

GREENHOUSE CHECKLIST

Essential Considerations for the Purchase and Operation of Community Greenhouses



















2. Who will be utilizing this greenhouse? Thinking about putting a greenhouse in your community? ☐ An individual To start and maintain a successful greenhouse, there are many ☐ A community options and aspects to consider. This checklist consists of a series of ☐ Specific user group (i.e. school) self-assessment questions, with related information and tips ☐ A business and its employees covering key considerations when planning to purchase, build, and ☐ I don't know ultimately operate a greenhouse. Appendix A is provided to illustrate □ Other: typical greenhouse components and terminology. 3. What will the greenhouse be used to grow? Taking these considerations into account in the planning stage is ☐ Transplants critical to making informed decisions about the kind of greenhouse ☐ Vegetables and food for community members that will be right for you and can help avoid costly mistakes. After ☐ Vegetables and food for sale completing this checklist, you will be able to: ☐ Landscaping plants, potted ornamentals • Apply information and tips related to key considerations to your ☐ Reclamation plants greenhouse project ☐ Tree seedlings • Take stock of your greenhouse planning process to date by ☐ Medicinal plants identifying which key considerations of your greenhouse plan ☐ I don't know are clear to you and which might require further attention □ Other: and/or information 4. What is your user group or target market? Identify next steps to move forward your project implementation ☐ Local community Complete the checklist by answering each of the following ☐ Boutique/Speciality online questions. Any "I don't know" answers in red will help identify (Web based: herbs, teas, flowers, etc.) areas in need of further attention. ☐ Retail stores ☐ Farmer's Markets For each question, check ALL answers that apply: ☐ Reclamation and large-scale industrial projects ☐ I don't know **PURPOSE OF THE GREENHOUSE (OR GREENHOUSES)** □ Other: 1. What is the purpose of the greenhouse? 5. Do you want to use the greenhouse for multiple purposes (i.e. ☐ Teaching different crops, different growing conditions, different production ☐ Healing methods, different seasons of the year)? ☐ Business/Economic development ☐ Yes. If yes, what purposes? (please describe): ☐ Job creation ☐ Food security and local food production ☐ I don't know

□ No

☐ I don't know

□ Other:

BUSINESS PLANNING, FINANCING, MANAGEMENT, AND STAFF Following initial construction and set up costs, there will be on-going fixed and variable operational costs of running a greenhouse. These could include: loan payments, electricity, water delivery, fuel, tools, repairs and maintenance, cleaning, employee wages and associated costs soil amendments and innuts sunnlies nest and disease

management, etc. Business planning and feasibility analysis can be critical steps to achieving long-term economic sustainability for both non-profit and business focused greenhouses. The following questions relate to these considerations, but do not replace business planning or feasibility analysis. 6. Which best describes the economic operation of your greenhouse?	□ No, a business plan has not been started□ Other:	
	Tip: Finding and retaining the skilled labour necessary to operate and manage a greenhouse can be a significant challenge faced by many operations. Developing a human resource strategy early in the planning process can set the groundwork for success.	
		☐ Subsidized (i.e. Financial losses are supplemented from other funding sources)
 □ Cost-recovered (Break even, i.e. operating expenses are covered) □ Profit making □ I don't know □ Other: 	 □ Recruited community members □ Recruited employee(s) from outside of the community □ Existing staff person(s) □ I don't know □ Other: 	
7. How will the costs of purchasing, constructing and operating the greenhouse be covered?	10. Do you anticipate full time and/or part time positions to be associated with the greenhouse?	
-	A. Full time positions:	
□ Loans/Financing□ Grants□ Financial support from existing programs/other revenue	Yes, we anticipate full time positions.i.) How many positions do you anticipate?	
Streams I don't know Other:	ii.) How many full time positions do you anticipate to be seasonal? None All Some, please specify: I don't know	

8. If the greenhouse will be a commercial business, has a business

☐ Yes, a business plan has been prepared and includes a 5-year

☐ Yes, a rough business plan has been started, but needs further

plan and feasibility study been completed?

development

cash flow forecast and marketing plan

☐ We don't anticipate any full time positions.

