

Annexure-9

Date: 24th March, 2023

List of agrochemicals to be monitored for the grape season 2022-2023

Sr. No.	Chemicals	Harmonized EU-MRL (mg/kg)
1.	1-Naphthylacetamide and 1-naphthylacetic acid (sum of 1-naphthylacetamide and 1-naphthylacetic acid and its salts, expressed as 1-naphthylacetic acid)	0.06*
2.	2,4-D (sum of 2,4-D and its esters and its conjugates, expressed as 2,4-D)	0.10
3.	4-Bromo-2-chlorophenol (metabolite of Profenophos)	0.01*
4.	4-Chloro-3-methylphenol	0.01*
5.	4-CPA (4-Chlorophenoxy acetic acid)	0.01*
6.	6-Benzyl adenine	0.01*
7.	Abamectin (sum of avermectin B1a, avermectin B1b and delta-8,9 isomer of avermectin B1a, expressed as avermectin B1a) (F),(R)	0.01*
8.	Acephate	0.01*
9.	Acetamiprid (R)	0.50
10.	Afidopyropen	0.01*
11.	Alachlor	0.01*
12.	Aldrin and Dieldrin (Aldrin and dieldrin combined expressed as dieldrin) (F)	0.01*
13.	Allethrin and Bioallethrin	0.01*
14.	Ametoctradin	6.00
15.	Ametryn	0.01*
16.	Amisulbrom	0.50
17.	Anilofos	0.01*
18.	Atrazine	0.05*
19.	Azadirachtin	1.00
20.	Azimsulfuron	0.01*
21.	Azoxystrobin	3.00
22.	Benalaxyl including other mixtures of constituent isomers including Benalaxyl-M (sum of isomers)	0.70
23.	Bendiocarb	0.01*
24.	Benomyl (see carbendazim)	0.30
25.	Bensulfuron-methyl	0.01*
26.	Bifenazate (sum of bifenazate plus bifenazate-diazene expressed as bifenazate) (F)	0.70
27.	Bifenthrin (sum of isomers) (F)	0.30

Sr. No.	Chemicals	Harmonized EU-MRL (mg/kg)
28.	Bispyribac (sum of bispyribac, its salts and its esters, expressed as bispyribac)	0.01*
29.	Bitertanol (sum of isomers) (F)	0.01*
30.	Boscalid (R) (F)	5.00
31.	Bupirimate (A),(F),(R)	1.50
32.	Buprofezin (F)	0.01*
33.	Butachlor	0.01*
34.	Captafol	0.02*
35.	Captan (Sum of captan and tetrahydrophthalimide (THPI), expressed as captan) (R) (A)	0.03*
36.	Carbaryl (F)	0.01*
37.	Carbendazim and benomyl (sum of benomyl and carbendazim expressed as carbendazim) (R)	0.30
38.	Carbofuran (sum of carbofuran (including any carbofuran generated from carbosulfan, benfuracarb or furathiocarb) and 3-OH carbofuran expressed as carbofuran) (R)	0.002*
39.	Carboxin (carboxin plus its metabolites carboxin sulfoxide and oxycarboxin (carboxin sulfone), expressed as carboxin)	0.03*
40.	Carfentrazone-ethyl (sum of carfentrazone-ethyl and carfentrazone, expressed as carfentrazone-ethyl) (R)	0.02*
41.	Carpropamid	0.01*
42.	Cartap hydrochloride	0.01*
43.	Chlorantraniliprole	1.00
44.	Chlordane (sum of cis- and trans-chlordane) (F),(R)	0.01*
45.	Chlorfenapyr	0.01*
46.	Chlorfenvinphos	0.01*
47.	Chlorfluazuron	0.01*
48.	Chlorimuron-ethyl	0.01*
49.	Chlormequat (CCC) (sum of chlormequat and its salts, expressed as chlormequat-chloride)	0.05
50.	Chlorothalonil	0.01*
51.	Chlorpropham	0.01*
52.	Chlorpyrifos	0.01*
53.	Chlorpyrifos-methyl	0.01*
54.	Chromafenozide	0.01*
55.	Cinmethylen	0.01*
56.	Clethodim (sum of Sethoxydim and Clethodim including degradation products calculated as Sethoxydim)	1.00
57.	Clofentezine (R)	0.02*

