD 344,892.90;
- Vegetable seed processing plants, including installation and training: USD 281,896
- Greenhouses: USD 351,510
- 80-85 hp tractor
- Seed dryers (vapour pressure packing) USD 65,625

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 enhancement of technical capacity in vegetable seed research and production through 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.

- 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 vegetable crops varietal development and evaluation, variety maintenance, seed production and marketing, and vegetable seed quality control..

The participants of 3 external training of trainers (ToT) programme have transferred new skills and techniques in the areas of vegetable seed technology to 150 Iraqi technical staff - 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 strengthened 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 contributed 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 provision of ideal seed testing equipment for both routine and pathological has strengthened the vegetable seed testing and quality control capacities of the MoA

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.

Main activities undertaken and achievements/ impacts:

- Procurement

Procurement of equipment (research and farm equipment) for research, seed production and quality control will enhance seed production and vegetable crops which is inline of the main objective of the project of improving food security and nutrition for the Iraqi people and to rehabilitation of damaged infrastructure in the vegetable seed sectore.

- Procurement of office automation and data processing equipment: 3 desktop computers, 3 laser printers, 1 colour laser printer, 3 scanners, 2 laptop computers, 1 photocopies, 1 digital video camera, 3 digital cameras (100% of planned);
- Procurement of laboratory and office furniture (3 office tables, 3 computer tables wooden, 3 file cabinet, 3 metal cabinets, 3 wooden table, 18 laboratory chairs, 3 rotating office chairs, 9 air-conditioners, 3 refrigerators (100% of planned),
- Procurement of vegetable seed farm equipment: of 3 wheeled tipping trailers 2.5 tonne, 3 furrow plough 35hp, 1 furrow plough 80hg, 1 wheeled tipping trailer 4.5 tonne, 1 offset disc harrow 80-85hp tractor, 1 ditcher 70-80hp tractor, 3 ditcher 35hp tractor, 3 spreader 300L, 1 spreader fertilizer 1000L, 3 ridger for 35hp tractor, 1 power tiller 70-80hpt tractor, 1 agriculture tractor 80-85hp 4WD, 3 power tiller 35hp tractor, 3 boom sprayer 300L, 1 boom sprayers 600L, 5 4WD small tractor (100% of planned);
- Procurement of vegetable seed testing equipment 43 kinds (100% of planned) ((details given below)
- Climate controlled greenhouses: 15 units (100% of planned)
- Vegetable seed processing plants: 3 sets comprised of 12 kinds of equipments (details below)
- Seed dryers (vapour pressure packing): 3 units, including installation and training of Iraqi MoA's staff on utilization of the equipment procured.

Training

To enhance technical capacity in vegetable seed research and production to overcome skills and knowledge constraints of the workers at the sectoral level, 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:
 - SAWIB Seed sector study tour to India. Participated by 4 senior officials of the Iraqi Ministry of Agriculture (MoA) for a total duration of 2 weeks ((29 January 2009 to 16 February 2009):
 - Vegetable seed sector study tour to the Netherlands and Italy. Participated by 3 seed specialists of the MoA for a total duration for 2 weeks (17 to 28 May 2010)
- External training programme: the following overseas training programme were organized:.
 - Training of trainers on vegetable crops variety development and evaluation. Participated by 7 technical personnel of the MoA. Venue: Indian Agricultural Research Institute, New Delhi, India. Duration 1 month (15 September 2009 to 15 October 2009);
 - Training of trainers on vegetable seed production and marketing. Participated by 9 technical personnel of MoA. Venue: Federal University of Pelotas (UFPEL), Pelotas,

- Brazil. . Duration 1 month (19 November 2009 to 16 December 2009);
 - Training of trainers on vegetable seed quality control. Participated by 9 technical personnel of MoA. Venue: The Netherlands General Service for Seeds and Seed Potato Certification (NAK), Emmeloord, the Netherlands. Duration 2 weeks (15 to 30 November 2009);
 - ECOSA conference attendance by one official of the Ministry of Agriculture. Istanbul, Turkey for the period 27 October 2010 to 01 November 2010;
 - National Vegetable Seed Workshop, Amman. Attended by 13 senior officials of the MoA. 28 to 30 September 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 vegetable crops varietal development and evaluation. Participated by 30 technical staff of MoA. Venue: Abu-Ghraib, Baghdad. Duration 1 week (25 to 29 July 2010);
 - National training course on vegetable seed quality control. Participated by 30 technical staff of MoA. Venue: Abu-Ghraib, Baghdad. Duration 1 week (01 to 05 August 2010);
 - National training course on vegetable seed production and marketing. Participated by 30 technical staff of MoA. Venue: Abu-Ghraib, Baghdad. Duration 1 week (12 – 16 September 2010);
 - National training course on vegetable seed entrepreneurship development. . Participated by 30 technical staff of MoA including private sector Venue: Abu-Ghraib, Baghdad. Duration 1 week (19 – 23 September 2010);
 - National training course on vegetable seed database management. Participated by 30 technical staff of MoA. Venue: Abu-Ghraib, Baghdad. Duration 1 week (07-11 November 2010);
 - In-service training for seed processing plant/ operation and maintenance (Feb, 2012)

