

List of Agrochemicals to be monitored for the grape season 2010-2011

Sr. No.	Chemicals	Harmonized EU-MRL (mg/kg) <u>updated on 11th October 2010</u>	Status in EU under Directive 91/414/EEC
I) Organochlorine			
1.	Aldrin (Aldrin and dieldrin combined expressed as dieldrin)	0.01*	Out/Banned
2.	Chlordane (cis & trans)	0.01*	Out/Banned
3.	<u>Chlorothalonil</u>**	1.00	In
4.	DDT (all isomers, sum of p,p'-DDT, o,p'-DDT, p,p'-DDE and p,p'-TDE (DDD) expressed as DDT)	0.05*	Out/Banned
5.	<u>Dicofol</u>** (sum of p, p' and o,p' isomers)	2.00	Out/Substance fulfilling criteria Annex VI Reg 1490/2002
6.	Dieldrin (see Aldrin)	0.01*	Out/Banned
7.	Endosulphan (All isomers, sum of <i>alpha</i> - and <i>beta</i> -isomers and endosulphan sulphate expressed as endosulphan)	0.50	Out
8.	Endrin	0.01*	Out/Banned
9.	HCH (sum of isomers, except the <i>gamma</i> isomer)	0.01*	Out/Banned
10.	Heptachlor (sum of heptachlor and heptachlor epoxide expressed as heptachlor)	0.01*	Out/Banned
11.	Lindane (<i>gamma</i> -HCH)	0.01*	Out
II) Organophosphorus			
12.	4-bromo-2-chlorophenol (metabolite of Profenophos)	0.01	Out
13.	Acephate	0.02*	Out
14.	Chlorfenvinphos	0.02*	Out/Essential use 835/2004
15.	<u>Chlorpyrifos</u>**	0.50	In
16.	Chlorpyrifos methyl	0.20	In
17.	Diazinon	0.01*	Out
18.	Dichlorvos	0.01*	Out
19.	Dimethoate (Including Omethoate)	0.02*	In
20.	Edifenphos	0.01	Out/ Never notified and authorized in the EU
21.	Ethion	0.01*	Out/Essential Use
22.	Etrimfos	0.01	Out
23.	Fenitrothion	0.01*	Out
24.	Fenthion (fenthion and its oxygen analogue, their sulfoxides and sulfone expressed as parent)	0.01*	Out
25.	Glufosinate-ammonium (sum of glufosinate, its salts, MPP and NAG expressed as glufosinate equivalents)	0.10*	In
26.	Glyphosate (and the metabolite aminomethylphosphonic acid)	0.50	In/ Extension of the expiry date for inclusion

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			(2010/77)
27.	<u>Iprobenphos</u>**	0.01	Out/ Never notified and authorized in the EU
28.	<u>Malathion</u>** (sum of malathion and malaaxon expressed as malathion)	0.02*	In
29.	Methamidophos	0.01*	Out
30.	Monocrotophos	0.01	Out
31.	Omethoate (refer to Dimethoate)	0.02*	Out
32.	Oxydemeton- methyl (sum of oxydemeton methyl and demeton-S-methylsulfone expressed as oxydemeton methyl)	0.01*	Out
33.	Parathion ethyl	0.05*	Out
34.	Parathion methyl (sum of Parathion methyl and paraoxon methyl expressed as Parathion methyl)	0.02*	Out
35.	Phenthoate	0.01	Out
36.	Phorate (sum of phorate, its oxygen analogue and their sulfones expressed as phorate)	0.05*	Out
37.	<u>Phosalone</u>**	0.05*	Out
38.	Phosphamidon	0.01*	Out
39.	Pirimiphos-methyl	0.05*	In
40.	Profenophos	0.05*	Out
41.	Propetamphos	0.01	Out
42.	Quinalphos	0.05*	Out
43.	Temephos	0.01	Out
44.	Thiometon	0.01	Out
45.	Triazophos	0.01*	Out/Essential use
III)	Synthetic Pyrethroids		
46.	Allethrin and Bioallethrin	0.01	Out
47.	Bifenthrin	0.20	Out/Application resubmitted for inclusion (Reg 33/2008)
48.	Cyfluthrin (including other mixtures of constituent isomers sum of isomers)	0.30	In
49.	Cypermethrin (including other mixtures of constituent isomers sum of isomers)	0.50	In (except beta isomer)
50.	Deltamethrin	0.20	In
51.	Ethofenprox (Etofenprox)	5.00	In
52.	Fenpropathrin	0.01*	Out
53.	Fenvalerate & Esfenvalerate (sum of RR & SS isomers)	0.10	Fenvalerate-Out Esfenvalerate-In/ Extension of the expiry date for inclusion (2010/77)

