Annexure – 9

Date: 28th January, 2013

List of Agrochemicals to be monitored for the grape season 2012-2013

Sr. No.	Chemicals	Harmonized EU-MRL (mg/kg)	LOQ (mg/kg)
I)	**Organochlorine**		
1.	Aldrin (Aldrin and dieldrin combined expressed as dieldrin)	0.01*	0.01
2.	Chlordane (cis & trans)	0.01*	0.01
3.	**Chlorothalonil****	**3.00**	0.01
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*	0.01
5.	**Dicofol** (sum of p, p´ and o,p´ isomers)**	0.02^	0.01
6.	Dieldrin (see Aldrin)	0.01*	0.01
7.	Endosulphan (All isomers, sum of *alpha*- and *beta*-isomers and endosulphan sulphate expressed as endosulphan)	0.05*	0.01
8.	Endrin	0.01*	0.01
9.	HCH (sum of isomers, except the *gamma* isomer)	0.01*	0.01
10.	Heptachlor (sum of heptachlor and heptachlor epoxide expressed as heptachlor)	0.01*	0.01
11.	Lindane (*gamma*-HCH)	0.01*	0.01
II)	**Organophosphorus**		
12.	4-bromo-2-chlorophenol (metabolite of Profenophos)	0.01	0.01
13.	Acephate	0.01*^	0.01
14.	Chlorfenvinphos	0.02*	0.01
15.	**Chlorpyrifos****	**0.50**	0.01
16.	Chlorpyrifos methyl	0.20	0.01
17.	Diazinon	0.01*	0.01
18.	Dichlorvos	0.01*	0.01
19.	Dimethoate (Including Omethoate)	0.02*	0.01
20.	Edifenphos	0.01	0.01
21.	Ethion	0.01*	0.01
22.	Etrimfos	0.01	0.01
23.	Fenitrothion	0.01*	0.01
24.	Fenthion (fenthion and its oxygen analogue, their sulfoxides and sulfone expressed as parent)	0.01*	0.01
25.	Glufosinate-ammonium (sum of Glufosinate, its salts, MPP and NAG expressed as Glufosinate equivalents)	0.10*	0.05
26.	Glyphosate	0.50	0.05
27.	**Iprobenphos****	**0.01**	0.01
28.	**Malathion** (sum of malathion and malaoxon expressed as malathion)**	**0.02***	0.01
29.	Methamidophos	0.01*	0.01
30.	Monocrotophos	0.01*	0.01
31.	Omethoate (refer to Dimethoate)	0.02*	0.01
32.	Oxydemeton- methyl (sum of oxydemeton methyl and demeton-S-methylsulfone expressed as oxydemeton methyl)	0.01*	0.01
33.	Parathion ethyl	0.05*	0.01
34.	Parathion methyl (sum of Parathion methyl and paraoxon methyl expressed as Parathion methyl)	0.01*^	0.01
35.	Phenthoate	0.01	0.01

36.	Phorate (sum of phorate, its oxygen analogue and their sulfones expressed as phorate)	0.01*^	0.01
37.	**Phosalone****	0.01*^	0.01
38.	Phosphamidon	0.01*	0.01
39.	Pirimiphos-methyl	0.05*	0.02
40.	Profenophos	0.01*^	0.01
41.	Propetamphos	0.01	0.01
42.	Quinalphos	0.05*	0.01
43.	Temephos	0.01	0.01
44.	Thiometon	0.01	0.01
45.	Triazophos	0.01*	0.01
III)	**Synthetic Pyrethroids**		
46.	Allethrin and Bioallethrin	0.01	0.01
47.	Bifenthrin	0.20	0.01
48.	Cyfluthrin (including other mixtures of constituent isomers sum of isomers)	0.30	0.05
49.	Cypermethrin (including other mixtures of constituent isomers sum of isomers)	0.50	0.05
50.	Deltamethrin	0.20	0.05
51.	Ethofenprox (Etofenprox)	5.00	0.01
52.	Fenpropathrin	0.01*	0.01
53.	Fenvalerate & Esfenvalerate (sum of RR & SS isomers)	0.10	0.01
54.	Fenvalerate & Esfenvalerate (sum of RS & SR isomers)	0.02*	0.01
55.	Lambda-cyhalothrin	0.20	0.01
56.	Permethrin (sum of isomers)	0.05*	0.01
57.	*tau*- Fluvalinate	0.10	0.01
58.	Transfluthrin	0.01	0.01
IV)	**Triazines**		
59.	Atrazine	0.05*	0.01
60.	Flufenzine	0.02^	0.02
61.	Simazine	0.20	0.02
V)	**Acylamino acid fungicides**		
62.	Benalaxyl including other mixtures of constituent isomers including Benalaxyl-M (sum of isomers)	0.30	0.02
63.	**Metalaxyl ** & Metalaxyl-M**	**2.00**	0.01
64.	Oxycarboxin	0.01*^	0.01
65.	Propanil	0.10*	0.05
VI)	**Carbamates**		
66.	Bendiocarb	0.01	0.01
67.	Benfuracarb	0.02*^	0.01
68.	**Benomyl (see carbendazim)****	**0.30**	0.01
69.	**Carbaryl****	0.01*^	0.01
70.	Carbofuran (sum of Carbofuran and 3-hydroxy-carbofuran expressed as Carbofuran)	0.01*^	0.01
71.	Carbosulfan	0.01*^	0.01
72.	Dazomet (Methylisothiocyanate resulting from the use of dazomet and metam)	0.02*	0.01
73.	Fenobucarb	0.01	0.01
74.	Indoxacarb (sum of R and S isomers)	2.00	0.02
75.	Iprovalicarb	2.00	0.02
76.	**Methomyl** and Thiodicarb (sum of methomyl and thiodicarb expressed as methomyl)**	**0.02***	0.01
77.	Propoxur	0.05*	0.01

