

Hunter Valley Wine Region

Native plant community lists

Information compiled by Dr Mary Retallack, April 2023

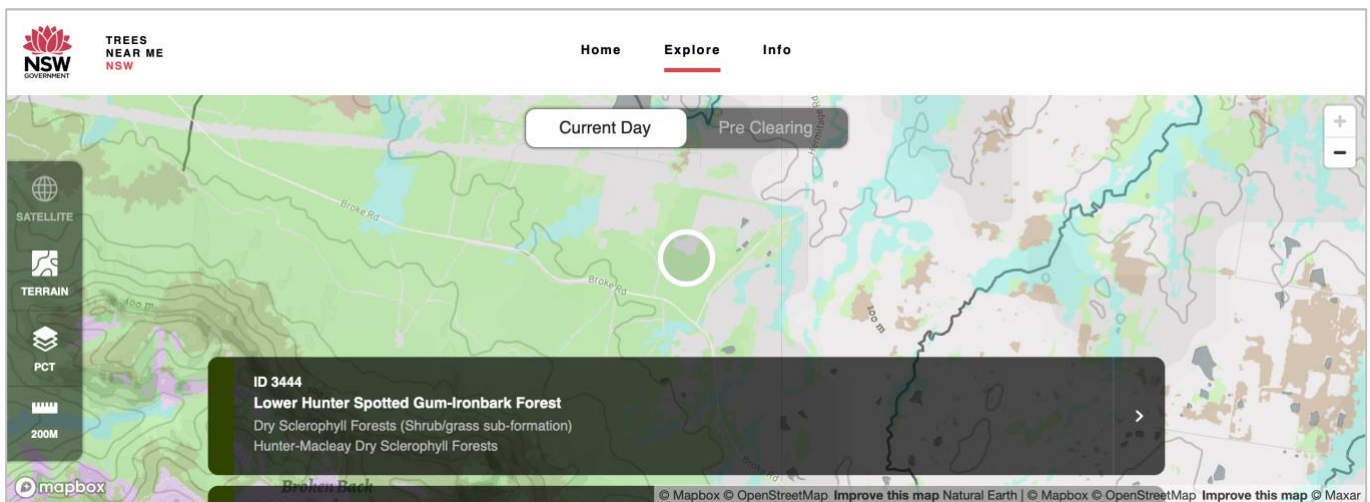
This 'quick guide' can help get you started on your property planning project. It provides details of the native plant community lists found in the Hunter Valley Wine Region and tools to assist you in determining your local plant community types.

Trees Near Me NSW

The Trees Near Me NSW app can be used to source local Plant Community Types (PCTs) for individual properties.

PCTs are the finest level in the NSW vegetation classification hierarchy. They identify and describe recurring patterns of native plant species assemblages in relation to environmental conditions (soil, temperature, moisture etc.). The floristic composition of PCTs is characterised by frequently co-occurring species, including combinations of trees, shrubs and/or ground cover plants.

Step #	Instructions
Step 1	Download the Trees Near Me NSW app on an internet browser https://treesnearme.app or mobile device
Step 2	Navigate to your property by dragging the map to your preferred location and use the zoom in and out buttons + -
Step 3	Toggle the layers on the left-hand side > satellite > terrain > PCT > 200m ruler
Step 4	Wait for the Plant Community Types (PCTs) to load at the bottom of the screen
Step 5	Select a Plant Community Type (PCT) to access the plants found in a particular native plant community





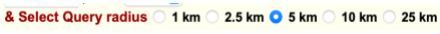


Please refer to the plant community lists below (they relate the location of the region's EcoVineyards demonstration sites) or enter your details into **Trees Near Me NSW** and follow the process above to access a plant list for your property.



PlantNET

Alternatively, PlantNET is an online program that can be used to source information about commonly found plants for designated locations in New South Wales.

You can access additional information about each plant by pressing on the plant name or do a more in-depth search for the status of a particular plant species (introduced, threatened, weed etc.).

Step #	Instructions
Step 1	To start visit https://plantnet.rbgsyd.nsw.gov.au
Step 2	Select the 'spatial search' button  and wait for the program to load
Step 3	Go to option 3 and enter the name of your town 
Step 4	While in option 3 select query radius (5 km) 
Step 5	Select All taxa and then press search 
Step 6	Click on a name to see the page for that taxon (and additional info about each plant) 

Background information

The plant community types and associated plant lists below have been refined to include plants that are likely to be available via local plant nurseries (enquire with your local nursery and pre-order in winter for pick up in May/June the following year), insectary benefits, and potential suitability for use either in or around vineyards. If you are unsure where to start, ask the nursery to select a tray of mixed species and observe how they grow adjacent to the vineyard in the first year.

If you wish to trial the use of plants, we suggest you start with a small area and focus your efforts on shrubs that either grow or can be trimmed to less than 2.5 metres tall if being planted near the vineyard (adjacent to strainer posts) and/or ground covers that are less than 30 cm tall if you are planting them in the undervine area.

Plant a diversity of plants to achieve optimal functional biodiversity benefits. To find out more about insectary plants please visit <https://ecovineyards.com.au/fact-sheets/>

Native plant communities have been identified for each EcoGrower demonstration site with a generic list of locally available plant species included at the end along with useful links to local service providers (native plant nurseries, suppliers of native seeds and sowing services). Plants are presented in alphabetical order by genus in each plant habit category.

Please use the plant information provided as a guide only and seek input from local practitioners and experts when selecting your plants, appropriate planting positions, spacing etc.



Hunter Valley Wine Region

Lower Hunter spotted gum-ironbark forest

Description: The canopy is almost always comprised of ironbarks including *Eucalyptus fibrosa*, *Eucalyptus crebra* or *Eucalyptus fergusonii* and *Corymbia maculata*. *Eucalyptus punctata* is occasionally present in localised areas.

There is a sparse however diverse mid-stratum, which almost always includes one or more *Acacia* species, of which *Acacia parvipinnula* and *Acacia elongata* are the most frequent and abundant. In addition, *Bursaria spinosa* and *Daviesia ulicifolia* are very frequent.

The mid-dense ground layer is characteristically grass-like however also includes hardy forbs, ferns, and twiners. Species that occur very frequently are *Entolasia stricta*, *Lomandra filiformis*, *Pomax umbellata*, *Dianella revoluta*, *Lomandra multiflora* subsp. *multiflora*, *Aristida vagans*, *Cheilanthes sieberi* subsp. *sieberi*, *Lepidosperma laterale* and *Themeda triandra*.

EcoVineyards sites: Brokenwood, McDonalds Road and Tyrell's Vineyards, Broke Road, Pokolbin, NSW

Habit	Family	Genus	Species	Common name	Floral resource		Height (m)	Width (m)	Tolerance to frost	Flower colour		Flowering time
					Pollen	Nectar						
Tree	Fabaceae	<i>Acacia</i>	<i>parvipinnula</i>	silver-stemmed wattle	yes	yes	2 to 10	2 to 5	moderately sensitive	yellow		autumn to spring
	Casuarinaceae	<i>Allocasuarina</i>	<i>littoralis</i>	black sheoak	yes	no	8	4 to 7	resistant	insignificant		autumn
	Proteaceae	<i>Banksia</i>	<i>oblongifolia</i>	rock banksia	yes	yes	3	2	resistant	yellow		summer to winter
	Proteaceae	<i>Banksia</i>	<i>spinulosa</i> var. <i>collina</i> [^]	hair-pin banksia	yes	yes	2 to 4	2 to 5	resistant	orange	yellow	autumn to winter
	Myrtaceae	<i>Corymbia</i>	<i>gummifera</i>	red bloodwood	yes	yes	15	10	moderately sensitive	cream		summer to winter
	Myrtaceae	<i>Leptospermum</i>	<i>laevigatum</i>	coastal tea-tree	yes	yes	1.5 to 6	2	moderately sensitive	white		winter to spring
	Myrtaceae	<i>Leptospermum</i>	<i>trinervium</i>	paperbark tea-tree	yes	yes	2 to 6	2	moderately sensitive	white		spring
	Myrtaceae	<i>Melaleuca</i>	<i>decora</i>	white feather honey myrtle	yes	yes	7	2	resistant	cream		spring to summer
	Myrtaceae	<i>Melaleuca</i>	<i>nodosa</i>	ball honey myrtle	yes	yes	6	3	resistant	cream		spring
	Scrophulariaceae	<i>Myoporum</i>	<i>montanum</i>	western boobialla	yes	yes	4	2 to 3	resistant	white		all year



