

Floriculture FACTSHEET



Ministry of
Agriculture

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Commercial Floriculture Grower – Getting Started

Floriculture is one of the most successful components of British Columbia's diversified horticultural industry. The sector has enjoyed steady growth in recent years (Table 1). Like most other agricultural commodities, floriculture is not only a business, but a lifestyle that involves a commitment. When a boiler alarm goes off at 2:00 am, you can't just roll over and go back to sleep. The problem must be fixed or you could risk losing your crop. In addition, there are many factors such as weather, prices and competition over which you have little control. A cold, wet spring will delay the bedding plant season and drive down prices. Today's efficient world-wide transportation links mean that weather in other countries will also affect your prices. For example, an early spring in England could result in English field-grown daffodils being sold on the Canadian market, driving down the price of locally grown greenhouse daffodils.

The decision to enter floriculture should not be based solely on a love of flowers. Working with flowers is of course a benefit, but a successful operation involves much more. It is a complex business requiring a great deal of highly specialized knowledge and skills. The industry is highly technical and scientific. Many areas of technical expertise are involved, including greenhouse design/construction, computers, nutrients, pest control and machinery. It is labour intensive and good management skills are essential.

Table 1. Farm cash receipts and production area for the B.C. floriculture sector.

Year	Farm Cash Receipts (\$ Millions)	Production Area (ha)
2008	\$216.5	167.4
2009	\$225.8	157.4
2010	\$230.6	175.6
2011	\$240.0	174.4
2012	\$246.1	197.8
2013	\$267.6	200.3

Source: Statistics Canada, CANSIM database

Floriculture is like any other business; to survive the business must make a profit. You should devote considerable time and study before making a business decision on the type of crop and location. A sound business plan is a crucial first step. Your plan must examine capital funding, crop choice, markets, the production system and labour. Don't expect to think about becoming a grower during the winter and start production the following spring. You need to do a great deal of investigation and "paper work" before you start growing. Entering the floriculture industry can be very capital intensive, so the more research you do before spending money the better.

No factsheet can answer all the questions that you need to ask yourself or questions you might have about the industry. This factsheet is intended to guide you in your research. It is not intended to tell you how to grow your business, rather it lists and briefly comments on some of the aspects that need to be considered in the decision process. It focuses on some of the more major questions such as which land to buy, which type of greenhouse to build and which crop(s) to grow. Becoming a commercial floriculture grower is a commitment to a lifestyle. It often involves hard work and economic uncertainty. The decision to enter the industry shouldn't be done without considerable research. The factsheet is written for individuals entering the floriculture industry for the first time in B.C.

Is There Any Government Funding Available?

At the time this factsheet was written, there is no direct government funding available for growers who wish to start in the floriculture industry. The Ministry of Agriculture focuses on creating a positive environment in which the agriculture industry can operate competitively with little reliance on government support or direct services. We do provide support in the form of production guides, factsheets and advice on marketing, production and business management.

Decisions

Becoming a commercial floriculture grower involves weighing numerous choices. Many decisions will involve large capital outlays and all will affect the potential profit situation. The choices centre around three main decision areas:

- What to look for when buying the land?
- What type of greenhouse to build?
- Which crop(s) to grow?

These topics are covered in more detail in the following sections.

Buying the Land

What to consider?

When looking for land to purchase there are many factors to keep in mind. Remember that the economic success of your operation starts with site selection. Location influences such factors as heating costs, available light, labour and pests. A “good” location that lends itself to easy planning and layout will simplify work to get the operation started.

Rent or Own?

If you don't already own land, the first decision will be whether to rent or purchase land. If you are not planning to build greenhouses, or you plan to grow outdoor cut flowers or perennials, there is really no reason to buy expensive land. A long-term lease of at least 5 years will save considerable capital expense. One word of caution, if you lease or rent the land, you will find it more difficult to secure bank loans for any greenhouses or other capital expenditures.

Once you've decided whether to purchase or lease, there are two important factors that should be investigated before any letters of intent are signed, i.e., water and the zoning. If the site doesn't have sufficient good quality water, you should look at an alternative site. Poor water quality complicates the production process, so if you have a choice, keep looking. Municipal zoning can have a significant impact on your cost of production. Local bylaws restrict the area of a site that can be covered by greenhouses, which may require the operator to purchase a larger plot of land to accommodate their greenhouse business.

