

# Evidence Framework for Owner Reimbursement Costs

## For the Viticulture Industry

Version 1 - October 2009



Plant Health  
AUSTRALIA

## Evidence Framework for Owner Reimbursement Costs for the Viticulture Industry

$$\text{ORC} = (\text{A} - \text{B}) + \text{C} + \text{D} + \text{E} + \text{F} + \text{G} + \text{H} + \text{I}$$

Formula for calculation of ORCs for Perennial Tree and Vine Crops from Schedule 6, Part 4.4.13

Crop	PHA Member
Citrus	Australian Citrus Growers'
Macadamias	Australian Macadamia Society
Almonds	Almond Board of Australia
Winegrapes	Winemakers Federation of Australia
Dried Fruit	Australian Dried Fruit Association
Table Grapes	Australian Table Grapes Association
Apples and Pears	Apple and Pear Australia
Avocados	Avocados Australia
Summerfruit	Summerfruit Australia
Mangos	Australian Mango Industry Association
Cherries	Cherry Growers' of Australia
Plantation Timber	A3P
Nuts (other)	ANIC

**Winemakers' Federation of Australia Inc**  
**Australian Dried Fruit Association**  
**Australian Table Grapes Association**  
**Wine Grape Growers Australia Inc**

	Definition	Evidence requirements/Authorised persons - DRAFT	Comments
<b>A</b>	Loss of profit from the current Crop destroyed. $= a * y * p$		Legislative requirement for record keeping

Definition	Evidence requirements/Authorised persons - DRAFT	Comments
		Levy paid on fruit tonnage
a = area of tree Crop destroyed	<ol style="list-style-type: none"> <li>1. Satellite imagery will be used as the first tool to calculate areas. This will depend on the specific jurisdictions capacity to access such information.</li> <li>2. Aerial photographs will be used if Satellite imagery is not available. This will depend on the specific jurisdictions capacity to access such information.</li> <li>3. On ground surveys using GPS data if the first two options are not available at the time of incursion and crop destruction.</li> </ol> <p>An on the ground survey and consultation with Industry maps containing information on vineyard area, density vine number and variety will be used to determine the area of the vineyard to be destroyed at the time of the incursion. This will be carried out by an "authorised" person. If the incursion is in an urbanised area, backyard surveys will also be conducted by these "authorised" persons.</p>	<p>Some States have databases that list vineyard locations. An on ground survey will still be required as there will not be 100% capture on these databases.</p> <p>A lot of land and vineyards are leased by growers/producers. This is a complexity that will need to be taken into account when determining who is paid ORCs</p>
y = expected yield based on Owners' past records, taking into account any biennial bearing patterns. In particular, Owners claiming above average yields (and prices) must produce auditable records of above average returns in previous years to justify additional amounts in Owner Reimbursement Costs. If the Owner has no records, the regional average for that Crop is to be used.	<p>If actual yield cannot be determined by harvesting the crop, expected yield for the current season will be calculated for the individual grower from historical data averaged over the 3 years from the sources below.</p> <p><b>Winegrapes:</b> Grower records as required by legislation will be used.</p> <p><b>Dried grapes:</b> Processor records will be used.</p>	<p><b>Winegrapes</b> – will vary between varieties, clones and growing regions. However this will normally be standardised as: one red and one white for cool and warm.</p> <p>Suitable records may include:</p> <ul style="list-style-type: none"> <li>Grower records</li> <li>Number of bins or tonnes delivered to winery</li> <li>Grower levies/t production</li> <li>Winery records/t crushed</li> </ul> <p><b>Dried</b> – all fruit is processed, varietal</p>

Definition	Evidence requirements/Authorised persons - DRAFT	Comments
	<p><b>Table grapes:</b> Grower records will be used and these will need to be independently verified.</p> <ol style="list-style-type: none"> <li>1. Where this is not available, a 3 year regional average will apply for the varieties used by that grower.</li> <li>2. Levy records for the past 3 years may be used to verify historical production records</li> <li>3. For new plantings without crop records, the regional average for the first commercial crop of a 3 year old vineyard (wine) or a 2 year old vineyard (Dried and Table) will be used.</li> </ol>	<p>differences esp. Sultana variety is 80%. Muscat and currents are more consistent. 2 scenarios</p> <p>Processor records can be used to verify grower yield and price records.</p> <p>In situations where the processor owns an affected crop, past records will need to be independently verified prior to use.</p> <p>New property owners will need to obtain permission from previous owners for processor data release.</p> <p><b>Table</b> – grower records. Number of boxes could be used to verify yield. Wholesale delivery records. Differences between region, variety and grower.</p> <p>The fairest way may be with levy records.</p>
<p>p = market price at farm gate at harvest time</p>	<ol style="list-style-type: none"> <li>1. If there is a contract in place, the contract price for crops applicable under the contract will be used.</li> <li>2. If there is no contract, the price paid for the current crop will be the cash price for the fruit grade obtained by the producer in the previous season.</li> </ol> <p>If there is fruit in both contract and non contract from the one grower, the contract price will be paid for the volume of fruit in the contract and the price for the remaining fruit will be the spot price.</p> <p>Long term price (where vines are destroyed) will be the</p>	