Physical infrastructure

As expected outputs, greenhouses for improvement and seed production were procured to increase domestic production of vegetable crops through producing new highly productive varieties. On 10 November 2010, a purchase order was issued to a Lebanese supplier, Debbane for supply, erection, testing and commission of 15 units of climate-controlled greenhouses in the following locations:

- SCHF, Abu-Ghraib, Baghdad Governorate – 5 units;
- SCHF, Al-Hindiya, Kerbala Governorate – 5 units;
- SCHF, Al-Mahaweel, Babil Governorate – 5 units;

Hand-over of the completed greenhouses to the beneficiaries was completed on (confirm date on completion)

Impacts:

- Provision of essential equipment such as data processing tools, farm equipment, seed processing machines, seed dryers, seed testing equipment, 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 vegetable crops 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 state of the art techniques in various areas of vegetable 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 timely delivery to destination of the purchase equipment
- 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.

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 availability for external training programme, a pre-gathering of information from proper authority on 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 Company for Horticulture and Forestry (SCHF) 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 in the area of vegetable crops.

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 seed 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 Iraqis 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.

PERFORMANCE INDICATORS

	Performance Indicators	Indicator Baselines	Planned Indicator Targets	Achieved Indicator Targets	Means of Verification	Comments (if any)
IP Outcome 1						
IP Output 1.1 Construction of greenhouses for varietal improvement and seed production	Indicator 1.1 Foundation seed production;	No vegetable seed production programme	5 kg of seeds	On-going activity	MoA communication	The activity to be continued by MoA
IP Output 1.2 Equipment for seed production, processing and quality control procured and installed	Indicator 1.2 Quantity of seed produced and tested	No vegetable seed produced and tested	2 metric tonnes	On-going activity	MoA communication	The activity to be continued by MoA
IP Output 1.3 Buildings for seed processing plant and seed testing laboratories constructed/rehabilitated	Indicator 1.3 Number of buildings rehabilitated/ constructed	Buildings needing rehabilitation (1 – seed processing plant, 2 – seed testing lab)	3 buildings	3 buildings rehabilitated	MoA communication	
IP Outcome 2						
IP Output 2.1 Vegetable crops improvement programme rehabilitated	Indicator 2.1 Improved varieties of major vegetable crops	No improved varieties available through national	6 varieties of major vegetable crops	On-going activity	MoA communication	The activity to be continued by MoA

		research system				
IP Output 2.2 Model production farm, processing plant and quality control laboratories for vegetable seed established	Indicators 2.2 Functional farms, seed proceeding plant and laboratories	Farm land available, but no research and production activities; no functional seed processing plant, absence of vegetable seed testing laboratory	Seed Farm – 1; Vegetable seed processing plant – 1; Vegetable seeds internal quality control labs - 2	Office automation equipment, seed production farm equipment procured, purchase of other equipment under progress	Delivery records.	Farm equipment delivered. Quality control equipment delivered.
IP Output 2.3 Vegetable seed quality control standards established	Indicator 2.3 Field and seeds standards	No field and seed standard defined for vegetable crops	Field and seeds standards for 10 vegetables	On-going activity	MoA communication	The activity to be continued by MoA upon enactment of draft seed law
IP Output 2.4 Modules for vegetable seed sector study tour, overseas and in-country training developed and implemented	Indicator 2.4 Study tour and training	There has been no study tour and training programme conducted in the vegetable seed sector	Participants of study tour (one study tour 3 participants), external training (3 courses – 25 trained in Trainers of Training, ToT programme and the number of trained people in internal training	Study tour, overseas training and national training completed	Tour report by participants. Training report by host institutions.	Completed

			(5 courses – 150 persons)			
IP Outcome 3						
IP Output 3.1 GOI assisted in the implementation of seed policy and regulatory framework (at Macro Level)	Indicator 3.1 Seed Law	National seed law promulgated by Government; Seed Law drafted	Seed Law promulgated	Draft Seed Law submitted to the Government.	MoA communication.	The Government taking necessary action on seed law enactment.
IP Output 3.2 Skill and knowledge constraints of the workers at the sectoral level overcome (at Meso Level)*	Indicator 3.2 Trained workers	No trained workers in vegetable seed sector	Trained workers in vegetable seed production, processing and packaging - 25	trained 30	MoA report	Completed
IP Output 3.3 Vegetable seed product added value created (at Micro Level)	Indicator 3.3 Vegetable seed	No vegetable seed multiplication programme at present	Vegetable seed produced and packaged – 2 MT	On-going activity	MoA communications	The MoA will continue with the activity
IP Output 3.4 Module of business development designed for capacity building (at Micro Level)	Training	No training programme	3 Training sessions	Trained 30	MoA report	Completed

Annex 2: PROJECT COSTS

CATEGORY	UNDG ITF approved budget (As per Original Project Document)	Actual Disbursement and Commitments (as per 31/12/10 non-final and provisional figures)	Percentage of Approved	Budget Revision	Percentage of revision
1. Supplies, commodities, equipment and transport					
2. Personnel (staff, consultants and travel)					
3. Training of counterparts					
4. Contracts					
5. Other Direct Costs					
6. Indirect support costs					
Total Expenditure	2 282 263				