78.	Thiobencarb (Benthiocarb)	0.10*	0.05
79.	Thiodicarb (see Methomyl)	0.02*	0.01
VII)	**Pyrimidines**		
80.	Fenarimol	0.30	0.1
VIII)	**Triazoles**		
81.	Cyazofamid	0.5*	0.01
82.	Bitertanol	0.05*	0.01
83.	Difenoconazole	0.50	0.05
84.	**Flusilazole****	**0.05**	**0.01**
85.	**Hexaconazole****	0.01^	0.01
86.	**Myclobutanil****	**1.00**	0.01
87.	Paclobutrazol	0.05	0.01
88.	**Penconazole****	**0.20**	0.01
89.	Propiconazole	0.30	0.01
90.	Tebuconazole	2.00	0.01
91.	**Tetraconazole****	**0.50**	0.01
92.	**Triadimefon **(sum of triadimefon and triadimenol)**	**2.00**	0.01
IX)	**Imidazole**		
93.	**Fenamidone****	**0.50**	0.02
94.	**Iprodione****	**10.00**	0.05
X)	**Oxazole**		
95.	Famoxadone	2.00	0.02
XI)	**Phthalimide**		
96.	Captafol	0.02*	0.01
97.	**Captan****	**0.02***	0.01
XII)	**Benzimidazole**		
98.	**Carbendazim (including Benomyl)****	**0.30**	0.01
99.	Thiophanate-methyl	0.10*	0.02
XIII)	**Dithiocarbamates**		
100.	**Dithiocarbamates (Mancozeb**,** Maneb**, Propineb**,** Metiram**,** Thiram**, Zineb** and Ziram** collectively estimated as CS2)**	**5.00**	0.1
XIV)	**Nicotinoids**		
101.	Acetamiprid	0.20	0.01
102.	Clothianidin (see thiamethoxam)	0.60	0.02
103.	Dinotefuran	0.01*	0.01
104.	Flonicamid (sum of flonicamid, TNFG and TNFA) (R)	0.05*	0.01
105.	**Imidacloprid****	**1.00**	0.01
106.	Thiacloprid	0.02*	0.01
107.	Thiamethoxam (sum of thiamethoxam and clothianidin expressed as thiamethoxam)	0.50	0.02
XV)	**Dinitrophenol**		
108.	**Dinocap** (sum of dinocap isomers and their corresponding phenols expressed as dinocap) and Meptyldinocap**	**0.05***	0.02
XVI)	**Aliphatic Nitrogen fungicides**		
109.	**Cymoxanil****	**0.20**	0.02
XVII)	**Morpholine**		
110.	**Dimethomorph****	**3.00**	0.05
111.	Tridemorph	0.01*^	0.01
XVIII)	**Substituted Thiourea**		
112.	Diafenthiuron	0.01	0.01
113.	**Diuron** (Diuron including all components containing 3,4-dichloroaniline moiety expressed as 3,4-dichloroaniline)**	**0.05***	0.02
114.	Iodosulfuron-methyl (iodosulfuron-methyl including salts, expressed as	0.02*	0.01