☐ I don't know

B. Part time positions:	
Yes, we anticipate part time positions. i.) How many positions do you anticipate? ii.) How many part time positions do you anticipate to be seasonal? None All Some, please specify: I don't know Use don't anticipate any part time positions. I don't know	
Tip: Many greenhouse operations will require additional labour and management during certain times of the year, such as planting and harvesting. This may coincide well with summer employment programs. Some greenhouse operations have also had success with creating shared positions between the greenhouse operation and other roles.	
11. Will these positions be exclusively focused on the greenhouse or shared by other departments? ☐ Yes, please describe:	
□ No □ I don't know	
12. Is there a need for staff and/or management training, such as in horticulture skills, greenhouse construction and maintenance, sales and customer service, business management, or other areas?	
☐ Yes, specifically ☐ No ☐ I don't know	

SITE SELECTION AND SITE PREPARATION

It is very difficult to move a greenhouse once it is in place, so give careful thought to the best location for your greenhouse. It is best to observe a potential greenhouse site over a full year in order to gauge factors such as the direction and strength of prevailing winds, shading from nearby buildings and vegetation, and flooding/water table exposure. To minimize costs, look for a well-drained site with nearby or existing road access, services, sun exposure and requiring minimal earthwork. Keep in mind that there is never a perfect site and compromises must be made. Figure 1, on the next page, shows two sites where certain considerations weighed heavily into site selection.



Figure 1. The greenhouse on the left is located at a high school and demonstrates a location that is sheltered from regular high winds and is also very accessible to students (essentially a classroom). The site of the greenhouse on the right was also carefully selected. The photo was taken from an exposed location above the greenhouse, while the greenhouse was purposely placed in a more sheltered area to limit exposure to unpredictable winds coming across the surrounding fields and is easily accessed from the public road for operational requirements by machinery and customers.

13. Does the proposed site require initial leveling or access	15. Is drainage or flooding an issue in the area?
improvements, such as backfilling with suitable material?	□ Yes
☐ Yes, please describe:	□ No□ I don't know
□ No □ I don't know	Some greenhouses attach to steel pins hammered into the ground (2-3 feet depth), others "plug-in" to feet embedded into a concrete perimeter ring or poured tubes, and some greenhouses are just
Having a dependable source of quality water is critical. Water should be potable (fit for human consumption), but other quality aspects also need to be considered. For example, well-water with heavy mineral content of iron and calcium can be problematic and contribute to poor plant growth and clog watering equipment nozzles and filters over time. Salts in water can also affect plant growth.	freestanding. Care should be taken with freestanding structures because the wind can pick them up and damage them and their surroundings in seconds. In areas with abundant shallow bedrock, it may not be possible to hammer steel pins in to the depth required to hold down the greenhouse. Field check your proposed site location by digging down or pounding in a few test pins (1½ inch pipe). Conversely, loose, sandy ground may not have enough "holding power" to adequately anchor steel pins to the ground. A greenhouse
Tip: well-water can be icy cold and shock plant root systems! If possible, fill barrels and let it warm to ambient temperature before watering to promote better water uptake and plant growth.	manufacturer will be able to help design a system best suited for your conditions. Be sure to have the site information on hand when talking to them.
14. Does the proposed site have access to potable water?	16. What kind of soil material will the greenhouse be built on?
☐ Yes. If yes, quality and quantity: ☐ No. If no, consider a water test for potability and mineral content. ☐ I don't know	 □ Sand □ Clay □ Gravel □ Combination □ I don't know
The best time for earthworks to level a greenhouse site is before the	□ Other:
bulky large greenhouse parts and pieces show up on site. If there is a high water table and/or sloping towards the greenhouse site, it would be advisable to ensure drainage ditches are completed prior to construction. Redirected water could be directed towards a new	Having a good solid, well-drained and weed-free floor inside of the greenhouse is helpful for various reasons. Floor options range from dirt to concrete. This decision will be driven largely by the crops you

dugout or existing pond. Be sure to check with local water

stewardship staff through Front Counter BC

(frontcounterbc.gov.bc.ca) prior to starting work.

desire to produce and the budget.

