



ACIAR CIM/2004/024

Better crop germplasm and management for improved production of wheat, barley and pulse and forage legumes in Iraq

Iraq-ICARDA-Australia

1 May 2005 – 30 June 2008

**Review and Phase 2 planning meeting
13-17 April 2008**



Purpose and agenda for meeting

Undertake external review

- **Sun/Mon**
 - presentations and discussions
- **Tues**
 - field day to farms, demos and machinery manufacturers
- **Wed/Thu**
 - drafting review report and follow-up inspections/discussions
 - draft review presentation (Thu 1400-1500)

Plan Phase 2 (extension)

- **Wed/Thu**
 - discuss and develop project proposal to ACIAR guidelines



External Review

Terms of reference

1. Project outputs

Evaluate how well the project has achieved the outputs and milestones (activities) against each of the objectives

2. Project impacts (Community, Capacity-building, Scientific)

Evaluate how:

- outputs have been/may be taken up by users (farmers, policy-makers, consumers) and provided economic, social or environmental benefits
- researcher and institution capacities have been enhanced
- scientific findings may contribute to other projects/activities

3. Project execution

Assess:

- scientific methodology and rigor
- formal documentation including accessibility
- management, reporting and financial administration
- collaboration/cooperation between countries, institutions, individuals

4. Follow-up

Advise ACIAR on follow-up activities and support desirable to ensure long-term benefits (including spill over to other countries/regions)

Objectives



Aim: To improve dryland cropping in northern Iraq through the testing, promotion and dissemination of improved crop cultivars and crop management practices.

Objectives:

- **Demonstration and promotion of “best bet” varieties and crop management technologies:**
 - To **identify, promote and widely disseminate** amongst farmers in the rainfed cropping regions of northern Iraq “best-bet” **improved varieties and crop management systems** for wheat, barley and pulse and forage legumes.
- **Germplasm adaptation research:**
 - To introduce, **evaluate and select improved germplasm** of wheat, barley and pulse and forage legumes for adaptation to rainfed farming systems in northern Iraq.
- **Crop management research:**
 - To identify, **evaluate and select improved cropping system management** options suited to rainfed farming systems in northern Iraq.
- **Capacity strengthening**
 - To enhance the **capacity** of Iraqi research and extension program to identify and evaluate potentially valuable germplasm and better crop/soil management technologies and promote their adoption by farmers

Outputs (baseline information, demonstrations, economic analysis)

Objective 1

To identify, promote and widely disseminate amongst farmers in the rainfed cropping regions of northern Iraq “best-bet” improved varieties and crop management systems for wheat, barley and pulse and forage legumes

- 1.1 Constraints/limitations in rainfed crop production identified through diagnostic study of farmers’ existing practices**
- 1.2 Available “best bet” technologies identified and prioritized based on existing knowledge**
- 1.3 On-farm demonstrations established**
- 1.4 Potential constraints to adoption identified**
- 1.5 Acceptable technology packages promoted and disseminated**
- 1.6 Assessment of potential adoption and impact**

Outputs (germplasm adaptation research, seed prodn)

Objective 2

To introduce, evaluate and select improved germplasm of wheat, barley and pulse and forage legumes for adaptation to rainfed farming systems in northern Iraq

- 2.1 Cultivars of these crops that produce higher yields and/or better satisfy local market requirements through better disease resistance, drought tolerance, bread quality characteristics, etc., identified and evaluated with farmers at research stations and in farmers' fields.
- 2.2 Efficient production systems of the seed needed in research and demonstrations established.

Outputs (crop management research)

Objective 3

To identify, evaluate and select improved cropping system management options suited to rainfed farming systems in northern Iraq

- 3.1 Specific production constraints, identified under Output 1.1, for which there are no immediate available technologies are identified and prioritized.**
- 3.2 New crop management options that solve these constraints identified, tested and evaluated with farmers.**

Outputs (capacity enhancement)

Objective 4

To enhance the capacity of Iraqi research and extension program to identify and evaluate potentially valuable germplasm and better crop/soil management technologies and promote their adoption by farmers

- 4.1 Enhanced capabilities of Iraqi research program through joint research and specialized training programs.
- 4.2 Research and extension staff are better able to promote and disseminate new technologies in partnership with farmers.
- 4.3 Enhanced capabilities in evaluating adoption and impact of improved technologies.
- 3.4 Effective international collaborative networks between Iraqi, ICARDA and Australian institutions and scientists.

