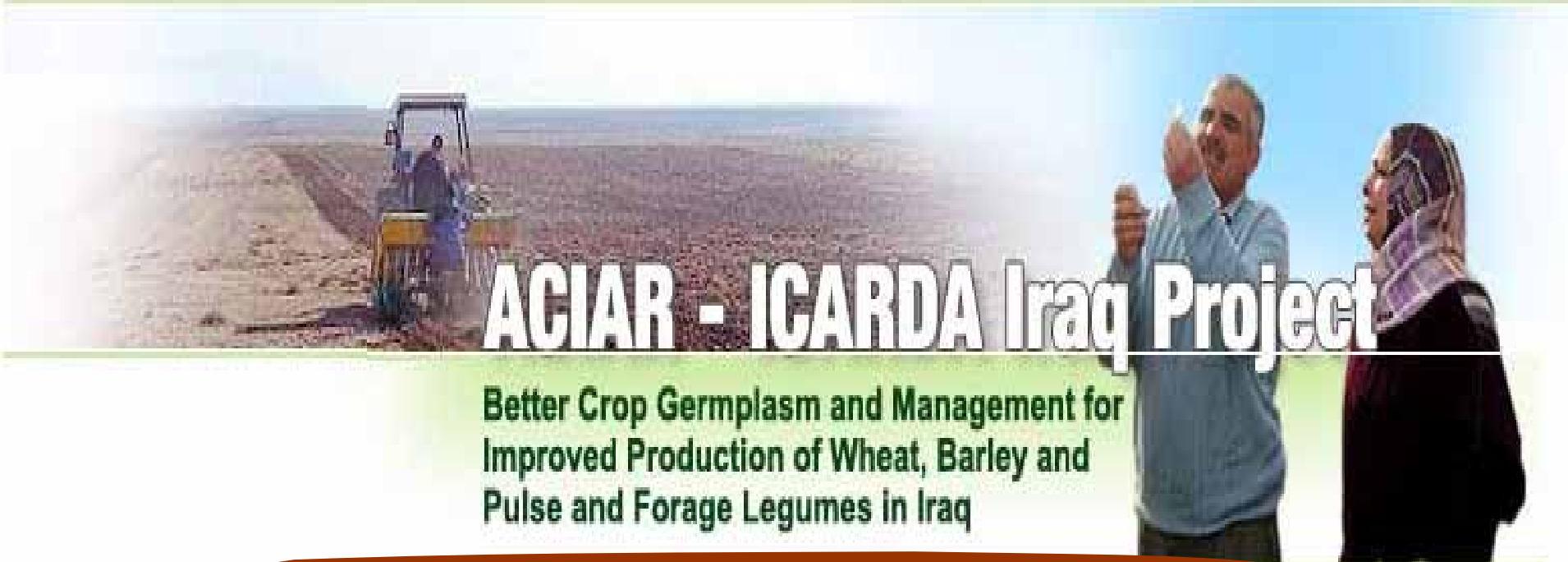




Australian Government
Australian Centre for
International Agricultural Research



Department of Agriculture and Food
Government of Western Australia



ACIAR - ICARDA Iraq Project

Better Crop Germplasm and Management for
Improved Production of Wheat, Barley and
Pulse and Forage Legumes in Iraq

IRAQ Overview

GEOGRAPHICAL LOCATION

- ▶ Iraq is located between 29 and 37 degrees latitudes N and 39 and 48 degrees longitudes E. sharing borders with Iran, Syria, Jordan, KSA, Kuwait and Turkey.

