

**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**

**Annual reporting and planning meeting  
1-5 October 2006**

- Background to project**
- Agenda/objectives of reporting/planning meeting**

# Objectives

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

## **Objectives:**

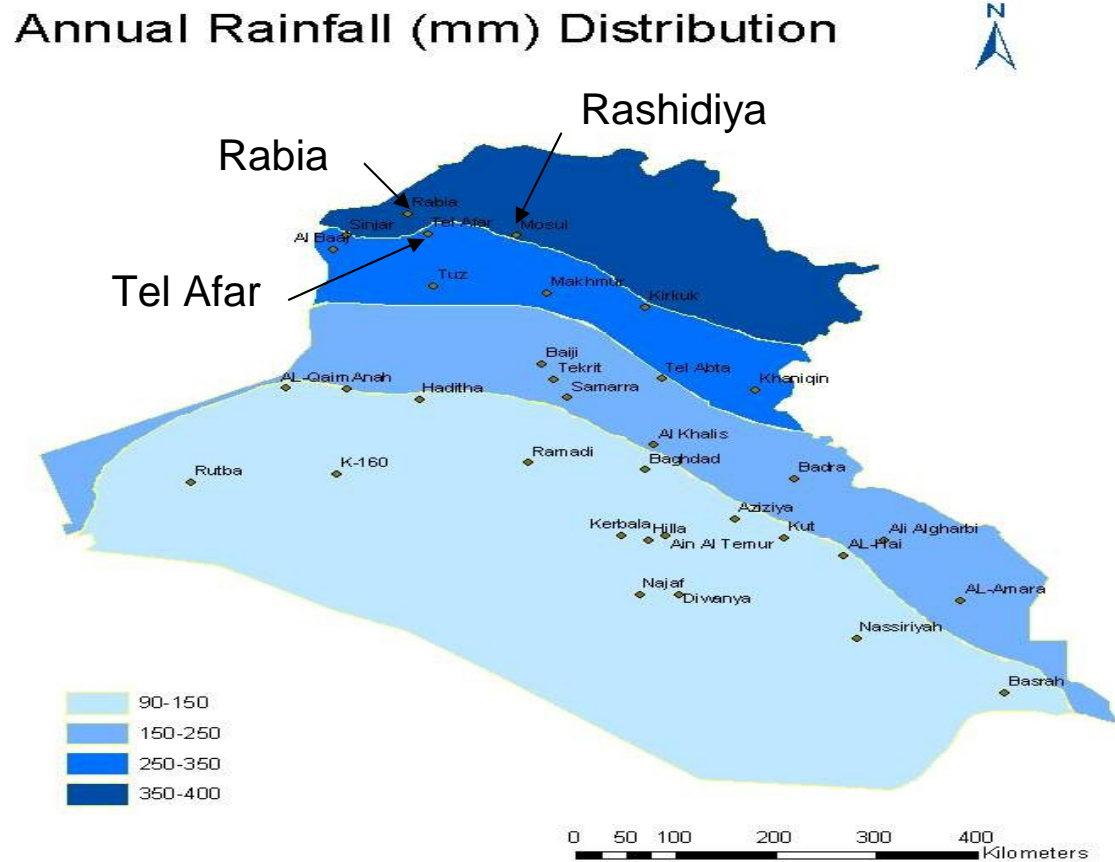
- **Demonstration and promotion of “best bet” varieties and crop management technologies:**
  - To **identify, promote and widely disseminate** amongst farmers in the rainfed cropping regions of northern Iraq “best-bet” **improved varieties and crop management systems** for wheat, barley and pulse and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

# Location

## Governorate of Nineveh

- three main agro-climatic zones
  - high rainfall areas (HRA) >450mm
  - moderate rainfall areas (MRA) 350-450mm
    - Rabia Research Station, Rashidiya Research Station
  - low-rainfall areas (LRA) <200-350mm) ± supplementary irrigation
    - Tel Afar Research Station

# Location – Ninevah Governorate



Courtesy of the Iraq National program for the Preparation of Agro-Ecological Zones Maps

# Implementation (Yr 1)

- **Identification/extension of best-bet technologies**
  - on-farm demonstrations. 3-5 demonstrations in each agro-climatic zone (10-15 demonstrations total)
- **Research on new technologies**
  - evaluate improved lines/technologies in the three research stations (3 trials for each crop/technology comparison)
- **Capacity building**
  - training (~23 trainees per year)
  - capital equipment

