

So, you want to grow Proteas?

Proteaceae (proteas, leucadendrons and leucospermums and other genera) have to be cultivated much the same way as commercial cut flowers

From harvesting in the wild with unreliable quantity and quality, and with no control over weather and disease control, the Fynbos Industry has matured via various stages:

- Plantations raised from seed resulted in more efficient layout, and disease control, better reliability and quality
- Plantations from vegetatively propagated material, leading to improved quality of stock by selecting the best seedling material available, resulting in improved quality and reliability, but flower forms remained variable.
- Currently the emphasis is on plantations of selected clonal material from breeding programs where factors considered include:
 - flower and leaf life
 - stem length
 - disease resistance
 - packing and traveling ability
 - productivity
 - flowering time

This leads to premium flower quality, uniform product and high productivity.

The future of the Industry will lie in clonal material from genetic manipulation and tissue culture propagation, which will enable producers to respond rapidly to market requirements, and will enable rapid response to disease problems.

If you intend to grow proteas in the natural habitat of the Fynbos, then conservation of the surrounding natural veld must be taken into consideration.

Factors determining successful establishing of plantations

It is impossible to grow all commercial varieties to a high standard of quality and profitability because of their different environmental needs. Growth and performance is influenced by factors such as:

Climatic factors: location, temperature, relative humidity, precipitation and light intensity.

Soil should be free-draining. Proteas can survive with as little as 300mm precipitation and many proteas will tolerate and in some cases greatly benefit from annual rainfall of up to 2000mm.

Proteaceae are not frost resistant, although some can take snow and wet/cold conditions.

Plants of all varieties are sensitive to light. They will react by showing leaf and bud scorch when there are excessively high light levels and daily accumulations of aggregate radiation during summer conditions with daily high temperatures, little air moisture and inadequate soil moisture.

Soil factors: chemical properties (minerals and pH), physical properties which affect aeration and drainage, and biological properties (pests and diseases)

- The majority of species and cultivars require well-drained, acidic soils with a Ph of 5.5 or less. In some cases pH can be as low as 3, except for a few species which grow in limestone rock along the south coast of the Cape. It is possible to grow proteas in heavy clay and silt solids, or in limestone areas where there is excessively high pH. In cultivation this can be solved by developing rootstocks tolerant to high pH.
- Soils should have a low phosphate content, a relatively low humus content and more calcium than magnesium.
- It is recommended to do soil tests to assess depth and texture and to ascertain what soil preparations are needed. Soil samples should be taken at a depth of 0 to 300mm and 300 to 600mm, from five to eight sites per hectare. Take a 1kg sample from each site, and mix all the 0-300mm samples together and analyze a 1kg portion. Do the same for soil from 300-600mm deep.

Pest and Diseases: Introduction of protea species and cultivars, whether as cuttings or as seed can pose a risk since new pests and diseases may also be inadvertently introduced. These can become a serious problem both for future protea growing and other agricultural crops.

Land preparation is dependent on knowing the condition of the land at present and at least some past history. A comprehensive soil test is mandatory and should convey information on the depth, texture and structure of the soil as well as its acidity and content of nutrients, both inorganic and organic.

Cutting material

For the export market, it is necessary in most cases to produce only from cultivar material, obtainable in the form of cuttings. Most cultivars have been developed by ARC-Fynbos Unit, which has entered into a license agreement with leading growers for test purposes and bulking up of mother stock for the Industry. A number of new cultivars are registered with Plant Breeders Rights on which a royalty is payable.

Details on availability and procedure are available from ARC-Fynbos. A number of full-colour leaflets on new cultivars are available from SAPPEX.

What to Plant ?

If you want to enter the export market (either by exporting direct or via an established exporter or producer export groups) bear in mind that the main export season is from October to January with a peak in early November, and that there is further high demand during "floral days" like Valentines Day and Mother's Day. Although there is year-round demand, the volumes are considerably higher during the above-mentioned periods.

Proteaceae have a long lead-time to production and it is not possible to react quickly to customer trends and preferences. In order to enter the market you have to ensure that you produce only the best quality.

It is important to select those varieties that do well in your area. A small test planting of different varieties is advised.

It is advisable to ensure a mix of product that allows you to handle the volume in your cold store, and spreading harvesting over as long a period as possible so as to utilize your labour force productively.

Large scale exporting requires sufficient quantities to meet export orders. There are natural limitations on what will grow in a given environment. The exporters co-ordinates production from the various regions to satisfy the buyer. That is the primary reason why exporters form such an essential part of the Industry.

