

## National Action Plan for the Improvement of the Olive Oil Sector in Lebanon

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Sep-03

Constraints	Solutions / remedies	Actions to be taken	Responsibility	Time frame	Pre-requisites
<b>High cost of production</b>	<b>Pruning</b>				
	1. proper pruning of trees	* Provision of mechanical pruning machines to cooperatives	Minagri, local NGOs (RMF, Fares Foundation, LebOlive, etc.), and cooperatives	Feb 2004 lending of available equipment at Minagri; new equipment bought in 2004 for distribution	Lists of cooperatives representing all regions that are ready to use the pruning equipment available (invitation to pilot demonstration in Oct 03 in South by ICU, and those attending could be provided with machinery)
	2. mechanical pruning to reduce time and labour cost	* Training of Ministry extension agents, skilled labour in the villages and with the cooperatives on the use of the machines	ICU in cooperation with RMF	In a total of 15 regions train 5-6 master trainers per region during Feb-Mar 2004	List of persons to be trained (from coops, Minagri and NGOs) and training schedule

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		* Information dissemination on the proper pruning period and practice on old and young trees	ICU, SRI, RMF, Minagri, etc	Brochures developed by Jan 2004 and distributed by Feb 2004	Methods of dissemination identified
		* Information needed on the number of olive cooperatives in the country	Minagri	Lists provided by Nov 03	
	<b>Appropriate fertilization</b>				
	1. Proper use of fertilizers	* Information dissemination on the proper type and period of fertilization of old and young trees	ICU, SRI, RMF, Minagri, etc	Brochures developed by Jan 2004 and distributed by Feb 2004	Methods of dissemination identified
		* Support in reducing cost of soil tests from accredited laboratories	LARI, IDAL, IRI	Agreements finalized by Dec 03	At least one lab identified in North, South and Chouf
		* Provide information in the form of demonstration plots / activities on alternative cost reducing fertilization methods	ICU in cooperation with Minagri and other NGOs and cooperatives	Establishment of demonstration plots in the 15 different regions starting Nov 03	Identification of plots

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	<b>Appropriate pest and disease control</b>				
	1. Peacock's eye disease	* Provide chemicals needed (Copper oxychloride) to growers, cooperatives, municipalities	Minagri, local NGOs (RMF, Fares Foundation, LebOlive, etc.) and cooperatives	Establishment of a system of distribution	Buying and distribution of chemicals not a priority since CuOCl is usually affordable by growers
		* Provide support in spraying (trucks, high volume sprayers, etc.)	Minagri, local NGOs (RMF, Fares Foundation, LebOlive, etc.) and cooperatives	Spraying during Nov/Dec (after harvest) of heavily infested areas.	Identify areas most in need (eg Koura)
		* Information dissemination on the proper fungicide application (for small scale and large scale application)	ICU, SRI, RMF, AUB, Minagri, etc	Brochures developed by Feb 2004	Methods of dissemination identified
	2. Olive fruit fly	* Provide pheromone traps for growers, cooperatives and municipalities	Minagri, local NGOs (RMF, Fares Foundation, LebOlive, etc.) and cooperatives	Bought by March 2004 and distributed by April 2004	Traps properly stored and used during the same year of purchase

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		* Identify a network of centres / laboratories for evaluation of the trapped insects	Minagri, supported by local NGOs (RMF, Fares Foundation, LebOlive, etc.) and cooperatives	Network identified by the end of Dec 2003	
		* Train and assign several staff members of the Ministry of Agriculture, Lebanese Agriculture Research Institute and, if possible, engineers from the cooperatives on insect identification and evaluation	ICU, LARI, AUB	Technicians trained by end of April 2004 (at least 15 trained per year over 3 years)	Simple binoculars provided to the centers or trainees
		* Information dissemination on simple methods for the determination of economic threshold levels by growers for chemical application	ICU, LARI, AUB	Pamphlets prepared and distributed by May 2004	Methods of dissemination identified
		* Information dissemination on type and method of insecticide application for control	ICU, LARI, AUB	Pamphlets prepared and distributed by May 2004	

