

APEDA/DIR/RMP-GRAPES/
October 18, 2006

To

1. All Grape Exporters/Farmers
2. All Grape Growers' Federations
3. Maharashtra Rajya Draksha Bagaitdar Sangh, Pune
4. Fruit & Vegetable Association, Mumbai
5. All nominated laboratories
6. Director, National Research Centre for Grapes, Pune
7. All concerned Agriculture/Horticulture Officers - A P, Karnataka & Maharashtra
8. All PSC issuing Authorities - A P, Karnataka & Maharashtra
9. Commissioner, Horticulture, Govt. of Andhra Pradesh
10. Secretary, Agriculture, Govt. of Karnataka
11. Commissioner, Agriculture, Govt. of Maharashtra
12. Director, Agriculture - Andhra Pradesh, Karnataka & Maharashtra
13. Managing Director, M S A M B, Pune
14. Agriculture Marketing Adviser, DMI, New Delhi
15. All regional Agmark offices - A P, Karnataka, Maharashtra
16. Apeda Regional offices - Bangalore, Hyderabad & Mumbai
17. Existing recognized Packhouses

Dear Sirs/Madam,

Vide our letter dated 21st September 2006, APEDA had advised all of you that the registration/renewal procedure for the grape farms at the plot level may be initiated as issue of the RMP document for the 2007 grape season was likely to take some time. A detailed explanation to the process was also explained.

While the RMP will be announced by next week, we are, in the interim, enclosing the Annexure - 7 covering the list of pesticides recommended by the National Referral Laboratory, Pune for use in the grape plots for the 2007 grape season. This list is based on studies carried out by the National Research Centre for Grapes, Pune and the AICRP on grapes of the ICAR. **The farmers and exporters are, hereby, advised to exercise extreme caution in using non-recommended pesticides and chemicals.**

Yours faithfully

S Dave
Director - APEDA

PESTICIDES RECOMMENDED FOR THE CONTROL OF VARIOUS DISEASES AND INSECT PESTS BASED ON THE STUDIES AT NRC GRAPES AND AICRP ON GRAPES OF ICAR



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S. No.	Pesticide recommended for major disease and pest	Nature of pesticide	Dose on formulation basis	MRL (mg/kg)				Pre-harvest Interval in Days (PHI)
				EU	UK	NL	Germany	
I	Downy Mildew							
1.	Mancozeb 75 WP, 35 %SC (Indofil M-45, Dithane M-45)	NS	1.5-2.0 g/L	2.00	2.00	3.00	0.05	35
2.	Ziram 80 WP, 27 SC (Cuman L)	NS	1.5-2.0 g/L, 3.5 ml/L	2.00	#	3.00	0.05	66
3.	Propineb 70 WP (Antracol)	NS	3 g/L	2.00	2.00	3.00	0.05	40
4.	COC 50 WP, 50 WG (Blitox, Fytolan, Blue Copper)	NS	2.5 g/L, 2.4g/L	#	#	Cu = 20.00	40.00	42 (Avoid using after fruit set)
5	Copper hydroxide 77 WP (Kocide 101)	NS	2.0 g/L	#	#	Cu = 20.00	40.00	42 (Avoid using after fruit set)
6.	Bordeaux Mixture (Copper sulphate + Lime ISI mark chemicals preferred)	NS	Pre-sprouting 1.0 % Post-sprouting 0.5%	#	#	Cu = 20.00	40.00	42 (Avoid using after fruit set)
7.	Captan 50 WP, 75 WP (Captaf)	NS	2.5 g/L, 1.67 g/L	3.00	3.00	3.00	3.00	30
8	Chlorothalonil 75 WP (Kavach)	NS	2.0 g / L	1.00	1.00	1.00	1.00	60
9.	Fosetyl AL 80 WP (Aliette)	S	1.4-2 g/L	#	#	0.20	5.00	30
10.	Metalaxyl + Mancozeb 8%+64 WP (Ridomil MZ, Tata Master)	S+NS	2.5 g/L	2.00+ Mancozeb 2.00	2.00+ Mancozeb 2.00	2.00+ Mancozeb 3.00	0.05 + Mancozeb 0.05	66
11.	Cymoxanil + Mancozeb 8%+64 WP (Curzate M-8)	S+NS	2 g/L	# + Mancozeb 2.00	0.10 + Mancozeb 2.00	0.05 + Mancozeb 3.00	0.20 + Mancozeb 0.05	66