Sr. No.	Chemicals	Harmonized EU-MRL (mg/kg)
58.	Clomazone	0.01*
59.	Clothianidin	0.70
60.	Coumachlor	0.01*
61.	Coumatetralyl	0.01*
62.	Cyantraniliprole	1.50
63.	Cyazofamid	2.00
64.	Cyenopyrofen	0.01*
65.	Cyflufenamid (sum of cyflufenamid (Z-isomer) and its E-isomer, expressed as cyflufenamid) (A) (R)	0.20
66.	Cyflumetofen	0.60
67.	Cyfluthrin (including other mixtures of constituent isomers sum of isomers)	0.30
68.	Cyhalofop-butyl	0.02*
69.	Cymoxanil	0.05
70.	Cypermethrin (cypermethrin including other mixtures of constituent isomers (sum of isomers)) (F)	0.50
71.	Cyproconazole (F)	0.20
72.	Cyprodinil (R) (F)	3.00
73.	Dazomet (Methylisothiocyanate resulting from the use of Dazomet and metam)	0.01*
74.	DDT (all isomers, sum of p,p'-DDT, o,p'-DDT, p,p'-DDE and p,p'-TDE (DDD) expressed as DDT)	0.05*
75.	Deltamethrin (cis-deltamethrin) (F)	0.20
76.	Diafenthiuron	0.01*
77.	Diazinon	0.01*
78.	Dichlorvos	0.01*
79.	Diclofop (sum diclofop-methyl and diclofop acid expressed as diclofop-methyl)	0.02*
80.	Diclosulam	0.01*
81.	Dicofol (sum of p,p' and o,p' isomers)	0.02*
82.	Dieldrin (see Aldrin)	0.01*
83.	Difenoconazole	3.00
84.	Diflubenzuron (F),(R)	0.01*
85.	Dimethoate	0.01*
86.	Dimethomorph (sum of isomers)	3.00
87.	Dinocap (sum of dinocap isomers and their corresponding phenols expressed as dinocap) (Where only meptyldinocap or its corresponding phenol are detected but none of the other components constituting dinocap (including their corresponding	0.02*

Sr. No.	Chemicals	Harmonized EU-MRL (mg/kg)
	phenols), the MRLs and residue definition of meptyldinocap are to be applied.) (F)	
88.	Dinotefuran	0.90
89.	Diquat	0.01*
90.	Dithianon	3.00
91.	Dithiocarbamates (dithiocarbamates expressed as CS ₂ , including maneb, mancozeb, metiram, propineb, thiram and ziram)	5.00
92.	Diuron	0.01*
93.	Dodine	0.01*
94.	Edifenphos	0.01*
95.	Emamectin benzoate B1a, expressed as emamectin	0.04
96.	Endosulphan (All isomers, sum of <i>alpha</i> - and <i>beta</i> -isomers and endosulphan sulphate expressed as endosulphan)	0.05*
97.	Endrin	0.01*
98.	Epoxiconazole	0.05*
99.	Ethephon	1.00
100.	Ethion	0.01*
101.	Ethiprole	0.01*
102.	Ethofenprox (Etofenprox)	4.00
103.	Ethoxysulfuron	0.01*
104.	Etoxazole	0.50
105.	Etrimfos	0.01*
106.	Famoxadone	2.00
107.	Fenamidone	0.01*
108.	Fenarimol	0.30
109.	Fenazaquin	0.01*
110.	Fenhexamid (F)	15.00
111.	Fenitrothion	0.01*
112.	Fenobucarb	0.01*
113.	Fenoxaprop-p	0.10
114.	Fenpropathrin	0.01*
115.	Fenpyroximate (A) (F) (R)	0.30
116.	Fenthion (fenthion and its oxygen analogue, their sulfoxides and sulfone expressed as parent)	0.01*
117.	Fenvalerate (any ratio of constituent isomers (RR, SS, RS & SR) including esfenvalerate) (F) (R)	0.30
118.	Fipronil (sum of fipronil + sulfone metabolite (MB46136) expressed as fipronil)	0.005*
119.	Fonicamid (sum of fonicamid, TNFG and TNFA expressed as	0.03*