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		* Information dissemination on the alternative non-chemical mass-trapping of the insects.	ICU, LARI, AUB	Pamphlets already available and to be distributed by May 2004	
	3. Olive moth	* Provide pheromone traps for growers, cooperatives and municipalities	Minagri, local NGOs (RMF, Fares Foundation, LebOlive, etc.) and cooperatives	Bought by March 2004 and distributed by April 2004	Traps properly stored and used during the same year of purchase
		* Identify a network of centres for insect catching evaluation in a network form	Minagri, supported by local NGOs (RMF, Fares Foundation, LebOlive, etc.) and cooperatives	Network identified by the end of Dec 2003	Same network as for olive fruit fly
		* Train and assign several staff members of the Ministry of Agriculture, Lebanese Agriculture Research Institute and, if possible, engineers from the cooperatives on insect identification and evaluation	ICU, LARI, AUB	Technicians trained by end of April 2004 (at least 15 trained per year over 3 years)	Simple binoculars provided to the centers or trainees
		* Information dissemination on type and method of insecticide application for control	ICU, LARI, AUB, SRI	Pamphlets already available and to be distributed by May 2004	

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	<b>Harvesting</b>				
	1. Mechanical harvesting	* Provision of mechanical harvesting machines to cooperatives (provided with the pruning machines)	Minagri, local NGOs (RMF, Fares Foundation, LebOlive, etc.), and cooperatives	Oct 03-Dec 03 lending of available equipment at Minagri; new equipment bought in 2004 for distribution	Lists of cooperatives representing all regions that are ready to use the harvesters available
		* Training of extension agents, skilled labour in the villages (students of tech.schools) and with the cooperatives on the use of the harvesting machines (a network of skilled labour)	ICU, Minagri, technical schools	Sept-Oct 04 training of at least 30 persons	
		* Information dissemination on the proper harvesting period and practice on old and young trees	ICU, SRI, RMF, Minagri, etc	Brochures developed and distributed by June 2004	Methods of dissemination identified
		* Awareness sessions to growers on the assessment of production costs and reduction of expenses due to the various techniques used.	ICU, SRI, RMF, Minagri, AUB. etc	May-July 2004; at least 10 sessions undertaken	Awareness sessions could be joint with the harvesting training sessions

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<b>Alternate bearing</b>	1. Proper pruning	Refer to cost reduction			
	2. Proper fertilization	Refer to cost reduction			
	3. Supplementary irrigation: When possible, 1-2 supplementary irrigations in summer recommended to reduce alternate bearing. A replacement of irrigation could be the application of urea dissolved in water on the foliage in summer when the seed is becoming woody (this could also replace summer nitrogen fertilization)	Action only when needed			

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<b>Poor oil quality</b>	Awareness of producers of importance of quality and the different international classification of oil	* Awareness campaigns for growers, cooperatives, municipalities, policy makers and the general public in the media as to the different quality classes of olive oil and their relative international prices	IDAL, Minagri, Leb. Army, ICU, SRI, RMF, AUB. etc	on-going campaigns starting Jan 2004	
		* Development of information pamphlets, taste panels, national olive oil fairs, and free testing campaigns	IDAL, Minagri, Leb. Army, ICU, SRI, RMF, AUB. etc	Free testing campaigns during Feb 2004 and July 2004 (comparative testing); National olive oil fairs	Agreements with IRI, AUB and LARI labs for a set of samples per cooperative
	<b>In the field</b>				
	1. Olive fruit fly control	Refer to cost reduction			
	2. Proper harvesting period	* Awareness campaigns and information dissemination to the growers, cooperatives and mill owners on the optimum olive harvesting period, with the relative advantages / disadvantages of each harvesting period	ICU, SRI, RMF, Minagri, etc	Brochures developed and distributed by June 2004; awareness campaigns in media during Aug and Sept 2004	Methods of dissemination identified; Media identified