In most instances – and this is true for the horticultural industry world-wide – production, selling, buying and distribution is in private hands. Inspection and quality standards may be enforced by local authorities, but what is acceptable to the buyer and what is not, remains a fairly personal matter between exporter and client, based on what, in the end, the consumer will buy.

If you want to serve the local market, do a proper study of your potential customers and competitors. Local sales demand a wide range of product, with harvesting spread throughout the year.

Leucadendrons will probably produce a cash flow in 18 months to two years, as opposed to Proteas, which can take 3 to 4 years or longer in the case of *P. cynaroides* and *P. magnifica*. Production will probably take up to 7 years to reach the maximum potential when planting a wide range of product.

The lifespan of plants is between 12 to 14 years from first flowering. Recommended row spacing is 1,5m between plants in 3m wide rows, depending of variety. Small variety density: 5000 plants / ha
Large varieties: 3000 plants / ha.

Seed Harvesting

Seed for the cultivation of Fynbos species for which cultivar material is not yet available is almost exclusively taken from flowers not picked during harvesting and once the seed has become mature 3 – 6 months after flowering. The exception is Leucadendron of which viable seed is available once the cone is ripe. Although some seed heads are available from flowers that were missed by pickers, most seed probably comes from flowers that were not harvested because they were of poor quality.

It is likely that genetically poor plants will always produce poor flowers, and that by harvesting seed from poor quality flowers, the next plant population will produce equally poor quality flowers. In time you might be growing an entire population of genetically inferior plants with a high potential to produce poor flowers. It is therefore suggested that you mark good quality bushes for seed harvesting.

It is preferred that plantations are established on previously used land. If virgin soil is earmarked for plantations, it must be noted that a permit is required from the Department of Agriculture, and that an environmental impact study should be done in consultation with Nature Conservation Authorities, particularly to identify Red Data (scarce and endangered species)

All proteas are protected by law, and various permits are required from Nature Conservation Authorities: i.a. Registration, Permission to Pick, to Transport and to Sell.

Farmers are furthermore subject to the laws on Fire management. Natural Fynbos is regenerated by fire, but uncontrolled frequent burns destroy the seed store. There are good reasons for doing a controlled burn: It rejuvenates old veld and can prevent disaster arising from accidental fires

Alien plant infestation

Alien invasive plants destroy the Fynbos and must be eradicated by law.

Financing cut flower growing

Successful commercial production of proteas depends on a combination of planting in suitable growing areas, development of new cultivars and the adoption of modern growing methods together with good post harvest practices.

The following are the major cost factors:

- Cost of land (can vary tremendously).
- Irrigation
- Weed control
- Pesticides and Insecticides
- Packshed
- Packaging
- Cold store
- Transport for harvesting and to point of sale
- Labour
- Plant material
- Communication (e-mail, fax, phone)

Markets

Is there world overproduction of flowers? It depends on how you define it. If you ask are there flowers thrown away, the answer is 'no'. But if you define it in an economic way, overproduction exists as soon as supply and demand meet where the cost price is not covered. That is what is happening in the Netherlands, Germany and Denmark. Fashion, colour, usage, the weather and economic situation of importing countries have a large influence on sales

Marketing

The Multiflora flower auction is by far the most important marketing channel for local marketing. The auction, situated a City Deep, has daily auctions from Mondays to Saturdays from 07:00 where major agents and wholesalers buy flowers. The auction is market driven and prices for products are determined by supply and demand. Continuity of good quality supply and branding is advantageous.

Floratown auction, is situated in the Kayalami-area. The market is a mixture of the traditional, wholesale, retail and Dutch-style auction. Floratown also houses Flowertraders.net, one of the latest e-commerce flower trading organizations. There is also an auction in Pretoria.

Exporting to Europe

Many flower producers in the world send their products to the Dutch market and depend on them to do the marketing. The Dutch, with their massive auctions, excellent logistics infrastructure and worldwide contacts have what it takes to sell large volumes of flowers. Other European importers located in consumption markets are often limited by the size of their company or of the national market. Germany, however, has large import companies and is the largest consumption market in Europe. Growers must weight all factors in determining to market direct through importers in a destination country or through the Dutch auctions.

Prices outside the Netherlands may be better during the first and last months of the import season, but will not quite reach the high levels of the Dutch auctions during January and February. However, the average during the whole season may very well compare.

The main draw for exporters to market direct is in shortening the distribution channel. Each link in the distribution chain takes a markup on the product. Auction charges vary from 15 to 35% depending on the price realized on the day.