Tip: Putting down a good quality landscape material or weed cloth on top of the freshly completed earthworks before any structures or raised beds are installed makes a fine and clean floor to start from.

17. What kind of floor will the greenhouse have inside? ☐ Soil ☐ Sand ☐ Concrete ☐ Landscape cloth on top of soil ☐ Woodchips ☐ I don't know ☐ Other:
For light-duty electrical needs in a small greenhouse, a good quality, covered extension cord is essential and may be all that is required. For the higher power and gas heat requirements of a larger greenhouse, at a minimum, a dedicated hydro meter on a service pole will need to be installed on-site as will a new gas meter. BC Hydro has a design team and an application process for new service proposals. Work with a local electrician early in the planning stage to avoid any surprises and potential delays. Check with your local electricity, natural gas or propane utility companies about service availability.
18. Does the site have power and natural gas service nearby (i.e. is the site less than 100 m from an existing electrical power line/pole)? ☐ Yes ☐ No ☐ I don't know ☐ Estimate of distance to electrical line/pole:
In addition to basic (new) electric power and gas services that may need to be brought to reach the OUTSIDE of the greenhouse, other services, such as water infrastructure (well, pump, pressure tank, piping, well-house), may also be required. INSIDE the greenhouse, gas fitting and water-proof electrical services need to be performed

by a qualified professional. These costs can be substantial and should be determined at the time of pricing out the greenhouse

structure, if not before.

19. What utilities need to be installed?

☐ Natural gas service/propane
☐ Electrical
☐ Water: well, pressure tank, storage tanks, irrigation
☐ Sewer/grey water treatment
☐ I don't know
☐ Other:

Building a prefabricated greenhouse can be a fun and straightforward experience, but it can also become a jumbled pile of steel quickly. Greenhouse manufacturing companies may offer assembly services (for a cost), but at minimum ensure a full assembly instruction guide is included with any purchase. Depending on local building codes, you may also be required to have a set of engineered plans from the manufacturer. Check with your local authorities and building inspector staff for specific requirements.

You will have to gauge your existing skills, ability, and any tools required for assembly. Perhaps there are some handy community members willing to assist with assembly over a few days. Being more prepared by reviewing plans and the supplied materials will mean fewer trips to the hardware store.

Tip: A minimum of two good quality 14-foot step ladders are essential for assembling any steel frame manufactured greenhouse.

20. Who will build and maintain the greenhouse? ☐ Greenhouse manufacturer (crew) ☐ Local contractor/Works Department ☐ Volunteers ☐ Community association ☐ I don't know ☐ Other:	21. Are hand and power tools (hammer, drill, cordless drill, sledgehammer, string or laser level, hacksaw, grinder, rachet/socker set, pipe wrench, wire cutters, etc.) available for capable assembly crew members to use? ☐ Yes ☐ No ☐ I don't know
	and scan (or use your phone to take a picture). Save it to your computer and then
	uilding, mountains, etc.), direction the sun rises, topography and ID of areas
requiring earth works (levelling, driveway access, site prepard factors influencing the suitability of the site.	ation for complimentary structures), prevailing wind, existing roads, and other
N.	
W E	

Matching your expectations of greenhouse production to environmental realities, while meeting budgeting requirements is critical. Wind, hail, and snow load are forces to be taken into consideration early in the planning stages. For extreme weather locations, greenhouse cost per square foot will be substantially higher because of the need for reinforced materials and other design requirements. Sometimes it is tempting to purchase and construct the biggest greenhouse possible with the assumption that it will be easily filled with plants, but often this leads to a bigger and more expensive structure than what is required. This is particularly true when starting a greenhouse enterprise for the first time.