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54.	Fenvalerate & Esfenvalerate (sum of RS & SR isomers)	0.02*	Fenvalerate-Out Esfenvalerate-In/ Extension of the expiry date for inclusion (2010/77)
55.	<u>Lambda-cyhalothrin**</u>	0.20	In/ Extension of the expiry date for inclusion (2010/77)
56.	Permethrin (sum of isomers)	0.05*	Out
57.	<i>tau</i> - Fluvalinate	0.10	In/Initially not included by decision 2008/934. Inclusion voted in Jan 2011 following resubmission for inclusion according to Reg. 33/2008
58.	Transfluthrin	0.01	Not Included
IV)	Triazines		
59.	Atrazine	0.05*	Out
60.	Flufenzine	0.10	Out
61.	Simazine	0.20	Out/ Essential use 835/2004
V)	Acylamino acid fungicides		
62.	Benalaxyl including other mixtures of constituent isomers including Benalaxyl-M (sum of isomers)	0.20	Benalaxyl-In Benalaxyl-M-Pending
63.	<u>Metalaxyl ** & Metalaxyl-M</u>	2.00	Metalaxyl - In Metalaxyl -M-In/ Extension of the expiry date for inclusion (2010/77)
64.	Oxycarboxin	0.05*	Out
65.	Propanil	0.10*	Out/Application resubmitted for inclusion (Reg 33/2008)
VI)	Carbamates		
66.	Bendiocarb	0.01	Out
67.	Benfuracarb	0.05*	Out
68.	<u>Benomyl (see carbendazim)**</u>	0.30	Out/ Essential use 835/2004
69.	<u>Carbaryl**</u>	0.05*	Out
70.	Carbofuran (sum of carbofuran and 3-hydroxy-carbofuran expressed as carbofuran)	0.02*	Out
71.	Carbosulfan	0.05*	Out
72.	Dazomet (Methylisothiocyanate resulting from the use of	0.02*	Out/ Application

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	dazomet and metam)		resubmitted for inclusion (Reg 33/2008)
73.	Fenobucarb	0.01	Out/ Never notified and authorized in the EU
74.	Indoxacarb (sum of R and S isomers)	2.00	In
75.	Iprovalicarb	2.00	In/ Extension of the expiry date for inclusion (2010/77)
76.	<u>Methomyl** and Thiodicarb (sum of methomyl and thiodicarb expressed as methomyl)</u>	0.02*	Methomyl-In Thiodicarb-Out
77.	Propoxur	0.05*	Out
78.	Thiobencarb (Benthiocarb)	0.10*	Out
79.	Thiodicarb (see Methomyl)	0.02*	Methomyl-In Thiodicarb-Out
VII) Pyrimidines			
80.	Fenarimol	0.30	Out
VIII) Triazoles			
81.	Bitertanol	0.05*	Out/ Application resubmitted for inclusion (Reg 33/2008)
82.	Difenoconazole	0.50	In
83.	<u>Flusilazole**</u>	0.05	In
84.	<u>Hexaconazole**</u>	0.10	Out
85.	<u>Myclobutanil**</u>	1.00	In/Initially non included by decision 2008/934. Inclusion voted in Nov 2010 following resubmission for inclusion according to Reg. 33/2008
86.	Paclobutrazol	0.05	Out/ Application resubmitted for inclusion (Reg 33/2008)
87.	<u>Penconazole**</u>	0.20	In
88.	Propiconazole	0.05*	In
89.	Tebuconazole	2.00	In
90.	<u>Triadimefon ** (sum of triadimefon and triadimenol)</u>	2.00	Triadimefon-Out Triadimenol-In
IX) Imidazole			
91.	<u>Fenamidone**</u>	0.50	In
92.	<u>Iprodione**</u>	10.00	In
X) Oxazole			
93.	Famoxadone	2.00	In/ Extension of the

