

Should I grow wildflowers? information kit

Reprint – information current in 2000



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 2000. We advise readers to take particular note of the areas most likely to be out-of-date and so requiring further research: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 APVMA www.apvma.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- Financial information—costs and returns listed in this publication are out of date.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 2000. 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 wildflower 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

Common QUESTIONS

This chapter answers the most commonly asked questions about growing wildflowers. Where more detail is required, we refer you to other chapters in the book. Symbols on the pages will help you make these links.

Contents

Getting started—suitability of block.....	14
Getting started—general.....	15
What to grow.....	16
Buying plants.....	17
Pruning.....	17
Fertiliser.....	18
Pests, diseases and disorders.....	18
Harvesting and marketing.....	21



Getting started—suitability of block

How do I determine if my block of land is suitable for wildflowers or proteas?

The suitability of your block for growing any given species needs to be assessed using information on the production requirements of the crop and the market demand for the species you are interested in growing. If you can grow a high demand species easily in your particular location, you are better placed to make a success of your enterprise. For more information, read on.

How big an area do I need to grow wildflowers for a living?

Normally a minimum of 5 ha of planting area is required. The area you need depends on the types of wildflowers grown, the market supplied, ease of access to that market, establishment and operating costs and the likely returns. For example, returns per bunch for waxflowers or foliage can be low, therefore a larger area of land is needed to achieve a set return compared with high-yielding, higher-value crops. It is the norm to have a mix of flowers on a property and this also influences the area of land required.

Are my site and soil suitable?

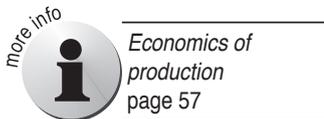
Slopes of less than 15% are suitable provided that the farm layout minimises erosion. For most species soils must have good internal drainage. Light sandy well-drained soils are preferable. However, some species will tolerate heavier soils and some soils can be managed to improve drainage. Soil fertility is less crucial and low fertility can be ameliorated in lighter soils. An acid soil of pH 5 to 7 is desirable for most species; some need low levels of phosphorus.

Obtain a soil and water test as part of your planning process or before buying property. The prior build-up of diseases like *Phytophthora* root rot or nematodes in other susceptible crops or native vegetation may affect the survival and yield of subsequent wildflower plantings. Sites susceptible to frosts will only suit a narrow range of crops.

The further you are located from necessary infrastructure such as transport, cold rooms, agents and markets, the higher your input costs. However, avoid residential areas as environmental concerns about farm spraying and noise can become a major issue with neighbours.

Do I have to irrigate?

You cannot depend on rainfall alone to grow your crop. You must have access to a reliable supply of good quality water. Have your irrigation water tested.



Economics of
production
page 57



Water supply
The farm
page 74

Getting started—general

I am not going to be able to live on my property immediately. How do I get my wildflower block started?

If you are not able to visit your property regularly because it is too far away you will be limited in what you can achieve without employing someone to look after the block. Realistic goals are to establish a property plan and put in place irrigation infrastructure, windbreaks and sheds. Leave the first planting until you are able to monitor and manage your crop more closely. Otherwise you may lose a lot of plants and unwittingly establish a long-term pest and disease problem.

Assuming that you are able to get to the block each weekend, you may be able to establish plants and get started. If you are not living on the property you run the risk of missing important events, such as a burst irrigation line, infestations of pests, disease outbreaks or cattle wandering on to your farm from next door. At certain times, such as planting and harvesting, you will need to devote additional time to your property.

The family is going to work the farm together. Is this going to be a good lifestyle?

Do not expect your spouse/partner or children to share your enthusiasm for the hard manual labour involved in operating a wildflower enterprise. The issue of family labour needs to be discussed carefully before getting started. Most growers have some difficulty in engaging their children to help at harvest unless an adequate reward system is in place. Expect some conflict to arise between your desire for a good lifestyle and the need for a profitable enterprise.

I don't know anything about farming or commercial horticulture, but I like gardening. How do I learn about wildflowers?

If you plan to grow wildflowers the first two to three years will represent a sharp learning curve and mistakes are an inevitable part of this process. Other wildflower growers are a valuable source of information. Some TAFE colleges run workshops for intending flower growers and on general horticulture.

A large quantity of written information is also available from the Department of Primary Industries' GrowSearch Australia service, libraries and booksellers. Many specialist cut flower grower associations have their own libraries that lend books and leaflets to members. These associations generally welcome prospective and new flower growers.



Contacts page 91
References page 113

I haven't got much money but I'd still like to grow wildflowers. How do I get started?

Growing wildflowers involves a substantial investment in money and time. If you cannot afford to lose money, but still want to sustain your interest in wildflowers, try to obtain work experience with an existing flower grower while testing a modest number of plants on your land, with the aim of slowly building your business. Obtaining skills in flower growing and a good knowledge base are two good ways to reduce the financial risk involved.

What to grow

What should I grow?

The first rule of crop selection is to grow for the needs of the market place. Before getting started, talk to a range of wholesalers or exporters about what is likely to sell well and at what time of year. Does your locality offer any seasonal advantages?