STRUCTURE CONSIDERATIONS

23. Which main environmental conditions could negatively impact your greenhouse structure over the course of the year?	to find one from a BC-based company that offers robust customer
☐ Frequent and excessive snow loads ☐ Rain	support. Ask about other greenhouses they may have supplied in your region. Generally speaking, the arch-style roofed or "gothic
□ Flooding	arch" tubular steel frame and poly plastic is a tried-and-true durable
☐ Prevailing winds	and user-friendly greenhouse structure. A bonus of purchasing a
☐ Hail	complete greenhouse "kit" is that all the required pieces will be
☐ Excessive heat	provided, including bolts, screws, doors, and vents. This will
□ I don't know	potentially save many hours of time you might otherwise need to
Other:	invest in sourcing these materials yourself, which is a common
24. What size of structure do you require?	challenge of a DIY project.
☐ Small 10'x20' (backyard, community garden scale)	25. On the following page, review the typical greenhouse design
☐ Medium 30'x50' (community garden, small retail sales)	options and associated considerations. Select the style of
☐ Large 30'x100'+ (commercial business, industrial)	greenhouse best suited to your needs or mark 'I don't know':
☐ Multiple structures (commercial business, industrial)	☐ Arch-style roof
☐ Yes. If yes, how many?	☐ Venlo-style
☐ I don't know	☐ Lean-to style
Other:	Post and rafter
	☐ I don't know

Perhaps you have access to a sawmill and a willing carpenter in the

consideration of costs and benefits is needed before choosing what style of greenhouse and construction materials will be the best fit for

construction designs and resources available in printed publications

community or local area? Depending on the anticipated scale of production and your budget, it might make sense to utilize these

local resources to build your greenhouse structure, rather than

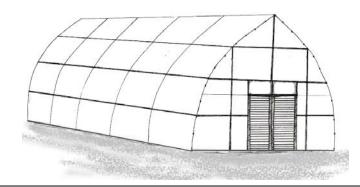
purchase a manufactured steel frame greenhouse. Careful

you. There are a variety of Do-It-Yourself (DIY) greenhouse

rot-resistance properties.

and on the internet if you choose this option. Pressure-treated

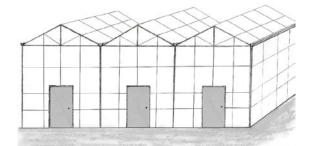
lumber is not recommended for where plant roots may come into contact, however, cedar lumber, if available, is ideal because of its Arch-style roof (Includes a variation of forms: gothic arch, quonset, hoop house, ground-to-ground, etc.)



Considerations

- Generally lowest cost commercial options
- Snow will shed off, but may need to be removed from sides to avoid pressure
- Venting options may be limited depending on the design

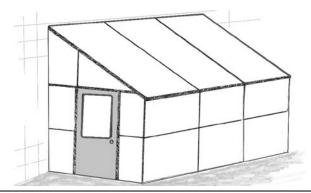
Venlo-style (Single structure or multiple gutter connected structures)



Considerations

- Utilized by much of the commercial hot house industry in BC
- Can be scaled up to meet most larger size requirements
- Allows for free, open floor plan

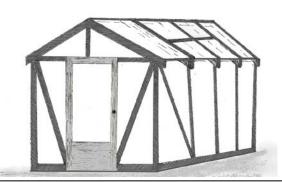
Lean-to style (Ground level or partially below ground level options)



Considerations

- Can work well as do-it-yourself option
- Can be built against an existing building or inset into a hillside
- Usually built south facing with insulated northern wall
- Can be a good option for colder climates

Post and rafter (Typically square sided)



Considerations

- Can work well as do-it-yourself option, particularly where small area is required
- Can be made from locally available or salvaged materials

ASSOCIATED EQUIPMENT

Different plants require different amounts of heat and light, but in general, there is a point in early spring and late fall where there is just not enough daylight for adequate plant growth. Supplemental lighting will be required if planning to extend the production season into early spring and late fall. Careful consideration should be given to the extra cost of heating, lighting and staff time relative to the return on investment.

26. Will your greenhouse crops require supplemental lighting?

	Yes. If Yes, when and for how many weeks/months of the year?
	No I don't know
27.	What irrigation equipment is needed?
	Hose and watering wands Rain barrel and watering cans Drip tape or drip system Sprinklers I don't know Other, please describe:

For an enclosed environment, airflow and temperature control are of critical importance. Temperature and humidity must be monitored and regulated closely as large variations in either can be detrimental to plant health. This additional equipment to control the growing environment (heat, lighting, irrigation) can be manually turned on and off, or automated. The additional up-front cost of automation should be weighed against staff time and availability to regularly perform environmental control tasks, such as switching equipment on and off.