Lower Hunter spotted gum-ironbark forest

Habit	Family	Genus	Species	Common name	Floral resource		Height (m)	Width (m)	Tolerance to frost	Flower colour		Flowering time
					Pollen	Nectar						
Shrub	Fabaceae	<i>Acacia</i>	<i>elongata</i>	swamp wattle	yes	¹ yes	0.4 to 5	1.5	moderately sensitive	yellow		winter to spring
	Fabaceae	<i>Acacia</i>	<i>myrtifolia</i> [^]	myrtle wattle	yes	¹ yes	1 to 2	1 to 2	moderately sensitive	yellow		spring
	Pittosporaceae	<i>Bursaria</i>	<i>spinosa</i>	blackthorn	yes	yes	2 to 4	1 to 3	resistant	white		summer to autumn
	Myrtaceae	<i>Callistemon</i>	<i>linearis</i>	narrow-leaved bottlebrush	yes	yes	1 to 3	2	resistant	red		spring to summer
	Myrtaceae	<i>Callistemon</i>	<i>rigidus</i>	stiff bottlebrush	yes	yes	2 to 3	1 to 3	resistant	red		summer
	Asteraceae	<i>Cassinia</i>	<i>uncata</i>	sticky cassinia	yes	¹ yes	1 to 2	1		cream		summer to winter
	Rutaceae	<i>Correa</i>	<i>reflexa</i>	native fuchsia	yes	yes	0.5 to 1	1	resistant	red	orange	winter to spring
	Fabaceae	<i>Daviesia</i>	<i>genistifolia</i>	bitter pea	yes	yes	1 to 2	1 to 2	resistant	yellow	red	spring
	Fabaceae	<i>Daviesia</i>	<i>ulicifolia</i>	prickly bitter-pea	yes	yes	1 to 2	1 to 2	resistant	yellow	red	spring
	Fabaceae	<i>Dillwynia</i>	<i>retorta</i>	eggs and bacon parrot-pea	yes	yes	3	1	moderately sensitive	yellow		winter to spring
	Sapindaceae	<i>Dodonaea</i>	<i>triquetra</i>	common hop bush	yes	no	2 to 4	1 to 2	moderately sensitive	insignificant		winter to spring
	Sapindaceae	<i>Dodonaea</i>	<i>viscosa</i>	sticky hop bush	yes	no	2 to 4	2 to 4	resistant	insignificant		spring to autumn
	Fabaceae	<i>Gompholobium</i>	<i>latifolium</i>	golden glory pea	yes	yes	3	1.5	resistant	yellow		spring
	Goodeniaceae	<i>Goodenia</i>	<i>ovata</i> [^]	hop goodenia	yes	yes	1 to 2.5	1 to 3	moderately sensitive	yellow		spring to summer
	Proteaceae	<i>Hakea</i>	<i>dactyloides</i>	broad-leaved hakea	yes	yes	2.5 to 4.5	2 to 2.5	resistant	white		spring
	Proteaceae	<i>Hakea</i>	<i>sericea</i>	silky needle-bush	yes	yes	4	2 to 3	resistant	white		winter to spring
	Fabaceae	<i>Hovea</i>	<i>linearis</i>	narrow-leaf hovea	yes	yes	1.2	0.5	resistant	green	mauve	winter to spring
	Fabaceae	<i>Indigofera</i>	<i>australis</i>	native indigo	yes	yes	2	1 to 2	resistant	pink		spring
	Fabaceae	<i>Jacksonia</i>	<i>scoparia</i>	dogwood	yes	yes	0.5 to 2	2 to 4	resistant	yellow		spring
	Myrtaceae	<i>Leptospermum</i>	<i>polygalifolium</i> [^]	common tea-tree	yes	yes	2	2	moderately sensitive	white		winter to summer
Myrtaceae	<i>Melaleuca</i>	<i>thymifolia</i> [^]	thyme honey myrtle	yes	yes	0.5 to 1	0.5 to 1	resistant	white	purple	summer	
Asteraceae	<i>Olearia</i>	<i>elliptica</i>	sticky daisybush	yes	yes	2	2	resistant	white		spring to autumn	
Asteraceae	<i>Ozothamnus</i>	<i>diosmifolius</i>	everlasting paper daisy	yes	yes	2	1	moderately sensitive	white		winter to spring	
Thymelaeaceae	<i>Pimelea</i>	<i>linifolia</i>	rice flower	yes	yes	1.5	1	moderately sensitive	white	pink	spring	



Lower Hunter spotted gum-ironbark forest

Habit	Family	Genus	Species	Common name	Floral resource		Height (m)	Width (m)	Tolerance to frost	Flower colour		Flowering time
					Pollen	Nectar						
Shrub	Apiaceae	<i>Platysace</i>	<i>lanceolata</i>	native parsnip	yes	yes	1.5	1	moderately sensitive	white		spring to autumn
	Fabaceae	<i>Pultenaea</i>	<i>paleacea</i>	chaffy bush-pea	yes	yes	0.5 to 1.5	1	resistant	yellow	orange	spring
	Fabaceae	<i>Pultenaea</i>	<i>retusa</i>	notched bush pea	yes	yes	0.5 to 2	1	resistant	orange	yellow	spring
	Fabaceae	<i>Pultenaea</i>	<i>spinosa</i>	bush pea	yes	yes	3	2	resistant	yellow	orange	spring
	Fabaceae	<i>Pultenaea</i>	<i>villosa</i> [^]	hairy bush pea	yes	yes	0.3 to 2.5	3	resistant	yellow		winter to spring
	Rutaceae	<i>Zieria</i>	<i>smithii</i>	sandfly zieria	yes	yes	1 to 2	1	resistant	white		summer to winter
Ground cover	Asteraceae	<i>Chrysocephalum</i>	<i>apiculatum</i> [^]	yellow buttons	yes	yes	0.3	0.5 to 1	resistant	yellow		winter to spring
	Poaceae	<i>Dichelachne</i>	<i>micrantha</i> [^]	short-haired plume grass	yes	no	0.5 to 1	0.3	resistant	cream		spring to summer
	Convolvulaceae	<i>Dichondra</i>	<i>repens</i>	kidney weed	yes	yes	0.1 to 0.3	1 to 5	resistant	yellow	green	spring to summer
	Poaceae	<i>Echinopogon</i>	<i>caespitosus</i> [^]	hedgehog grass	yes	no	0.5 to 0.8	0.2	resistant	brown		summer to autumn
	Goodeniaceae	<i>Goodenia</i>	<i>heterophylla</i>	variable-leaved goodenia	yes	yes	0.4	0.4	moderately sensitive	yellow		summer to autumn
	Goodeniaceae	<i>Goodenia</i>	<i>paniculata</i>	branched goodenia	yes	yes	0.5	0.5	moderately sensitive	yellow		summer to autumn
	Goodeniaceae	<i>Goodenia</i>	<i>rotundifolia</i>	star goodenia	yes	yes	0.5	0.5	moderately sensitive	yellow		spring to autumn
	Poaceae	<i>Microlaena</i>	<i>stipoides</i> var. <i>stipoides</i> ^{^*}	weeping grass	yes	no	0.1 to 0.7	0.2 to 1	moderately sensitive	cream		spring to summer
	Poaceae	<i>Poa</i>	<i>labillardierei</i> [^]	common tussock grass	yes	no	0.3 to 1	0.3 to 0.7	resistant	cream		spring to summer
	Poaceae	<i>Rytidosperma</i>	<i>fulvum</i> [^]	wallaby grass	yes	no	0.4 to 0.7	0.5	resistant	cream		spring to summer
	Poaceae	<i>Rytidosperma</i>	<i>tenuius</i>	purplish wallaby grass	yes	no	1.2	0.5	resistant	cream		spring to summer
	Poaceae	<i>Themeda</i>	<i>triandra</i> ^{^*}	kangaroo grass	yes	no	0.4 to 1	0.5 to 1	resistant	brown		all year
	Asteraceae	<i>Vittadinia</i>	<i>cuneata</i> [*]	fuzzy New Holland daisy	yes	yes	0.1 to 0.4	0.3	resistant	blue	mauve	all year
	Asteraceae	<i>Vittadinia</i>	<i>hispidula</i>	hairy daisy	yes	yes	0.3	0.3	resistant	white	mauve	all year



Lower Hunter spotted gum-ironbark forest

Habit	Family	Genus	Species	Common name	Floral resource		Height (m)	Width (m)	Tolerance to frost	Flower colour	Flowering time
					Pollen	Nectar					
Strap leaved	Asparagaceae	<i>Lomandra</i>	<i>filiformis</i>	wattle mat rush	yes	yes	0.5	0.5	resistant	cream	spring
	Asparagaceae	<i>Lomandra</i>	<i>longifolia</i> [^]	spiny-headed mat rush	yes	yes	0.5 to 0.8	1	resistant	cream	winter to spring
	Asparagaceae	<i>Lomandra</i>	<i>multiflora</i>	many-flowered mat-rush	yes	yes	0.5 to 1	< 0.5	resistant	cream	winter to summer
Bulbs and lilies	Asphodelaceae	<i>Dianella</i>	<i>caerulea</i> [^]	blue flax lily	² buzz pollinated	yes	1	0.5 to 2	resistant	blue	spring to summer
	Asphodelaceae	<i>Dianella</i>	<i>revoluta</i> var. <i>revoluta</i>	black-anther flax-lily	² buzz pollinated	yes	0.3 to 1	0.5 to 2	resistant	blue	spring to summer
	Iridaceae	<i>Patersonia</i>	<i>sericea</i>	purple flag	yes	yes	0.5	0.5	resistant	purple	spring to summer

[^] plants available commercially

* seed available commercially

¹ *Acacia* flowers do not produce nectar. However, the leaf and phyllode glands do secrete a nectar or sugary substance which bees, butterflies and other insects have been observed feeding on.

² Buzz pollination: Some native bees use a special pollination technique called 'buzz pollination' (sonication) i.e., the blue-banded bee, bangs its head on the flower's anthers 350 times a second to release the pollen. Plants from the Solanaceae (nightshade) family (tomatoes, capsicums, and eggplants) and many Australian native plants including *Hibbertia* spp. and *Dianella* spp. are buzz pollinated. These plants have the capacity to boost biodiversity and support populations of native bees, but their pollen resources may not be readily available to predatory arthropods.

Growers are encouraged to explore the use of *Bursaria spinosa*, *Leptospermum* spp. and *Rytidosperma* spp. as insectary plants in proximity grapevines (Retallack et al., 2019). It is anticipated a broader suite of native insectary plants could extend the richness and abundance of predatory arthropods in and around vineyards.



Hunter Valley Wine Region

Central Hunter ironbark-spotted gum forest

Description: A tall sclerophyll open forest with dry shrubs and a ground cover of grasses and graminoids occurring on moderately fertile soils on lower slopes of hills in the central Hunter Valley to the west of Newcastle from North Rothbury to Lake Liddell.

The canopy almost always includes ironbarks (*Eucalyptus crebra* or *Eucalyptus fibrosa*), very frequently in association with *Corymbia maculata*. The sparse small tree layer almost always includes one or more Acacia species, of which *Acacia parvipinnula* and *Acacia falcata* are most frequent and abundant.

Sparsely spaced individuals of the shrubs *Lissanthe strigosa* and *Daviesia ulicifolia* also commonly occur. The mid-dense ground layer typically includes a diverse array of graminoids, forbs and a hardy fern.

Cymbopogon refractus, *Lomandra multiflora* subsp. *multiflora* and *Cheilanthes sieberi* subsp. *sieberi* are almost always present and *Aristida ramosa*, *Aristida vagans*, *Dianella revoluta* and *Microlaena stipoides* are very frequent.

EcoVineyards site: Scarborough Wine Co., Hermitage Road, Pokolbin, NSW

Habit	Family	Genus	Species	Common name	Floral resource		Height (m)	Width (m)	Tolerance to frost	Flower colour	Flowering time
					Pollen	Nectar					
Tree	Fabaceae	<i>Acacia</i>	<i>binervia</i>	coastal myall	yes	¹ yes	5 to 8	5 to 8	resistant	yellow	winter to spring
	Casuarinaceae	<i>Allocasuarina</i>	<i>littoralis</i>	black sheoak	yes	no	8	4 to 7	resistant	insignificant	autumn
	Myrtaceae	<i>Melaleuca</i>	<i>decora</i>	white feather honey myrtle	yes	yes	7	2	resistant	cream	spring to summer
	Myrtaceae	<i>Melaleuca</i>	<i>nodosa</i>	ball honey myrtle	yes	yes	6	3	resistant	cream	spring
	Myrtaceae	<i>Melaleuca</i>	<i>sieberi</i>	Sieber's paperbark	yes	yes	10	3 to 4	resistant	white	spring to summer
	Scrophulariaceae	<i>Myoporum</i>	<i>montanum</i>	western boobialla	yes	yes	4	2 to 3	resistant	white	all year



Central Hunter ironbark-spotted gum forest

Habit	Family	Genus	Species	Common name	Floral resource		Height (m)	Width (m)	Tolerance to frost	Flower colour		Flowering time
					Pollen	Nectar						
Shrub	Fabaceae	<i>Acacia</i>	<i>amblygona</i>	fan wattle	yes	¹ yes	0.4 to 1.5	1	moderately sensitive	yellow		winter to spring
	Fabaceae	<i>Acacia</i>	<i>elongata</i>	swamp wattle	yes	¹ yes	0.4 to 5	1.5	moderately sensitive	yellow		winter to spring
	Fabaceae	<i>Acacia</i>	<i>falcata</i>	sickle wattle	yes	¹ yes	2 to 5	1 to 2	moderately sensitive	yellow		autumn to winter
	Fabaceae	<i>Acacia</i>	<i>paradoxa</i>	prickly wattle	yes	¹ yes	2 to 4	3 to 4	moderately sensitive	yellow		spring
	Fabaceae	<i>Aotus</i>	<i>ericoides</i>	common aotus	yes	yes	1 to 2	1	resistant	yellow		winter to spring
	Fabaceae	<i>Bossiaea</i>	<i>rhombifolia</i>	bossiaea	yes	yes	2	1	moderately sensitive	red	yellow	winter to spring
	Pittosporaceae	<i>Bursaria</i>	<i>spinosa</i>	blackthorn	yes	yes	2 to 4	1 to 3	resistant	white		summer to autumn
	Myrtaceae	<i>Callistemon</i>	<i>linearis</i>	narrow-leaved bottlebrush	yes	yes	1 to 3	2	resistant	red		spring to summer
	Myrtaceae	<i>Calytrix</i>	<i>tetragona</i>	fringe myrtle	yes	yes	1 to 2	1 to 2	resistant	pink		spring
	Asteraceae	<i>Cassinia</i>	<i>uncata</i>	sticky cassinia	yes	¹ yes	1 to 2	1		cream		summer to winter
	Fabaceae	<i>Daviesia</i>	<i>genistifolia</i>	bitter pea	yes	yes	1 to 2	1 to 2	resistant	yellow	orange	spring
	Fabaceae	<i>Daviesia</i>	<i>ulicifolia</i>	prickly bitter-pea	yes	yes	1 to 2	1 to 2	resistant	yellow	orange	spring
	Fabaceae	<i>Dillwynia</i>	<i>retorta</i>	eggs and bacon parrot-pea	yes	yes	3	1	moderately sensitive	yellow		winter to spring
	Sapindaceae	<i>Dodonaea</i>	<i>viscosa</i>	sticky hop bush	yes	no	2 to 4	2 to 4	resistant	insignificant		spring to autumn
	Amaranthaceae	<i>Enchylaena</i>	<i>tomentosa</i> *	ruby saltbush	yes		0.3 to 1	0.5 to 1.5	resistant	insignificant		spring to summer
	Proteaceae	<i>Hakea</i>	<i>sericea</i>	silky needle-bush	yes	yes	4	2 to 3	resistant	white		winter to spring



