

Wine grapes information kit

Reprint – information current in 1997



REPRINT INFORMATION – PLEASE READ!

For updated information please call 13 25 23 or visit the website www.deedi.qld.gov.au

This publication has been reprinted as a digital book without any changes to the content published in 1997. We advise readers to take particular note of the areas most likely to be out-of-date and so requiring further research:

- Chemical recommendations—check with an agronomist or Infopest www.infopest.qld.gov.au
- Financial information—costs and returns listed in this publication are out of date. Please contact an adviser or industry body to assist with identifying more current figures.
- Varieties—new varieties are likely to be available and some older varieties may no longer be recommended. Check with an agronomist, call the Business Information Centre on 13 25 23, visit our website www.deedi.qld.gov.au or contact the industry body.
- Contacts—many of the contact details may have changed and there could be several new contacts available. The industry organisation may be able to assist you to find the information or services you require.
- Organisation names—most government agencies referred to in this publication have had name changes. Contact the Business Information Centre on 13 25 23 or the industry organisation to find out the current name and contact details for these agencies.
- Additional information—many other sources of information are now available for each crop. Contact an agronomist, Business Information Centre on 13 25 23 or the industry organisation for other suggested reading.

Even with these limitations we believe this information kit provides important and valuable information for intending and existing growers.

This publication was last revised in 1997. The information is not current and the accuracy of the information cannot be guaranteed by the State of Queensland.

This information has been made available to assist users to identify issues involved in wine grape production. This information is not to be used or relied upon by users for any purpose which may expose the user or any other person to loss or damage. Users should conduct their own inquiries and rely on their own independent professional advice.

While every care has been taken in preparing this publication, the State of Queensland accepts no responsibility for decisions or actions taken as a result of any data, information, statement or advice, expressed or implied, contained in this publication.



Queensland Government

Crop Production

HANDY GUIDE

for wine grape

Handy Guide 2



	Dormancy Green tip, first leaf tissue visible	Budburst Green tip, first leaf tissue visible	Shoots 10-20 cm long Five leaves separated, flowers visible	Flower clusters first visible shoots 30-40 cm long	Start of flowering first flower caps loosening	Full flower 80% capfall	Fruit set bunches at right angles to stem	Berries pea size bunches hanging down	Versicon berries start to soften, colour and enlarge	Harvest	Pre-leaf fall	Leaf fall
Fertilising	Soil analysis in early winter. Apply lime, dolomite or granomog as required.		Two weeks after budburst, start applications of nitrogen and potassium.	Foliar spray of boron and zinc.	Second foliar spray of boron and zinc.	Petiole analysis.		Two weeks after full flower, apply nitrogen and potassium.		Mid water stress increases sugar content and berry quality.	Four to six weeks before leaf fall, apply nitrogen and potash.	
Watering		Good water management critical Water when shallow tensiometers read 30 kPa on sandy soils, 50 kPa on loam/clay soils.			Good water management critical Water when shallow tensiometers read 25 kPa on sandy soils, 40 kPa on loam/clay soils.				Good water management critical Water when shallow tensiometers read 40 kPa on sandy soils, 40 kPa on loam/clay soils.	Maintain water supply to prevent premature leaf drop but avoid late leaf growth flushes.		
Weed control and interrow sod management	Four to six weeks before budburst, spray weeds under vines with a post-emergent contact herbicide. Two to four weeks before budburst, apply a pre-emergent herbicide to vine rows. After pre-emergent herbicide is incorporated, spread mulch under vine rows. In early winter, plant grass cover in interrow (perennial or winter only species). Two weeks after emergence, fertilise with ammonium nitrate (155 kg/ha). Slash grass cover before seeding or when 30 cm high.	Regularly slash or spray interrow grass cover with low rate of contact post-emergent herbicide. Regularly slash or spray interrow grass cover with low rate of contact post-emergent herbicide to prevent competition with vines. Regularly slash or spray interrow grass cover with low rate of contact post-emergent herbicide to prevent competition with vines. Plant summer interrow grass cover if winter cover not grown. Two weeks after emergence fertilise with ammonium nitrate (155 kg/ha). Slash grass cover before seeding and throw under vines as much cover.										Two to four weeks before leaf fall, lightly disc interrow to prepare seedbed for winter sowing.
Disease and pest control	At pruning, check vines for scale and spray if needed. Remove and burn material from vines infested with black spot or Phomopsis and tagged in previous season. Plan spray program for coming season.	Apply protectant fungicide for black spot and Phomopsis. Spray for bud mite if a problem previously.	Two weeks after budburst, apply second protectant spray for black spot and Phomopsis. Spray every 10 to 14 days, if wet weather continues. Tag any infected vines. At two, four and six weeks after budburst, spray for powdery mildew. Apply chlorothalonil at 10-20% capfall for Botrytis and downy mildew and Botrytis.	Check vines weekly for moth larvae or mites and apply sprays as required.	Check vines weekly for moth larvae and mites. If present, apply appropriate control measure. Two weeks after budburst, apply second protectant spray for black spot and Phomopsis. Spray every 10 to 14 days, if wet weather continues. Tag any infected vines. At two, four and six weeks after budburst, spray for powdery mildew. Apply chlorothalonil at 10-20% capfall for Botrytis and downy mildew.	Apply a protectant fungicide at 14 day intervals for downy mildew control. If wet weather occurs, apply an eradicant fungicide. Before bunch closure apply Boron for Botrytis control.	Check for powdery mildew and spray as required. Apply a protectant fungicide at 14 day intervals for downy mildew control. If wet weather occurs, apply an eradicant fungicide. Before bunch closure apply Boron for Botrytis control.	Four to six weeks before harvest start trapping for Queensland fruit fly and spray if 40 or more flies per week are found. Two sprays at four and two weeks before harvest may be required. Spray with Floralit 7 days before harvest for Botrytis.	Reduce checks for moth larvae and mites to weekly and spray as required.	Check vines weekly for downy mildew, black spot, Phomopsis and powdery mildew and spray as required.		
Canopy management, pruning and training	Prune canes to two-bud spurs. Weigh prunings and assess vigour/cropping status.	Shoot thinning and desuckering.	Shoot thinning with lifting of foliage vines or tucking of shoots between lowest foliage vines.	Remove leaves around bunches 2 to 4 weeks before harvest.	Remove bunches if vines overcropping.	Shoot thinning as required. Record yield on 10 to 20 vines per block to assess vigour/cropping status.	Start berry sampling and testing four weeks before harvest.					