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	3. Proper harvesting method	* Awareness campaigns with the growers, and cooperatives on the best methods for harvesting olives	ICU, SRI, RMF, Minagri, etc	Brochures developed and distributed by June 2004; techniques disseminated with other mechanical harvesting techniques	Methods of dissemination identified
		* Provision of nets for fruit collection	Minagri, local NGOs (RMF, Fares Foundation, LebOlive, etc.), and cooperatives	(refer to reducing cost)	Some nets provided with the mechanical harvesters
		* Provision of mechanical harvesters and skilled labour for harvesting (refer to reducing cost)	Minagri, local NGOs (RMF, Fares Foundation, LebOlive, etc.), and cooperatives	(refer to reducing cost)	
	4. Limited harvesting duration	* Use of mechanical harvesters (refer to above)	no action needed	no action needed	

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	5. Separation of infected and clean fruits	* Awareness campaigns with the growers, cooperatives and mill owners on the importance of the separation of clean from infected fruits (despite extra labour costs)	ICU, SRI, RMF, Minagri, etc	Brochures developed and distributed by June 2004; awareness campaigns in media during Aug and Sept 2004	Methods of dissemination identified; Media identified
	6. Quick and proper method of transport to the mill	* Awareness campaigns with the growers, cooperatives and mill owners on the importance of carrying harvested olives in open plastic boxes and in not storing them over 24 hours before pressing	ICU, SRI, RMF, Minagri, etc	Brochures developed and distributed by June 2004; awareness campaigns in media during Aug and Sept 2004	Methods of dissemination identified; Media identified

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	<b>At the mill</b>				
	1. Waiting period between harvest and pressing	<b>* Training of mill owners on mill management skills:</b>			
	2. Separation of leaves and fruits and washing of fruits	1. Record keeping for all growers (land area owned, number of trees, olive amount received, status of olives received, oil amount pressed, quality of olives, test results on oil, amount of oil/cash paid, date of entry and departure, )	ICU, SRI, RMF, Minagri, ELCIM, etc.	Training sessions for mill owners starting in October 2003 and on-going once per month till Jan 2004;	
	3. Cleanliness of filters	2. Scheduling of appointments, time estimation, rejection of olives, etc.		Training sessions repeated twice per month for different regions in August 2004 till October 2004	
	4. Conditions of machinery and equipment	3. Sanitary conditions of the mill (smoking, eating, dirt, movement, other material stored, presence of animals and insects, )		Brochures developed and distributed starting July 2004;	

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	5. Cleanliness of rooms and environment	4. Cleanliness and maintenance of machinery: changing of filters between presses, cleaning equipment at the end of the season, cleaning equipment at the beginning of the season, replacing oil, filters and damaged equipments during or at the end of the season, etc.		Awareness campaigns in media during Aug and Sept 2004	
		5. Record keeping for cost and maintenance schedule of equipment of the mill			

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		* <b>Renovation of old mills:</b>			
		1. Assessment of the status of all mills nation-wide: Chouf completed, South almost completed, all North needs assessment (Jbeil, Batroun, Zghorta, Koura, Akkar,)	Minagri, SRI, ICU, local NGOs	Assessment in 2 phases: 1) questionnaires to mill owners and mapping of mills; completed by Mar 2004; 2) evaluation of around 50-60 mills through visits by experts, completed by June 2004	
		2. Provision of support to renovate the mills (at least those of cooperatives and those critical for certain regions). Renovation includes adding tiles on the floor and walls, locating storage rooms, covering oxidized metal of the equipment with stainless steel, elimination alternatives to extraction residues, etc	Ministry of Finance, High Relief Commission, ELCIM, World Bank, donor agencies	Renovation of 20 mills between June- Sept 2004; renovation of 20 other mills in 2005 and another 20 in 2005	Identified mills for renovation should cover a balanced distribution in the regions and a proper network of olive areas; technical support provided by ICU and ELCIM experts

