POLYTUNNELS

Ireland is a bit colder and damper than many other places around the world. Here in Northern Europe, the winters are long and the summers are cold. Many of the food plants people want to eat are from warmer climates. Growing under cover is a good solution.

There are many options if you are looking for a way to grow under cover. Each has advantages and disadvantages, and a mix of the different solutions may be the best choice.

Why grow under cover?
In Ireland, winter begins in November: the daylight is short and temperatures are not great for plants. Spring is not so different from winter, and frosts can happen as late as May. But from March onwards the daylight lasts 12 hours longer and plants, under glass, can use this light to grow.

Plants like tomatoes like warm weather and they take a long time before any fruit is ready. If you start tomatoes early, the plants will be big enough to plant out under cover in May. Even in a bad year, frosts in May usually won't be strong enough to kill plants if they are in a polytunnel. Frost will kill or damage plants, glass or plastic stop this, even down to -5 degrees Celsius. Many plants also don't like wind or too much rain, and polytunnels also protect from these.

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Polytunnels

You can often find cheap second hand polytunnels, but you should be aware that the way the plastic is attached can make a difference. Old polytunnels were just a semi-circular galvanised steel frame and you needed to dig a trench around them to put the plastic in. You then fill the trench with the soil and that keeps the plastic sheet on. (This is a heavy job, but the plastic should last for 10 years, if there is no wind!)

One advantage of trench polytunnels is that frogs can find and live in the small gaps under the trench plastic. It is a good place to hibernate and the frogs eat slugs and earwigs.

Newer polytunnels have clips that run along the side, so there is no digging. You clip the plastic into a rail, along the bottom of the tunnel and tighten it by pulling it down. The tightness of tunnels is important. A tight skin will resist wind better and make the structure integrate better.

Keep in mind…

- In very windy conditions it is best to have the doors closed. Leaving the doors open allows wind to generate lift, and so the plastic can tear.
- The plastic used in polytunnels can be a problem. You should remember that plastic is not so much of a problem if it is disposed of properly.
- Some polytunnel plastics have additives that are there to stop ultraviolet light damage, and require that you put them on the right way up (the additive is on the outside). Some modern plastics are quite stretchy, this helps with wind issues.

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Polytunnel doors
Some tunnels come with ready-made doors, some without. To make rectangular door frames, but leave extra wood above and below the verticals, you fit the bottom extensions into a hole for the bottom, and then cut the top to fit and have it just touch the polytunnel frame. Thin metal strapping can be nailed to fit over and around the polytunnel frame and back on to the other side of your doorframe. Get it as tight as possible, when the plastic is stretched over tight, it will all hold together. Attach the plastic by wrapping it around thin buttons, pulling the plastic tight, in around the doorframe and nail it in.

When stretching the plastic, on an old style dig-in polytunnel, choose a warm sunny day and put the plastic over the frame. Let the polytunnel heat up; this makes the plastic more stretchy. When filling the soil in, it is good to start at the centre section. Put about 1/3 of the earth in on each side then get as many people as possible on each side, to lift the soil-plastic-blob up and out, at the same time, to stretch it tight over the frame. Move on to the next section and do the same, working from the middle, towards the ends. When it is tight, fill in the trenches, fully. Stretch the end sections last. You can then cut the holes for the doors, cut a small hole, you need to leave extra plastic, so there is enough to stretch it around (on batons) to the inside of the door frames.

Polytunnel Crops
There are not many food plant varieties that prefer cold conditions. Lettuce is an example of a plant that doesn't like heat, so only put them in a polytunnel in autumn, winter, or spring.

It is possible to have food growing all year round in your polytunnel. There are books available, but a bit of thought and practice are good alternatives. You can grow fruit trees in polytunnels, but choose varieties that come on dwarfing rootstocks. They can also make good wood storage, as the heat will help the wood to dry out.

Many people put raised beds in tunnels, but it is okay to have flat ground. You can't use a plough in a tunnel, even the massive multi-framed ones, so hand digging or no-dig are the options. Growing in polytunnels is usually intensive agriculture and no dig is most appropriate for field scale agriculture. You want a nice deep and rich soil, so you can get several crops out of the same patch, each year, so dig in lots of compost.

Polytunnel frames can also be used with bird netting. If you are growing berries, the birds are a pain! This is also a good way to use a polytunnel if you are in a windy area. The netting also keeps a bit of a microclimate inside and that might help.

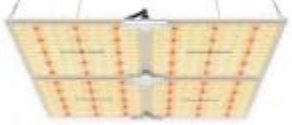
Ventilation
Plants need air. They take carbon dioxide as the boiling block, so more air circulation means more food and faster growth. Ventilation is important for controlling fungi related problems. In summer, you can open all the doors. In spring or autumn, you will need to open them in the morning and close them before the cold comes. In winter, droughts and the temperature difference with the outside is

enough for ventilation. You also need ventilation for insect fertilised plants, like peppers, chilli, and the like.

Cleaning
Over a couple of years, algae may start to grow on your polytunnel. It can be hard to get this off. Slugs will eat a good bit of it, but it is better to clean it. You can get a bit of agricultural fleece or any other long strip of material. On a day after rain, get one person on each side, then pull and drag the cloth along to wipe the algae away. Try a bit of organic washing up liquid, too. This helps it wash away and reduces the friction.

Windowsill

Putting your seed trays or seedlings in pots, inside a window is an option. A big window is best, so that more light gets in. Plants will grow towards the light, so you might need to turn them around occasionally, so they grow evenly. If they don't get enough light, they will grow thin. To reach up for more light, they will become weak and stop growing. You could use a low energy LED growing light above the plants, to solve this issue.



Cloches

It is possible to make mini-polytunnels, with a long sheet of clear plastic, a few bits of bent wire and some string. You can buy them also. There are also bell jar alternatives that cover one or more plants. You can also use plastic bottles, with the bottom cut off, as a micro-cloche for seedlings.

Cold Frame

A cold frame is like a mini greenhouse, but you can't stand in it. Cold frames won't get as hot as a greenhouse or polytunnel, but they are still a good option. Cold frames are a good half-way house to move plants into for a few days on their journey from the warmth of the polytunnel to the fresher conditions in the veg beds.

They can be built from many materials, but they are just a sloping topped box structure with a lifting glass or polycarbonate roof. They can sit directly onto the ground or have a concrete floor (this seals the structure and can help prevent disease and pests getting in.) You can design your cold frame to have a removable lid, so that when the weather gets warmer, the plants don't get too hot and can grow directly out of the frame.

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Greenhouses

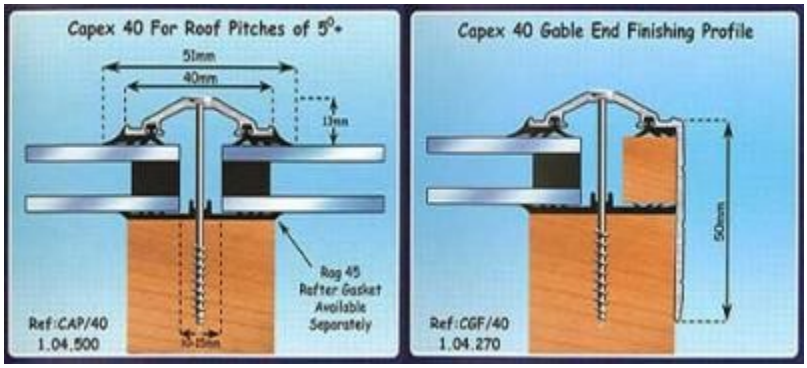
There are many sizes of greenhouse, but they all do the same job. You can make them yourself out of wood or buy aluminium alternatives. Glass is a good material for protecting plants; it lets in all the right light frequencies and keeps frost away better than plastic. Glass will last forever, unless someone throws a stone, etc. Glass is also made from sand and is recyclable.

There are also polycarbonate alternatives, but the plastic will need replacing eventually as the ultraviolet in sunlight will slowly damage the sheets. Polycarbonate greenhouses are an alternative to polytunnels especially in windy locations. Dome shaped greenhouses are also a good option for windy locations.

Home-made greenhouses can be made from plastic bottles, which is a great way to recycle.

Conservatories

If you add a greenhouse to the side of your home, it will warm the home, with solar power. The heat from your home will also keep the conservatory warm in the winter. In a heated greenhouse or conservatory, you can grow many kinds of exotic plants that are not found in Ireland.



There are many kinds of conservatories available, but you can find DIY conservatory bars at places that sell "Capping Bars," though they may be called by a different name. These are metal bars that fit over the top of your polycarbonate sheets. You build a frame to the shape you want, then screw the bars on top of the wood and polycarbonate to hold it down. This is cheap and you can build it with recycled/ethical wood. Acrylic sheet has better light transmission than polycarbonate.

Earth Sheltered Greenhouses

This is a good cheap alternative, especially if your earth greenhouse has a hill. There are books available that show you how to design and make frames for them. Alternatively, you can just use polytunnel plastic over 2x4 wood beams.

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⇨ The Earth-Sheltered Solar Greenhouse Book ⇦
⇨ Do Kiwi-Fruits Grow In Ireland? And How To Cover A Polytunnel ⇦
⇨ The Ecological Cost of a Polytunnel ⇦
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