Annex 3: List of equipment procured and quantity**A. Office Automation Equipment** qty

- | | |
|------------------------|---|
| 1 Desktop computer | 3 |
| 2 UPS | 3 |
| 3 Flash RAM | 3 |
| 4 Laser printer | 3 |
| 5 Colour laser printer | 1 |
| 6 Scanner | 3 |
| 7 Laptop computer | 2 |
| 8 Photocopier | 1 |
| 9 Digital video camera | 1 |
| 10 Digital camera | 3 |
| 11 Memory Stick | 3 |

B. Lab & Office Furniture

- | | |
|---|----|
| 1 Office table 140cm | 3 |
| 2 Computer table wooden | 3 |
| 3 File cabinet 4 drawers metal | 3 |
| 4 Metal cabinet with sliding door | 3 |
| 5 Medium sized wooden table | 3 |
| 6 Lab chair rotating adjustable height | 18 |
| 7 Office chair rotating adjustable height | 3 |
| 8 Metal clothes hanger | 3 |

C. Air Conditioners & Refrigerators

1	Air conditioners	9
2	Refrigerator	3

D. Farm equipments

1	Wheeled tipping trailer 2.5 tonne	3
2	Furrow plough for 35hp	3
3	Furrow plough for 80hp	1
4	Wheeled tipping trailer 4.5tonne	1
5	Offset disc harrow 80-85hp tractor	1
6	Ditcher 70-80hp tractor	1
7	Ditcher 35hp tractor	3
8	Spreader fertilizer 300L	3
9	Spreader fertilizer 1000L	1
10	Grader blade for 70-80hp	1
11	Ridger for 35hp tractor	3
12	Power tiller 70-80hp tractor	1
13	Agriculture tractor 80-85hp 4WD	1
14	Power tiller 35hp tractor	3
15	Wheeled tipping trailer 2.5 tonne	3
16	Furrow plough for 35hp	3
17	Furrow plough for 80hp	1
18	Wheeled tipping trailer 4.5tonne	1
19	Offset disc harrow 80-85hp tractor	1
20	Ditcher 70-80hp tractor	1
21	Ditcher 35hp tractor	3
22	Spreader fertilizer 300L	3
23	Spreader fertilizer 1000L	1
24	Grader blade for 70-80hp	1
25	Ridger for 35hp tractor	3
26	Power tiller 70-80hp tractor	1
27	Agriculture tractor 80-85hp 4WD	1
28	Power tiller 35hp tractor	3
29	Boom sprayers 300L	3
30	Boom sprayer 600L	1
31	4WD small tractor	5
32	Boom sprayers 300L	3
33	Boom sprayer 600L	1
	Total PO value	
34	4WD small tractor	5

F.1. Seed testing equipments

1	Analytical balance cap 210g	3
2	Laboratory oven	3

3	Shaker incubator with cooling	1
4	Water distillation system	1
5	Germination paper	2000
6	Shaker water bath	1
7	Colony counter with spare parts	1
8	Burner with spare parts	1
9	Aluminium counter	15
10	Aluminium counter with sink	6
11	Seed moisture tester	3
12	Germination paper	10000
13	Oven	1
14	Analytical balance 160g	1
15	Autoclave capacity 75L	1
16	Hot plate magnetic stirrer	1
17	pH meter	1
18	Laminar airflow cabinet with spare parts	1
19	Bucker funnel	1
20	Top loading balance	1
21	Para film	4
22	Cooled incubator	1
23	Purity board	3
24	Hygrothermograph	3
25	Sample containers	3
26	Desiccators	3
27	Stereo microscope	3
28	Laboratory microscope (10-40x)	1
29	Computerized binocular compound microscope with digital camera	1
30	Total freight and insurance cost	1
31	Atoclave capacity 150L	3
32	Vacuum pump	1
33	Laboratory glassware	1
34	Slide container	1
35	Hand testing screen and rack	3
36	Test tube rack	3
37	Digital hand tally	3
38	Desk seed germinator	3
39	Compound microscope with digital camera	1
40	Seed counter for testing	1
41	Lab seed blower	3
42	Precision dividers	3
43	Laboratory seed cleaner and grader	3
44	Sample pans	3
45	Laboratory mill	3

E. Greenhouses

1 Greenhouses	15
---------------	----

F. Vegetable seed processing plants

1 Axial vegetable seed extracting machine	3
2 Seed dryer model -BDV	3
Seed dryer (batch type) for vapour-proof packing machine	3
3 Brushing machine model - DBV	3
4 Seed grader model - Ultra	3
5 Specific gravity separator model - GT	3
6 Universal seed treater model - UTV	3
7 Platform type electronic weighing scale	3
8 Seed weighing machine	3
9 Heat sealing machine	3
10 Semi-automatic vacuum packaging machine	3
11 Central electric control panel	3
12 Diesel generating set	3