

Seed Related Activities within the Iraq-ICARDA-ACIAR Project

Review and Planning Meeting
13-17 April 2008
Aleppo, Syria



Outline of the Presentation

- **The ICARDA Seed Section**
- **Seed activities within the ACIAR-Iraq project**
 - **Coordination of quality seed provision for research and demonstration**
 - **Identification and facilitation of procurement of appropriate seed processing machines**
 - **Capacity development of human resources for quality seed production**
 - **Looking ahead**



The ICARDA Seed Section -Strengthening National Seed Systems-



- **Assisting commercialization of public sector or stimulating private sector participation through regulatory reforms and policy influence**
- **Designing alternative seed delivery systems for less favorable/marginal areas and resource poor farmers**
- **Capacity building to provide relevant expertise to lead and manage national seed programs**
- **Conducting applied research on seed technology and supply system to address constraints and seek possible solutions**
- **Producing quality seed as service to ICARDA and NARS to ensure availability and access to early generation seed of new improved varieties**
- **(Assisting in emergency seed supply in the aftermath of disasters i.e. sourcing adapted (germplasm) or varieties)**



1. Provision of seed for research and demonstration

- All seed (international nurseries, promising lines or released varieties) provided for research or demonstration were produced under rigorous quality control by the Seed Section at ICARDA
 - ✓ Field inspection, seed cleaning, seed treatment, seed quality testing
 - ✓ Seed health testing for quarantine pests (including fungal and viral diseases)
- Seed were properly packaged, labelled and sent by transport as per the plan for research or demonstration purposes

Roguing seed fields



TBIA kit for virus detection



1. Provision of seed for research and demonstration...cont

Table 1. Amount of seed supplied for research and demonstration in 2005/06-07/08

Purpose	Item	2005/06	2006/07	2007/08	Total
Testing*	No of crops	7	1	1	7
	No of lines/ varieties	60 (660 entries)*	36 (25 entries*)	38 (25entries**)	
	Quantity in kg	304.4	247	123	674.4
<hr/>					
Demonstration	No of crops	7	6	6	7
	No of lines/ varieties	24	32	10	
	Quantity in kg	15,510	1,654	1,775	18,939

*Refers to wheat and barley and ** barley only



2. Identifying seed processing machines

- ICARDA's Seed Unit provided assistance in identifying seed cleaning machines
- Quotation requested from reputed suppliers in USA, Europe, India, Syria
- Comparison was made on cost, mobility, technical specifications, appropriateness, etc
- Results shared with partners in Iraq for decision



2. Identifying seed processing machines...cont

Comparison of costs and units against allocated budget

Manufacturer	Capacity (t/h)	FOB/Unit	Remarks	Advantages	Disadvantages	No of Units
CRIPPEN (US)	1.0	\$56,660	Mobile No gravity, 1 cylinder	High tech	High cost (less number of units)	4
PETKUS (Germany)	1.3	\$153,850	Stationary 2 cylinders, Gravity	High tech	Highest cost (least number of units)	1
AGROSAW ¹ (India)	1.0	\$58,712	Mobile 2 similar cylinders* Gravity	Low cost (more number of units)	Appropriate tech (less performance & durability)	4
BARKAWI (Syria)	1.0	\$50,000	Stationary Cylinders, gravity	Lower cost (more number of units)	Appropriate tech (less performance & durability)	5
DARBAS ² (Syria)	1.0	\$25,000	Mobile 2 cylinders, gravity	Lowest cost (highest number of units)	Appropriate tech (versatile)	10

¹ Recommended by ICARDA based on cost and experiences in Afghanistan

^{1,2} Selected by MoA based on number of units and later on recommendations made by Iraqi team of experts)



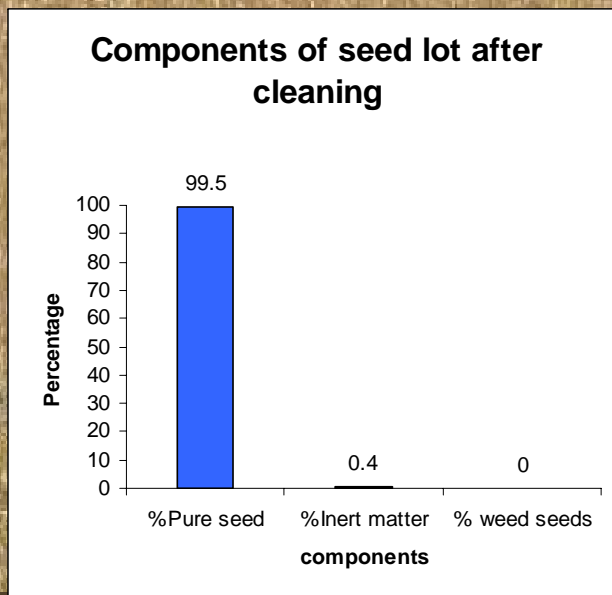
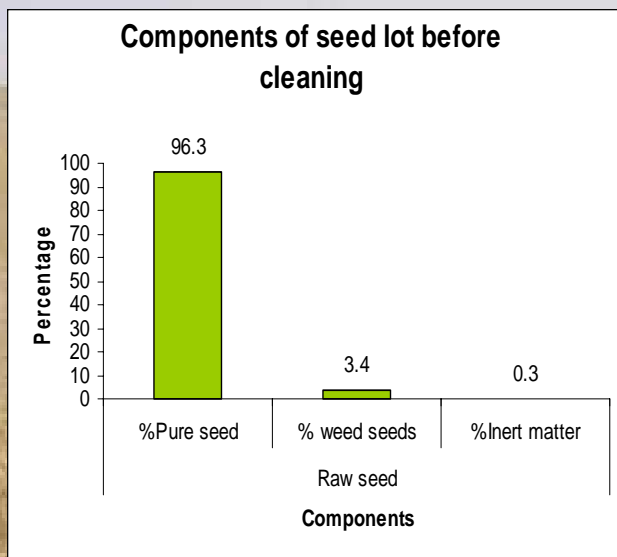
2. Identifying seed processing machines...cont