Although many species and cultivars of wildflowers are sold on the domestic and export markets, a much smaller percentage are suitable for growing in Queensland and even fewer will be suited to your farm. Queensland is a large state with a range of climatic zones, each offering their own potential as a growing environment for native flowers and proteas.

We recommend that new growers try small plantings of five to ten wildflower crop species in two different locations on their farm to determine what is likely to grow well, be productive and be marketed profitably. Other factors that determine which crops to plant include likely market returns relative to production costs and the resources needed (for example machinery, equipment and labour) relative to your means. You are more likely to remain motivated to look after a crop that you prefer, but do not let this override the need to make money to stay in business or to sustain your lifestyle.



Can I grow waratah in Queensland?

The prospects for waratah in Queensland are far less promising than in New South Wales and Victoria. Commercial cultivation is restricted to cooler elevated areas, just inland from the coast. Waratah flower heads are prone to rain marking, blossom blight (caused by the fungal organism *Botrytis*), flower borer and other deformities even in these conditions. *Phytophthora* root rot and a tendency to biennial bearing are other difficulties encountered.

Climatic niches may exist that make waratah a viable proposition in a few areas, particularly on basaltic soils where growers have evaluated seedling selections that perform well in their district. Currently available New South Wales hybrids do not appear to perform well in Queensland. Flowering in south-east Queensland is from the end of August to the end of October.

Can I grow Western Australian species in Queensland?

Western Australian wildflowers are adapted to a region with predominantly winter rainfall and low summer rainfall. In addition, most showy commercial wildflowers from Western Australia grow naturally in well-drained sandy soils and loams. Many species do not perform well under the summer rainfall, high humidity conditions experienced in coastal Queensland. In general, Queensland soils tend to be clay-based, which does not favour species requiring good internal soil drainage.

In Queensland, many Western Australian species develop debilitating fungal foliage diseases and root rot diseases caused by *Phytophthora*. Failure to flower or flowering abnormalities can occur due to the different daylength and temperature regimes. Often, though the crop can be grown in Queensland, it cannot compete in terms of yield, stem quality and price with the same crop grown in Western Australia. This can be the case with many of the showy forms of Western Australian banksias.

Unless the species is a known performer in your district, don't plant any more than you would be prepared to lose. Be prepared for problems with newly released cultivars of established crops such as waxflower as well.

Buying plants

Where can I buy plants?

As a starting point, local grower organisations can advise you on reliable sources of supply for the particular plants that you wish to grow. As many cut flower species are highly susceptible to disease it is important to buy healthy planting material, preferably from accredited nurseries. This not only ensures the health of the plants themselves, but is also one way of stopping new pests and diseases being introduced and spreading around your property.

Many nurseries grow to contract, so order your plants well in advance of planting time to ensure you get the plants and the quantities you want.



Pruning

Should I prune my wildflowers? If so, when and how?

The main reasons for pruning are to:

- shape and structure plants
- rejuvenate plants by encouraging regrowth
- control pests and diseases (to a lesser extent).

Pruning requirements vary from crop to crop and between localities. Contact the local grower association dealing with your flower crop(s). Grower groups frequently hold field days for their members to demonstrate crop pruning and harvesting techniques, and other cultural



Wildflower grower
associations
Contacts page 92



Library & literature
search services
Contacts page 108

practices. If there are no grower associations in your area, there may be another established wildflower grower in your locality whom you could contact for advice.

Your local Department of Primary Industries extension officer or your marketer/agent may also provide information. Videos and printed information on a range of cultural and management practices for some wildflower crops are available from the Department of Primary Industries' GrowSearch Australia information service.

Fertiliser

Should I fertilise my wildflowers?

Little information is available on fertilising wildflowers. To find out what fertiliser you may need and how much to apply, have a soil analysis done to determine the chemical status of your soil. A leaf tissue analysis may also be useful in evaluating the nutrient status of ailing plants, using healthy plants for comparison. Unfortunately, few of the companies offering soil analysis and leaf tissue testing have consultants familiar with the interpretation of the test results for wildflower crops. Contact experienced growers in your area or specialist private or DPI wildflower consultants for advice and interpretation of the results.

Other sources of information include GrowSearch Australia, the Department of Primary Industries' ornamental crops database at Cleveland.

Pests, diseases and disorders

What's killing my wildflowers?

Many pests, diseases and/or unfavourable environmental conditions could be killing your wildflowers. It could be disease, damaging cultural treatments, the wrong fertiliser, herbicide drift or insect damage. The main problems with wildflowers are likely to be *Phytophthora* root rot and/or collar rot; root-knot nematode damage; fungal rot diseases of crowns and stem bases, and wilt diseases (caused by fungi such as *Rhizoctonia*, *Fusarium* and *Phomopsis* species).

Keep good records of activities and events on your farm (that is, a history of the management and condition of the crop). This is a valuable reference point for solving problems. Next examine the plant. Given the prevalence of root disease, you may need to pull up the plant then wash and examine the root system carefully for symptoms of damage.