S. No.	Pesticide recommended for major disease and pest	Nature of pesticide	Dose on formulation basis	MRL (mg/kg)				Pre-harvest Interval in Days (PHI)
				EU	UK	NL	Germany	
12	Dimethomorph 50 WSG + Mancozeb (Acrobat +Mancozeb)	S + NS	0.5 to 0.75 g/L + 2g/L	# + Mancozeb 2.00	# + Mancozeb 2.00	0.05 + Mancozeb 3.00	2.00 + Mancozeb 0.05	66
13.	Azoxystrobin 23 % SC (Amistar)	S	200 ml /Acre	2.00	2.00	2.00	2.00	7
II	<u>Powdery Mildew</u>							
14.	Penconazole 10 EC (Topas)	S	0.5 ml/L	0.20	0.20	0.20	0.05	50
15.	Triadimefon 25 WP (Bayleton)	S	0.5-1.0 g/L	2.00	2.00	2.00	2.00	45
16.	Hexaconazole 5 EC, 5SC (Contaf)	S	1.0 ml / L or 0.5 ml/L along with 5 g / L potassium bicarbonate	0.10	0.10	0.10	0.10	38
17.	Myclobutanil 10 WP (Systhane)	S	0.4 g/L	1.00	1.00	1.00	0.02	30
18.	Flusilazole** 40 EC (Nustar)	S	25 ml / 200L	#	#	0.05	0.01	50 **
19.	Fenarimol 10 EC (Rubigan)	S	0.4 ml / L	0.30	0.30	0.30	0.30	30
20.	Difenoconazole 25EC (Score)	S	0.5 ml / L	#	#	0.05	0.05	45
21.	Dinocap 48 EC (Karathane)	NS	0.3 - 0.35 ml/L	#	#	0.05	0.50	50
22.	Sulfur 40 SC, 55.16 SC, 80 WP, 80 WDG, 85 WP (Sulfex, Kumulus, Sultaf, Thiovit)	NS	3 ml, 3ml, 2.5 g, 1.87-2.5 g, 1.5-2 g per L respectively	#	#	50.00	50.00	Avoid using after fruit set
23.	Potassium bi-carbonate (Available as Potassium Bicarbonate)	NS	5 to 10 g / L	—	—	—	--	--
24.	Azadirachtin 0.03% (Tricure)	Neem based EC formulation	4 ml/L	--	--	--	-	2
13a.	Azoxystrobin 23 % SC (Amistar)	S	200 ml / Acre	2.00	2.00	2.00	2.00	7
III	<u>Anthracnose</u>							

S. No.	Pesticide recommended for major disease and pest	Nature of pesticide	Dose on formulation basis	MRL (mg/kg)				Pre-harvest Interval in Days (PHI)
				EU	UK	NL	Germany	
2a.	Ziram 80 WP, 27 SC (Cuman L)	NS	1.5-2.0 g/L, 3.5 ml/L	2.00	#	3.00	0.05	66
3a	Propineb 70 WP (Antracol)	NS	3 g/L	2.00	2.00	3.00	0.05	40
4a.	COC 50 WP, 50 WG (Blitox, Fytolan, Blue Copper)	NS	2.5 g/L, 2.4g/L	#	#	Cu = 20.00	40.00	42 (Avoid using after fruit set)
5a.	Copper hydroxide 77 WP (Kocide 101)	NS	2.0 g/L	#	#	Cu = 20.00	40.00	42 (Avoid using after fruit set)
25.	Iprobenphos 48 EC (Kitazin)	NS	2.0 ml/L	#	#	#	0.01	50
26.	Carbendazim 50 WP, 46.27 SC (Bavistin)	S	1 g/L, 1 ml/L	2.00	0.30	0.30	2.00	50
IV	<u>Post harvest berry rots</u>							
27.	Iprodione 50 WP (Rovral)	NS	2.0 g / L	10.00	10.00	10.00	0.02	7
V	<u>Flea beetles</u>							
28.	Carbaryl 50 WP (Sevin)	NS	2.0 g/L	3.00	0.05	3.00	3.00	42
29.	Imidacloprid 200 SL (Confidor)	S	0.3 ml/L	#	#	1.00	0.05	60
30.	Thiamethoxam 25 WG (Actara)	S	0.25 g/L	#	#	0.05	0.01	40
31.	Lambda-cyhalothrin 05 EC/CS (Karate EC & Karate Zeon CS)	NS	0.50 ml/L	0.20	0.20	0.20	0.20	30
32.	Clothianidin 50 % WDG (Dantop)	S	0.12 g/L	#	#	#	0.01	40
VI	<u>Thrips and Jassids</u>							
30a.	Thiamethoxam 25 WG (Actara)	S	0.25 g/L	#	#	0.05	0.01	40
33.	Spinosad 45 SC (Tracer)	NS	0.25 ml/L	#	0.50	0.01	0.20	28
34.	Emamectin benzoate 05 SG (Proclaim)	NS	0.22 g/ml/L	#	#	#	0.01	25
35.	Difenthiuron 50 SC (Polo)	S	0.80 g/ml/L	#	#	#	0.01	45