A very cost-effective way to get airflow into the greenhouse is by designing the greenhouse to have "roll-up" sides, on either one or opposite sides of the structure (see Appendix A). In this type of

structure, the bottom 5 feet or so of the side walls roll-up with a hand-crank at one end.

In the peak growing season, greenhouses can become too hot for all but the most heat-loving plants like peppers and melons. Many greenhouses may require shade cloth covering, or at least a tarp, over the outside of the structure. The most efficient way to vent the hot air is through the peak of the roof: hot air naturally rises and vents out the top, thus pulling cooler ground level air in as part of natural convection. Many greenhouse manufacturers offer options for roof ventilation.

Tip: Careful construction of a drip or sprinkler system and utilizing automatic irrigation timers can significantly decrease employee hours required to water plants.

	What kind of temperature regulating equipment will be uired?
	Heating Ventilation Shade cloth I don't know Other:
29.	What kind of venting do you want to use?
	aa.
30.	What kind of heating system do you want to use?
	Electric heater Natural gas/propane forced air heat Wood boiler Sunlight/passive solar/natural heat I don't know
	Other:

Tip: Heating the soil versus the air can be a much more efficient means of heat delivery resulting in a boost in plant root function as the heat is held in mass (in the soil). Running underground pipes with a non-freezing liquid solution from an outdoor wood fired boiler is a popular choice for a growing season extension heat source.

SOIL, GROWING MEDIUM, AND AMENDMENTS

After spending a lot of time and money building a greenhouse, ensure that equal attention is given to starting with the best soil or growing medium possible for optimal plant growth.

For the purposes of this document, soil refers to naturally found material with average plant rooting depth, ideally full of living organisms and beneficial microbes. Growing medium refers to a premade and packaged commercial substance or mix (usually composed of peat, perlite, mulch and compost). Amendments refer to fertilizers, either chemically or naturally derived, but also include soil conditioners (such as sand, perlite, clay, silt, manure, compost, worm castings, bone meal, etc.). These are added slowly but regularly over time. The plants consume these trace elements and/or the soil amendments naturally adjust the physical property of the soil to improve growing conditions.

Natural soil found on-site may not be optimal. For example, it may be heavy clay or too sandy. Therefore, many natural soils will require soil amendments to adjust the physical soil properties and nutrient composition. There are many variables to consider in building your soil/growing medium quality, but with experience you will learn the slight clues provided by the soil/growing medium and the resulting plant health.

Tip: If sourcing composted manure from a local farm, be sure to talk to the farm operator and ask if they use herbicides in their operation. Some herbicides may persist in manure, even over years, and be detrimental to plant growth in the greenhouse.

31. What growing mediums are you considering growing plants in? Peat moss/purchased growing mix Directly in the ground using what is already on-site Our own soil mix/compost Worm castings Hydroponics I don't know Other(s):		
Greenhouses can grow a very large amount of food in small spaces		
and in impressive timeframes. Careful planning and planting of seasonally appropriate crops is required (i.e. don't plant heat-loving melons in September!). For a greenhouse business venture, it is		
imperative to grow what customers want. Also, consider your competition. For example, there can be many other commercial		
tomatoes to compete with during the prime growing season, so try to differentiate your products with quality, taste, accessibility,		
customer service, and/or by using different varieties. What can you offer at times of the year that other sources cannot? For example, higher profit margins may be found in early spring and fall season for leafy greens.		
32. What does the local community or end consumer eat?		
33. What can the greenhouse provide to the community?		
34. Where do community members currently get their groceries from?		

35. Is there a local Farmers' Market? If so, when does it operate and what kind of produce/goods does it sell?	
36. Does your community have an existing Good Food Box, Community Supported Agriculture (CSA), or similar program? ☐ Yes ☐ No. If no, would members of your community be interested in this type of program:	
□ I don't know	
37. Are there regular local community meals (e.g. Elders' luncheons feasts or meals during community meetings or other events, etc.)?	
☐ Yes ☐ No	
38. Are there existing catering opportunities for meetings and events in your community? ☐ Yes ☐ No ☐ I don't know	
39. If there are catering opportunities, where do caterers currently source their produce (vegetables, berries, etc.)?	
40. Does your community currently have a community garden? ☐ Yes. If yes, what kinds of vegetables/fruits/plants are grown: ————————————————————————————————————	

PRODUCE HANDLING, STORAGE, TRANSPORTATION AND REGULATION

Food safety is important to all of us. It is about making sure our food is safe to eat. Safe food production and processing needs a farm-to-plate approach.