Refer to publications that describe or illustrate the symptoms, ask other experienced growers, or refer the sample to laboratories that specialise in diagnosing disease and other problems. When you are contacting laboratories for advice, send them fresh samples (not dead plants) that have not been recently treated with pesticides and show a good range of symptoms. You should also include details of the history of that planting. Contact DPI's Crop Health Services at Cleveland for more information on sending samples for problem or disease diagnosis.

more info



Plant health diagnostic
services
Contacts page 100

How can I stop what is killing my plants?

Many things can kill plants (see previous question); probably the most important is root rot disease, and more specifically, root rot disease caused by *Phytophthora*. Most cultivated wildflowers are susceptible to this disease.

Important issue to consider before you start growing wildflowers

You cannot easily stop disease caused by Phytophthora from eventually killing your plants in large numbers if you plant a Phytophthora-susceptible-crop in a soil where climatic and root environment conditions are very conducive to development of this disease.

Poorly drained soils with internal barriers to drainage must be avoided; they will experience periods of excessive wetness or waterlogging; and are very favourable for disease development. Surface drainage measures, such as planting on slopes or hilling, are only useful as supplementary practices and will not prevent shallow soils from becoming saturated during high and prolonged rainfall periods. In summer-rainfall coastal areas, you may be successful in growing wildflowers for a number of years, but eventually very high rainfall periods will test your soil's internal drainage capability.



LEIF FORSBERG

Size variation and death in *Berzelia* with *Phytophthora* root rot disease

Fungicides (for example phosphonates, furalaxyl) are available to suppress development of root rot disease, but they must be applied before considerable damage has occurred. As fungicides only give temporary protection they must be continually re-applied. Long-term reliance on fungicides for disease control is not recommended. For some pests



more info



Publications—Proteas
References
page 115

and diseases, such as root-knot nematode in rice flower or Fusarium wilt in flannel flower, there are no effective treatments after plants become infected.

To stop what is killing or may kill your wildflowers you will need to know how to prevent disease development. Prevention is vital. It includes providing above and below-ground conditions to discourage disease development; the responsible use of chemicals for disease control; eliminating plant pathogens from irrigation water and from soil before planting; and the use of disease-free planting material.

For more help with *Phytophthora* control, refer to the book *Protea diseases and their control*.

How can I control diseases and other things that damage flowers and foliage?

There are several ways to control or prevent these problems:

- Buy disease-free plants, preferably from accredited nurseries.
- Select or manage the environment so that it is least conducive for diseases. For example, avoid coastal areas with high rainfall and high humidity. Space and/or prune plants to provide good air circulation. Plantings on hillsides usually have good air circulation.
- After small trial plantings of different wildflowers on your farm, grow plants that are least susceptible to flower rots and leaf spot diseases.



CYNTHIA CARSON

Bacterial leaf spot in King Protea

- Fungicide treatments before and after flower harvest may be needed for some plants as consumers demand blemish-free products. Always treat plants before diseases have built up. Precautionary postharvest disease control measures such as dipping are essential in some crops.

Fungal diseases such as grey mould or incorrectly applied pesticide sprays are common causes of damage. Less common are bacterial diseases (such as bacterial spot on King Protea). Insect and mite pests may also cause disfigurement of flowers, stems and foliage.

How can I maintain my flower quality if I don't have access to cooled transport?

The effect of high temperatures at harvest can be best reduced by harvesting stems straight into water, prompt removal from field to packing shed and using forced air-cooling to remove field heat rapidly.

If you grow for export and do not have cooled transport, every effort should be made to protect the consignment. Cover or shade it with a thermal blanket or use an insulated vehicle for transport, and minimise the duration of transport from packing shed to exporter. Moving product in the cool of the night is also an option. At the point of export you should consider rehydrating stems and further cooling before shipment. You should also ask your exporter and importer for feedback on the value of such treatments.

Harvesting and marketing

When should I harvest my wildflowers?

Wildflowers are harvested when they reach a particular maturity, with best display and postharvest quality. The most suitable maturity for harvesting is specific for each crop. Practical information can be obtained from specialist growers and the nearest grower association for your particular crop.

more info



Quality specifications,
market requirements
Marketing page 30

more info



Marketing
page 23

Where can I sell my wildflowers?

Wildflowers can be sold on domestic markets direct to florists or through wholesalers. They can also be sold on the export market, where more exacting specifications exist for each wildflower product. Potential growers should contact florists, domestic wholesalers and exporters to gain a thorough understanding of the requirements for particular wildflowers, including the product specifications, season of demand, price arrangements and quarantine procedures.

How do I start exporting wildflowers?

The production of wildflowers for export requires substantial commitments in land, labour and capital as well as skills and knowledge in how to grow and market a consistent and top quality product. Potential growers should familiarise themselves with the contents of this book and should contact exporters and exporting wildflower growers for further information on the crops in demand and the additional requirements placed on exporting growers.

New growers considering export should also look into growing and supplying the domestic market, either as part of a learning phase or to complement the export market. If adopting this approach, check the

more info



Export markets
Marketing
page 26

domestic demand for your product, to avoid low prices caused through a glut or a lack of interest in the Australian market at the time you can normally supply.



Domestic markets
Marketing
page 24