A team consisting of technical experts and seed specialists from MoA visited Darbas Factory twice and made evaluation in Iraq

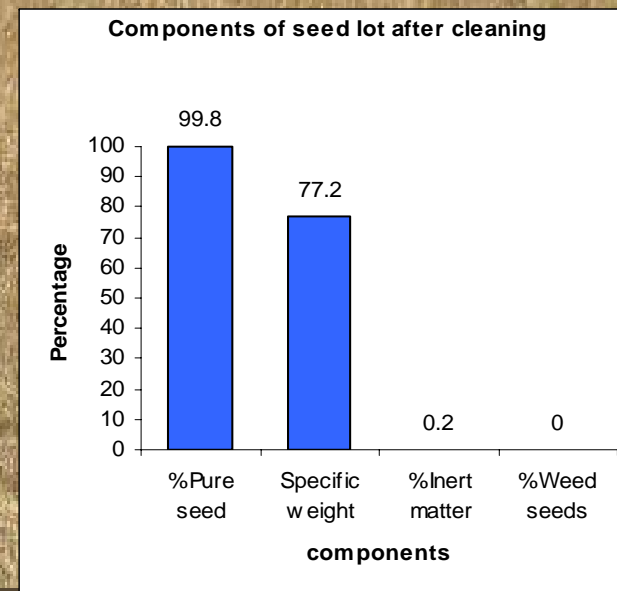
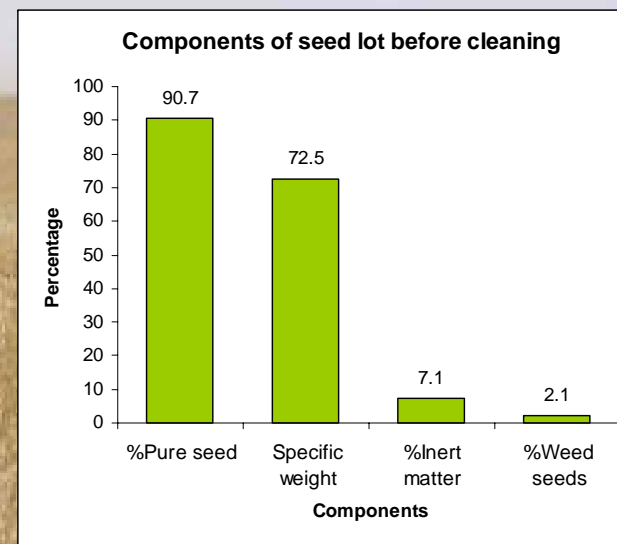
1. The first mission inspected and tested the performance of the prototype and a decision was made based on the result to purchase one cleaning machine
2. A prototype was manufactured and delivered for further evaluation in Iraq and a decision was made to order 9 machines with minor modifications
3. The second mission tested the 9 machines including the gravity table and approved the final purchase of the machines

2. Identifying seed processing machines...cont

Performance of original prototype seed cleaning machine (first visit)

