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

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Sr. No.	Chemical recommended for major disease & pest	Nature of chemical	Dose on formulation basis	EU MRL (mg/kg) updated as on <u>11/10/2010</u>	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.	Chlorothalonil 75 WP	NS	2.0 g/L	1.0	60
5.	Fosetyl Al 80 WP	S	1.4-2.0 g/L	100.0	7
6.	Metalaxyl + Mancozeb 8+64 WP	S+NS	2.5 g/L	2.0 + 5.0	66
6a.	Metalaxyl-M + Mancozeb 4+64 WP	S+NS	2.5 g/L	2.0 + 5.0	66
7.	Cymoxanil + Mancozeb 8+64 WP	S+NS	2.0 g/L	0.2 + 5.0	66
8.	Dimethomorph 50 WP + Mancozeb 75WP as tank mixture	S+NS	0.5 to 0.75 g/L + 2.0 g/L	3.0 + 5.0	66
9.	Fenamidone + Mancozeb 10+50 WG	S+NS	2.5 to 3 g/L	0.5 + 5.0	66
10.	Azoxystrobin 23 SC	S	200 mL/Acre	2.0	7
11.	Iprovalicarb + Propineb 5.5+61.25WP	S+NS	2.25 g/L	2.0 + 1.0	55
12.	Famoxadone 16.6 % + Cymoxanil 22.1 % SC	S+NS	500 mL/ha	2.0 + 0.2	27

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13.	Kresoxim methyl 44.3 SC	S	600-700 mL/ha	1.0	30
14.	Fenamidon 4.44% + Fosetyl-Al 66.66% WDG	S	2 to 2.5 kg/ha	0.5 + 100	27
II	Powdery Mildew				
15.	Penconazole 10 EC	S	0.50 mL/L	0.2	50
16.	Triadimefon 25 WP	S	0.50-1.0 g/L	2.0	45
17.	Hexaconazole 5EC	S	1.0 mL/L	0.1	38
18.	Myclobutanil 10 WP	S	0.40 g/L	1.0	30
19.	Flusilazole 40 EC	S	25 mL / 200 L	0.05	50
20.	Fenarimol 10 EC	S	0.40 mL / L	0.3	30
21.	Difenoconazole 25EC	S	0.50 mL / L	0.5	45
10a.	Azoxystrobin 23 SC	S	200 mL / Acre	2.0	7
13a.	Kresoxim methyl 44.3 SC	S	600-700 mL/ha	1.0	30
22.	Dinocap 48 EC	NS	0.30 - 0.35 mL/L	0.05	50 (avoid application when tender shoots are present in canopy)
23.	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	MRL not applicable	--
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)
24.	Carbendazim 50 WP, 46.27 SC	S	1.0 g/L, 1.0 mL/L	0.30	50
IV	Flea beetles				
25.	Imidacloprid 17.8 SL*	S	0.30 mL/L	1.0	60
26.	Clothianidin 50 WDG*	S	0.12 g/L	0.60	40
27.	Lambda-cyhalothrin 05 EC*	NS	0.50 mL/L	0.20	30
28.	Thiamethoxam 25 WG*	S	0.25 g/L	0.50	40

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V Thrips					
26a.	Clothianidin 50 WDG*	S	0.12 g/L	0.60	40
29.	Emamectin benzoate 05 SG*	NS	0.22 g/mL/L	0.05	25
30.	Fipronil 80 WG*	S	0.05 g/L	0.005	60
27a.	Lambda-cyhalothrin 05 EC*	NS	0.50 mL/L	0.20	30
31.	Spinosad 45 SC*	NS	0.25 mL/L	0.50	28
28a.	Thiamethoxam 25 WG*	S	0.25 g/L	0.50	40
VI Jassids					
26b.	Clothianidin 50 % WDG*	S	0.12 g/L	0.60	40
27b.	Lambda-cyhalothrin 05 EC*	NS	0.50 mL/L	0.20	30
28b.	Thiamethoxam 25 WG*	S	0.25 g/L	0.50	40
VII Mealy bugs					
32.	Buprofezin 25 SC	NS	1.25 mL/L	1.0	40
25a.	Imidacloprid 70 WG*	S	0.45 g/L/vine as soil drench	1.0	60
33.	Methomyl 40 SP	NS	1.0 g/L	0.02	61 (one application only at pre-flowering stage)
VIII Caterpillars (<i>Helicoverpa armigera</i> and <i>Spodoptera litura</i>)					
31a.	Spinosad 45 SC*	NS	0.25 mL/L	0.50	28
27c.	Lambda-cyhalothrin 05 EC*	NS	0.50 mL/L	0.20	30
IX Mites					
34.	Fenpyroximate 5 SC*	NS	1.5 mL/L	0.30	60
X Plant Growth Regulators					
35.	Hydrogen cyanamide 50 SL	S	30-40 mL/L	0.05	90-120
36.	Forchlorfenuron (CPPU) 0.1% L	S	1-2 ppm	0.05	45 (for 1 ppm dose) 60 (for 2 ppm dose)
37.	Gibberellic acid (GA3) Technical	S	100 ppm (Cumulative Usage)	5.00	PHI data not available

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38.	1-Naphthyl acetic acid 4.5% L	S	100 ppm	0.05	PHI data not available
39.	Chlormequat chloride 50 SL	S	250 ppm	0.05	PHI data not available
XI	Herbicides				
40.	Paraquat dichloride 24 SL	NS	5 mL/L	0.02	PHI data not available

NS = Non-systemic, S = Systemic

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 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.
The PHI of the fungicide Flusilazole pertains to one application by foliar spray only.
- Imidacloprid (17.8 SL or 70 WG) application (spraying or drenching) should not exceed more than two times per fruiting season.
- For the chemicals (Sl. No. 37, 38, 39 and 40) having label claim for grapes with CIB&RC, no PHI data is available for EU MRL. The farmers need to be cautious about the dose and stage of application as per the need.
- * As per the Office Memorandum F. No. 13035/18/2010-PP.I dated 21.10.2010 (copy enclosed) of the Govt. of India, Ministry of Agriculture, Department of Agriculture and Cooperation regarding the label expansion of insecticides for control of insects-pests of grapes.
- The responsibility of usage of chemicals for the management of 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.