



WPRS *International Organisation for Biological and Integrated Control of Noxious
Animals and Plants: West Palearctic Regional Section*
SROP *Organisation Internationale de Lutte Biologique et Intégrée contre les Animaux et les
Plantes Nuisibles Section Régionale Ouest Palearctique*

IOBC/WPRS Commission «IP Guidelines and Endorsement»

Crop specific evaluation scheme for regional guidelines (Text version of 30.03.2004)

OLIVES

Objectives and Procedures

Having passed the first evaluation by the Commission (evaluation scheme for the general fulfilment of the requirements of IOBC guidelines I and II) the documents submitted by the applying regional organisation are evaluated in detail for conformity with guidelines III by 2 specialists (referees) nominated by the respective crop specific IOBC working group. One of the referees will be located, whenever possible, in the same country of the applying organisation and should be familiar with the specific legal and agronomic conditions of the region concerned. The second referee will be located in another country.

This evaluation scheme has the objective to allow a standardised evaluation and hence to make the evaluation process transparent for all parties involved. Referees are free to incorporate additional evaluation criteria if necessary.

Synoptic Statement of Referee

IOBC no.	
Name and country of applying organisation	
Referee	Date of evaluation

I recommend

Acceptance without alterations

Rejection based on points no.

Acceptance with the following proposed alterations to be suggested to the applying organisation (separate page)

Date and signature of referee

1. DEFINITION OF INTEGRATED PRODUCTION

Do the guidelines clearly define the objectives of Integrated Production concerning

- a) the promotion of production systems which respect environment, are economically viable and sustain the multiple functions of agriculture?

1 yes

0 partly

-1 no

- b) the pursuit of sustainable production of healthy, high quality crops whilst minimising pesticide residues?

1 yes

0 partly

-1 no

- c) the protection of farmers` health while handling agrochemicals?

1 yes

0 partly

-1 no

- d) the promotion and maintenance of a high biological diversity in the agro-ecosystems and their surroundings?

1 yes

0 partly

-1 no

- e) the priority of employing natural regulation mechanisms?

1 yes

0 partly

-1 no

- f) the preservation and promotion of long-term soil fertility?

1 yes

0 partly

-1 no

- g) the minimisation of water, soil and air pollution?

1 yes

0 partly

-1 no

Chapter 1

Maximum number of points	7
Number of points achieved	

2. PROFESSIONALLY TRAINED, ENVIRONMENTALLY AND SAFETY CONCIOUS GROWERS

The farmer/farm manager has to

a) be professionally qualified and educated to manage the farm according to IP-principles;

yes

no

b) participate in basic training courses and participate actively in regular updating courses offered by IP organisations/ or official extension services;

yes

no

c) be member of an officially recognised IP association;

yes

no

d) make available for inspections his complete farm records on the essential farm operations, such as fertilization, pesticide application, soil management, irrigation, according to the rules of the IP association;

yes

no

Chapter 2

Maximum number of points	0
Number of points achieved	
Number of unacceptable points	

3. CONSERVING THE OLIVE-GROVE ENVIRONMENT

3.1	The conservation and promotion of the native species of animals and plants in and around the olive groves are required	yes	0
		no	U
3.2	The guidelines require that from the entire farm surface* (excluding forests) ecological farm infrastructures (ecological compensation areas) cover	> 5%	3
		5 %	0
		< 5% or	
		not mentioned	U
*or are covered by a program at the municipal level according to the Technical Guideline II (3rd edition, 2004)			
3.3	Is the list of measures/options to enhance actively biodiversity	satisfactory ?	3
		poor ?	-1
		lacking ?	U
3.4	At least two ecological options are required to promote biodiversity	yes	0
		no	U
3.5	The planting of olive trees at the border of a ditch or open water channel (< 10m distance) is	forbidden	5
		not recommended	1
		not mentioned	-5

Chapter 3

Maximum number of points	11
Number of points achieved	
Number of unacceptable points	