Central Hunter ironbark-spotted gum forest

Habit	Family	Genus	Species	Common name	Floral resource		Height (m)	Width (m)	Tolerance to frost	Flower colour		Flowering time
					Pollen	Nectar						
Shrub	Fabaceae	<i>Hovea</i>	<i>linearis</i>	narrow-leaf hovea	yes	yes	1.2	0.5	resistant	green	mauve	winter to spring
	Fabaceae	<i>Indigofera</i>	<i>australis</i>	native indigo	yes	yes	2	1 to 2	resistant	pink		spring
	Fabaceae	<i>Jacksonia</i>	<i>scoparia</i>	dogwood	yes	yes	0.5 to 2	2 to 4	resistant	yellow		spring
	Myrtaceae	<i>Kunzea</i>	<i>ambigua</i>	tick bush	yes	yes	1 to 3	1 to 3	resistant	white		spring
	Myrtaceae	<i>Leptospermum</i>	<i>juniperinum</i>	prickly tea-tree	yes	yes	2 to 3	2	moderately sensitive	white		spring
	Myrtaceae	<i>Leptospermum</i>	<i>polygalifolium</i> [^]	common tea-tree	yes	yes	2	2	moderately sensitive	white		winter to summer
	Myrtaceae	<i>Melaleuca</i>	<i>thymifolia</i> [^]	thyme honey myrtle	yes	yes	0.5 to 1	0.5 to 1	resistant	white	purple	summer
	Asteraceae	<i>Ozothamnus</i>	<i>diosmifolius</i>	everlasting paper daisy	yes	yes	2	1	moderately sensitive	white		winter to spring
	Thymelaeaceae	<i>Pimelea</i>	<i>linifolia</i>	rice flower	yes	yes	1.5	1	moderately sensitive	white	pink	spring
	Fabaceae	<i>Platylobium</i>	<i>formosum</i>	handsome flat pea	yes	yes	1 to 2	1	resistant	yellow		spring
	Fabaceae	<i>Pultenaea</i>	<i>spinosa</i>	bush pea	yes	yes	3	2	resistant	yellow	orange	spring



Central Hunter ironbark-spotted gum forest

Habit	Family	Genus	Species	Common name	Floral resource		Height (m)	Width (m)	Tolerance to frost	Flower colour		Flowering time
					Pollen	Nectar						
Ground cover	Asteraceae	<i>Chrysocephalum</i>	<i>apiculatum</i> [^]	yellow buttons	yes	yes	0.3	0.5 to 1	resistant	yellow		winter to spring
	Poaceae	<i>Chloris</i>	<i>truncata</i>	windmill grass	yes	no	0.3 to 0.5	0.23 to 0.5	resistant	cream		spring to summer
	Poaceae	<i>Dichelachne</i>	<i>micrantha</i> [^]	short-haired plume grass	yes	no	0.5 to 1	0.3	resistant	cream		spring to summer
	Convolvulaceae	<i>Dichondra</i>	<i>repens</i>	kidney weed	yes	yes	0.1 to 0.3	1 to 5	resistant	yellow	green	spring to summer
	Poaceae	<i>Echinopogon</i>	<i>caespitosus</i> [^]	hedgehog grass	yes	no	0.5 to 0.8	0.2	resistant	brown		summer to autumn
	Goodeniaceae	<i>Goodenia</i>	<i>heterophylla</i>	variable-leaved goodenia	yes	yes	0.4	0.4	moderately sensitive	yellow		summer to autumn
	Goodeniaceae	<i>Goodenia</i>	<i>rotundifolia</i>	star goodenia	yes	yes	0.5	0.5	moderately sensitive	yellow		spring to autumn
	Poaceae	<i>Microlaena</i>	<i>stipoides</i> var. <i>stipoides</i> ^{^*}	weeping grass	yes	no	0.1 to 0.7	0.2 to 1	moderately sensitive	cream		spring to summer
	Poaceae	<i>Poa</i>	<i>labillardieri</i> ^{^*}	common tussock grass	yes	no	0.3 to 1	0.3 to 0.7	resistant	cream		spring to summer
	Poaceae	<i>Rytidosperma</i>	<i>fulvum</i> [^]	wallaby grass	yes	no	0.4 to 0.7	0.5	resistant	cream		spring to summer
	Poaceae	<i>Rytidosperma</i>	<i>pilosum</i>	velvet wallaby grass	yes	no	0.2 to 0.9	0.4	resistant	cream		spring to summer
	Poaceae	<i>Rytidosperma</i>	<i>tenuius</i>	purplish wallaby grass	yes	no	1.2	0.5	resistant	cream		spring to summer
	Poaceae	<i>Poa</i>	<i>labillardierei</i> [^]	common tussock grass	yes	no	0.3 to 1	0.3 to 0.7	resistant	cream		spring to summer
	Poaceae	<i>Themeda</i>	<i>triandra</i> ^{^*}	kangaroo grass	yes	no	0.4 to 1	0.5 to 1	resistant	brown		all year
	Asteraceae	<i>Vittadinia</i>	<i>cuneata</i> [*]	fuzzy New Holland daisy	yes	yes	0.1 to 0.4	0.3	resistant	blue	mauve	all year
Asteraceae	<i>Vittadinia</i>	<i>hispidula</i>	hairy daisy	yes	yes	0.3	0.3	resistant	white	mauve	all year	



Central Hunter ironbark-spotted gum forest

Habit	Family	Genus	Species	Common name	Floral resource		Height (m)	Width (m)	Tolerance to frost	Flower colour	Flowering time
					Pollen	Nectar					
Strap leaved	Asparagaceae	<i>Lomandra</i>	<i>filiformis</i>	wattle mat rush	yes	yes	0.5	0.5	resistant	cream	spring
	Asparagaceae	<i>Lomandra</i>	<i>longifolia</i> [^]	spiny-headed mat rush	yes	yes	0.5 to 0.8	1	resistant	cream	winter to spring
	Asparagaceae	<i>Lomandra</i>	<i>multiflora</i>	many-flowered mat-rush	yes	yes	0.5 to 1	< 0.5	resistant	cream	winter to summer
Sedges and rushes	Cyperaceae	<i>Fimbristylis</i>	<i>dichotoma</i>	common fringe-rush	yes	yes	0.1 to 0.8	0.4	resistant	brown	all year
	Juncaceae	<i>Juncus</i>	<i>usitatus</i> [^]	common rush	yes	yes	0.4 to 1	0.5	resistant	brown	spring to summer
Bulbs and lilies	Asphodelaceae	<i>Dianella</i>	<i>caerulea</i> [^]	blue flax lily	² buzz pollinated	yes	1	0.5 to 2	resistant	blue	spring to summer
	Asphodelaceae	<i>Dianella</i>	<i>revoluta</i> var. <i>revoluta</i>	black-anther flax-lily	² buzz pollinated	yes	0.3 to 1	0.5 to 2	resistant	blue	spring to summer
	Iridaceae	<i>Patersonia</i>	<i>sericea</i>	purple flag	yes	yes	0.5	0.5	resistant	purple	spring to summer

[^] plants available commercially

^{*} seed available commercially

¹Acacia flowers do not produce nectar. However, the leaf and phyllode glands do secrete a nectar or sugary substance which bees, butterflies and other insects have been observed feeding on.

² Buzz pollination: Some native bees use a special pollination technique called 'buzz pollination' (sonication) i.e., the blue-banded bee, bangs its head on the flower's anthers 350 times a second to release the pollen. Plants from the Solanaceae (nightshade) family (tomatoes, capsicums, and eggplants) and many Australian native plants including *Hibbertia* ssp. and *Dianella* ssp. are buzz pollinated. These plants have the capacity to boost biodiversity and support populations of native bees, but their pollen resources may not be readily available to predatory arthropods.