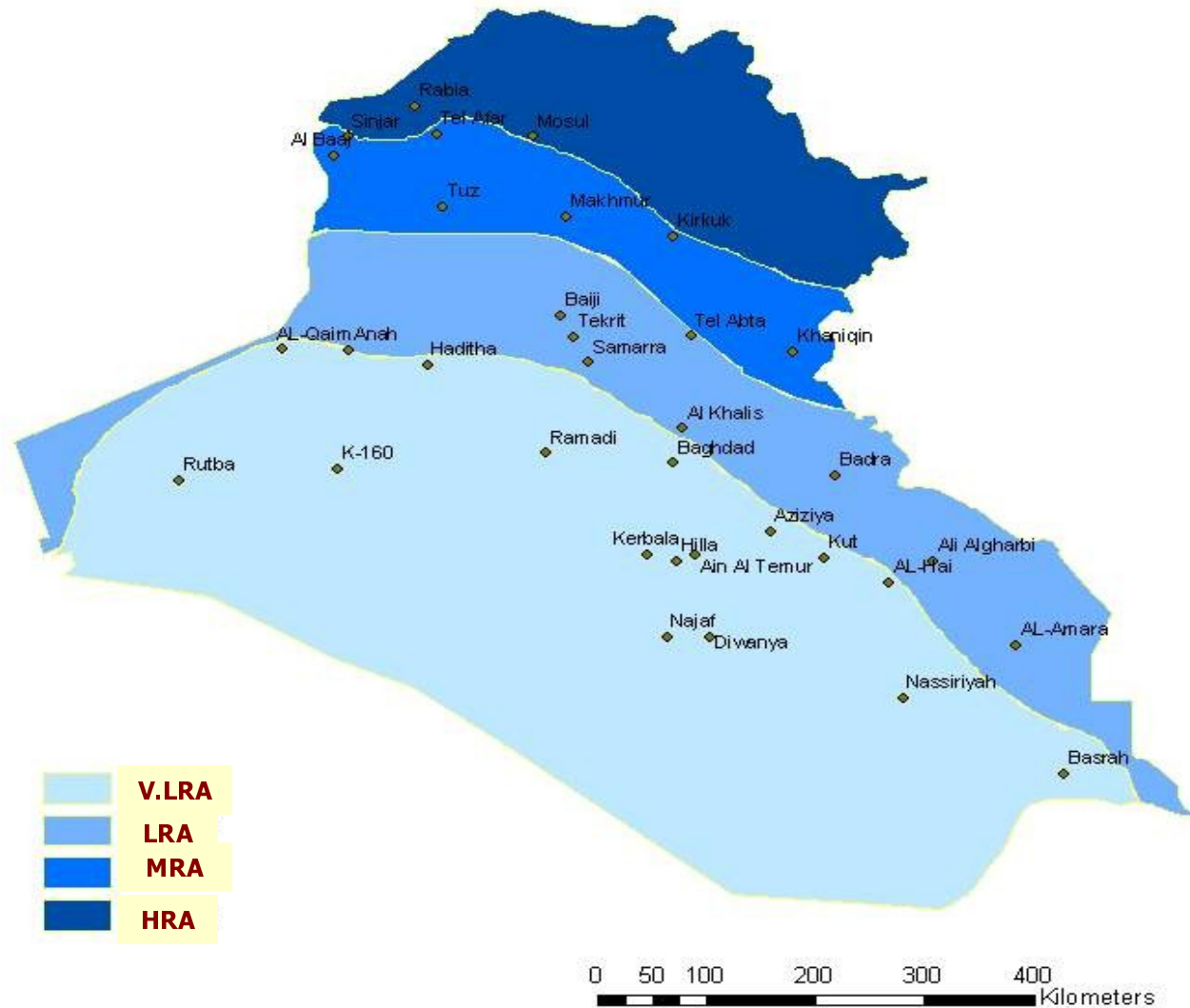
LAND AREA

- ▶ It covers a total area of 44 million hectares of which only 9.5 million are involved in agricultural activities.
- ▶ Most of this area is marginal, only 3.5 million hectares are cropped annually.

CLIMATE

- ▶ Rainfall varies from 50mm in the South Western deserts to about 1000mm in the Northern hills and falls between November and April. The general climatic conditions can be classified as arid to semi arid with hot summer and cold winter and annual temperature average is between 11 to 50 degrees Celsius.