4. SITE, ROOTSTOCKS, CULTIVARS AND PLANTING SYSTEMS FOR NEW OLIVE GROVES

4.1 Are the basic requirements for creating new plantations pointed out ?	yes	0
	partly	-1
	no	U
4.2 Are disease resistant/tolerant cultivars recommended?	yes	3
	no	0
Are less susceptible cultivars recommended in areas where the risk of olive fly (<i>Bactrocera oleae</i>) attack is high?	yes	1
	no	-1
4.3 Are planting systems allowing reduction of pesticide use, non-chemical weed control, erosion control (i.e. plant density < 300 plant/ha)	required ?	3
	recommended ?	0
	not mentioned ?	-3
4.4 Is a training system facilitating the general objectives of sustainable production (high quality, longevity, etc.) required ?	yes	0
	no	U
4.5 Is a soil analysis before plantation (granulometry, organic matter, major macro and micro – Mg and Borum) required ?	yes	0
	no	U
4.6 Is an increase of organic matter before and after plantation, where necessary (OM content e.g. < 1%),	required ?	0
	not required ?	U
4.7 Is the elimination of sources of disease inoculum recommended?	yes	1
	no	-1
4.8 Are large-scale melioration (e.g., excavations and land-fillings) examined critically with respect of their environmental impact	yes	1
	no	-1
4.9 Is chemical soil sterilisation before planting prohibited?	yes	0
	no	U

Chapter 4

Maximum points	9
Points achieved	
No. unacceptable	

5. NUTRITION AND SOIL MANAGEMENT

5.1 Are periodical soil and/or leaf analyses required?	yes no	0 U
5.2 Does the guideline set out a clear method to determine plant nutrient requirements (sampling, analytical procedures and rules for decision making)?	yes no	0 U
5.3 Are the mandatory major nutrients (P, K, Mg) of the soil analysis specified ?	yes no	2 0
5.4 Is the allowed maximum N input per ha and year and per ton of olives harvested	\leq 8 kg \leq 10 kg \leq 12 kg > 15 kg	3 0 -3 U
5.5 Is the period of N application limited and defined ?	yes no	0 U
5.6 Is the antagonism K-MgO taken into account by providing MgO in proper quantity?	yes no	0 -1
5.7 Do the guidelines forbid the use of not analysed or possibly hazardous off-farm organic fertilizers and waste compost (heavy metals, pathogens)?	yes no	0 U
<i>The referee has to consider the pluviometrical characteristics of the region concerned when evaluating this chapter with respect to the potential for green cover</i>		
5.8 Are measures for active soil protection (erosion, compaction leaching of nutrients) adequately addressed and required ?	yes partly no	0 -1 -3
5.9 Is a green cover over winter time strongly advised?	Yes No	0 U
5.10 Is a permanent or temporary green cover in areas with sufficient precipitation and adequate soil types	mandatory ? recommended ? not mentioned ?	3 0 -3
5.11 Is an appropriate soil tillage recommended (superficial, frequent, etc.)?	yes no	3 0
5.12 The application of herbicides on the entire surface is	forbidden permitted	0 U

5.13 In case of soil preparation for harvest under the canopy, the use of residual herbicides with medium persistence is permitted, but their application has to be restricted to early autumn

yes	0
no	U

5.14 Post-emergence applications of herbicides are permitted in any case only after harvest

yes	0
no	U

Chapter 5

Maximum points	11
Points achieved	
No. unacceptable	

6. IRRIGATION

6.1 The guidelines emphasise the importance of an adequate soil moisture and the ecological danger of over-irrigation

yes	1
partly	0
no	-1

6.2 The regular observation of rainfall is required where irrigation is necessary in order to regulate the water supply

yes	0
no	U

6.3 The supply of water is calculated according to the requirements of the olive tree, the soil moisture balance and the water storage capacity, wherever it is possible

yes	0
no	U

6.4 Do the guidelines define the maximum water volume not to be surpassed (in any case < 250 mm)?

yes	0
no	U

6.5 Particular attention is paid to water quality (conductivity, Cl-content and content of polluting agents)

yes	1
no	-1

Total chapter 6

Maximum points	2
Points achieved	
No. unacceptable	

7. CANOPY MANAGEMENT

7.1 Is an optimal balance between foliage and olive yield emphasised?

yes	0
no	-1

7.2 Is a good canopy management emphasised for proper ventilation and penetration of pesticides ?

yes	2
no	0

7.3 Is severe pruning forbidden except in cases of canopy renewal or of strong infestation by *Saissetia oleae* ?

yes	1
no	-1

7.4 Is disinfecting of pruning equipment recommended to avoid the spread of disease infections?

yes	1
no	-1

7.5 Is a mechanical destruction of healthy pruning materials recommended ?	yes	1
(except in case of <i>Verticillium dahliae</i> infection)	no	-1