Growers are encouraged to explore the use of *Bursaria spinosa*, *Leptospermum* ssp. and *Rytidosperma* ssp. as insectary plants in proximity grapevines (Retallack et al., 2019). It is anticipated a broader suite of native insectary plants could extend the richness and abundance of predatory arthropods in and around vineyards.



Hunter Valley Wine Region

Central Hunter swamp oak riparian forest

Description: A tall *Casuarina* open forest with a mid-stratum with chenopods and acacias and a grassy ground layer that occurs on creek flats in the undulating terrain of the Central Hunter Valley to the west of Newcastle, NSW.

The canopy very frequently consists of a high cover of *Casuarina glauca* and other trees are rarely present. The mid-stratum is sparse and almost always includes chenopods such as *Maireana microphylla* and *Enchylaena tomentosa* or occasionally a taller *Acacia* such as *Acacia salicina*.

The mid-dense ground layer is mainly comprised of grasses and forbs with some twiners, hardy ferns, and low growing shrubs, almost always including *Dichondra repens* and *Austrostipa verticillata* with *Glycine tabacina*, *Microlaena stipoides* and *Cheilanthes sieberi* subsp. *sieberi* very frequently occurring. This PCT occurs in a restricted area from south of Singleton to Muswellbrook.

EcoVineyards site: Margan Wines, Milbrodale Rd, Broke, NSW

Habit	Family	Genus	Species	Common name	Floral resource		Height (m)	Width (m)	Tolerance to frost	Flower colour	Flowering time
					Pollen	Nectar					
Tree	Casuarinaceae	<i>Allocasuarina</i>	<i>luehmannii</i>	bullock	yes	no	10 to 20	5	resistant	insignificant	spring
	Casuarinaceae	<i>Casuarina</i>	<i>glauca</i> [^]	swamp sheoak	yes	no	8 to 20	6	resistant	insignificant	spring
	Fabaceae	<i>Acacia</i>	<i>implexa</i>	hickory	yes	¹ yes	5 to 15	4 to 10	resistant	yellow	summer
Shrub	Amaranthaceae	<i>Enchylaena</i>	<i>tomentosa</i> [*]	ruby saltbush	yes		0.3 to 1	0.5 to 1.5	resistant	insignificant	spring to summer
	Asteraceae	<i>Olearia</i>	<i>elliptica</i>	sticky daisybush	yes	yes	2	2	resistant	white	summer to autumn
	Asteraceae	<i>Ozothamnus</i>	<i>diosmifolius</i>	everlasting paper daisy	yes	yes	2	1	moderately sensitive	white	winter to spring



Central Hunter swamp oak riparian forest

Habit	Family	Genus	Species	Common name	Floral resource		Height (m)	Width (m)	Tolerance to frost	Flower colour		Flowering time
					Pollen	Nectar						
Ground cover	Poaceae	<i>Anthosachne</i>	<i>scabra</i>	native wheat grass	yes	no	0.3 to 1	1 to 1.5	resistant	cream		spring to summer
	Amaranthaceae	<i>Atriplex</i>	<i>semibaccata</i> *	berry saltbush	yes		0.3	1 to 2	resistant	insignificant		all year
	Poaceae	<i>Chloris</i>	<i>truncata</i>	windmill grass	yes	no	0.3 to 0.5	0.3 to 0.5	resistant	cream		spring to summer
	Poaceae	<i>Chloris</i>	<i>ventricosa</i>	plump windmill grass	yes	no	1	0.5	resistant	cream		spring to autumn
	Asteraceae	<i>Chrysocephalum</i>	<i>apiculatum</i> ^	yellow buttons	yes	yes	0.3	0.5 to 1	resistant	yellow		winter to spring
	Convolvulaceae	<i>Dichondra</i>	<i>repens</i>	kidney weed	yes	yes	0.1 to 0.3	1 to 5	resistant	yellow	green	spring to summer
	Poaceae	<i>Dichelachne</i>	<i>micrantha</i> ^	short-haired plume grass	yes	no	0.5 to 1	0.3	resistant	cream		spring to summer
	Poaceae	<i>Echinopogon</i>	<i>caespitosus</i> ^	hedgehog grass	yes	no	0.5 to 0.8	0.2	resistant	brown		summer to autumn
	Amaranthaceae	<i>Einadia</i>	<i>nutans</i>	climbing saltbush	yes		0.5	1	resistant	insignificant		spring
	Goodeniaceae	<i>Goodenia</i>	<i>pinnatifida</i>	cut-leaf goodenia	yes	yes	0.4	0.1	moderately sensitive	yellow		spring to summer
	Poaceae	<i>Microlaena</i>	<i>stipoides</i> var. <i>stipoides</i> ^*	weeping grass	yes	no	0.1 to 0.7	0.2 to 1	moderately sensitive	cream		spring to summer
	Poaceae	<i>Poa</i>	<i>labillardierei</i> ^	common tussock grass	yes	no	0.3 to 1	0.3 to 0.7	resistant	cream		spring to summer
	Poaceae	<i>Rytidosperma</i>	<i>caespitosum</i> *	common wallaby grass	yes	no	0.2 to 0.8	0.1 to 0.3	resistant	cream		spring
	Poaceae	<i>Rytidosperma</i>	<i>fulvum</i> ^	wallaby grass	yes	no	0.4 to 0.7	0.5	resistant	cream		spring to summer
	Poaceae	<i>Themeda</i>	<i>triandra</i> ^*	kangaroo grass	yes	no	0.4 to 1	0.5 to 1	resistant	brown		all year
	Asteraceae	<i>Vittadinia</i>	<i>cuneata</i> *	fuzzy New Holland daisy	yes	yes	0.1 to 0.4	0.3	resistant	blue	mauve	all year



Central Hunter swamp oak riparian forest

Habit	Family	Genus	Species	Common name	Floral resource		Height (m)	Width (m)	Tolerance to frost	Flower colour	Flowering time
					Pollen	Nectar					
Strap leaved	Asparagaceae	<i>Lomandra</i>	<i>confertifolia</i> var. <i>rubiginosa</i>	mat rush	yes	yes	0.8	0.8	resistant	cream	spring
	Asparagaceae	<i>Lomandra</i>	<i>longifolia</i> [^]	spiny-headed mat rush	yes	yes	0.5 to 0.8	1	resistant	yellow	winter to spring
	Asparagaceae	<i>Lomandra</i>	<i>multiflora</i>	many-flowered mat-rush	yes	yes	0.5 to 1	< 0.5	resistant	cream	winter to summer
Sedges and rushes	Cyperaceae	<i>Fimbristylis</i>	<i>dichotoma</i>	common fringe-rush	yes	yes	0.1 to 0.8	0.4	resistant	brown	all year
	Cyperaceae	<i>Gahnia</i>	<i>aspera</i>	rough saw sedge	yes	yes	0.5 to 1	0.5 to 1.5	resistant	cream	spring to summer
	Cyperaceae	<i>Schoenoplectus</i>	<i>validus</i> [^]	river club rush	yes	yes	1 to 3 m	0.5	resistant	brown	summer to autumn
Bulbs and lilies	Asphodelaceae	<i>Dianella</i>	<i>caerulea</i> [^]	blue flax lily	² buzz pollinated	yes	1	0.5 to 2	resistant	blue	spring to summer
	Asphodelaceae	<i>Dianella</i>	<i>revoluta</i> var. <i>revoluta</i>	black-anther flax-lily	² buzz pollinated	yes	0.3 to 1	0.5 to 2	resistant	blue	spring to summer

[^] plants available commercially

^{*} seed available commercially

¹ *Acacia* flowers do not produce nectar. However, the leaf and phyllode glands do secrete a nectar or sugary substance which bees, butterflies and other insects have been observed feeding on.

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Growers are encouraged to explore the use of *Bursaria spinosa*, *Leptospermum* spp. and *Rytidosperma* spp. as insectary plants in proximity grapevines (Retallack et al., 2019). It is anticipated a broader suite of native insectary plants could extend the richness and abundance of predatory arthropods in and around vineyards.