Do I Need to Consider Water Quality and Quantity?

An abundant supply of good irrigation water is the first step in producing high quality floriculture crops. Small amounts of impurities are found in almost all water sources, and while some of these may be beneficial, others can be harmful to plant growth. Floriculture crops are heavy water

users and the water source must be able to meet these needs. Before you sign any papers you should have a water test performed to determine the available flow rate and quality. Check for pH, salinity, EC, mineral content and possible contaminants. If the water isn't within the recommended range for irrigation water, it may require treatment prior to use. If the values exceed the upper quality limits, it might be advisable to choose an alternative site with better water quality.

Well water is one possible source, but city water can be used if it doesn't have too many additives (especially fluoride) and is available in the quantities you need. It's a good idea to check whether there are any summer water restrictions. Surface water, such as ponds, are subject to contamination with plant disease organisms and may require expensive treatment.

Does Municipal Zoning Affect Greenhouse Operations?

Know the zoning for the land before you buy. Land that is within the Agricultural Land Reserve (ALR) is preferred for agricultural production and has certain restrictions concerning its use. Municipal zoning bylaws will also affect your operation. They can limit the amount of greenhouses that can be built on a specific site and the activities that can be carried-out on the site. They establish setbacks, maximum site coverage, building requirements on flood plains, nuisance regulations (lights, sounds, dust), storm water management (including roof run-off), and boiler emissions. While checking the zoning for greenhouses in the municipality, inquire about future municipal plans for the area where you intend to purchase. Large roadways or subdivisions may already be in the works.

What are some other site considerations?

- It should be larger than your current needs to allow for future expansion.
- Building permits vary by municipality. Some municipalities have extensive

development cost charges associated with any new construction. Don't wait for any nasty surprises – ask before you buy the land.

- Locations within a small area can differ significantly in terms of hours of sunlight, fog, predominant winds, and average temperature and rainfall. For example, in the Fraser Valley, Delta has significantly more hours of sunshine than municipalities further east.
- Chose land that is as level as possible to reduce grading costs. Grading must be done carefully to preserve the condition of the top soil on the site. An uneven grade may result in cold air pockets and water ponding that will make growing more difficult. Crops growing in these cooler, damper areas may have a higher incidence of disease.
- For soil-based culture, look for a well-drained site where the soil layer is deep and fertile. Subsurface drainage must be installed to correct any drainage problems. Surface water which flows into the greenhouse can carry diseases. Avoid sites that have a layer of hardpan or clay close to the surface or sites which have a nearby water course.
- If you plan to grow soil-based crops, have the soil tested for fertility levels. Soil amendments can be added at a later date, but problems are reduced if you start with a site with good natural soil.
- Be aware of shade from neighbouring trees or mountains. As a general rule, neighbouring trees or structures must be setback a distance equal to at least 2.5 times their height to not shade the greenhouse. Nearby tall trees can also fall and cause damage to greenhouses during high wind storms.
- Floriculture is labour intensive. Is there an adequate labour source?
- Don't let road accessibility limit your potential. Look for sites that are serviced by roads big enough to allow for large tractor-trailer or truck access. Don't forget winter weight allowances.

- If there is a predominant wind flow, you might consider wind breaks to decrease the heat loss effects, especially if it is an arctic outflow wind.
- Greenhouses need large amounts of gas and electricity. Are they available or will lines have to be installed at your own cost? Check whether you can install three phase power, which can reduce motor operating costs.
- The proximity to your neighbours is an important factor. Neighbours are affected by regular day-to-day operations such as spraying, traffic, lights and dust. Keep security in mind and the possibilities for vandalism. If neighbours are close by you may consider planting hedges to minimize off-site sounds and lights.

How about buying an existing operation?

As some growers grow and expand their operations, they often find that their land base is too small to support all their plans. In that case, they may wish to sell their current operation and move to a larger land base and start over. This situation presents an opportunity for a new grower to start with all the preliminary work finished. Providing you plan to grow similar crops, you're ready to start growing soon after moving in.

Make sure that you're not buying someone else's problems. Some of the things to look out for when buying an existing operation are:

- Is the layout and design of the operation efficient?
- What is the general appearance of the site and crop?
- How old is the greenhouse and equipment?
- What is the condition of the structural supports and glazing material?
- Do they have maintenance records?
- What are the heating costs?
- Is the water quality and quantity acceptable?

