



Annexure-5

Revision date: 09th November, 2016

List of chemicals with CIB&RC label claim for use in grapes

Sr. No.	Chemical recommended for major disease & pest	Nature of chemical	Dose on formulation basis	EU MRL (mg/kg)	Pre-harvest Interval (PHI in days)
I	Downy Mildew				
1.	Mancozeb 75 WP	NS	1.5-2.0 g/L	5.0	35 (avoid using after fruit set)
2.	Propineb 70 WP	NS	3.0 g/L	1.0	40 (avoid using after fruit set)
3.	COC 50 WP	NS	2.5 g/L, 2.4 g/L	50.0	42 (avoid using after fruit set)
4.	Copper hydroxide 53.8 DF	NS	1.5 g/L	50.0	12
5.	Chlorothalonil 75 WP	NS	2.0 g/L	3.0	60
6.	Fosetyl Al 80 WP	S	1.4-2.0 g/L	100.0	7
7.	Metalaxyl + Mancozeb 8+64 WP	S+NS	2.5 g/L	2.0 + 5.0	66
7a.	Metalaxyl-M + Mancozeb 4+64 WP	S+NS	2.5 g/L	2.0 + 5.0	66
8.	Cymoxanil + Mancozeb 8+64 WP	S+NS	2.0 g/L	0.2 + 5.0	66
9.	Ametoctradin 27 + Dimethomorph 20.27 SC	NS + S	800-1000mL/ha	6.0 + 3.0	34
10.	Dimethomorph 50 WP + Mancozeb 75 WP as tank mixture	S+NS	0.5 to 0.75 g/L + 2.0 g/L	3.0 + 5.0	66
11.*	Fenamidone + Mancozeb 10+50 WG	S+NS	2.5 to 3 g/L	0.5 + 5.0	66
12.*	Azoxystrobin 23 SC	S	494 mL/ha	2.0	7

Sr. No.	Chemical recommended for major disease & pest	Nature of chemical	Dose on formulation basis	EU MRL (mg/kg)	Pre-harvest Interval (PHI in days)
13.	Iprovalicarb + Propineb 5.5+61.25WP	S+NS	2.25 g/L	2.0 + 1.0	55
14.*	Famoxadone 16.6 % + Cymoxanil 22.1 % SC	S+NS	500 mL/ha	2.0 + 0.2	27
15.*	Kresoxim methyl 44.3 SC	S	600-700 mL/ha	1.0	30
16.*	Pyraclostrobin 5% + Metiram 55% 60WG	S+NS	1.5-1.75 kg/ha	1+5	15
17.	Fluopicolide 4.44% + Fosetyl-Al 66.67% WG	S	2.25 to 2.5 kg/ha	2.0 + 100	40
18.	Mandipropamid 23.4% SC	NS	0.8 mL/L	2.0	5
II	Powdery Mildew				
19.	Penconazole 10 EC	S	0.50 mL/L	0.2	50
20.	Hexaconazole 5EC	S	1.0 mL/L	0.01	60
21.	Myclobutanil 10 WP	S	0.40 g/L	1.0	30
22.	Flusilazole 40 EC	S	25 mL / 200 L	0.01	60
23.	Difenoconazole 25EC	S	0.50 mL / L	3.0	45
12a.	Azoxystrobin 23 SC	S	494 mL / ha	2.0	7
15a.	Kresoxim methyl 44.3 SC	S	600-700 mL/ha	1.0	30
24.	Dinocap 48 EC	NS	0.30 - 0.35 mL/L	0.02	65(avoid application when tender shoots are present in canopy)
25.	Sulfur 40 SC, 55.16 SC, 80 WP, 80 WDG, 85 WP	NS	3.0 mL, 3.0 mL, 2.50 g, 1.87-2.50 g, 1.50-2.0 g/L, respectively	50.0	15
26.	Tetraconazole 3.8EW	S	0.75 mL/L	0.5	30
27*	Tebuconazole 50% + Trifloxystrobin 25% WG	S+S	0.175 g/L	0.5+3.0	34
28	Fluopyram 200 + Tebuconazole 200 SC	S+S	0.563 mL/L	1.5+0.5	60
29	Metrafenone 50% SC	S	250 mL/ha	7	22

