Irrigation Scheduling Survey

West Bekaa July 2005

Survey Objectives

- Get to know the farmers of the region,
- Introduce Khirbit Kanafar Center and their activities,
- Assess the farmers' practices and water sources,
 Highlight on the farmers major concerns

Data Collection

- The field work of the survey started 1st of July 2005 and ended on 31st of August.
- Four extension agents: Jean , Yasser, Ali and Mariam were divided in groups worked on 20 villages located between Quaraoun lake and Damascus road (*map 1: survey area*)

Survey area 78,412 dn

20 villages visited

284 farmers interviewed



Field Work

Advantages:

- Good contacts with municipalities and mayors,
- The Extension agents became more familiar with on field activities.

<u>Limitations</u>:

- Problems in finding the farmers (large projects, home visits....),
- Difficulties in Communication,
- Exact delimitation of the plots on field.





Primary results

- Generalities on farmers (age, occupation)
- Farm description
- Irrigation Scheduling

Age distribution of the surveyed farmers



Occupation of surveyed land users

crop production
animal production
general trade
teacher
gaz station
miscellaneous



Irrigated vs. Not-Irrigated Plots



Owned vs. Rent Plots



Farm size distribution (dounoum)



<=200
200<s<=400
400<s<=600
600<s<=800
800<s<=1000

Weighted Average Renting Cost LBP/dn

Summer Season	Winter Season
107,740	59,263

Primary Water Source

Primary water source	# farms	% farms	surface dn	Weighted average %
Public well	43	15	16,840	21
Private well	89	31	29,185	37
Litani river private pumping	20	7	6,090	8
Litani river public pumping	2	1	1,100	1
Ghzayel river private pumping	79	28	18,002	23
Ghzayel river public pumping	3	1	965	1
Faregh river private pumping	1	0	2	0
Faregh river public pumping	0	0	0	0
Litani river subscriber	24	8	3,702	5
Anjar source	8	3	1,157	1
No irrigation	14	5	1,058	1
water ponds		0	311	0
TOTAL OF FARMERS VISITED	284	100	78,412	100

Primary Water Source

Primary water source	# farms	% farms	surface dn	weighted average %
Artesian wells	132	46	46,025	59
Ghzayel river pumping	79	28	18,967	24
Litani river subscriber	24	8	3,702	5
Litani river pumping	20	7	7,190	9
other	15	5	1,470	2
No irrigation	14	5	1,058	1
TOTAL OF FARMERS VISITED	284	100	78,412	100

Secondary Water Source ~ 28% of farms visited

Secondary water source	# farms	% farms	surface dn	weighted average %
Public well	0	0	0	0
Private well	0	0	0	0
Litani river private pumping	18	23	6,512	25
Litani river public pumping	7	9	1,570	6
Ghzayel river private pumping	24	31	10,328	40
Ghzayel river public pumping	0	0	0	0
Faregh river private pumping	1	1	143	1
Faregh river public pumping	0	0	0	0
Litani river subscriber	27	35	6,423	25
Anjar source	1	1	590	2
No irrigation	0	0	0	0
water ponds	0	0	0	0
Total # farms using secondary water source	78	100	25,566	100

Secondary Water Source

Secondary water source	# farms	% farms	surface dn	weighted average %
Artesian wells	0	0	0	0
Ghzayel river pumping	24	31	10,328	40
Litani river subscriber	27	35	6,423	25
Litani river pumping	25	32	8,082	32
other	2	3	733	3
No irrigation	0	0	0	0
TOTAL OF FARMERS VISITED	78	100	25,566	100

Filtration Techniques

Filtration	# farms	% farms
Mesh	28	10
Sand	3	1
Decantation basin	2	
Disc	1	0
Mixed (Sand, Mesh)	1	0
No filtration	249	88
TOTAL OF FARMS VISITED	284	100

Soil Analysis

Soil Analysis	# farms	% farms
Yes (but not considered in fertilisation programs)	61	21
No	216	76
No data	7	2
TOTAL OF FARMS VISITED	284	100

Major Problems

- Drainage channels
- Wind interference *sprinkler*
- Water salinisation
- Clogging
- Excess use of water
- Water leakage
- Weeds: Orobanche
- Marketing strategies



Agricultural Extension (?)



Irrigation Scheduling Common practices/POTATO

MARCI	н	APRIL		MAY		JUNE			
		7	7	7	7	7	7		
		6	8	10 9		7	6		
		18.00	18.00	18-00	18-00	18.00	18.00		
	MARCI	MARCH	MARCH APRIL	MARCH APRIL Image: I	MARCH APRIL MAY Image: March and the second state and the sec	MARCH APRIL MAY Image: Ima	MARCHAPRILMAYJUNEImage: Strain S		

Irrigation Scheduling Common practices/POTATO

	MARCH	1	APRIL		МАҮ		JUNE		JULY		AUGU	ST	
Planting/Harvesting date													
Irrigation starting/Ending date													
Irrigation interval (days)		7	7	7	7	7	7	7	7	7			
Irrigation duration (hours)		6	6	6	14	14	12	12	5	5			
Irrigation starting hour		19:00	19:00	19:00	19:00	19:00	19:00	19:00	19:00	19:00			

Irrigation Scheduling Common practices/CORN

	JULY		AUGUS	ST	SEPTE	MBER	остое	BER	NOVEMBE			
Planting/Harvesting date												
Irrigation starting/Ending date												
					_							
Irrigation interval (days)												
Irrigation duration (hours)	7	8	9	11	10	9	6	6	5			
Irrigation starting hour	18:00	18:00	18:00	18:00	18:00	18:00	18:00	18:00	18:00			

Irrigation Scheduling Common practices/SUGARBEET

	APRI	IL MAY			JUNE		JULY		AUGUS	т	SEPTEMBER		
Planting/Harvesting date													
Irrigation starting/Ending date													
Irrigation interval (days)		15	15	15	15	15	15	15	15	15	15	15	
Irrigation duration (hours)		6	7	8	10	12	13	15	15	15	10	8	
Irrigation starting hour		18:00	18:00	18:00	18:00	18:00	18:00	18:00	18:00	18:00	18:00	18:00	

Irrigation Scheduling Common practices/WHEAT

	JAN	1	FEB	MAI	R	АРБ	RIL	MAY		JUI	١E	JUL	Y	AUC	9	SEF	ост	NO\	DEC	
Planting/ Harvesti ng date															U					
Irrigation starting/ Ending date																				
Irrigation interval (days)							15		15											
Irrigation duration (hours)							15		15											
Irrigation starting hour							1	9:00	19	9:00										

Survey Output

Extension agents were trained on how to organize <u>work</u> (making contacts with municipalities, mayors, finding key farmers, etc...)

 They became more familiar with on field activities, Preparation of the farmers data base for the center
 Preparation of the training courses

 Staring point of Extension activities







Recommendations

- The available cadastral maps *to be* farmer-customized by surveyors on the ground to facilitate farmers recognition of their lands on papers.
- Training extension agents on good communication
- Continuous technical updating of the extension agents