- Is the operation in close proximity to neighbours and water courses?

One Final Checklist Before You Sign the Property Purchase Agreement

- ✓ Did you check into the zoning of the property? Is it zoned ALR, business or residential?
- ✓ Did you check with the local Municipal government regarding zoning or how they otherwise regulate the greenhouse industry within their municipality?
- ✓ Did you check the quality and quantity of the water supply?
- ✓ Does the site have adequate services, i.e., natural gas supply, electricity and road access?
- ✓ How close are the neighbours? Are they mainly other types of farming operations, or are they rural homeowners who might object to some normal farm practices?
- ✓ Is there a water course running through the property or nearby?
- ✓ How close is the site to local labour supplies and the market place?
- ✓ Is there room for expansion?
- ✓ Is the site relatively level with good drainage or will extensive grading and drainage be required?

How do I organize the buildings on my property?

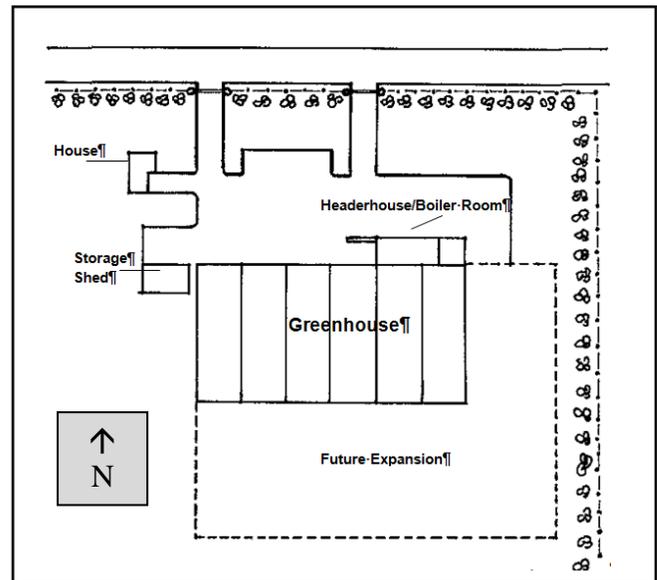
The importance of a good site plan cannot be overemphasized. Its purpose is not simply to maximize land use, but to ensure the efficient organization of the land base to start your business off on the right foot. The time spent in the planning and organizing stages can increase the effectiveness of day-to-day greenhouse operations, help reduce conflicts with neighbours and prevent environmental problems. A detailed site plan is required for a building permit.

Some considerations are:

- **Municipal zoning:** your plans must meet zoning and building bylaws.
- **Orientation:** ridges should run east-west for free-standing greenhouses to allow for maximum winter light penetration. Gutter connected ranges should be oriented north to south to compensate for the shadow cast by the ridge.
- **Proximity to neighbours:** try to locate high noise areas away from neighbours, such as the header house, boiler house and loading bay.
- **Light penetration:** the header house, packing room and boiler should be to the north of the greenhouses to minimize sunlight blockage.
- **Parking:** your plans must allow for staff parking and room for large trucks to turn.
- **Room for expansion:** your plans should allow for future expansion.
- **Labour:** your plans should promote the efficient use of labour in production areas that are especially labour intensive.
- **Supplies:** your plans should allow for the storage of supplies close to where they're delivered or used.

An example site plan is provided in Figure 1. It makes use of trees to screen the site from the road and neighbours. There's lots of room for expansion and the boiler and header house are on the north side of the greenhouses. One added feature is a fence surrounding the greenhouse for security.

Figure 1. An example of a site plan for a floriculture business.



Choosing the Greenhouses

The first question you need to ask yourself regarding greenhouses should be: Do I need one? Not all crops need a greenhouse. If you chose to grow summer field-grown cut flowers you may not need one. However, if you want to grow crops year-round in B.C. you will need something to protect them from the climate. It doesn't mean that you'll need an expensive glass greenhouse; very simple structures, like cold frames can be used to extend the growing season.