Sr. No.	Chemicals	Harmonized EU-MRL (mg/kg)
	flonicamid) (R)	
120.	Fluazifop-P (sum of all the constituent isomers of fluazifop, its esters and its conjugates, expressed as fluazifop)	0.01*
121.	Flubendiamide	2.00
122.	Flucetosulfuron	0.01*
123.	Fluchloralin	0.01*
124.	Fluensulfone	0.01*
125.	Flufenacet (sum of all compounds containing the N fluorophenyl-N-isopropyl moiety expressed as flufenacet equivalent)	0.05*
126.	Flufenoxuron	0.01*
127.	Flufenzin	0.02*
128.	Flumioxazine	0.05*
129.	Fluopicolide	2.00
130.	Fluopyram	2.00
131.	Flupyradifurone	3.00
132.	Flusilazole	0.01*
133.	Fluthiacet-methyl	0.01*
134.	Fluxapyroxad	3.00
135.	Fomesafen	0.01*
136.	Forchlorfenuron (CPPU)	0.01*
137.	Fosetyl-Al (sum fosetyl + phosphorous acid and their salts, expressed as fosetyl)	100.00
138.	Glufosinate (sum of glufosinate isomers, its salts and its metabolites 3-[hydroxy(methyl)phosphinoyl]propionic acid (MPP) and N-acetyl-glufosinate (NAG), expressed as glufosinate)	0.15
139.	Glyphosate	0.50
140.	Halosulfuron methyl	0.01*
141.	Haloxyfop (Sum of haloxyfop, its esters, salts and conjugates expressed as haloxyfop (sum of 0.01the R- and S- isomers at any ratio)) (F) (R)	0.01*
142.	Heptachlor (sum of heptachlor and heptachlor epoxide expressed as heptachlor)	0.01*
143.	Hexachlorocyclohexane (HCH), alpha-isomer (F)	0.01*
144.	Hexachlorocyclohexane (HCH), beta-isomer (F)	0.01*
145.	Hexaconazole	0.01*
146.	Hexazinone	0.01*
147.	Hexythiazox	1.00
148.	Homobrassinolide	0.01*†
149.	Imazamox (Sum of imazamox and its salts, expressed as	0.05*

Sr. No.	Chemicals	Harmonized EU-MRL (mg/kg)
	imazamox)	
150.	Imazethapyr	0.01*
151.	Imidacloprid	0.70
152.	Indaziflam	0.01*
153.	Indoxacarb (sum of indoxacarb and its R enantiomer) (F)	2.00
154.	Iodosulfuron-methyl (sum of iodosulfuron-methyl and its salts, expressed as iodosulfuron-methyl)	0.01*
155.	Iprobenphos	0.01*
156.	Iprodione	0.01*
157.	Iprovalicarb	2.00
158.	Isoprothiolane	0.01*
159.	Isoproturon	0.01*
160.	Ivermectin	0.01*
161.	Karanjin	0.01*
162.	Kasugamycin	0.01*
163.	Kresoxim methyl	1.50
164.	Lambda-cyhalothrin (includes gamma-cyhalothrin) (sum of R,S and S,R isomers) (F)	0.08
165.	Lindane (Gamma-isomer of hexachlorocyclohexane (HCH)) (F)	0.01*
166.	Linuron	0.01*
167.	Lufenuron (any ratio of constituent isomers) (F)	0.01*
168.	Malathion (sum of malathion and malaoxon expressed as malathion)	0.02*
169.	Mandipropamid (any ratio of constituent isomers)	2.00
170.	Matrine & Oxymatrine	0.01*
171.	Mepiquat (sum of mepiquat and its salts, expressed as mepiquat chloride)	0.02*
172.	Meptyldinocap (sum of 2,4-DNOPC and 2,4-DNOP expressed as meptyldinocap)	0.20
173.	Metaflumizone (sum of E- and Z- isomers)	0.02*
174.	Metalaxyl and Metalaxyl-M (metalaxyl including other mixtures of constituent isomers including metalaxyl-M (sum of isomers))	2.00
175.	Metamifop	0.01*
176.	Metamitron	0.01*
177.	Methabenzthiazuron	0.01*
178.	Methamidophos	0.01*
179.	Methomyl	0.01*
180.	Methoxyfenazide	1.00
181.	Metolachlor and S-Metolachlor (metolachlor including other	0.05*