Rainfall Zones Distribution



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

IRRIGATION

- ▶ The irrigation water mostly depends on the Tigris and Euphrates Rivers as well as ground water sources which support irrigation network for about 2.5 million hectares.
- ▶ The irrigation system is mainly surface with less than 10% is sprinkler and drip.



CROPS

- ▶ A wide range of crops is grown in the rain fed areas of Iraq. These include wheat, barley, chickpea, lentil and broad bean.
- ▶ Wheat and barley are the dominant cereal crops occupying nearly 1.5 million hectares each. Wheat is the most important food crop while barley is used mainly for animal feed. Wheat, barley, chickpea, beans are grown during winter as rain-fed crops in the northern Governorates of the country which receive 400 to 1000 mm of rainfall although wheat is also grown in marginal areas (200 to 400mm of annual rainfall) with supplemental irrigation). Further, since barley has some drought resistant capacity, it is grown in comparatively drier areas than wheat. Sunflower and sesame are grown during the summer season mainly under irrigation.



FARMING SYSTEMS

- ▶ The farming systems are based on crops and water resources . Therefore the following farming systems are :

Dry land field crops

- ▶ This is devoted to such crops as wheat barley, sunflower, sesame, cotton , potato , chickpea, lentil, dry broad bean and sugar beat. In this system some supplementary irrigation is provided where the annual rainfall is not adequate. Dry land farming takes place mainly during the winter season from October to May for winter crops and from March to September for summer crops under supplementary irrigation.

Orchards

- ▶ Orchard cultivation in Northern of Iraq are mostly deciduous fruit trees such as grapes, apple, apricot, plums, pomegranate, pear, peach, almond , various nuts including pistachio and olive too.
- ▶ while orchards in the middle and south of Iraq are mainly evergreen fruit trees such as date palm , citrus and olive as well as some deciduous trees.

Irrigated field crops

- ▶ Main irrigated summer crops are rice, maize, cotton and sunflower.
- ▶ The main irrigated winter crop is Wheat.



Vegetables

- ▶ Vegetables grown in Iraq are tomato, okra, eggplant, cucumber, squash, watermelon, melon, pepper, onion, green bean, lima bean, cabbage, beat ...etc.
- ▶ The production is mainly for local markets and is an important income source for small farmers and women.



SOILS

- ▶ The main problem in Iraqi soils are drought in north of Iraq and salinity in middle and south of Iraq , so Iraq need new irrigation system in north , and new drainage system in middle and south of Iraq.
- ▶ Iraqi soil fertility have shown a declining in both physical and chemical properties due to absence of crop rotation. Other factors are soil compaction due to high animal stocking and use of heavy machinery and high erosion arising from monoculture, so crop yield levels are generally very low.

Agricultural Research System:

- ▶ Agricultural research in Iraq is wholly public
- ▶ The main research activities now are carry out through three ministries which are MoA, MoST and MoHESR
- ▶ The responsibility of cereal varieties development, production of foundation seed and varietals maintenance is State Board for Agricultural Research (MoA)
- ▶ In the period between 1992 – 1999, 102 different crop varieties and hybrids are released

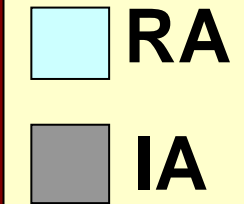
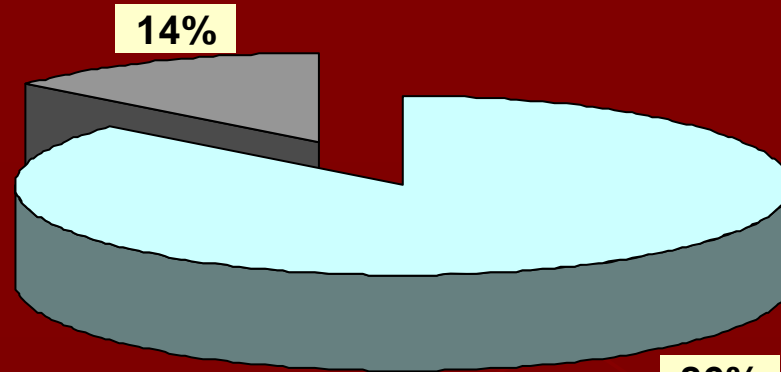
| Crops | Cultivars No. |
|-------------------|---------------|
| Wheat | 30 |
| Barley | 15 |
| Rice | 8 |
| Maize | 14 |
| Lentil & Chickpea | 4 |
| Others | 31 |
| Total | 102 |