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XI) Phthalimide			
94.	Captafol	0.02*	Out/Banned
95.	<u>Captan**</u>	0.02*	In
XII) Benzimidazole			
96.	<u>Carbendazim (including Benomyl)**</u>	0.30	Carbendazim – In/ Approved with restrictions to crops and application rates Benomyl-Out/Essential use 835/2004
97.	Thiophanate-methyl	0.10*	In
XIII) Dithiocarbamates			
98.	<u>Dithiocarbamates (Mancozeb**, Maneb, Propineb**, Metiram, Thiram, Zineb** and Ziram** collectively estimated as CS2)</u>	5.00	All In except Zineb
XIV) Nicotinoids			
99.	Acetamiprid	0.01*	In
100.	<u>Clothianidin (see thiamethoxam)**</u>	0.60	In/Additional provisions to protect honey bees introduced by Directive 2010/21/EU
101.	<u>Imidacloprid**</u>	1.00	In/Additional provisions to protect honey bees introduced by Directive 2010/21/EU
102.	Thiacloprid	0.02*	In
103.	<u>Thiamethoxam (sum of thiamethoxam and clothianidin expressed as thiamethoxam)**</u>	0.50	In/Additional provisions to protect honey bees introduced by Directive 2010/21/EU
XV) Dinitrophenol			
104.	<u>Dinocap** (sum of dinocap isomers and their corresponding phenols expressed as dinocap) and Meptyldinocap</u>	0.05*	Dinocap-Out/Inclusion expired on 31/12/2009 Meptyldinocap-Decision Pending
XVI) Aliphatic Nitrogen fungicides			
105.	<u>Cymoxanil**</u>	0.20	In
XVII) Morpholine			
106.	<u>Dimethomorph**</u>	3.00	In

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107.	Tridemorph	0.05*	Out
XVIII) Substituted Thiourea			
108.	Diafenthiuron	0.01	Out
109.	<u>Diuron** (Diuron including all components containing 3,4- dichloroaniline moiety expressed as 3,4- dichloroaniline)</u>	0.05*	In
110.	Iodosulfuron-methyl (iodosulfuron-methyl including salts, expressed as iodosulfuron-methyl)	0.02*	In
111.	Isoproturon	0.05*	In/ Extension of the expiry date for inclusion (2010/77)
112.	Linuron	0.05*	In
113.	Lufenuron	1.00	In
114.	Pencycuron	0.05*	Out/ Application resubmitted for inclusion (Reg 33/2008)
XIX) Benzoylphenyl urea			
115.	Flufenoxuron	1.00	Out/ Application resubmitted for inclusion (Reg 33/2008)
XX) Strobilurin			
116.	<u>Azoxystrobin**</u>	2.00	In
117.	Kresoxim methyl	1.00	In
118.	Pyraclostrobin	1.00	In
119.	Trifloxystrobin	5.00	In
XXI) Phenyl pyrazole			
120.	<u>Fipronil** (sum of fipronil + sulfone metabolite (MB46136) expressed as fipronil)</u>	0.005*	In/Additional provisions to protect honey bees introduced by Directive 2010/21/EU
XXII) Pyrazole			
121.	<u>Fenpyroximate**</u>	0.30	In
XXIII) Nitrophenyl ether			
122.	Oxyfluorfen	0.10	Out/ Application resubmitted for inclusion (Reg 33/2008)
XXIV) Dinitroaniline			
123.	Pendimethalin	0.05*	In
124.	Trifluralin	0.10*	Out
XXV) Anilide/acetanilide and chloroacetanilide			
125.	Alachlor	0.05*	Out
126.	Butachlor	0.01	Out
127.	Carboxin	0.05*	Out/ Application