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	<b>In storage</b>				
	1. Containers used	* Provision of stainless steel containers	Ministry of Finance, High Relief Commission, ELCIM, World Bank, donor agencies	Action could be part of the renovation of the mills (June- Sept 04; 2005 and 2005)	Credits could be provided instead of free provision; Size to be determined by mill capacity
	2. Conditions of storage (air, temp, light, material)	* Information dissemination on decantation and conditions of storage in the mill and at home	ICU, SRI, RMF, Minagri, ELCIM, etc.	Training sessions for mill owners starting in October 2003 and on-going once per month till Jan 2004; Training sessions repeated twice per month for different regions in August 2004 till October 2004	
		* Rehabilitation of storage rooms at the mills (refer to mill rehabilitation above)	Ministry of Finance, High Relief Commission, ELCIM, World Bank, donor agencies	(refer to mill rehabilitation above)	
		* Support in testing the oil upon pressing and after months of storage (refer to chemical tests)	IDAL, Minagri	Free testing campaigns during Feb 2004 and July 2004 (comparative testing); National olive oil fairs	Agreements with IRI, AUB and LARI labs for free set of samples per cooperative (refer to poor oil quality section)

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<b>Marketing: Bottling and labelling facilities</b>	Network of local bottling facilities needed	* Assessment of the presence of bottling and labelling facilities in the various olive growing regions and in Beirut (mapped)	ICU, SRI, RMF, Minagri, etc.	Survey and mapping of facilities available May-July 2004	
		* Provision of bottling and labelling facilities to cooperatives when not easily available in the vicinity.	Ministry of Finance, High Relief Commission, ELCIM, World Bank, donor agencies	Starting 2004 and on-going over the coming 3 years	Credits could be provided instead of free provision; Location of facilities developed based on the survey results
	Information provided for growers, cooperatives, mill owners and processors, merchants on the nutritional labelling requirements in the local and external markets.	* Training on label design and image	ICU, SRI, RMF, Minagri, etc.	Workshops in Beirut and 4 different regions undertaken during May-July 2004	

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		* Information dissemination on labelling requirements in the local and external markets.	ICU, SRI, RMF, Minagri, etc.	Brochures to be developed and distributed by June 2004	
		* Support in testing of oil (refer to chemical tests)	IDAL, Minagri, IRI, AUB, LARI	Agreements for reduced test costs finalized by Jan 2004	
<b>Marketing: Quality testing</b>	<b>Chemical tests:</b>				
	1. Identify accredited laboratories for testing	* Identify specific laboratories to be assigned at the national level for testing (IRI, AUB, Deir el-Qamar,)	IDAL, Minagri, IRI, AUB, LARI, ICU	Lists finalized by Dec 2004	
	2. Reduce costs of tests in these laboratories	* Make agreements with these laboratories to reduce costs for testing (various tests are needed, some basic simple tests, others more complicated), or subsidize through IDAL the tests	IDAL, Minagri, IRI, AUB, LARI	Agreements for reduced test costs finalized by Jan 2004	



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	3. Provision of small scale testing equipment (acidity and peroxide) for mills and cooperatives	* Mapping of the available small oil testing laboratories with mills and cooperatives	ICU, SRI, RMF, Minagri, etc.	Survey of testing facilities available by Mar-Apr 2004 with the assessment of mills	
		* Provision of small scale testing equipment to the cooperatives and mill owners (acidity and peroxide)	Minagri, supported by local NGOs (RMF, Fares Foundation, LebOlive, etc.) and cooperatives	On-going based on needs and location identified by survey	
		* Assess the characteristics of the Lebanese olive oil from the different Lebanese regions / villages (in preparation for the Geographic Indications or Appellations	LARI, IRI, AUB, Minagri, Ministry of Econ.& Trade, IDAL	Tests of oil profiles from different regions starting Jan 2004 and on-going, covering at least 10 regions per year	Cost could be incorporated within the cost of free chemical tests
	<b>Organoleptic tests:</b>				
	1. Complete the training of the national tasting panel	* Identify the exact requirements for obtaining the certification of the national tasting panel	ICU, SRI, RMF, Minagri, etc.	Information needed completed by Dec 2003	