Hunter Valley Wine Region

Generic list of available native plant species from local nurseries

Habit	Family	Genus	Species	Common name	Floral resource		Height (m)	Width (m)	Tolerance to frost	Flower colour		Flowering time
					Pollen	Nectar						
Tree	Fabaceae	<i>Acacia</i>	<i>longifolia</i> [^]	Sydney golden wattle	yes	¹ yes	2 to 5	4 to 8	moderately sensitive	yellow		winter to spring
	Myrtaceae	<i>Acmena</i>	<i>smithii</i> [^]	lillypilly	yes	yes	8	3 to 5	moderately sensitive	white	purple	summer
	Casuarinaceae	<i>Allocasuarina</i>	<i>littoralis</i>	black sheoak	yes	no	8	4 to 7	resistant	insignificant		autumn
	Casuarinaceae	<i>Allocasuarina</i>	<i>luehmannii</i>	bulloak	yes	no	10 to 20	5	resistant	insignificant		spring
	Casuarinaceae	<i>Allocasuarina</i>	<i>torulosa</i> [^]	forest sheoak	yes	no	6 to 20	6 to 8	resistant	insignificant		spring
	Proteaceae	<i>Banksia</i>	<i>spinulosa</i> var. <i>collina</i> [^]	hair-pin banksia	yes	yes	2 to 4	2 to 5	resistant	orange	yellow	autumn to winter
	Myrtaceae	<i>Callistemon</i>	<i>citrinus</i> [^]	red bottlebrush	yes	yes	2 to 5	2 to 5	resistant	red		spring to summer
	Casuarinaceae	<i>Casuarina</i>	<i>cunninghamiana</i> [^]	river sheoak	yes	no	10 to 15	6 to 10	resistant	insignificant		summer
	Casuarinaceae	<i>Casuarina</i>	<i>glauca</i> [^]	swamp sheoak	yes	no	8 to 20	6	resistant	insignificant		spring
	Myrtaceae	<i>Corymbia</i>	<i>maculata</i> [^]	spotted gum	yes	yes	10 to 40	8 to 20	sensitive	yellow		summer to spring
	Myrtaceae	<i>Eucalyptus</i>	<i>punctata</i> [^]	grey gum	yes	yes	35	8	resistant	yellow		summer to autumn
	Myrtaceae	<i>Eucalyptus</i>	<i>racemosa</i> [^]	narrow-leaved scribbly gum	yes	yes	15	6	resistant	white		winter to spring
	Myrtaceae	<i>Eucalyptus</i>	<i>saligna</i> [^]	Sydney blue gum	yes	yes	20 to 40	10 to 25	moderately sensitive	white		summer
	Myrtaceae	<i>Eucalyptus</i>	<i>tereticornis</i> [^]	forest red gum	yes	yes	20 to 30	10 to 25	resistant	white		winter to spring
	Pittosporaceae	<i>Hymenosporum</i>	<i>flavum</i> [^]	native frangipani	yes	yes	8 to 10	4 to 5	sensitive	orange	yellow	spring to summer
	Myrtaceae	<i>Leptospermum</i>	<i>trinervium</i>	paperbark tea-tree	yes	yes	2 to 6	2	moderately sensitive	white		spring
	Myrtaceae	<i>Leptospermum</i>	<i>laevigatum</i>	coastal tea-tree	yes	yes	1.5 to 6	2	moderately sensitive	white		winter to spring
	Scrophulariaceae	<i>Myoporum</i>	<i>montanum</i>	western boobialla	yes	yes	4	2 to 3	resistant	white		all year



Generic list of available native plant species from local nurseries

Habit	Family	Genus	Species	Common name	Floral resource		Height (m)	Width (m)	Tolerance to frost	Flower colour		Flowering time
					Pollen	Nectar						
Shrub	Fabaceae	<i>Acacia</i>	<i>myrtifolia</i> [^]	myrtle wattle	yes	¹ yes	1 to 2	1 to 2	moderately sensitive	yellow		spring
	Pittosporaceae	<i>Bursaria</i>	<i>spinosa</i>	blackthorn	yes	yes	2 to 4	1 to 3	resistant	white		summer to autumn
	Goodeniaceae	<i>Goodenia</i>	<i>ovata</i> [^]	hop goodenia	yes	yes	1 to 2.5	1 to 3	moderately sensitive	yellow		spring to summer
	Amaranthaceae	<i>Enchylaena</i>	<i>tomentosa</i> [*]	ruby saltbush	yes		0.3 to 1	0.5 to 1.5	resistant	insignificant		spring to summer
	Proteaceae	<i>Isopogon</i>	<i>anemonifolius</i> [^]	drumsticks	yes	yes	0.5 to 1	0.5 to 2	resistant	yellow		spring to summer
	Myrtaceae	<i>Leptospermum</i>	<i>juniperinum</i>	prickly tea-tree	yes	yes	2 to 3	2	moderately sensitive	white		spring
	Myrtaceae	<i>Leptospermum</i>	<i>liversidgei</i>	lemon scented tea-tree	yes	yes	4	2	moderately sensitive	white		summer
	Myrtaceae	<i>Leptospermum</i>	<i>polygalifolium</i> [^]	common tea-tree	yes	yes	2	2	moderately sensitive	white		winter to summer
	Myrtaceae	<i>Melaleuca</i>	<i>thymifolia</i> [^]	thyme honey myrtle	yes	yes	0.5 to 1	0.5 to 1	resistant	white	purple	summer
	Scrophulariaceae	<i>Myoporum</i>	<i>boninense</i>	coastal boobialla	yes	yes	2	2	resistant	white		spring to summer
	Lamiaceae	<i>Prostanthera</i>	<i>incana</i> [^]	velvet mint-bush	yes	yes	1 to 2.5	1.5	resistant	mauve		spring
	Fabaceae	<i>Pultenaea</i>	<i>villosa</i> [^]	hairy bush pea	yes	yes	0.25 to 2.5	3	resistant	yellow		winter to spring
Lamiaceae	<i>Westringia</i>	<i>fruticosa</i> [^]	coastal rosemary	yes	yes	2 to 3	2 to 3	resistant	white	purple	winter to spring	



Generic list of available native plant species from local nurseries

Habit	Family	Genus	Species	Common name	Floral resource		Height (m)	Width (m)	Tolerance to frost	Flower colour	Flowering time
					Pollen	Nectar					
Ground cover	Poaceae	<i>Aristida</i>	<i>ramosa</i> *	purple wiregrass	yes	no	1.2	0.5	moderately sensitive	brown	summer
	Poaceae	<i>Aristida</i>	<i>vagans</i> *	three-awn spear grass	yes	no	0.4 to 0.8	0.4	moderately sensitive	brown	spring to autumn
	Amaranthaceae	<i>Atriplex</i>	<i>semibaccata</i> *	berry saltbush	yes		0.3	1 to 2	resistant	insignificant	all year
	Poaceae	<i>Austrostipa</i>	<i>scabra</i> *	rough spear-grass	yes	no	0.3 to 0.6	0.5	resistant	brown	winter to spring
	Poaceae	<i>Bothriochloa</i>	<i>biloba</i> *	lobed bluegrass	yes	no	0.5 to 1	0.5	moderately sensitive	brown	summer
	Poaceae	<i>Bothriochloa</i>	<i>macra</i> *	red grass	yes	no	0.2 to 1	0.2	moderately sensitive	brown	autumn
	Asteraceae	<i>Brachycome</i>	<i>multifida</i> ^	cut-leaf daisy	yes	yes	0.45	1	moderately sensitive	mauve	autumn to winter
	Asteraceae	<i>Calotis</i>	<i>lappulacea</i> *	yellow burr-daisy	yes	yes	0.2 to 0.5	0.4	moderately sensitive	yellow	all year
	Poaceae	<i>Chloris</i>	<i>ventricosa</i> *	plump windmill grass	yes	no	1	0.3	resistant	cream	spring to autumn
	Poaceae	<i>Chloris</i>	<i>divaricata</i> *	slender chloris	yes	no	0.5	0.2	resistant	cream	spring to summer
	Poaceae	<i>Chloris</i>	<i>truncata</i> *	windmill grass	yes	no	0.3 to 0.5	0.2 to 0.5	resistant	cream	spring to summer
	Asteraceae	<i>Chrysocephalum</i>	<i>apiculatum</i> ^	yellow buttons	yes	yes	0.3	0.5 to 1	resistant	yellow	winter to spring
	Poaceae	<i>Cymbopogon</i>	<i>refractus</i> *	barbed wire grass	yes	no	1	0.4	resistant	cream	spring to autumn
	Asphodelaceae	<i>Dianella</i>	<i>caerulea</i> ^	blue flax lily	² buzz pollinated	yes	1	0.5 to 2	resistant	blue	spring to summer
	Poaceae	<i>Dichelachne</i>	<i>micrantha</i> ^	short-haired plume grass	yes	no	0.5 to 1	0.3	resistant	cream	spring to summer



Habit	Family	Genus	Species	Common name	Floral resource		Height (m)	Width (m)	Tolerance to frost	Flower colour		Flowering time
Ground cover	Convolvulaceae	<i>Dichondra</i>	<i>repens</i>	kidney weed	yes	yes	0.1 to 0.3	1 to 5	resistant	yellow	green	spring to summer
	Poaceae	<i>Echinopogon</i>	<i>caespitosus</i> [^]	hedgehog grass	yes	no	0.5 to 0.8	0.2	resistant	brown		summer to autumn
	Scrophulariaceae	<i>Eremophila</i>	<i>debilis</i> [*]	winter apple (prostrate form)	yes	yes	0.5	2	resistant	white		summer
	Cyperaceae	<i>Ficinia</i>	<i>nodosa</i> [^]	knobby club rush	yes	yes	0.5 to 1.5	0.5 to 2	moderately sensitive	brown		all year
	Goodeniaceae	<i>Goodenia</i>	<i>heterophylla</i>	variable-leaved goodenia	yes	yes	0.4	0.4	moderately sensitive	yellow		summer to autumn
	Goodeniaceae	<i>Goodenia</i>	<i>paniculata</i>	branched goodenia	yes	yes	0.5	0.5	moderately sensitive	yellow		summer to autumn
	Goodeniaceae	<i>Goodenia</i>	<i>rotundifolia</i>	star goodenia	yes	yes	0.5	0.5	moderately sensitive	yellow		spring to autumn
	Poaceae	<i>Microlaena</i>	<i>stipoides</i> var. <i>stipoides</i> ^{^*}	weeping grass	yes	no	0.1 to 0.7	0.2 to 1	moderately sensitive	cream		spring to summer
	Poaceae	<i>Pennisetum</i>	<i>alopecuroides</i> [^]	swamp foxtail grass	yes	no	0.6	0.5 to 0.8	moderately sensitive	pink	mauve	summer to autumn
	Poaceae	<i>Poa</i>	<i>affinis</i> [^]	coastal tussock grass	yes	no	0.7	0.5	resistant	cream		spring to summer
	Poaceae	<i>Poa</i>	<i>labillardieri</i> ^{^*}	common tussock grass	yes	no	0.3 to 1	0.3 to 0.7	resistant	cream		spring to summer
	Poaceae	<i>Rytidosperma</i>	<i>bipartitum</i> [*]	leafy wallaby grass	yes	no	0.5	0.3	resistant	cream		spring to summer
	Poaceae	<i>Rytidosperma</i>	<i>fulvum</i> [^]	wallaby grass	yes	no	0.4 to 0.7	0.5	resistant	cream		spring to summer
	Poaceae	<i>Rytidosperma</i>	<i>tenuius</i>	purplish wallaby grass	yes	no	1.2	0.5	resistant	cream		spring to summer
	Goodeniaceae	<i>Scaveola</i>	<i>albida</i> [^]	purple fan flower	yes	yes	0.3 to 0.6	0.6 to 1	resistant	white		all year
	Poaceae	<i>Themeda</i>	<i>triandra</i> ^{^*}	kangaroo grass	yes	no	0.4 to 1	0.5 to 1	resistant	brown		all year
	Violaceae	<i>Viola</i>	<i>hederacea</i> [^]	native violet	yes	yes	0.2	1 to 4	resistant	white	purple	all year
Asteraceae	<i>Vittadinia</i>	<i>cuneata</i> [*]	fuzzy New Holland daisy	yes	yes	0.1 to 0.4	0.3	resistant	blue	mauve	all year	



Generic list of available native plant species from local nurseries

Habit	Family	Genus	Species	Common name	Floral resource		Height (m)	Width (m)	Tolerance to frost	Flower colour		Flowering time
					Pollen	Nectar						
Sedges and rushes	Poales	<i>Baloskion</i>	<i>tetraphyllum</i> [^]	tassel cord rush	yes	yes	0.5 to 1.8	0.5 to 1.5	moderately sensitive	brown		spring to summer
	Cyperaceae	<i>Baumea</i>	<i>rubiginosa</i> [^]	soft twig rush	yes	yes	1.4	2	resistant	brown		spring to summer
	Cyperaceae	<i>Bolboschoenus</i>	<i>caldwellii</i> [^]	club rush	yes	yes	0.3 to 1.2	1	resistant	yellow	brown	summer
	Cyperaceae	<i>Carex</i>	<i>appressa</i> [^]	tall sedge	yes	yes	1	0.5 to 1	resistant	brown		spring to summer
	Cyperaceae	<i>Carex</i>	<i>longebrachiata</i> [^]	weeping sedge	yes	yes	0.4 to 0.80	1	resistant	yellow	brown	spring to summer
	Cyperaceae	<i>Cyperus</i>	<i>exaltatus</i> [^]	tall flat-sedge	yes	yes	0.3 to 1	0.3 to 1	resistant	brown		all year
	Cyperaceae	<i>Gahnia</i>	<i>clarkei</i> [^]	tall saw sedge	yes	yes	1.5 to 2	1.5 to 2	resistant	brown		summer
	Cyperaceae	<i>Gahnia</i>	<i>sieberiana</i> [^]	ted fruited saw sedge	yes	yes	3	2 to 3	resistant	yellow	brown	spring to summer
	Juncaceae	<i>Juncus</i>	<i>kraussii</i> [^]	sea rush	yes	yes	0.5 to 1	0.5 to 1	resistant	brown		all year
	Juncaceae	<i>Juncus</i>	<i>usitatus</i> [^]	common rush	yes	yes	0.4 to 1	0.5	resistant	brown		spring to summer
	Cyperaceae	<i>Schoenoplectus</i>	<i>mucronatus</i> [^]	club rush	yes	yes	0.4 to 0.7	0.5	resistant	brown		summer
	Cyperaceae	<i>Schoenoplectus</i>	<i>validus</i> [^]	river club rush	yes	yes	1 to 3 m	0.5	resistant	brown		summer to autumn
Strap leaved	Asparagaceae	<i>Lomandra</i>	<i>hystrix</i> [^]	river mat rush	yes	yes	1	1	resistant	yellow		spring
	Asparagaceae	<i>Lomandra</i>	<i>longifolia</i> [^]	spiny-headed mat rush	yes	yes	0.5 to 0.8	1	resistant	yellow		winter to spring
Climber (outside vineyard)	Fabaceae	<i>Hardenbergia</i>	<i>violacea</i>	native lilac	yes	yes	1 to 2	1 to 2	moderately sensitive	purple		winter to spring
	Fabaceae	<i>Glycine</i>	<i>tabacina</i> [*]	variable glycine	yes	yes	0.3	scrambling	sensitive	purple		spring to autumn

[^] plants available commercially

^{*} seed available commercially

¹ *Acacia* flowers do not produce nectar. However, the leaf and phyllode glands do secrete a nectar or sugary substance which bees, butterflies and other insects have been observed feeding on.

² Buzz pollination: Some native bees use a special pollination technique called 'buzz pollination' (sonication) i.e., the blue-banded bee, bangs its head on the flower's anthers 350 times a second to release the pollen. Plants from the Solanaceae (nightshade) family (tomatoes, capsicums, and eggplants) and many Australian native plants including *Hibbertia* spp. and *Dianella* spp. are buzz pollinated. These plants have the capacity to boost biodiversity and support populations of native bees, but their pollen resources may not be readily available to predatory arthropods.