Producers are responsible for complying with all relevant federal, provincial and municipal legislation and bylaws that deal with the production of food.

Canada GAP^* is a food safety program for companies that produce, handle and broker sales of fruits and vegetables. The program has been fully recognized by the Government of Canada and is designed to help implement and maintain effective food safety procedures within fresh produce operations. Good agricultural practices in your greenhouse(s) will help you to:

- Assess the risks associated with your daily farming practices
- Minimize those risks
- Customize a food safety program for your individual farm
- Streamline record keeping and traceability requirements

Commercial vegetable production in the province is regulated by the BC Vegetable Marketing Commission under the Natural Products Marketing Act and its Regulations. The BC Vegetable Marketing Commission is vested with the power to promote, control and regulate in any respect the production, transportation, packing, storage and marketing of Regulated Product grown in British Columbia. Your greenhouse location, size, product line, production yields and sales channels will impact which, if any, regulations may apply. There are various exemptions to these regulations which it is important to be aware of and clear on.

Contact the BC Vegetable Marketing Commission directly through http://www.bcveg.com/ or 1-800-663-1461 for more information.

41. How will produce be harvested? ☐ By hand ☐ By machine ☐ I don't know ☐ Other:	45. Is there extra packaging that needs to be done before selling the produce? (i.e. in bags with labels) ☐ Yes ☐ No ☐ I don't know
42. How will the produce be moved from being harvested to processing? Plastic totes (see Figure 2) Cardboard boxes Canvass or paper bags I don't know Other:	46. Will produce be washed before it is marketed/distributed? Yes. If yes, are there other sanitation needs (i.e. Wash station as shown in Figure 3): No I don't know Figure 3. Basic washing station
Figure 2. Plastic harvesting totes	

43. Will the crops grown need to be cooled after harvesting? ☐ Yes ☐ No ☐ Multiple crops with different cooling requirements ☐ I don't know	47. How will the produce be transported to its final market or consumer, if required?
44. Do you have adequate refrigeration or cold storage space available? Is it a shared/community space?	48. How long will it take for produce to reach market?
□ Yes	
☐ No. If no, what is required:	

49. What is the perishability of your crop? ☐ 1 to 7 days	51. Do the crops being produced need to stay cool during transportation?
□ 7 to 14 days □ 14 days to 1 month	□ Yes □ No
☐ Multiple months☐ I don't know	☐ Some of them ☐ I don't know
50. Is the vehicle and/or other transportation infrastructure you require something the community already owns, or will it need to be purchased, leased or rented?	
☐ Already owns ☐ Need to purchase ☐ Will lease/rent	
☐ I don't know	

NEXT STEPS: EVALUATING YOUR OPTONS AND IMPLEMENTING YOUR PROJECT

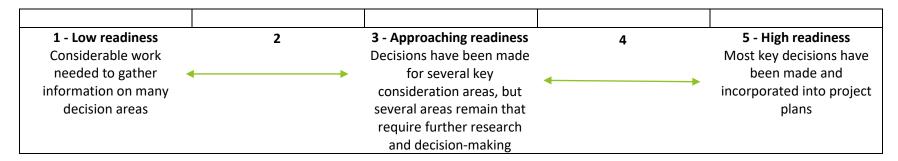
Now that you have systematically worked through many of the key considerations when planning a successful greenhouse project, what next steps can you follow to get your greenhouse built and start operation?

First, assess your readiness and develop a plan to turn any "unknowns" into "knowns".

1. Create a list of all questions marked as 'I don't know'. These are areas requiring further research and/or consideration before moving forward with your project. For each 'I don't know', use the three columns to the right to help organize the areas requiring follow-ups with professional expertise, community input and/or additional work with greenhouse suppliers.