S. No.	Pesticide recommended for major disease and pest	Nature of pesticide	Dose on formulation basis	MRL (mg/kg)				Pre-harvest Interval in Days (PHI)
				EU	UK	NL	Germany	
36.	Dimethoate 30 EC (Rogor)	S	1 ml/L	0.02	0.02	0.02	0.02	100 (Should not be used after blossom)
37.	Endosulfan 35 EC (Thiodan)	NS	2ml/L	0.50	0.50	0.50	0.50	65
24a.	Azadirachtin (Neemazal T/S 1%, Neemazal F 5%, Econeem plus 1%, Ozoneem Thrishul 1%)	Neem based EC formulation	1% & 5% @ 2 & 1ml/L	--	--	--	-	3
31a.	Lambda-cyhalothrin 05 EC/CS (Karate EC & Karate Zeon CS)	NS	0.50 ml/L	0.20	0.20	0.20	0.20	30
29a.	Imidacloprid 200 SL (Confidor)	S	0.30 ml/L	#	#	1.00	0.05	60
32a.	Clothianidin 50 % WDG (Dantop)	S	0.12 g/L	#	#	#	0.01	40
VII	Mealy bugs							
38.	Chlorpyrifos 20 EC (Dursban)	NS	2.0 ml/L	0.50	0.50	0.50	0.50	40
39.	Malathion 50 EC (Malathion)	NS	2.0 ml/L	0.50	0.50	0.50	0.50	40
40.	Phosalone 35 EC (Zolone)	NS	2.0 ml/L	1.00	1.00	1.00	1.00	40
41.	Methomyl 40 SP (Lannate)	NS	1.0 g/L	0.05	0.05	0.05	0.05	61
42.	Dichlorvos 76 EC (Nuvan)	NS	1.0 ml/L	0.10	0.10	0.10	0.10	15
43.	Cartap Hydrochloride 50 SP (Padan)	S	2.0 g/L	#	#	1.00	0.01	40
24b.	Azadirachtin (Neemazal T/S 1%, Neemazal F 5%, Econeem plus 1%, Ozoneem Thrishul 1%)	Neem based EC formulations	1% & 5% @ 2 & 1 ml/L	--	--	--	--	3
VIII	Caterpillars							
40a.	Phosalone 35 EC (Zolone)	NS	2.0 ml/L	1.00	1.00	1.00	1.00	40
38a.	Chlorpyrifos 20 EC (Dursban)	NS	2.0 ml/L	0.50	0.50	0.50	0.50	40

S. No.	Pesticide recommended for major disease and pest	Nature of pesticide	Dose on formulation basis	MRL (mg/kg)				Pre-harvest Interval in Days (PHI)
				EU	UK	NL	Germany	
41a.	Methomyl 40 SP (Lannate)	NS	1.0 g/L	0.05	0.05	0.05	0.05	61
33a.	Spinosad 45 SC (Tracer)	NS	0.25 ml/L	#	0.50	0.01	0.20	28
31b.	Lambda-cyhalothrin 05 EC/CS (Karate EC & Karate Zeon CS)	NS	0.50 ml/L	0.20	0.20	0.20	0.20	30
24c.	Azadirachtin (Neemazal T/S 1%, Neemazal F 5%, Econeem plus 1%, Ozoneem Thrishul 1%)	Neem based EC formulations	1% & 5% @ 2 & 1 ml/L	--	--	--	--	3
IX	Mites							
44.	Dicofol 18.5 EC (Kelthane)	NS	1.0 ml/L	2.00	2.00	2.00	2.00	100
35a.	Difenthiuron 50 SC (Polo)	S	0.8 ml/L	#	#	#	0.01	45
24d.	Azadirachtin (Neemazal T/S 1%, Neemazal F 5%, Econeem plus 1%, Ozoneem Thrishul 1%)	Neem based EC formulations	1% & 5% @ 2 & 1 ml/L	--	--	--	--	3

NS= Non systemic

S= Systemic

= No MRLs given as yet

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 Efficiency of sprayers used.
- After fruit set, all fungicides containing Mancozeb or dithiocarbamates and Sulphur should be avoided.
- Dinocap should not be used when tender shoots are present in canopy.

- Recommended PHI will be valid only if maximum 2 sprays are applied per fruiting season at 7-15 days interval at recommended doses.
- ** The PHI of flusilazole pertains to one application by foliar spray only.

For export to Germany, the use of pesticides has to be managed very carefully in last 60 days before harvest to ensure the MRL compliance.