	Definition	Evidence requirements/Authorised persons - DRAFT	Comments
		<p>regional average for the last 5 years or a wider average if data is not available for specific regions.</p> <p><b>Winegrapes:</b> This will be adjusted according to contract terms, using the average of the fruit grading values of the previous 3 seasons. Price will vary between varieties, growing region (warm vs cool climate) and quality.</p> <p><b>Dried grapes:</b> Prices from the usual processor will be used and adjusted according to contract terms, using the average of the fruit grading values of the previous 3 seasons.</p> <p><b>Table grapes:</b> Prices will vary weekly.</p>	<p><b>Winegrapes</b> – will vary between varieties. One red and one white for cool and warm.</p>
B	<p>= Harvesting costs based on 'best practice' as estimated by State/Territory departments of agriculture, plus any other costs (such as watering or pruning costs) normally associated with Crop production between the time of tree destruction and harvest.</p>	<p>Best practice harvest costs to be estimated using applicable local contract prices and industry data, determined by State departments in consultation with the Relevant Parties.</p> <p>Costs to be determined in accordance with the EPPRD and <i>Appendix 2: Schedule of costs for B – Harvesting costs based on 'best practice'</i> and will be broken into the following categories:</p> <ul style="list-style-type: none"> <li>• Winegrapes - cool climate - warm climate - red wine - white wine</li> <li>• Dried grapes</li> </ul>	<p><b>Winegrapes:</b> refer to GWRDC Benchmarking Study.</p>

	Definition	Evidence requirements/Authorised persons - DRAFT	Comments
		<ul style="list-style-type: none"> <li>Table grapes</li> </ul>	
C	= Direct costs associated with the Response Plan incurred by the Owner but not normally incurred as a production expense.	<p>This will depend on what the Response Plan requires and will need to be calculated on an Incident by Incident basis with costs estimated using standard local or regional contract prices and industry data as appropriate.</p> <p>Required actions/treatments by Owners need to be specifically defined in a Response Plan.</p> <p>A legislative order needs to specify the actions/treatments required by the Owner.</p> <p>Costs to be determined in accordance with the EPPRD and <i>Appendix 3: Schedule of costs for C – Any other direct costs incurred by the Owner under the Response Plan.</i></p>	
D	= Replacement value of any capital items destroyed as part of the Response Plan.	<p>This will depend on what the Response Plan requires and will need to be calculated on an Incident by Incident basis.</p> <p>This will be based on the market value of capital items, replacing like with like.</p> <p>Capital items requiring destruction need to be specified in a Response Plan.</p> <p>A legislative order needs to identify the item requiring destruction.</p> <p>Capital items for vineyards include: Trellis – posts and wire Irrigation lines Nets</p>	Prices will be sourced from suppliers like Landmark, Elders or other specialist suppliers at the time of the incident.

	Definition	Evidence requirements/Authorised persons - DRAFT	Comments
		<p>Costs to be determined in accordance with a schedule of market values for items expected to be destroyed, and agreed by Affected Parties at the time of developing a Response Plan.</p>	
E	<p>= Loss of net profits for any fallow period required by a Response Plan. Net profit is to be standardised based on regional gross margins calculations for the Crop in question by State/Territory departments of agriculture.</p>	<p>A standard Schedule of costs will be used to estimate costs based on “best practice” determined by State/Territory departments in consultation with the Relevant Parties.</p> <p>Where a grower wishes to claim a higher profit margin, suitable evidence may (must?) include tax returns and farm management information with averaged profit over 3 years.</p> <p>Costs to be determined in accordance with the EPPRD and <i>Appendix 4: Schedule of costs for E – Loss of net profit from a compulsory fallow.</i></p>	<p>Potential to use vineyard consultant Di Davidson and/or region consultants with local knowledge</p> <ul style="list-style-type: none"> <li>• Best practice</li> <li>• Costs</li> <li>• Expected earnings</li> </ul>
F	<p>= Tree destruction costs ‘depreciated’ depending on the age of the orchard in relation to a standardised period of rotation for the tree Crop in question.</p> <p><i>Depreciation is to be based on a straight line method between full cost reimbursement at the beginning of commercial production of the rotation and the end of the rotation.</i></p>	<p>Costs to be determined in accordance with the EPPRD and <i>Appendix 5: Schedule of costs for F – Vine destruction costs</i> and based on best practice and applicable contract prices.</p> <p>Standard rotation pattern to be considered as:</p> <p><b>Winegrapes:</b> 30 years unless a grower can provide evidence of a different intention.</p> <p><b>Dried grapes:</b> 20 years</p> <p><b>Table grapes:</b> 15 years</p>	<p>The Phylloxera report written by Fosters contains real information about destruction costs</p> <p><b>Dried grapes</b> – contractor records for past few years.</p> <p><b>Dried grapes and Table grapes</b> - 2/3 on rootstock which are more vigorous and harder to remove.</p> <p><b>Winegrapes</b> – from Fosters. – most of</p>