Questions marked with 'I don't know'		For each key consideration listed as an 'I don't know', put a check mark or notes in each column that applies.		
	Does this require professional expertise? (e.g. trades person, financial expert, regulatory and legal experts, etc.)	Does this area require further community or end users input?	Does this require further work with greenhouse suppliers?	

2. Based on the self-assessment questions completed above, where do you place your readiness to move forward with your project on a scale on 1 (low readiness) to 5 (high readiness)? Highlight the readiness score that best applies to you.



3. Your next steps will depend greatly on your level of readiness and the areas requiring further research or consideration, as you have identified in questions 1 and 2 above.

Some examples of next steps include:

a. Schedule appointments with each of the professionals you have identified in Question 1 to provide expert advice on key consideration areas.

Tip: If you are not already working with a skilled professional in the field of expertise you require, be sure to speak with several professionals who you might decide work with. Don't hesitate to ask about their past experiences with greenhouse operations and request references from their other clients to decide if they are the right fit for your project. It is recommended to obtain quotes from multiple manufacturers and service providers to ensure prices are fair market value.

- b. If further input is needed from community members or end users, schedule a community meeting or arrange an online survey to gather the input that you need. What methods will work best will depend on who you need to consult with and the type of information you are seeking. Information on household vegetable preference may be gathered effectively through a survey, while for broader questions related to land use decisions or community economic development strategies, a meeting may be a more appropriate venue.
- c. Writing a business plan is an essential component of a successful operation, whether it is a for-profit venture or a not-for-profit community program. A business plan provides a road map and helps to organize the information about how you plan to run the operation into one document. If you do not already have a business plan that covers your purpose, business structure, human resources plan, marketing plan, production economics and financial plans, and other key business planning areas, consider developing one as part of your next steps.

RESOURCES FROM THE BC MINISTRY OF AGRICULTURE

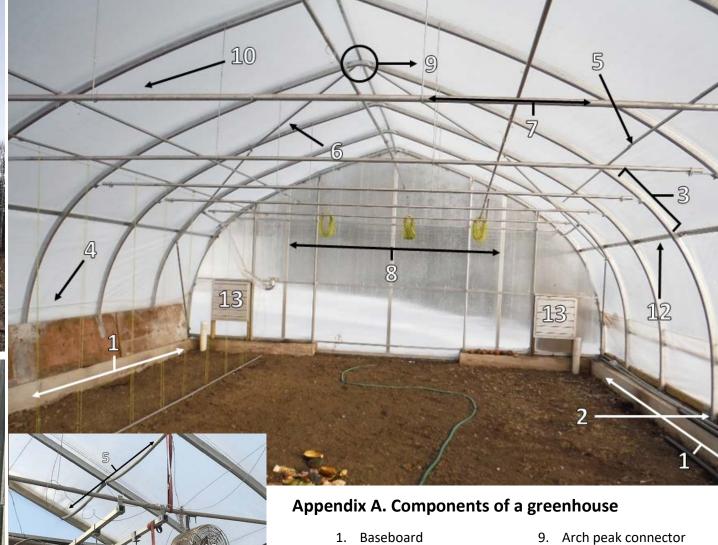
- AgriService BC to help connect you with funding, tools and services to help your business succeed in BC: https://www2.gov.bc.ca/gov/content/industry/agriservice-bc
- BC Indigenous Agriculture Development Program to assist with business planning and feasibility analysis and other programs offered by the BC Ministry of Agriculture:
 https://www2.gov.bc.ca/gov/content/industry/agriculture-seafood/programs
- Crop production guides includes information on best management practices for various crops, published by the BC Provincial Government and Industry Associations:
 https://www2.gov.bc.ca/gov/content/industry/agriculture-seafood/animals-and-crops/crop-production

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- 2. Arch anchor pin/footer
- 3. Arch
- 4. Roll-up side
- 5. Purlin
- Wind brace
- 7. Arch cross tie
- 8. End/Gable wall (back wall)

- 10. Polyethylene (poly) covering
- 11. Poly lock (wire & channel)
- 12. Hip board
- 13. Vents
- 14. Hand crank
- 15. Ventilation fan
- 16. Gas forced-air heater