These images are supplied courtesy of AgriLink, the Australian Wine Research Institute, R.E. Smart and M. Robinson, Swaght into Wine and B.G. Combe and P.R. Dry (eds) *Viticulture Vol 2: Practices*.

Problem Solver — **HANDY GUIDE**

for wine grape pests and diseases

Handy Guide 1

SAFETY FIRST

Read the label
Follow the directions
Wear protective clothing



Agrilink
your growing guide
to better farming

September 1997



Active ingredient: trade names	Withholding period (days)		Any time		Budburst		80% capfall										35 days before harvest		30 days before harvest					5 days before harvest			
	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	
<i>Bacillus thuringiensis</i> : Agree, Biobit, Delfin, Dipel, Dipel Forte, Novosol	✓																										
sulphur as polysulfide: Lime sulphur	✓																										
petroleum oil: Pestoil, Sunspray, Uvapro, Vicol, White oil, Winter spray oil, Lovis		✓																									
methadathion: Supracide, Suprathion																											
fenamiphos: Nemacur 400																											
carbendazim: Bavistin, Spin																											
benomyl: Benlate																											
carbaryl: Bugmaster, Carbaryl																											
oxadixyl+propieneb: Fruvit																											
chlorothalonil: Bravo, Chlorothalonil, Rover																											
dimethoate: Danadim, Dimethoate, Perfekthion, Rogor, Foxion, Saboteur																											
feniton: Lebaycid																											
pyrimethanil: Scala																											
thiram: Thiragranz, Thiram																											
ziram: Bryzam, Cyram, Fulasin, Zirgranaz, Ziram																											
azinphos-methyl: Azinphos, Benthion, Cotion, Gusathion																											
benalaxyl+mancozeb: Galben M																											
endosulfan: Bar, Endosulfan, Thiodan																											
flusilazole: Nustar																											
metiram: Polyram																											
oxadixyl+mancozeb: Recoil																											
penconazole: Topas																											
propiconazole: Bumper, Tilt																											
dithianon: Delan																											
hexaconazole: Anvil																											
tebuconazole: Mimic																											
triadimenol: Bayfidan, Shavit																											
fenarimol: Rubigan																											
copper hydroxide: Dry bordeaux																											
copper oxychloride: Copper oxychloride, Coprox, Copurite, Cuprox, Oxydul, Copper Brycop																											
copper, dispersible: Cosavet, Kumulus, Microsul, Microthiol, Thiovit, Top, Wettable sulphur																											
copper, oxychloride + metaxyli: Ridomil Plus																											
phosphorous acid: Agrit-Fos, Foli-R-Fos, Fos-ject, Fossic, Fungit-Fos, Crow Green, Phos Acid, Phospot, Phozacid																											
procyimdone: Sumisclex																											
iprodione: Rovral																											
mancozeb: Bryzeb, Dek, Dithane, Mancozeb, Manzate, Fenncozeb																											
chlorpyrifos: Chlorfos, Chlorpyrifos, Cyren, Iban, Lorsban, Pirfoz, Pyrinex, Strike-Out																											

Note: Information is a guide only. The product label is the official authority. Read it carefully and follow directions.