Here are some considerations for choosing a greenhouse:

- How much capital do you have to invest?
- What is the level of environmental control demanded by the crop?
- What are the local weather conditions?
- Do you want to build it yourself or have a contractor do it?
- What types of greenhouses are available on the local market?
- Do local contractors have the time and expertise to build the greenhouse you want?

Factors to consider regarding greenhouse design:

- free-standing vs. gutter connected
- glazing material: acrylic panels, glass, fibreglass, double or single poly
- framing material: steel, wood, PVC pipes
- the computer climate control system
- the type of irrigation system
- heat source - central boiler versus unit heaters
- the ventilation system
- whether supplemental lighting is needed
- whether thermal blankets are required

What are some of my choices?

Crop choice and the greenhouse production system are tied together. The crop you choose to grow will determine whether a greenhouse is needed and how technologically advanced the greenhouse must be. If you do not consider crop choices prior to greenhouse selection, the greenhouse you chose may limit what type of crops can be produced. Some crops require a high degree of environmental control, therefore they need more capital intensive greenhouses. Your available investment capital, equity position and credit limit may preclude a greenhouse that costs \$250 per square meter to build. Another consideration is what primary market your business will serve; an operation that is primarily retail will need a different type of greenhouse than a wholesale operation. Of course, personal preference also plays a role.

Ultimately, the structure you chose will be based on what you can afford and the expected returns. It is important to understand the advantages of the various greenhouse styles and which crops they are best suited for. Your choice involves a trade-off between your time and being closely tied to the operation versus a more efficient operation with a greater capital expenditure up front. The crop light requirements (with winter light levels being the crucial factor) and fuel savings are two other important considerations. Your final choice will be

influenced by your level of management and growing skills.

Floriculture is not limited to high tech greenhouse production. Reasonable returns can be achieved with a lower priced structure. The returns will be lower per square meter, but the high capital costs are avoided. Cold-frames can be used to over winter crops or for extending production into the shoulder seasons. A quonset-type structure covered in poly with heaters and ventilation systems is more costly, but can be used for year-round production. Today's top-of-the-line greenhouses are usually gutter connected, glass Venlo or Kubo-type ranges. Costs vary greatly between the different types of greenhouses.

Crop Choice

One of the strengths of the floriculture industry is the incredible diversity of crops, so deciding what to grow is not easy. The obvious answer is to only grow what you can sell and make money on. It sounds simple, but it does point out the importance of selling your crop. There's no point in growing plants that you cannot sell. Production must be market not supply driven. Don't expect to grow 100,000 petunias and have customers magically arrive and buy them when they're in bloom.

Do I need quota?

Floriculture is not a supply managed commodity, therefore there are no marketing boards or quotas. You are free to grow whatever legal crop you wish. Don't base your choice strictly on prices because they can fluctuate widely from year to year. Price is only one factor to consider. The following questions may help you to narrow the choices somewhat:

Crop questions

- Do you have prior experience with a particular crop?
- What are other growers producing in the area?

- Is the crop suited to your location?
- Do you have the knowledge of crop requirements and how to satisfy them?
- Can you grow a quality product?
- Can you control the costs of production?
- How about organically grown product?

Price questions

- Can you sell the crop at a competitive price and still make a profit?
- What are the historical wholesale and retail prices of the various crops?
- Do the prices fluctuate over the growing season and/or over time?

Market questions

- Do you want to target the local market or the export market?
- Can you carry out some market research to identify a “hole” in supply?
- Can you establish a market for your product?
- What is the size of the market?
- Is the market mature or still expanding?
- Where are your buyers located?
- Does the market have room for additional production?

The time to do market research is before you commit yourself to a crop. It should be done before you invest in the land and greenhouses. Your production must be driven by demand. Part of your market research should include visiting and talking to local retailers or wholesalers. Often they can identify holes in supply or upcoming trends. For example, local garden centres may not have enough herbs to meet their customers’ demands. Don’t expect them to give full answers during a busy season like Mother’s Day. If you’re in the Fraser Valley, part of your research should include a trip to United Flower Growers to see what crops are being grown, in what volumes and their prices.

One significant decision is to decide whether you want to grow potted plants or cut flowers

(or both). The two crops usually involve very different production systems, so most growers concentrate on growing either cut flowers or potted plants.