Sr. No.	Chemical recommended for major disease & pest	Nature of chemical	Dose on formulation basis	EU MRL (mg/kg)	Pre-harvest Interval (PHI in days)
30	Fluxapyroxad 25% + Pyraclostrobin 25% SC	S+S	200mL/ha	0.5+1.0	60
III Anthracnose					
2a	Propineb 70 WP	NS	3.0 g/L	1.0	40
3a.	COC 50 WP	NS	2.5 g/L, 2.40 g/L	50.0	42 (avoid using after fruit set)
31	Carbendazim 50 WP, 46.27 SC	S	1.0 g/L, 1.0 mL/L	0.30	50
32.	Thiophanate methyl 70 WP	S	0.71- 0.95g/L	0.1	50 Use of Thiophanate methyl should be avoided after flowering stage
28a.	Fluopyram 200 + Tebuconazole 200 SC	S+S	0.563 mL/L	1.5+0.5	60
IV Flea beetle					
33.	Imidacloprid 17.8 SL	S	0.30-0.40 mL/L	1.0	60 (Use of imidacloprid should be avoided during pre-flowering and flowering stage)
34.	Lambda-cyhalothrin 05 CS	NS	0.25-0.50 mL/L	0.2	30
V Thrips					
35.	Emamectin benzoate 05 SG	NS	0.22 g/L	0.05	25
36.	Fipronil 80 WG	NS	0.05-0.06 g/L	0.005	60 (only one application before flowering stage)
34a.	Lambda-cyhalothrin 05 CS	NS	0.50 mL/L	0.2	30
VI Mealybugs					
37.	Buprofezin 25 SC	NS	1.00-1.50 mL/L	1.0	40
38.	Methomyl 40 SP	S	1.25 g/L	0.02	61 (only one application before flowering stage)
VII Plant Growth Regulators					
39.	Hydrogen cyanamide 50 SL	S	30-40 mL/L	0.01	90-120
40. ^s	Forchlorfenuron (CPPU) 0.1% L	S	1-2 ppm	0.01	60

Sr. No.	Chemical recommended for major disease & pest	Nature of chemical	Dose on formulation basis	EU MRL (mg/kg)	Pre-harvest Interval (PHI in days)
41.	Gibberellic acid (GA3) Technical	S	100 ppm (Cumulative Usage)	5.00	7
42.	1-Naphthyl acetic acid 4.5% L	S	100 ppm	0.05*	15
43. #	Chloromequat chloride 50 SL	S	250 ppm	0.05	PHI data not available
VIII Herbicides					
44.	Paraquat dichloride 24 SL	NS	5 mL/L	0.02	PHI data not available

NS = Non-systemic, S = Systemic

*Resistance in downy mildew based on Cys b gene (G143A) has been detected against QoI fungicides (Fenamidone, Azoxystrobin, Famoxadone, Kresoxim methyl, Pyraclostrobin and Trifloxystrobin) in India from major grape growing areas. Use of formulations containing these fungicides should be minimized and avoided during high risk periods.

\$ Application of Forchlorfenuron (CPPU) should be avoided after 65 days of pruning or after 6-8 mm berry size is attained to reduce the chances of detections.

European Commission (EC) is likely to revise the MRL

Note

- All the doses mentioned above are for high volume sprayers, where normal spray volume is 1000 L/ha. Spray volume can however be changed as per the efficiency of sprayers used. However, the amount of each pesticide based on its active ingredient recommended for 1 ha area on the basis of 1000 L spray solution should be strictly maintained to ensure bio-efficacy and to minimize pesticide residues.
- Recommended PHI will be valid only if two applications of an agrochemical are given per fruiting season at the interval of 7-15 days at recommended dose except in case of Flusilazole, Methomyl and Fipronil where not more than one application per season should be given.
The PHI of the fungicide Flusilazole and insecticide Methomyl pertains to one application by foliar spray only.
- If any of the pesticide found ineffective in controlling the targeted diseases or pests, it is advised not to give repeated applications of the formulation since it may lead to residue issues and increase the resistance population of targeted pathogen or insects.
- The responsibility of usage of chemicals for the management of any of the above pests and diseases will rest with the growers in compliance with the requirements of the importers / EU and, in the minimum; all chemicals listed in Annexure 9 should be tested.

1-naphthylacetic acid MRL will be revised from 0.05* to 0.06* mg/kg on 19th January 2017 as per the Commission Regulation (EU) 2016/1015 of 17th June 2016.