- ▶ As a result of the war there has been massive loss of many valuable germplasms, including stocks of current varieties of all classes of seed of all the important crops

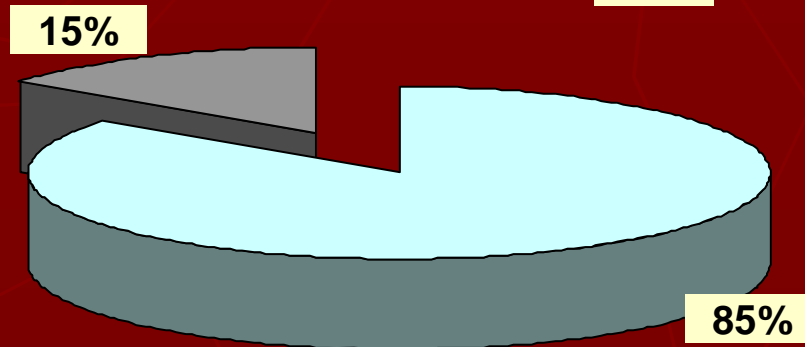
Total cultivation, productivity and production of wheat in Iraq

| Region | Parameters | 1971-1980 | 1981-1990 | 1992-2002 |
|-----------------|--------------------------|----------------|-----------|----------------|
| Total wheat | Cultivated area (Donum) | 5896440 | 4877500 | 5312160 |
| | Productivity (kg/ Donum) | 185 | 182 | 252 |
| | Production (ton) | 1116720 | 895890 | 1358620 |
| Rainfed wheat | Cultivated area (Donum) | 5087760 | 4160960 | 2479390 |
| | Productivity (Kg/ Donum) | 149 | 168 | 169 |
| | Production(ton) | 777690 | 706090 | 441140 |
| Irrigated wheat | Cultivated area (Donum) | 808680 | 716540 | 283277 |
| | Productivity (Kg/ Donum) | 408 | 270 | 321 |
| | Production(ton) | 340030 | 139790 | 917480 |

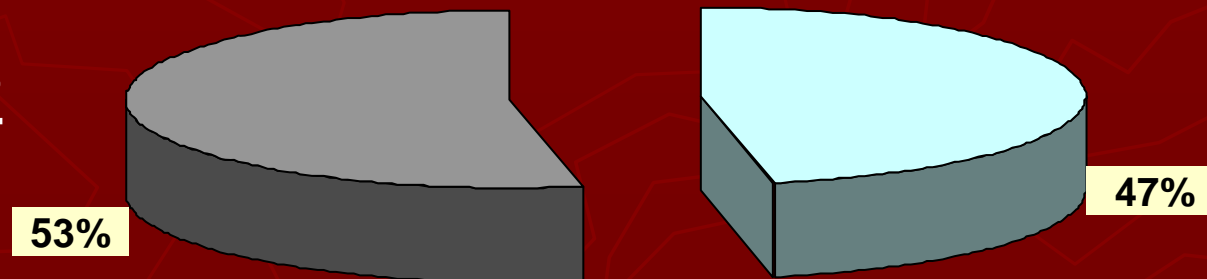
1971-1980



1981-1990



1992-2002



Percentage of irrigated and rainfed areas cultivated with wheat in Iraq

Thank You