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	2. International recognition of the national organoleptic taste panel	* Support in the completion of the training and certification of the locally trained group	ICU, SRI, RMF, Minagri, IDAL, etc.	Certification should be completed by Sep 2004	
	3. Train new tasters	* Identify another group and organize an organoleptic training in the following year	Minagri, supported by local NGOs (RMF, Fares Foundation, LebOlive, etc.) and cooperatives	Within 2004	
<b>Low local olive oil consumption level</b>	Awareness of consumer raised on importance of olive oil and quality	* Media campaigns on the importance and health benefits of olive oil and the dangers of poor quality olive oil	Minagri, Ministry of Econ&Trade, IDAL, ICU, SRI, RMF, etc.	Brochures developed and distributed by June 2004; awareness campaigns in media during Aug and Sept 2004	Methods of dissemination identified; Media identified
		* Promotion of olive oil through the organization and participation in national and health food events and fairs	Minagri, Ministry of Econ&Trade, IDAL, ICU, SRI, RMF, etc.	Establishment of at least 2 events during 2004	Events to be decided with the national NGOs and donors
<b>Local awareness of international market needs</b>	Awareness raised on international labelling requirements, market niches, prices	* Establishment of a national olive oil board the role of which includes:	Minagri, Ministry of Econ&Trade, and other concerned institutions, Council of Ministers		
		1. Participation in the IOOC meetings and payment of membership dues	Minagri	Legally finalized by end of 2005	Minsitry of Finance provides membership fees due

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		2. Providing information on production, prices, quality, international markets, etc. through websites, info sheets, media campaigns, etc	Minagri, SRI, ICU, ELCIM, etc.	Development of a national Lebanese olive oil website completed by end of 2004; hosted by Minagri???	Data collected and available information provided freely and openly to website
		* Training of potential exporters on nutritional labelling requirements	ICU, SRI, RMF, Minagri, etc.	At least 2 workshops undertaken during May-July 2004	
<b>International publicity of Lebanese olive oil</b>	Awareness of international consumer and markets on the high quality of Lebanese oils from different regions	* Support in participation in international fairs	IDAL, SRI, RMF, Minagri, ICU, etc.		
		* Publicity in international food magazines, publications, TV networks	IDAL, RMF, SRI, Minagri	At least 2 intensive campaigns in US and north European magazines / newspapers by the end of 2004	
		* Invitation of international journalists to visit Lebanon on olive oil tasting tours and national food shows	IDAL, RMF, SRI, Minagri	One event at least by end of 2004	Event could be associated with the international chambers of commerce, business and restaurant associations and tourism

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<b>Regulatory framework</b>	Mill registration and certificate of origin of oil	* Document and assess present registration related to mill registration in the different Lebanese regions			
		* Document and evaluate the regulations regarding the issuing of the certification of origin for olive oil			
		* Develop a more adapted regulation regarding the certificate of origin that allows the traceability of the oil source (quality control) and protect the local regional source of oil (value added)			
		* Work on the system of Geographic Indications or Appellations d'Origine Controlle for local olive oil			

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	Processing of oil extraction residues	* Document and evaluate the present regulations regarding the disposal of oil extraction residues			
		* Assess the present regulations with respect to the present status and capabilities of the mills in Lebanon			
		* Propose applicable regulations that are permanent or temporary until alternatives are available for mills			
		* Propose an action plan and sources of funding for alternative waste disposal methods			