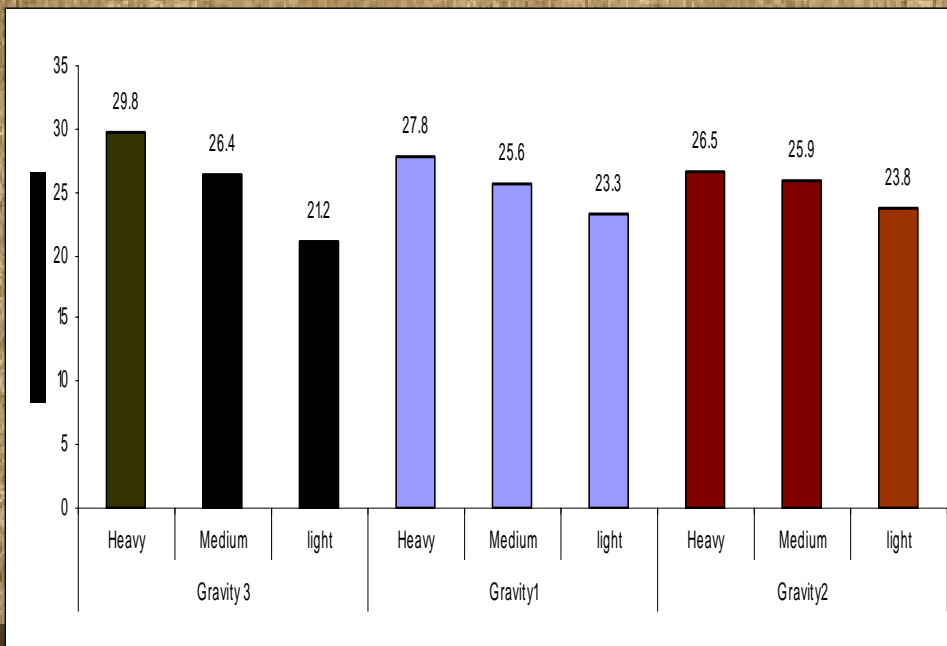
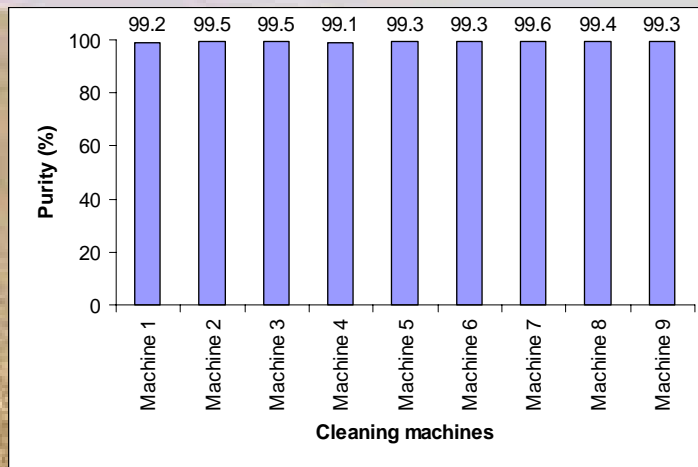


Performance of improved prototype seed cleaning machine (in Iraq)



2. Identifying seed processing machines...cont

Performance of 9 seed cleaning machines (second visit)



Result from Ninevah seed testing laboratory

بسم الله الرحمن الرحيم
جمهورية العراق

العدد: 25
التاريخ: 2008/2/4

إلى / مديرية زراعة نينوى

إشارة إلى مفكرة السيد وكيل مدير زراعة نينوى بتاريخ 2008/2/3 أثناء نتائج الفحص المخبري لنماذج الحنطة الواردة لنا المستخلصة من قبلكم للتفضل بالاطلاع مع التقدير .

ت	العلامة المميزة	النظافة %
.1	معمل رقم 1	99.23
.2	معمل رقم 2	99.53
.3	معمل رقم 3	99.51
.4	معمل رقم 4	99.11
.5	معمل رقم 5	99.31
.6	معمل رقم 6	99.34
.7	معمل رقم 7	99.56
.8	معمل رقم 8	99.41
.9	معمل رقم 9	99.32

ملاحظة/ يرجى تسديد مبلغ فقرة (4050) أربعة آلاف وخمسون ديناراً لأغريها إلى حسابات الهيئة العامة لفحص وتصديق البذور / نينوى .

المدير
مروان عاصم علي

نسخة منه إلى/

- الهيئة العامة لفحص وتصديق البذور / المختبرات للاطلاع مع التقدير.
- المختبرات / للتأشير .
- الحسابات / للمتابعة .
- الاضطرار العامة .

2. Identifying seed processing machines...cont

Integrated mobile seed cleaning and treatment machines



Gravity separator



20 KVA generator





3. Capacity development of human resources 2005-07

Course	Period	No. of participants
Seed enterprise development and management	13-24 Nov 2005	3
Seed health testing and field inspection *	19-29 March 2007	6
Variety management and quality assurance	06-17 May 2007	3
Total		12

*: With seed health laboratory



4. Looking Ahead: Linking Research with Impact

- Best performing technologies (varieties) have been identified and demonstrated for wider use by farmers
- Seed processing facilities have been identified and purchased for use by farmers
- Seed is pathway for delivering agricultural innovation to farmers and ensure impact: Research to impact
- Establish/strengthen the seed unit of the ARC
 - ✓ Variety maintenance
 - ✓ Breeder and foundation seed supply
- Limited formal seed sector operations in Northern Iraq
 - ✓ Develop/support private seed sector
 - ✓ Organizing farmers in local seed production and marketing

Benefits of Farmer-based Seed Enterprises

Participatory—serve defined target groups mobilizing and involving farmers in less favorable environments/or remote areas

Decentralization—multiply varieties selected based on farmers' preferences in target areas

Market oriented—link seed demand with production at local level based on farmers' realistic needs

Relevant quality—adopt appropriate seed quality standards that meet farmers' diverse requirements

Appropriate technology—develop low cost seed equipment to improve quality at farm level

Income generation—add value and better income from rural farm enterprises

Sustainability—institutionalize seed production and marketing to continue with seed business without external support





Thank you