Total chapter 7

Maximum points	5
Points achieved	
No. unacceptable	

8. INTEGRATED PLANT PROTECTION

8.1 Is the concept of indirect (preventive) and direct plant protection measures properly addressed and evident in the general plant protection concept of the guideline ?	yes	0
	no	U

8.2 Is the regional list of important key pests and diseases that require regular attention	adequate ?	0
	too large ?	-2
	missing ?	U

Indirect (preventive) plant protection measures :

8.3 Are the implemented indirect plant protection measures adequately covered? (e.g. adequate choice of varieties, clones, training systems; reduction of N-input; proper canopy management) enhancing biodiversity at floristic and faunistic level; active protection of natural enemies)	yes	3
	no	-3

8.4 Does the list of essential antagonists (beneficials) to be protected sufficiently reflect the present scientific knowledge ?	yes	2
(at least 2 key natural enemies must be identified)	no	-2
	no list established	U

8.5 The introduction of parasitoids of scale insects in abandoned olive groves where scale insects require regular attention is	required	2
	mentioned	0
	not mentioned	-2

Risk assessment and monitoring

8.6 Is the importance and necessary use of monitoring systems and related official services, diagnostic tools, forecasting systems, economic thresholds, properly emphasized ?	yes	0
	no	U

(The quality of these tools to be verified during the visit of the organisation)

8.7 Do the guidelines provide a list of clearly defined tolerance levels/economic thresholds for key pests?	yes	2
	no	-2

8.8 Do the values given in the list mentioned in point 8.7 reflect the present state of the art ?	yes	2
	partly	0
	no	-2

Choice of direct plant protection measures:

8.9 Is preference for selective control methods explicitly requested? (e.g. (biological, biotechnical, physical)	yes	0
	no	U

8.10 Do the guidelines provide an adequate list of highly selective	yes	2
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control methods to be used with priority?	no	<input type="text" value="- 2"/>
8.11 Does the list of pesticides clearly differentiate between those that can be applied without restrictions (e.g. "green" list) and those that can only be applied with restrictions/permission (e.g. "yellow" list) ?	yes	<input type="text" value="0"/>
	no	<input type="text" value="U"/>
8.12 Do the lists of pesticides to be used with restrictions («yellow list») define clearly the indications (i.e. against what pest or disease under what conditions and how often)	yes	<input type="text" value="0"/>
	no	<input type="text" value="U"/>

8.13 Are the pesticides with the following characteristics

	forbidden ?	permitted with clear restrictions ?	permitted ?
High human toxicity	<input type="text" value="3"/>	<input type="text" value="0"/>	<input type="text" value="- 5"/>
Risk of developing resistance	<input type="text" value="1"/>	<input type="text" value="0"/>	<input type="text" value="- 3"/>
Long persistence and high mobility	<input type="text" value="3"/>	<input type="text" value="0"/>	<input type="text" value="- 3"/>
Toxic or middle-toxic for beneficials organisms			
honey-bees	<input type="text" value="2"/>	<input type="text" value="0"/>	<input type="text" value="- 2"/>
earthworms	<input type="text" value="2"/>	<input type="text" value="0"/>	<input type="text" value="- 2"/>
2 key-antagonists listed (point 8.4)	<input type="text" value="2"/>	<input type="text" value="0"/>	<input type="text" value="- 2"/>
<i>Insecticides and acaricides:</i>			
Pyrethroids (exception made for use in attractive traps or with the protein and/or pheromone bait system)	<input type="text" value="0"/>	<input type="text" value="U"/>	<input type="text" value="U"/>
Broad-spectrum insecticides (e.g. organo-phosphates, certain carbamates) without precise indication and maximum number of applications	<input type="text" value="3"/>	<input type="text" value="- 3"/>	<input type="text" value="U"/>
<i>Fungicides</i>			
with high risk of resistance development	<input type="text" value="2"/>	<input type="text" value="0"/>	<input type="text" value="U"/>
<i>Herbicides</i>			
Toxic, water polluting or very persistent herbicides (e.g. Diquat, Paraquat)	<input type="text" value="0"/>	<input type="text" value="U"/>	<input type="text" value="U"/>
Residual herbicides with a DT < 7 months (their use must be clearly specified and the risk of residues in olive oil be monitored; if not = U)	<input type="text" value="3"/>	<input type="text" value="- 3"/>	<input type="text" value="U"/>
Residual herbicides with a DT > 7 months	<input type="text" value="0"/>	<input type="text" value="U"/>	<input type="text" value="U"/>
<i>Other pesticides with unacceptable characteristics:</i>			
	<input type="text" value="0"/>	<input type="text" value="U"/>	<input type="text" value="U"/>
	<input type="text" value="0"/>	<input type="text" value="U"/>	<input type="text" value="U"/>

