

# Spate Irrigation: Minor Crops



# Introduction

- ‘**Minor**’ crops usually refers to the cultivated surface, which is considerably smaller than the area in which major crops are grown
- **Why is it useful?**
  - Low external inputs – largely free from pesticides and chemical fertilizer, organic farming
  - Play an important role in meeting the needs of the country
  - May provide **high value income** opportunities for the population of spate irrigated areas
  - Grown for their local importance, usefulness and **fit into** the **overall agricultural structure**



# Examples: Guar (Cluster bean)

- Drought resistance
- Cash Crop
- Multiple uses
- Leguminous
- High potential



# Examples: Sesame

- Common in all regions (depending on the soil)
- Cash crop – locally and for confectionary industry
- Can be grown in areas where wheat can't be grown economically
- Honduras and Egypt – producing yields of 1267 and 1063 kg/ha, respectively
- Spate farmers have higher potential due to availability of spate flows and nutrient rich sediment



Sesame harvest, Pakistan



# Examples: Melons and Watermelons

- Cropping of melons using residual moisture after flooding period
- Higher outputs
- Intercropping is also practiced between fruit trees



Crops types	Yield (kg /ha)
Wheat	9,500
Barley	7,850
Onions	2,500
Sweet Potatoes	5,000
Cumin	1,400
Lentils	8,500
Melons	15,000
Water Melons	2,000
Sesame	350

Table 1: Common crops and expected yields under the Lashkari System, Afghanistan (MEW 2009)

## Examples: Zizyphus (Ber)

- Common tree in all regions, local verities
- Honey production, multipurpose uses.
- Fodder, fruit, timber, shade, drought resistance, can be grafted
- Naturally grown