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128.	Flufenacet (sum of all compounds containing the N fluorophenyl-N-isopropyl moiety expressed as flufenacet equivalent)	0.05*	In
129.	Metolachlor (with S-Metolachlor)	0.05*	Metolachlor-Out S-Metolachlor-In
130.	Novaluron	0.01*	Pending/Extension provisional authorization (2009/579)
XXVI) Miscellaneous group of chemicals			
131.	<u>1-Naphthylacetic acid (alphanaphthyl acetic acid)**</u>	0.05*	Out/ Application resubmitted for inclusion (Reg 33/2008)
132.	<u>2,4-D (sum of 2,4-D and its esters expressed as 2,4-D)**</u>	0.05*	In/ Extension of the expiry date for inclusion (2010/77)
133.	6-Benzyl adenine	0.01	In/ Initially non included by decision 2008/941. Inclusion voted in November 2010 following resubmission for inclusion according to Reg. 33/2008
134.	Abamectin (sum of avermectin B1a, avermectinB1b and delta-8,9 isomer of avermectin B1a)	0.01*	In
135.	Azadirachtin	1.00	Out/ Application resubmitted for inclusion (Reg 33/2008)
136.	Bifenazate	0.01*	In
137.	<u>Buprofezin**</u>	1.00	In/ Initially non included by decision 2008/771. Included as from 1 Feb. 2011 following resubmission for inclusion according to Reg. 33/2008
138.	Cartap hydrochloride	0.01	Out
139.	<u>Chlormequat (CCC)**</u>	0.05*	In
140.	Diflubenzuron	1.00	In
141.	<u>Homobrassinolide</u>	0.01†	Not mentioned
142.	Diquat	0.05*	In/ Extension of the expiry date for inclusion (2010/77)

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143.	Dithianon	3.00	Out/ Application resubmitted for inclusion (Reg 33/2008)
144.	Dodine	0.20*	In/ Initially non included by decision 2008/934. Included as from 1 June 2011 following resubmission for inclusion according to Reg. 33/2008
145.	<u>Emamectin Benzoate**</u>	0.05	Decision Pending
146.	Ethephon	0.70	In
147.	Fenazaquin	0.20	Out/ Application resubmitted for inclusion (Reg 33/2008)
148.	Flubendiamide	0.01*	Decision Pending
149.	<u>Forchlorfenuron (CPPU)**</u>	0.05*	In
150.	Fosetyl-Al (sum fosetyl + phosphorous acid and their salts, expressed as fosetyl)	100.00	In
151.	<u>Gibberellic acid**</u>	5.00	In
152.	Hexythiazox	1.00	Out/ Application resubmitted for inclusion (Reg 33/2008)
153.	Hydrogen cyanamide (Cyanamide including salts expressed as cyanamide)	0.05*	Out/ Application resubmitted for inclusion (Reg 33/2008)
154.	Isoprothiolane	0.01	Out
155.	Mandipropamid	2.00	Pending/Extension provisional authorization (2009/579)
156.	Mepiquat	0.30	In
157.	Metribuzin	0.10*	In
158.	Milbemectin (sum of MA4+8,9Z-MA4, expressed as milbemectin)	0.05*	In
159.	Oxadiazon	0.05*	In
160.	<u>Paraquat**</u>	0.02*	Out
161.	Propargite	7.00	Out/ Application resubmitted for inclusion (Reg 33/2008)
162.	Pyriproxyfen	0.05*	In
163.	<u>Spinosad (sum of Spinosyn A+D)**</u>	0.50	In
164.	Spiromesifen	0.02*	Pending/Extension provisional authorization (2009/579)

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165.	Trichlorfon	0.50	Out
166.	Tricyclazole	0.05*	Out
167.	Uracil	1.00†	Not mentioned
XXVII) Inorganic			
168.	Cadmium	0.05#	Heavy metal contaminant
169.	Copper compounds (all copper fungicides as elemental Cu; Bordeaux Mixture, Copper oxychloride, Copper hydroxide)**	50.0	In
170.	Lead	0.20#	Heavy metal contaminant
171.	Sulphur	0.00	Sulphur-In Lime sulphur-Out Listed in Annex 4 of EU‡

* EU-MRL set at LOQ (mg/kg) as per

http://ec.europa.eu/sanco_pesticides/public/index.cfm?event=substance.selection

† These are natural products. EU-MRL does not exist for these chemicals. Hence, their MRL is set at the LOQ of the method developed and validated at the National Referral Laboratory of the NRC for Grapes.

** Pesticides registered for use in grapes for control of insect pests, diseases and weeds approved by the CIB of Ministry of Agriculture, Government of India, New Delhi under the Insecticides Act 1968

#Reference: Commission Regulation (EC) No 1881/2006 of 19th December 2006

‡ Annex IV: Active substances of plant protection products evaluated under Directive 91/414/EEC for which no MRLs are required because residues arising from use of the active substance are indistinguishable from natural background levels or other sources.

In = Chemicals authorized in EU

Out = Authorization of these chemicals in EU is withdrawn

Out/Banned = Chemicals are Banned in EU