8.14 Is the permitted maximum amount of Cu (kg/ha/year) defined (as long as the use Cu is permitted by law)	Not permitted	3
	Defined	0
	Not defined	-3
8.15 Is the use of localised applications with protein baits mixed or pheromone baits with insecticides against <i>Bactrocera oleae</i> strongly recommended?	yes	3
	not mentioned	0
8.16 Is the use of food and sex attractant traps impregnated with insecticides (attract & kill technique) against <i>Bactrocera oleae</i> recommended?	yes	3
	not mentioned	0
8.17 Is the use of <i>Bacillus thuringiensis</i> against <i>Prays oleae</i> and <i>Margaronia unionalis</i> strongly recommended, where effective?	yes	3
	not mentioned	0
8.18 Are cultural methods for <i>Pollinia pollini</i> and entomophagous insects in combination with cultural methods for scale insects (<i>Saissetia oleae</i> , <i>Aspidiotus nerii</i> etc.) recommended?	yes	3
	not mentioned	0
8.19 The safe-to-harvest intervals are extended compared to the intervals required by law and taking also into account the risks of concentration?	yes	2
	no	0

Total chapter 8

Maximum points	51
Points achieved	
No. unacceptable	

9. EFFICIENT AND SAFE APPLICATION METHODS

9.1 Is an optimal application technique required and specifications given (defined volume of water delivered according to the phenological stage of the olive trees) ?	yes	3
	no	-3
9.2 Are the olive growers obliged to calibrate the spray equipments at least at the beginning of each season ?	yes	0
	no	U
9.3 Is a mandatory service check-up of the equipment by an authorised service centre at least every 4 years required ?	yes	0
	no	U
9.4 The gradual introduction of less polluting spraying techniques (e.g. automatic flow designs etc.) is	required	3
	recommended	1
	not mentioned	-3
9.5 Is the applications by means of aircraft or helicopter forbidden (exceptions accepted when official scientific studies prove that no ecologically safer alternatives are available) ?	yes	0
	no	U

Total chapter 9

Maximum points	6
Points achieved	
No. unacceptable	

10. HARVEST AND OLIVE QUALITY

- 10.1 Is the correct timing of harvest defined? yes

0
U

no

U

- 10.2 Can olives be harvested only directly from the tree or after artificial or natural dropping on nets (in case of natural dropping the olives have to be collected at minimum weekly) yes

0
U

no

U

- 10.3 Have the olive fruits falling on the ground to be managed separately and not be IP labelled in any case ? yes

0
-3

no

-3

- 10.4 The interval between harvest and milling has to be minimised and recommended in regional guidelines (a maximum interval of 4 days is required with exception for special conditions to be clearly defined and justified) Required

3
1
-3

Recommended
not mentioned
- 10.5 Harvest containers must be rigid and open (bags are not allowed) and have to be stored in dry and hygienic conditions avoiding completely the presence/contact with hydrocarbons (e.g. gasoline). yes

0
U

no

U

- 10.6 Do regional guidelines include specific recommendations about prevention of *Pseudomonas* infections on olives damaged by mechanical harvesting? yes

0
-3

no

-3

Total chapter 10

Maximum points	3
Points achieved	
No. unacceptable	

Summary of scores of individual chapters

	Maximum points possible	Points achieved	No. of unacceptable points	Comments made (x)
1 Definition	7			
2 Commitment of the farmer	0			
3 Conserving the olive grove environment	11			
4 Site, rootstocks, cultivars, planting system	9			
5 Nutrition and soil management	11			
6. Irrigation	2			
7. Canopy management	5			
8. Integrated Plant Protection	51			
9. Efficient and safe application methods	6			
10 Harvest and olive quality	3			
All chapters	105			

Remarks of referee: