

Best Management Practice for Irrigated Viticulture: *Chemical and Pest Management*

August 2004

Activity, Product or Service	Aspect	Objective	Achieved by Best Management Practice	Indicators	Checklist	
		To meet legal responsibilities:	Research legal and regulatory obligations plus Australian Standards from established facility			
<b>Handling of Pesticides</b>	Leakage and spills at the time of handling pesticides	Minimise number of incidents associated with leakages and spills to minimise negative impact on land, surface and ground water and biodiversity.	<ol style="list-style-type: none"> <li>1. Have an established IPM programme to reduce requirement of chemicals.</li> <li>2. Develop and use a Standard Operating Procedure (SOP) to control leaks and spills, with clean up equipment.</li> <li>3. All workers involved with the use of chemicals have ChemCert qualification.</li> <li>4. Where possible, chemicals to be mixed only in impervious bunded/drained area with catchment sump and disposal procedure. Alternately, in an area assessed as environmentally safe.</li> <li>5. A reporting system on incidents and actions</li> <li>6. Map of property (property and regional scale) and surrounds identifying environmentally sensitive areas, vulnerable areas, environmental assets, hazardous situations.</li> </ol>	IPM Processes/ procedures in place to a suitable standard Number of incidences / spills Soil monitoring of chemical levels in relevant areas Populations of beneficial species Pesticide use (litres).	IMP in place SOP in place Kit Certificates  SOP for mixing. Result of assessment Records Map	
<b>Application of pesticides</b>	Dispersal of chemicals and overspraying.  Spray drift	Reducing contamination of land, surface and ground water, minimal impact of biodiversity. Negligible discomfort and inconvenience for local residence	<ol style="list-style-type: none"> <li>1. Have established IPM programme in place</li> <li>2. Develop and use SOP for application of chemicals addressing                             <ul style="list-style-type: none"> <li>• Weather conditions inc. wind speed and direction</li> <li>• the presence of inversion layers</li> <li>• the proximity of sensitive areas (including waterways) and crops</li> <li>• accuracy of the calibration of application equipment</li> <li>• assessment of coverage required/applied</li> </ul> </li> <li>3. Establish a pesticide monitoring programme that provides for an annual assessment of pesticide level in soil.</li> </ol>		IMP SOP    Annual record	

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<b>Transport of Chemicals</b>	Leakages and spills at the time of transporting chemicals	Minimise number of incidents associated with leakages and spills to minimise negative impact on land, surface and ground water and biodiversity.	<ol style="list-style-type: none"> <li>1. Develop and use SOP for the transport of pesticides addressing legal requirements, security and stowage plus route to be taken.</li> <li>2. Develop and use SOP for the key risk activities of loading and unloading where not in bunded area.</li> <li>3. Meet Best Management Practice for waste management of empty containers with reference to container size and suitability.</li> </ol>		SOP in place	
<b>Vermin Control – Use of Baiting</b>	Killing Protected and non target species	Minimal losses of protected and non target species	<ol style="list-style-type: none"> <li>1. Establish an animal and bird management plan addressing <ul style="list-style-type: none"> <li>• Property map</li> <li>• Animal problem – when, where, cost and which species cause the problem.</li> <li>• Identification of endangered and protected species and <i>important</i> local species and pests.</li> <li>• Management strategies – Aims, actions, monitoring, communications, training.</li> </ul> </li> <li>2. Develop and use SOP for baiting of foxes, rabbits, hares.</li> </ol>		Animal and Bird Management Plan	
<b>Storage of Pesticides</b>	Leakages and spills at the time of storing pesticides	Minimise number of incidents associated with leakages and spills to minimise negative impact on land, surface and ground water and biodiversity.	<ol style="list-style-type: none"> <li>1. Establish storage facilities that are <ul style="list-style-type: none"> <li>• Weatherproof</li> <li>• bunded/drained with sump floor</li> <li>• secure</li> <li>• ventilated</li> <li>• with adequate lighting</li> <li>• Provided with segregation facilities from other activities and other chemicals. Consideration to be given to seasonal mixes and volumes.</li> </ul> </li> <li>2. SOP for flooding event where vulnerable.</li> <li>3. Loading and unloading provisions with SOP established.</li> <li>4. Maintain record of pesticides in store</li> <li>5. Provide clean up kit.</li> </ol>		Facilities	
					SOP SOP	Register Kit

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<b>Bird control – Use of guns</b>	Disposal of spent ammunition	Minimise pollution and litter	1. Develop SOP for use of guns which addresses <ul style="list-style-type: none"> <li>• Disposal of spent ammunition</li> <li>• Type of shot – preference steel</li> <li>• OH&amp;S Issues</li> </ul>		SOP	
<b>Bird Control – Use of bird scarers</b>	Generation of noise	Minimise noise discomfort for local residents	1. Use animal and bird management plan as in Vermin Control above. 2. Develop Good Neighbour policy and control noise at night and in certain sections of vineyard adjacent to vulnerable areas.		Animal, Bird Management plan Policy	
<b>Bird Control – Use of netting</b>			Not an issue at Langhorne Creek			

Reference Material:  
ChemCent SA Chemical Management – Course Manual