

RALF Project 02-05



Title of the Project

**Increased productivity and Profitability
of Wheat Based Cropping System to
Reduce Reliance of Opium Poppy in
The Northern Afghanistan**



Project Goal

To reduce farmer reliance on opium poppy in northern Afghanistan by increasing agriculture productivity and profitability



Target Area

Balkh

Baghlan

Badakhshan

(Kunduz)



The alternate crops selected for research till 2005

Soybeans

Canola

Safflower

Sesame

Sunflower

Linseed

Peanuts



Rationale:

- **Market Demand**
- **Prospects for local Production**
- **Potential for acceptance as alternative crop**



Market Demand for Ghee & Veg. Oil in Afghanistan

Total Demand = 268,000 mt

Domestic Production = 87,500 mt

Import = 180,500 mt

(Source: CRS, FY05 Bellmon Analysis Afghanistan 01/02/2005)

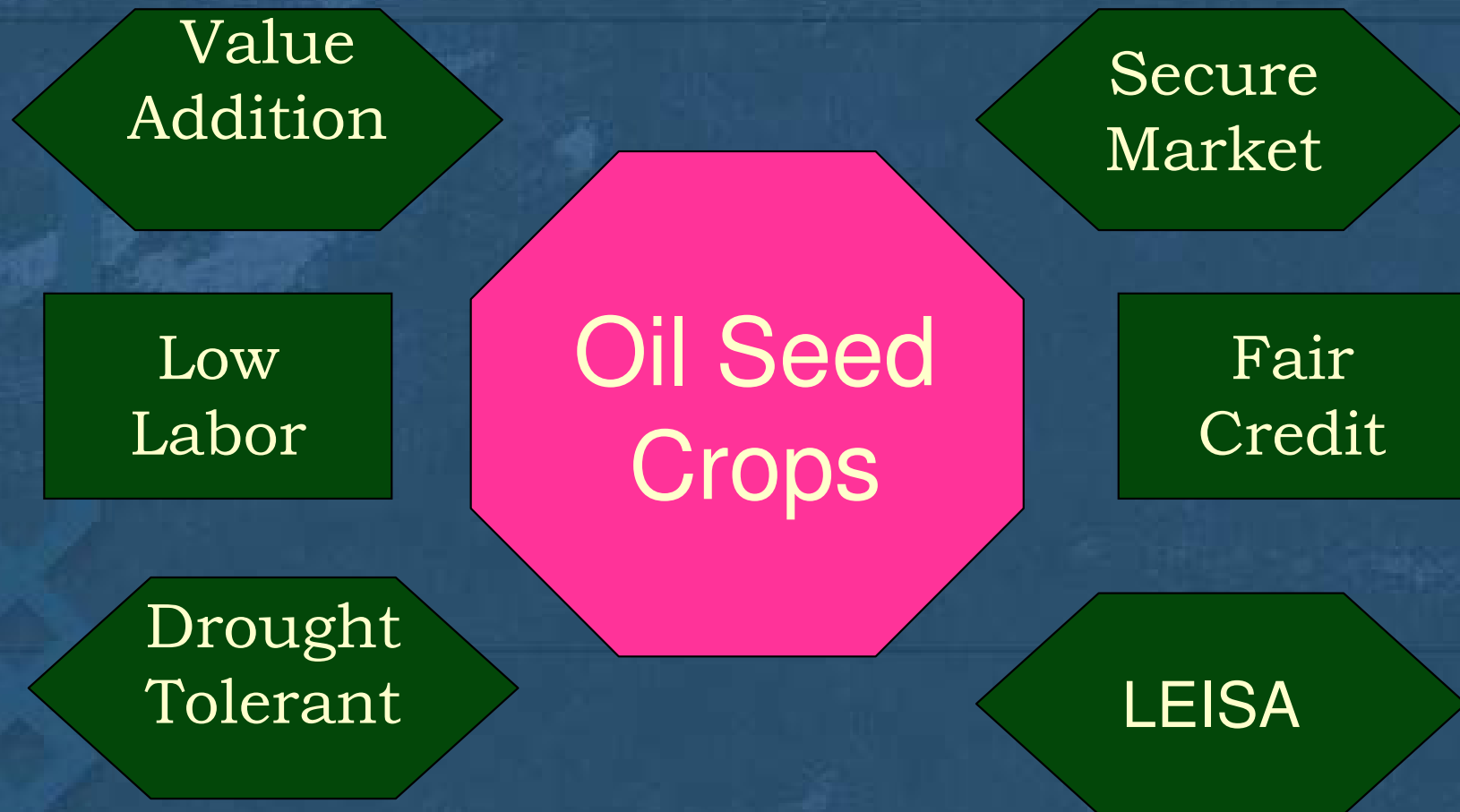


Prospects for Local Production

Research results



Alternate Crop?



Average Yield/ hectare

Soybeans	500-2000 kg/ha-Res. Afg. & FAO
Canola	1000-1700 kg/ha-Res. Afg.& FAO
Safflower	400-600 kg/ha FAO Afg
Sesame	350-500 kg/ha FAO Afg
Sunflower	740 kg/ha-Pakistan
Linseed	235-335 kg/ha-FAO Afg
Peanuts	1000-1500 kg/ha-FAO Afg



Crop Economics

Crop	Yield kg/ha	Oil Content	Av.Rate/ Kg Afs	Amount Afs	Press Cake	Av.Rate/ Kg Afs	Amount
Soybean	2,000	14%	50	14,000	86%	10	17,200
Canola	1,700	35%	50	29,750	65%	10	11,050
Groundnuts	1,500	42%	50	31,500	58%	10	8,700
Sunflower	740	32%	50	11,840	68%	10	5,032
Sesame	500	50%	50	12,500	50%	10	2,500
Linseed	335	42%	50	7,035	58%	10	4,785



Value Addition-Small Scale Processing at Village Level

- **Oil extraction is possible with oil press or Oil expeller**

(Oil can also be extracted with solvent but it is not recommended for small scale processing due complexity of operations)



Oil Extraction-Small Scale Processing

- ***Ram Press***

(50 to 100 Kg/day)

- ***Komet Oil Expeller***

(small hand operated to industrial machines) manufactured by IBG Monforts Germany

- ***Täby Press***

(Various Models) Screw Press manufactured in Sweden

- ***6yl-94A***

(Various Models) Screw Press manufactured in China



Oil Extraction-Small Scale Processing

Ram Press



Oil Extraction-Small Scale Processing



Oil Extraction-Small Scale Processing



Oil Extraction-Small Scale Processing



Additional Benefits

- Village Level Processing-Micro Enterprises will . . . emerge
- Improved availability for the farmers
- The residue of oil seed will be used as animal feed . by the farmers
- Mid term import substitution of vegetable oil
- Improved soil fertility
- Low labor 2nd crop



Challenges

- To finally demonstrate the crop economy
- To continue participatory research and further verify
 - . the first years outcomes
- To achieve competitive product standards
- Transfer and probe Appropriate Technology for value
 - . addition



Thank you!