# Project inception meeting

ICARDA 11-14 July 2005



# Project planning meeting

ICARDA 4-8 September 2006



# Project inception planning meeting

ICARDA 11-14 July 2005



# Outputs

- **agreed 2005/06 workplan compatible with:**
  - **agreed objectives, outputs (Table 3.2), activities (3.3a Flow chart) and budget**
  - **resources and prevailing situation in Iraq**
- **an understanding and strategy to implement workplan**
- **identification of responsible persons for activities and outputs (reporting)**

# **Achievements 2005/06**

- **The 2005/06 workplan was developed at three meetings at ICARDA in June, July and September 2005 with ICARDA, Iraqi and Australian scientists. Required seed (16t) was supplied in October 2006**
- **A major baseline survey of 260 farm families was undertaken in July-Sept 2005 by University of Mosul, MOA Baghdad and ICARDA socio-economists**
- **The Ninevah Implementation Committee, set up by MOA to manage the project, met and produced minutes from 18 meetings which discussed and coordinated Iraqi activity**
- **The demonstration program was implemented in 13 locations in the four main agroclimatic zones as planned**
- **In the ambitious research program, 30 of the 80 planned research trials evaluating better adapted lines/varieties were conducted**
- **The agreed training program was exceeded with 26 Iraqis participating in 6 training courses**
- **Capital purchase of 4 zero-till seeders was completed and of seed cleaning plants is under way**
- **Operational funds were transferred to all partners**

# Major problems 2005/06

- **implementation of the project has been difficult given the political and security situation in Iraq. There have been changes in the Minister of Agriculture (twice) and MOA Coordinator, a referendum and election, security concerns constraining field activity, and land disputes preventing activity at Tel Afar and Al Rashidya research stations**
- **in-country field visits by ICARDA and Australian collaborators to inspect and interact on trials/demonstrations were not possible**
- **50 of the 80 planned research trials evaluating better adapted lines/varieties could not be conducted due to heavy rain, security concerns, land disputes and transport shortages**
- **planned research trials and demonstrations on agronomy/crop management were postponed until 2006/07 because of security concerns, land disputes, lack of machinery and transport shortages**
- **the visit of a trainee to Adelaide University in autumn (April-May) to study conservation cropping with Professor David Coventry was postponed until May-June 2007 due to nomination difficulties**

## **Conclusion 2005/06**

**The project has gone remarkably well since commencement on 1 May 2005 due to:**

- **the enthusiasm, industry, flexibility and dedication of Iraqi collaborators**
- **the strong interest and support of ICARDA and Australian collaborators**
- **the proximity of ICARDA**

# Purpose and agenda for meeting

- **For research and demonstrations on legumes, cereals, agronomy and the baseline survey:**
  - review/evaluate/report 2005/06 activities and results
  - develop 2006/07 workplans
- **Review 2005/06 progress and 2006/07 plans for:**
  - training
  - capital items
  - finance
  - seed requirements
  - Iraq cropping review
- **Facilitate exchange of information and experiences through seminars by Australian collaborators on relevant crop-livestock systems in Iraq/Australia**

# Required outputs

- presentations on 2005/06 technical results according to the agreed workplan
- presentations on agreed 2006/07 workplan compatible with:
  - objectives, outputs (Table 3.2), activities (3.3a Flow chart) and budget
- draft reports
  - 2005/06 technical report
  - 2006/07 workplan
- agreed strategy to implement the workplan

# Meeting agenda

- **Sun – review 2005/06 results/presentations**
  - legumes
  - cereals
  - socio-economics
  - agronomy
- **Mon/Tues am – present 2005/06 results**
- **Tues pm/Wed – discuss/prepare 2006/07 workplans**
- **Thu**
  - am present 2006/07 workplans
  - pm review/plan training, capital items, finance, seed, cropping review, other issues

# Activities (baseline information, demonstrations)

**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

[3.3a Flow chart pp. 22-25]

# Activities (germplasm adaptation research)

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).
4. Jointly evaluate lines with farmer groups.
5. Annual project review and planning meeting to review results of 1st years evaluation and agree work plan for 2nd cropping season
6. 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.
7. Annual project review and planning meeting to review results of 2nd year's evaluation and agree work plan for 3rd cropping season
8. Develop capacity at Rabia station to produce seed for research and demonstrations

# 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.**
4. **Joint evaluation of options with farmer groups.**
5. **Annual project review and planning meeting to review results of 1st year and agree work plan for 2nd year**
6. **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.**

# 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. Senior 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]