Cape Flora products fall under EU MFN trade (most favoured nation) in respect of import duties and export is subject to completion of Form A, which must be lodged with the Trade & Industry. All exporters must be registered with the Department.

A special Quota system is in place on Proteas sold to the EU. In order for customers to import Proteas without duty, application must be made to Customs & Excise for EUR1.

Exporting to the USA

Due to past high interception rates of insects and diseases on proteas, a special protocol for export to the USA must be adhered to. The phytosanitary requirements are high and interceptions in most cases lead to consignments being destroyed. This market is not recommended for new entrants until they are well-established.

Exporting to the Middle- and Far East

Import Duties on floral products to these countries are high.
Japan has similar high quality standards as the USA.
These markets are not recommended for new entrants.

Export Regulations

The Dept of Agriculture has delegated inspection for export of perishable products to the Perishable Product Export Control Board (PPECB)

Regulations are available from the Secretary of SAPPEX. It should be noted that the Industry exports Proteas under the name 'Cape Flora'. Regulations cover Proteas, Leucadendrons and Leucospermums. Other Fynbos products are too diverse and specific regulations cannot be written for each product. They are therefore inspected under the generic 'Flower regulations' for freshness, clean (from dirt, chemical residue and disease). Specific regulations for Ferns exist.

Fynbos is exported under Class I.

The Dried Flower Trade

Harvesting from the natural resource is particularly important for the dried flower trade. Guidelines are published by SAPPEX and some exporters have people in the field to assist and guide farmers in sustainable harvesting practices.

Feasibility Study/Business Plan

Consult with growers in your area

Check with your nearest Nature Conservation office

Check with your Municipality

Ask a Consultant to assist you, ie Private Consultants, NBI Kirstenbsch or Nature Conservation

The business plan serves a number of roles:

- a. It provides a programmed set of activities to achieve defined objectives.
- b. It is a valuable communication tool, as it allows a third party to look at your business and consider whether they will give financial support.
 1. Business introduction: Should include your mission statement and business objectives.
 2. Mission Statement: A simple, descriptive statement of exactly what your farming business will do. Strategically it is a tool that defines the business and target market.
 3. Objectives: Could include personal objectives as what makes you unique in your product, services and quality strategy.
 4. A summary is the final stage of the business plan, and although it comes at the beginning of the business plan, it is the last thing you prepare. Its aim is to provide an overview of your business plan that can be read in less than 5 minutes and should be made up of
 - Overall objectives
 - Competitive advantage
 - What products and services you will sell and to what target consumer
 - A profile of the first three year projected sales and how you will achieve this.
 - A summary of your marketing, retail, personnel and financial strategies.

SAPPEX, the Industry Association.

The Association was formed in 1966 and received Agricultural Status in 1994 after consultation with the Departments of Agriculture, Nature Conservation and the scientific community.

We are a voluntary Association with members ranging from producers, to exporters to scientists and hobbyists. The Association publishes two journals per annum, disseminating up to-date news on matters of

relevance to role-players in the industry. Regular newsletters are sent out on topical subjects, where possible via e-mail.

A promotion program that has resulted in direct exposure on florist level, and which has captivated the imagination of trade and life-style magazines in Europe and America. Posters, brochures and leaflets are produced by SAPPEX to assist farmers and exporters.

Apart from service to its members, SAPPEX is responsible for maintaining close liaison with government and non-governmental organizations to ensure that the voice of the Industry is heard. We give input on Export Quality Standards and protocols, export documentation, conservation issues, freight issues and many other matters that effect members.

With more than 80% of production originating from the Western Cape, we are affiliated to Agri-Western Cape as well as Agri-SA. We maintain close ties with the Fynbos Forum (a group of scientists, nature conservation, landowners and opinion makers who meet on a annual basis to discuss research results, to address sustainable use of the Fynbos, and to plan actions for the maintenance of the Fynbos). The Working for Water and Cape Action for People and the Environment programs resulted from this group.

SAPPEX is not a marketing organization. Control bodies are being phased out world-wide as these are in conflict with international trade laws and agreements such as GATT (General Agreement on Trade and Tariffs) of which South Africa is a signatory.

The Executive Committee is supported by various sub-committees.

Meetings and Conferences

SAPPEX calls meetings from time to time, apart from the Annual General Meeting
The International Protea Association offers a world conference every two years where growers and the scientific community exchange ideas.

Publications

A number of publications are available to members.

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