Potted Plants

Potted plants can be divided into a few broad categories, which include bedding plants, perennials, and flowering and foliage plants. Many entry level growers start with a cycle of bedding plants and poinsettias. Bedding plants do not require as exact environmental control as some crops, so they are a less capital intensive choice. You can have year-round production with this crop combination. The crop of bedding plants will be seeded starting in January/February, and most of the crop will be sold when the poinsettia cuttings arrive in July/August. Another alternative is to have the greenhouses empty once the fall bedding plants are sold at the end of October. This saves some of the winter heating costs; the downside is the lack of cash flow. One of the disadvantages of this crop mix is that it is characterized by large fluctuations in supply and prices. When the supply exceeds the local demand, prices dive sharply.

Bedding plants and foliage plants generally have low margins, profits are made on volume. Some growers are happy if they make two cents profit on a ten centimetre potted foliage plant. In both these crops, large growers have the advantage of capturing economies of scale. A grower with seven hectares of bedding plants can often get volume discounts on their growing supplies that are not available to small growers. In addition, large bedding plant producers are often highly mechanized, so they can still make profits at lower selling prices. Remember, you’re not just competing against your neighbour; with the fast, efficient distribution systems available today, you’re competing against the whole province. This doesn’t mean that small growers shouldn’t grow bedding plants. But you should have some natural advantage, such as a good location for direct marketing or access to local markets.

Where bedding plants are sold mostly in the spring, potted flowering and foliage plants have the benefit of year-round production and sales. Crops can be grown on weekly schedules. Some crops have only one marketing season such as poinsettias for Christmas and Easter lilies for Easter.

For most flowering plants, the peak prices are from November through May (Mother's Day). Timing is a critical factor for flowering plants. An Easter lily that is ready two weeks after Easter has the same costs of production as one that blooms for Easter Sunday, but the price it sells for may be one tenth of the one that blooms on time. Flowering plants must be sold before peak flowering, they can't be held in the greenhouse until a buyer is found. For foliage plants, timing is not as critical.

Cut Flowers

If you decide to grow cut flowers the first question you have to ask yourself is whether you want to focus on greenhouse or field production. Growing field-grown cut flowers on rented land provides an inexpensive way to enter the cut flower industry, but it leaves you at the mercy of the weather. Greenhouses require more capital, but they allow you to grow many crops year-round in a protected environment. Both options allow for the production of a large range of crops or the specialization in one or two. One thing to remember with cut flowers is that in some crops you're competing with countries from around the world. Countries with warmer climates and lower labour costs can ship cut flowers to Canada at prices far below our costs of production. This is the reason why most of our standard carnations come from South America.

Where To Sell Your Crop?

If you are near a large urban area you may be able to sell your entire product through a growers' co-operative or floral wholesaler. Other choices include: chain-stores, florists, garden centres, restaurants, hotels, farmer's or public markets, road-side stands and other greenhouses. Often your product will be sold

to multiple markets. It depends upon how much time and money you are willing to invest in marketing. It may be easy to sell all your plants to one outlet; you benefit from low marketing costs, but you may not always receive the best price. If you choose to sell your crop direct to the public from your property there are many regulations, including ALR and municipal zoning that you must meet.

Wrapping it All Up

There are many factors to consider before starting your own floriculture operation; this factsheet has pointed out some of the major considerations. Most of the decisions can be placed into three main groups: choosing the land, choosing the greenhouse, and deciding on the crop(s) to grow. There are many resources available to perspective growers, and careful planning before any major decisions are made may save money by preventing costly mistakes.

Look for a land base that lends itself to a greenhouse operation; it should be relatively flat and not shaded by neighbouring mountains or trees. Avoid areas that are close to waterways or that have flooding problems that can't be remedied by installing drainage. The site should be close to a ready labour supply and your main markets. Determining which greenhouse to build and which crops to grow are tied together. Try not to choose a greenhouse that may limit your crop choice. Do some research into local market conditions to see what crops are already available and their prices. By talking with local retail outlets you may be able to identify an untapped market.

B.C.'s floriculture sector has experienced steady growth in the past decade. The sector is competitive and dynamic. Growers must constantly keep abreast of changes in technology and crop choices. While this makes it an exciting industry to enter, it also means that if you decide to commit yourself to it, you must continuously adapt to the changes. Becoming a floriculture producer isn't simply a job, it's a lifestyle.