Sr. No.	Chemicals	Harmonized EU-MRL (mg/kg)
	mixtures of constituent isomers including S-metolachlor (sum of isomers))	
182.	Metrafenone	7.00
183.	Metribuzin	0.10*
184.	Milbemectin (sum of milbemycin A4 and milbemycin A3, expressed as milbemectin)	0.02*
185.	Monocrotophos	0.01*
186.	Myclobutanil (sum of constituent isomers) (R)	1.50
187.	Nereistoxin	0.01*
188.	Nitenpyram	0.01*
189.	Novaluron	0.01*
190.	Omethoate	0.01*
191.	Orthosulfamuron	0.01*
192.	Oxadiargyl	0.01*
193.	Oxadiazon	0.01*
194.	Oxathiapiprolin	0.70
195.	Oxycarboxin	0.01*
196.	Oxydemeton- methyl (sum of oxydemeton methyl and demeton-S-methylsulfone expressed as oxydemeton-methyl)	0.01*
197.	Oxyfluorfen	0.01
198.	Paclobutrazol (sum of constituent isomers)	0.01*
199.	Paraquat	0.02*
200.	Parathion - methyl (sum of Parathion-methyl and paraoxon- methyl expressed as Parathion -methyl)	0.01*
201.	Parathion ethyl	0.05*
202.	Penconazole	0.50
203.	Pencycuron (sum of pencycuron and pencycuron-PB-amine, expressed as pencycuron) (R) (F) (A)	0.02*
204.	Pendimethalin	0.05*
205.	Penoxsulam	0.01*
206.	Permethrin (sum of isomers)	0.05*
207.	Phenthoate	0.01*
208.	Phorate (sum of phorate, its oxygen analogue and their sulfones expressed as phorate)	0.01*
209.	Phosalone	0.01*
210.	Phosphamidon	0.01*
211.	Picoxystrobin	0.01*
212.	Pinoxaden(Sum of M4 and M6 (both free and conjugated), expressed as pinoxaden (R),(A))	0.03*

Sr. No.	Chemicals	Harmonized EU-MRL (mg/kg)
213.	Pirimiphos-methyl	0.01*
214.	Polyoxin D zinc salt	0.01*
215.	Pretilachlor	0.01*
216.	Profenophos	0.01*
217.	Propamocarb (sum of propamocarb and its salt expressed as propamocarb)	0.01*
218.	Propanil	0.01*
219.	Propargite	0.01*
220.	Propetamphos	0.01*
221.	Propiconazole (sum of isomers) (F)	0.01*
222.	Propineb (expressed as propilendiamine)	0.05*
223.	Propoxur	0.005*
224.	Pymetrozine	0.02*
225.	Pyraclostrobin	0.30
226.	Pyrazosulfuron-ethyl	0.01*
227.	Pyridaben	0.01*
228.	Pyridalyl	0.01*
229.	Pyriproxyfen	0.05*
230.	Pyriothiobac-sodium	0.01*
231.	Pyroxasulfone	0.01*
232.	Quinalphos	0.01*
233.	Simazine	0.20
234.	Spinetoram (sum of spinetoram-J and spinetoram-L) (A),(F)	0.40
235.	Spinosad (sum of Spinosyn A+D)	0.50
236.	Spirodiclofen	2.00
237.	Spiromesifen	0.02*
238.	Spirotetramat and spirotetramat-enol (sum of), expressed as spirotetramat (R)	2.00
239.	Sulfentrazone	0.01*
240.	Sulfosulfuron	0.01*
241.	Sulfoxaflor (sum of isomers)	2.00
242.	<i>tau</i> -Fluvalinate	1.00
243.	Tebuconazole	0.50
244.	Tembotrione (Sum of parent tembotrione (AE 0172747) and its metabolite M5 (4,6-dihydroxy tembotrione), expressed as tembotrione) (R)	0.02*
245.	Temephos	0.01*
246.	Tetraconazole	0.50
247.	Thiabendazole	0.01*

Sr. No.	Chemicals	Harmonized EU-MRL (mg/kg)
248.	Thiacloprid	0.01*
249.	Thiamethoxam	0.40
250.	Thifluzamide	0.01*
251.	Thiobencarb (4-chlorobenzyl methyl sulfone) (A)	0.01*
252.	Thiocyclam	0.01*
253.	Thiodicarb	0.01*
254.	Thiometon	0.01*
255.	Thiophanate-methyl	0.10*
256.	Tolfenpyrad	0.01*
257.	Topramezone	0.01*
258.	Transfluthrin	0.01*
259.	Triadimefon	0.01*
260.	Triadimenol (any ratio of constituent isomers)	0.30
261.	Triafamone	0.01*
262.	Tri-allate	0.10*
263.	Triasulfuron	0.01*
264.	Triazophos	0.01*
265.	Trichlorfon	0.01*
266.	Tricyclazole	0.01*
267.	Tridemorph	0.01*
268.	Trifloxystrobin	3.00
269.	Triflumezopyrim	0.01*
270.	Trifluralin	0.01*
271.	Uracil	1.00†

https://ec.europa.eu/food/plants/pesticides/eu-pesticides-database_en

Note: Residues of Ethylene oxide (sum of ethylene oxide and 2-chloro-ethanol expressed as ethylene oxide), in fresh grapes and SARS Covid-19 virus in food contact material and packaging surfaces of fresh grapes to be monitored by the exporters.

* Indicates lower limit of analytical determination

† 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 ICAR-NRC for Grapes.