✓ Indicates that the trade products are registered for that use. Check the label before purchase or use.

✓ Indicates one of these chemicals is the preferred choice of the Australian Wine Research Institute in the production of grapes for export wine in the 1997-98 season. Refer to their publication listed below.

P indicates a protectant fungicide

E indicates an eradicant fungicide

C indicates a curative fungicide

***** Consult *Agrochemicals registered for use in Australian viticulture*, (A.N. Sas and C.G. Daniel), published by the Australian Wine Research Institute.

****** Example: to control black spot, you can spray with ziram from budburst until 80% capfall, but mancozeb could be used from budburst up to 30 days before harvest.

****** Most products containing chlorothalonil have a 7 day withholding period: one has a 14 day withholding period. Check the label before purchase or use.

Chemical application rates

NOTE: Rates listed are a guide only. Individual products may vary within the range given. Check the label before use.

Active ingredient: trade names	Product rate	
	per 100 L water	per ha
azinphos-methyl: Azinphos Benthion, Cotinon, Gusathion 350 Gusathion 200	100 g 140 mL 245 ml	
Bacillus thuringiensis: Agree, Dipel, Novosol Delfin, Dipel Forte Biobit	25 g 12.5 g 75 – 125 g	125 g 500 – 750 g
benalaxyl+mancozeb: Galben M	280 g	2.8 kg
benomyl: Benlate	100 g	
carbaryl: Carbaryl Bugmaster	130 g 200 mL	
carbendazim: Bavistin, Spin Bavistin FL, Spin Flo	100 g 100 mL	1.1 kg 1.1 L
chlorothalonil: Bravo 720 Bravo 500, Chlorothalonil, Rover	210 mL 300 mL	1.8 – 2.3 L 2.6 – 3.3 L
chlorpyrifos: Lorsban 500, Chlorpyrifos 500, Chlorfos, Cyren, Iban, Pirifoz, Strike-Out Lorsban 500W Pyrinex Lorsban 250WP	50 – 100 mL 50 g 50 – 100 g 100 g	500 mL 500 g 500 g 1 kg
copper hydroxide: Dry bordeaux	2 kg	
copper oxychloride: Copper oxychloride, Coppox, Coppurite, Cuprox, Oxydul, Copper, Brycop	500 g	
copper oxychloride + metalaxyl: Ridomil Plus	150 g	1.5 kg
dimethoate: Danadim, Dimethoate, Perfekthion, Rogor, Roxion, Saboteur	75 mL	
dithianon: Delan	50 – 100 g	550 g
endosulfan: Bar, Endosulfan, Thiodan	190 mL	
fenamiphos: Nemaclar 400		30 L
fenarimol: Rubigan	10 – 20 mL	100 – 200 mL
fenthion: Lebaycid	75 mL	
flusilazole: Nustar	10 g	50 – 100 g



Active ingredient: trade names	Product rate	
	per 100 L water	per ha
hexaconazole: Anvil	30 mL	300 mL
iprodisone: Rovral Rovral Aquaflo Rovral Liquid	100 g 100 mL 200 mL	2 L
mancozeb: Bryzeb, Dek, Dithane, Mancozeb, Manzate, Penncozeb	150 – 200 g	2 – 3 kg
methidathion: Supracide, Suprathion	65 – 125 mL	650 mL – 1.3 L
metiram: Polyram	150 – 200 g	
oxadixyl+mancozeb: Recoil	250 g	2.5 kg
oxadixyl+propineb: Fruvit	250 g	2.5 kg
penconazole: Topas	12.5 mL	75 – 150 mL
petroleum oil: Pestoil, Sunspray, Ulvapron, Vicol, White oil, Winter spray oil Lovis	3 – 6 L 1 L + azinphosmethyl	
phosphorous acid: Agri-Fos, Foli-R-Fos, Fos-ject, Fossic, Fungi-Fos, Grow Green, Phos Acid, Phospot, Phozacid	400 – 600 mL	3 – 6 L
procymidone: Sumisclex 500, Sumisclex Flocol Sumisclex 500WP	75 – 150 mL 75 g	1 – 2 L 1 kg
propiconazole: Bumper, Tilt	10 mL	50 – 100 mL
pyrimethanil: Scala	200 mL	1.5 – 2 L
sulphur as polysulfide: Lime sulphur	5 L	
sulphur, dispersible: Cosavet, Kumulus, Microsul, Microthiol, Thiovit, Top, Wettable sulphur	350 – 500 g	
tebufenozide: Mimic 700 WP Mimic 240 SC	8.6 g 25 mL	172 g 500 mL
thiram: Thiragranz, Thiram	150 g	
triadimenol: Bayfidan, Shavit	10 mL	100 mL
ziram: Bryzam, Cyram, Fulasin, Ziragranz, Ziram	120 – 150 g	