	Definition	Evidence requirements/Authorised persons - DRAFT	Comments
		Unless a grower can provide evidence of a different intention.	industry on own roots.
G	= 'Depreciated' tree replanting costs as for tree destruction costs.	<p>Costs to be determined in accordance with the EPPRD and <i>Appendix 6: Schedule of costs for G – Vine replanting costs</i> and based on best practice and applicable contract prices.</p> <p>Standard costs will apply for the region as agreed by the Relevant Parties.</p> <p>This cost is for replacing like with like. If there is an opportunity following the Response Plan for modernising or upgrading the orchard — for example, closer tree plantings, more expensive varieties, or trellis plantings, the level of Owner Reimbursement Costs is to be related strictly to replacing the asset that was there. If an Owner wants to introduce more technology or better infrastructure, for example, the Owner must cover any additional costs (Schedule 6 part 4.4.13).</p>	<p>Di Davidson and potentially Fosters report.</p> <p>Currently:</p> <p><b>Dried grapes and Table grapes</b> - 2/3 on rootstock which are more vigorous and harder to remove.</p> <p><b>Winegrapes</b> – from Fosters. – most of industry on own roots.</p>
H	= 'Depreciated' loss of profit during the non-bearing period of immature trees.	<p>The yield curve and the comparative gross margin will be used to determine this loss.</p> <p>A standard non-bearing period will be used as follows:</p> <p><b>Winegrapes:</b> Time to bearing when planting a 2 yo vine:  Warm climate – 2-3 years  Cool climate – 3-4 years (average = 3 years)  Production quality and quantity gradually increases over time.</p> <p><b>Dried grapes:</b> Time to bearing when planting a 2 yo</p>	<p>Standard yield and quality profile to be reflected in gross margins</p> <p><b>Winegrapes:</b> Yield profiles to be developed for cool and warm climates as well as red and white. A model will be produced for red and white in both climates (4 altogether).</p> <p>Need to ensure the time lag for planting due to complete removal of old trees and land</p>

	Definition	Evidence requirements/Authorised persons - DRAFT	Comments
		<p>vine: 3 years. Production quality and quantity remains steady for the life of the vine.</p> <p><b>Table grapes:</b> Time to bearing when planting a 2 yo vine: 3 years. Production is variable due to individual crop management, so an average (flat) yield profile will be used.</p>	<p>preparation – irrigation lines being laid etc.</p> <p>There may also be a required time for planting and it may be missed due to the time of the incursion and the time for land preparation, prolonging the lag time before planting.</p>
I	<p>= Value of any stored produce on farm destroyed as a directive of the Response Plan including seed or nuts — as for annual broadacre Crops. If there is an opportunity following the Response Plan for modernising or upgrading the orchard — for example, closer tree plantings, more expensive varieties, or trellis plantings, the level of Owner Reimbursement Costs is to be related strictly to replacing the asset that was there. If an Owner wants to introduce more technology or better infrastructure, for example, the Owner must cover any additional costs.</p>	<p>This will depend on what the Response Plan requires and will be calculated on an Incident by Incident basis.</p> <p>Price and yield to be determined using the applicable method as described in “A”.</p> <p>Amount of any stored fruit can be determined by inspection at the time of the incident.</p>	<p><b>Wine grapes:</b> Only fruit waiting to go to market or the winery is stored. This is not long term storage.</p> <p><b>Dried grapes:</b> The packer takes on ownership on delivery; though much of the drying process occurs onfarm An inspection by an “authorised” person will be required for verification of quantity.</p> <p><b>Table grapes:</b> Fruit can be stored on farm for up to 6 months. An inspection by an “authorised” person will be required for verification of quantity.</p>

*Appendix 2: Schedule of costs for B – Harvesting costs based on 'best practice'.*

NOTE: These costs are estimates. In the event of an incursion where Owner Reimbursement Costs may be paid, the costs and values will be reviewed and updated by agreement of the Relevant Parties to allow current and case specific information to be used.