	iodosulfuron-methyl)		
115.	Isoproturon	0.05*	0.01
116.	Linuron	0.05*	0.02
117.	Lufenuron	1.00	0.02
118.	Pencycuron	0.05*	0.01
XIX)	**Benzoylphenyl urea**		
119.	Flufenoxuron	1.00	0.1
XX)	**Strobilurin**		
120.	**Azoxystrobin****	**2.00**	0.01
121.	Kresoxim methyl	1.00	0.01
122.	Pyraclostrobin	1.00	0.01
123.	Trifloxystrobin	5.00	0.01
XXI)	**Phenyl pyrazole**		
124.	**Fipronil** (sum of fipronil + sulfone metabolite (MB46136) expressed as fipronil)**	**0.005***	0.005
125.	Chlorantraniliprole	1.00	0.01
XXII)	**Pyrazole**		
126.	Fenpyroximate	0.30	0.05
XXIII)	**Nitrophenyl ether**		
127.	Oxyfluorfen	0.10	0.01
XXIV)	**Dinitroaniline**		
128.	Pendimethalin	0.05*	0.01
129.	Trifluralin	0.01*^	0.01
XXV)	**Anilide/acetanilide and chloroacetanilide**		
130.	Alachlor	0.01*^	0.01
131.	Butachlor	0.01	0.01
132.	Carboxin	0.05*	0.02
133.	Flufenacet (sum of all compounds containing the N fluorophenyl-N-isopropyl moiety expressed as flufenacet equivalent)	0.05*	0.01
134.	Metolachlor (with S-Metolachlor)	0.05*	0.02
135.	Novaluron	0.01*	0.01
XXVI)	**Miscellaneous group of chemicals**		
136.	**1-Naphthylacetic acid (alphanapthyl acetic acid)****	**0.05***	0.02
137.	**2,4-D (sum of 2,4-D and its esters expressed as 2,4-D)****	**0.05***	0.01
138.	6-Benzyl adenine	0.01	0.01
139.	Abamectin (sum of avermectin B1a, avermectinB1b and delta-8,9 isomer of avermectin B1a)	0.01*	0.01
140.	Azadirachtin	1.00	0.05
141.	Bifenazate	0.01*	0.01
142.	**Buprofezin****	**1.00**	0.01
143.	Cartap hydrochloride	0.01	0.01
144.	Chlorfenapyr	0.01*^	0.01
145.	**Chlormequat (CCC)****	**0.05***	0.01
146.	Diflubenzuron	1.00	0.05
147.	**Homobrassinolide**	**0.01†**	0.01
148.	Diquat	0.05*	0.02
149.	Dithianon	3.00	0.1
150.	Dodine	0.20*	0.05
151.	**Emamectin Benzoate****	**0.05**	0.01
152.	Ethephon	0.70	0.5
153.	Fenazaquin	0.20	0.1
154.	Flubendiamide	2.00	0.01
155.	**Forchlorfenuron (CPPU)****	**0.05***	0.01

156.	**Fosetyl-Al (sum fosetyl + phosphorous acid and their salts, expressed as fosetyl)**	**100.00**	1
157.	**Gibberellic acid****	**5.00**	1
158.	Hexythiazox	1.00	0.1
159.	**Hydrogen cyanamide (Cyanamide including salts expressed as cyanamide)**	**0.05***	0.05
160.	Isoprothiolane	0.01	0.01
161.	Mandipropamid	2.00	0.01
162.	Mepiquat	0.30	0.1
163.	Metribuzin	0.10*	0.02
164.	Milbemectin (sum of MA4+8,9Z-MA4, expressed as milbemectin)	0.05*	0.02
165.	Oxadiazon	0.05*	0.02
166.	**Paraquat****	**0.02***	0.01
167.	Propargite	7.00	0.05
168.	Pyriproxyfen	0.05*	0.01
169.	Spinosad (sum of Spinosyn A+D)	0.50	0.02
170.	Spiromesifen	0.02*	0.01
171.	Trichlorfon	0.01*^	0.01
172.	Tricyclazole	0.05*	0.01
173.	**Uracil**	**1.00†**	1.0
XXVII)	**Inorganic**		
174.	Cadmium	0.05#	0.02
175.	**Copper compounds (**all copper fungicides as elemental Cu; **Bordeaux Mixture, Copper oxychloride, Copper hydroxide)****	**50.0**	0.2
176.	Lead	0.20#	0.1
177.	**Sulphur ****	**50.0**	0.5

* 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, and New Delhi under the Insecticides Act 1968.
#Reference: Commission Regulation (EC) No 1881/2006 of 19th December 2006.
^ COMMISSION REGULATION (EU) No 899/2012 of 21st September 2012.