Growers are encouraged to explore the use of *Bursaria spinosa*, *Leptospermum* spp. and *Rytidosperma* spp. as insectary plants in proximity grapevines (Retallack et al., 2019). It is anticipated a broader suite of native insectary plants could extend the richness and abundance of predatory arthropods in and around vineyards.



Native insectary plants (general)

It is reported that the longevity of parasitoid wasps which predominantly feed on nectar are significantly enhanced by Australian native plants including sweet bursaria, *Bursaria spinosa*, crimson bottlebrush, *Callistemon* sp., Hakea, *Hakea* sp., prickly tea-tree, *Leptospermum continentale*, woolly tea-tree, *Leptospermum lanigerum*, austral trefoil, *Lotus australis*, creeping mint, *Mentha satureioides*, dryland tea tree, *Melaleuca lanceolata*, creeping boobialla, *Myoporum parvifolium*, sticky boobialla, *Myoporum petiolatum*, and wallaby grasses, *Rytidosperma* ssp.

In addition, a recent desktop review of plants native to South Australia identified a broader suite of locally adapted native plants which are regarded as having the capacity to provide insectary benefits and may hold widespread appeal. They include wild rosemary, *Dampiera rosmarinifolia*, clasping goodenia, *Goodenia amplexans*, hop goodenia, *Goodenia ovata*, cut-leaf goodenia, *Goodenia pinnatifida*, boobialla, *Myoporum insulare*, long-leaved bush-pea, *Pultenaea daphnoides*, twiggy bush-pea, *Pultenaea largiflorens*, blue-rod, *Stemodia florulenta*, fairy fan-flower, *Scaevola aemula*, as well as species of *Acacia* ssp., *Eucalyptus* ssp., and *Lomandra* ssp. that may be suited to a particular site. Other plants previously identified for their insectary benefits in vineyards include straw wallaby grass, *Rytidosperma richardsonii*, windmill grass, *Chloris truncata*, and creeping saltbush, *Atriplex semibacca*

Continue your search for useful information here:

- Australian National Botanic Gardens <https://www.anbg.gov.au/search/index.html>
- When Bee Foundation <https://www.whenbeefoundation.org.au/our-work/projects/powerful-pollinators/>
- Best planting practice to ensure maximum survival http://www.riverdenenursery.com.au/uploads/1/4/2/4/142436691/planting_guide_2022.pdf
- Threatened biodiversity profile search <https://www.environment.nsw.gov.au/threatenedspeciesapp/>



Local plant nurseries and seed suppliers

Native plant nurseries				
Company	Contact	Address	Contact details	Website
Hunter Indigenous Plants (^ plants available on lists above)	Jenny or Lachlan Anderson	36 Weakleys Drive Beresfield NSW	T: 02 4966 0457 M: 0422 959 221 E: plants@hunterindigenousplants.com.au	https://hunterindigenousplants.com.au
Hunter Wetlands Centre	Kenneth Bayliss	1 Wetlands Place Shortland NSW	T: 02 4951 6466 M: 0434623658 E: nursery@wetlands.org.au	https://wetlands.org.au
Riverdene Nurseries	Noel and Virginia Jupp	80 Allyn River Road East Gresford NSW	T: 02 4938 9280 E: riverdene.jupp@bigpond.com	http://www.riverdenenursery.com.au
Tilligerry Habitat Native Nursery		2E King Albert Ave Tanilba Bay 2319	T: (02) 4984 5677 E: tilligerryhabitat@gmail.com	https://www.tilligerryhabitat.org.au
Worimi Heritage Nursery	Shannon or Ray	Worimi Local Aboriginal Land Council 2163 Nelson Bay Rd. Williamstown	T: 02 4033 8821 E: admin.WGT@worimi.org.au	https://worimi.org.au/green-team/services/
Suppliers of native seeds and/or sowing services				
Cumberland Plain Seeds Pty Ltd	Tim Berryman	Glenbrook, NSW	T: 0422 480 078 E: tim@cpseeds.com.au	https://www.cpseeds.com.au
Native Seeds Pty Ltd	Darren Vincent	Great Alpine Rd Eurobin, Vic	T: 1300 473 337 E: enquiries@nativeseeds.com.au	www.nativeseeds.com.au

Visit the Hunter Region Landcare Network for more information <https://hunterlandcare.org.au/resources/flora-resources/>

Please contact the EcoVineyards team admin@ecovineyards.com.au if you would like us to add your company details. This is a living document, and it is updated as new information becomes available.



Further reading

Articles on functional biodiversity enhancement

- Retallack, M. (2011) **Vineyard biodiversity and insect interactions**. Grape and Wine Research and Development Corporation, Adelaide.
<http://www.viti.com.au/pdf/Rmjr0811VineyardBiodiversityandInsectInteractionsBookletFINAL.pdf>
- Retallack, M. (2012) **Enhancing biodiversity in the vineyard**. Adelaide and Mount Lofty Ranges Natural Resources Management Board, Adelaide.
<http://www.viti.com.au/pdf/Enhancing%20Biodiversity%20in%20the%20Vineyard%20%20Workshop%20Notes.pdf>
- Retallack, M.J. (2018) **The importance of biodiversity and ecosystem services in production landscapes**. The Australian and New Zealand Grapegrower and Winemaker. Oct (657), 36 - 43.
<https://winetitles.com.au/gwm/articles/october-657/the-importance-of-biodiversity-and-ecosystem-services-in-production-landscapes/>
- Retallack, M.J. (2018) **The role of native insectary plants and their contribution to conservation biological control in vineyards**. The Australian and New Zealand Grapegrower and Winemaker. Nov (658). <https://winetitles.com.au/gwm/articles/november-658/the-role-of-native-insectary-plants-and-their-contribution-to-conservation-biological-control-in-vineyards/>
- Retallack, M.J. (2018) **Practical examples of ways to establish native insectary plants in and around vineyards**. The Australian and New Zealand Grapegrower and Winemaker. Dec (659), 38-41.
<https://winetitles.com.au/gwm/articles/december-659/practical-examples-of-ways-to-establish-native-insectary-plants-in-and-around-vineyards/>
- Retallack, M.J. (2019) **The functional diversity of predator arthropods in vineyards**. The Australian and New Zealand Grapegrower and Winemaker. Jan (660), 23-26.
<https://winetitles.com.au/gwm/articles/january-660/the-functional-diversity-of-predator-arthropods-in-vineyards/>
- Retallack, M.J. (2019) **Ways to monitor arthropod activity on native insectary plants**. The Australian and New Zealand Grapegrower and Winemaker. Feb (661), 40-43.
<https://winetitles.com.au/gwm/articles/february-661/ways-to-monitor-arthropod-activity-on-native-insectary-plants/>
- Retallack, M.J., Thomson, L.J, and Keller, M.A. (2019) **Native insectary plants support populations of predatory arthropods for Australian vineyards**. 42nd Congress of Vine and Wine, International Organisation of Vine and Wine (OIV), Geneva, Switzerland. https://www.bio-conferences.org/articles/bioconf/abs/2019/04/bioconf-oiv2019_01004/bioconf-oiv2019_01004.html

Copies of these publications can also be found here <https://ecovineyards.com.au/articles/>

Fact sheets and case studies

National EcoVineyards Program fact sheets can be downloaded here <https://ecovineyards.com.au/fact-sheets/>

EcoVineyards case studies can be downloaded here <https://ecovineyards.com.au/casestudies/>





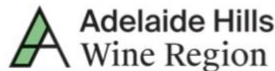
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The National EcoVineyards Program is funded by Wine Australia with levies from Australia's grape growers and winemakers and matching funds from the Australian Government.

Acknowledgement of country

The EcoVineyards project acknowledges Aboriginal people as the First Peoples and Nations of the lands and waters we live and work upon and we pay our respects to their Elders past, present, and emerging. We acknowledge and respect the deep spiritual connection and the relationship that Aboriginal and Torres Strait Islander people have to Country.

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