<b>Industry</b>	<b>Harvesting Method</b>	<b>Rate</b>	<b>Comments</b>
Winegrapes	Hand harvesting	\$450 - \$650 / Ha	Highly variable
	Machine Harvesting	\$280 - \$350 / Ha	Highly variable
Dried Grapes			
Table Grapes			

*Appendix 3: Schedule of costs for C – Any other direct costs incurred by the Owner under the Response Plan.*

NOTE: These costs are estimates. In the event of an incursion where Owner Reimbursement Costs may be paid, the costs and values will be reviewed and updated by agreement of the Relevant Parties to allow current and case specific information to be used.

**Table grapes**

<b>COSTS</b>	
<b>Soil management</b>	
Rotary hoeing	
Discing	
Tyned cultivation	
<b>Weed control</b>	
Sprayseed	
Application	
Slashing and mulching	
<b>Cover crop (ryecorn)</b>	
Establishment	
<b>Water costs</b>	
Infrastructure use fee	
Drainage	
Power	
<b>Fertiliser</b>	
Urea	
Triple super	
Spreading	

<b>Other management</b>	
Pruning	
Bunch thinning	
Bunch trimming	
GA treatments	
Application	
Plastic covers (3 yr life)	
Labour (rollout & rollup)	
<b>Pest/disease management</b>	
Fungicide sprays	
Application	
<b>Total Production Cost</b>	
Picking	
Packing	
Cooling	
Boxes	
Freight	
Other shed costs	
<b>Total Variable Costs</b>	

*Winegrapes*

<b>COSTS</b>	
<b>Soil management</b>	
Rotary hoeing	
Discing	
Tyned cultivation	
<b>Weed control</b>	
Herbicide	
Application - Herbicide	
Slashing and mulching	
<b>Cover crop (ryecorn)</b>	
Establishment	
<b>Water costs</b>	
Infrastructure use fee	
Drainage	
Power	
<b>Fertiliser</b>	
Urea	
Triple super	
Zintrac	
<b>Other management</b>	
Pruning – mechanical Hand pruning Other management costs include: Shoot thinning Bunch thinning	

Wire lifting (See GWRDC Benchmarking Study) Netting	
<b>Pest/disease management</b>	
Fungicide/pesticide sprays	
Application	
<b>Other labour cost</b>	
Contract harvesting	
Bin hire and local freight	
Freight to winery	
<b>Total Variable Costs</b>	

*Dried grapes*

<b>Operating Costs</b>	
fertiliser	
chemicals drying oils	
fuels	
power cost	
irrigation & drainage rates	
farm machinery (R&M)	
mechanical harvesting	
contract drying	
labour for picking	
labour for other contractors	
labour - permanent not owner	
<b>total variable costs</b>	
gross margin	
overhead & other costs incl freight	

*Appendix 4: Schedule of costs for E – Loss of net profit from a compulsory fallow*

NOTE: These costs are estimates. In the event of an incursion where Owner Reimbursement Costs may be paid, the costs and values will be reviewed and updated by agreement of the Relevant Parties to allow current and case specific information to be used.

Cost	Rationale	Rate	Comments

*Appendix 5: Schedule of costs for F – Vine destruction costs*

NOTE: These costs are estimates. In the event of an incursion where Owner Reimbursement Costs may be paid, the costs and values will be reviewed and updated by agreement of the Relevant Parties to allow current and case specific information to be used.

Cost	Rationale	Rate	Comments

*Appendix 6: Schedule of costs for G – Vine replanting costs*

NOTE: These costs are estimates. In the event of an incursion where Owner Reimbursement Costs may be paid, the costs and values will be reviewed and updated by agreement of the Relevant Parties to allow current and case specific information to be used.

Cost	Rationale	Rate	Comments

**Appendix 7: Production Yield Data**

**Winegrapes**

<b>Year 1 crop</b>	<b>50% of full crop</b>
<b>Year 2 crop</b>	<b>75% of full crop</b>
<b>Years 3 to 15</b>	<b>100%</b>
<b>Year 15 to 30</b>	<b>Decline to 75%</b>
<b>Year 30 - 50</b>	<b>Decline to 50%</b>