Activities (baseline info, demos, econ analysis)

Objective1 To identify, promote and widely disseminate amongst farmers in the rainfed cropping regions of northern Iraq “best-bet” improved varieties and crop management systems for wheat, barley and pulse and forage legumes

1. Compile and review current available information on farmers’ practices and production and economic / marketing constraints
2. Baseline survey and analysis of production constraints/limitations in individual agro-climatic zones (survey team to be identified from Iraq)
3. Compile, review and analyse existing information on potential available technology options, i.e., options already tested in Iraq, including registered Iraqi varieties of target crops and crop management options
4. Round table discussion between project partners and representative farmers from the three agro-climatic zones to review options and decide best-bet technologies to be promoted in each zone
5. First Annual Project Planning meeting of all project partners (immediately following round table discussion)
6. Based on work plan, select sites and participating host farmers and farmer groups for on-farm demonstrations. 3-5 demonstrations in each agro-climatic zones (10-15 demonstrations total)
7. Implement on-farm demonstrations
8. Monitor demonstrations and jointly evaluate options with farmer groups to identify preferences and/or potential constraints to adoption.
9. Field days for farmers and development of extension material to disseminate information on new options
10. Annual project review and planning meetings to review results of previous year and agree work plan for coming year
11. Assess potential adoption and impact of technologies based on information from baseline surveys and results from demonstrations

Activities (germplasm adaptation research, seed prodn)

Objective 2. To introduce, evaluate and select improved germplasm of wheat, barley and pulse and forage legumes for adaptation to rainfed farming systems in northern Iraq

1. Identify potential lines from Iraq, ICARDA's international nurseries, Australia, and other sources.
2. First Annual Project Planning meeting of all project partners.
3. Introduce and evaluate improved lines in the three research stations (one in each agro-climatic zone). Jointly evaluate lines with farmer groups.
4. Annual project review and planning meeting to review results of 1st years evaluation and agree work plan for 2nd cropping season
5. Selected entries from Yr 1 will be evaluated in the research stations (3 trials) and in replicated trials on farmers' fields in 3 sites in each agroclimatic zone (3x3 = 9 trials). Jointly evaluate cultivars with farmer groups.
6. Annual project review and planning meeting to review results of 2nd year's evaluation and agree work plan for 3rd cropping season
7. Selected entries from Yr 2 will be evaluated in the research stations (3 trials) and in replicated trials on farmers' fields in 3 sites in each agroclimatic zone (3x3 = 9 trials). Jointly evaluate cultivars with farmer groups.
8. Identify promising lines for registration and release.
9. Develop capacity at Rabia station to produce seed for research and demonstrations

[3.3a Flow chart pp. 22-25]

Activities (crop management research)

Objective 3. To identify, evaluate and select improved cropping system management options suited to rainfed farming systems in northern Iraq

1. Based on collective knowledge, identify and prioritize those constraints/limitations in crop production systems which need further research to identify improved crop and soil management practices (potential research areas already identified with Iraqi partners are: tillage and sowing systems, pest and weed management, and new crop rotation options).
2. First Annual Project Planning meeting of all project partners
3. On-station research on crop management options to fill gaps in information. Joint evaluation of options with farmer groups.
4. Annual project review and planning meeting to review results of 1st year and agree work plan for 2nd year
5. Based on 1st year's results implement on-station and farmer-managed on-farm (3 sites in each agro-climatic zone) research trials of potential options Joint evaluation of options with farmer groups. Identify potential constraints to adoption.
6. Annual project review and planning meeting to review results of 2nd year and agree work plan for 3rd year
7. Based on 2nd year's results implement on-station and farmer-managed on-farm (3 sites in each agro-climatic zone) research trials of potential options Joint evaluation of options with farmer groups. Identify potential constraints to adoption.
8. Identify options for introduction into promotion and dissemination program under Objective 1.

[3.3a Flow chart pp. 22-25]



Activities (capacity enhancement)

Objective 4. To enhance the capacity of Iraqi research and extension program to identify and evaluate potentially valuable germplasm and better crop/soil management technologies and promote their adoption by farmers

- 1. Annual Project Meetings: Develop program of training including on-the-job coaching, short term courses, workshops, individual visits to ICARDA and/or Australian partners, and selective longer term activities. MOA to nominate suitable staff for training.**
- 2. Short-term training courses in germplasm evaluation, cropping systems management, seed production & seed quality control, integrated pest/disease/weed management, and extension methods (5 x 4 trainees = 20 Iraqi staff per year)**
- 3. Individual training for MOA staff in economic analysis, adoption and impact assessment (2 persons).**
- 4. Iraqi scientists (one per year) visit one Australian research institute (6-8 weeks)**
- 5. Support participation of Iraqi personnel in regional or international workshops and conferences of relevance to the project.**

[3.3a Flow chart pp. 22-25]

Presentations and discussions



1. Project overview / Iraq overview
2. Demonstration program – Iraq
 - germplasm adaptation
 - agronomy
3. Research program – Iraq
 - germplasm adaptation
 - agronomy
 - IPM
4. Socio-economics – baseline survey and economic/impact analysis in Iraq
5. Linked ICARDA research
 - agronomy research and demonstrations
 - genetic enhancement
6. Australian collaboration
7. Training, seed, capital equipment, finance
8. Ideas for project future

Field day



Objectives

1. **Appreciation of local farming systems**
2. **Inspection of several zero-till demonstrations**
3. **Inspection of small machinery manufacturer**
 - **potential for local fabrication of ZT seeders**



Phase 2 (extension)

Discuss/agree

- what should be continued
- new components

Discuss and prepare Project Proposal

1. **Justification and objectives**
2. **Methodology, activities and outputs/milestones**
3. **Partners, personnel and travel**
4. **Impacts and adoption pathways**
5. **Budget**
6. **Requirements for letters of support, CVs, IP**