typically 20 years if the owner continues to pay the required fees. The idea behind a patent system is that, without patents, inventors would keep their inventions secret for fear that their competitors would copy them. This secrecy would prevent others from building on the earlier knowledge and so the scientific knowledge and technology of society would not advance. In exchange for granting a patent, the State requires that the invention be fully disclosed so that other people can learn from the invention and, once the patent has expired, can use the invention. The extent to which the present international patent system balances the needs of business with those of society is a contentious topic, which is outside the scope of this chapter.

In order to be patentable an invention must be:

Novel. Novel is another word for new. To be considered novel the invention must not be publicly available anywhere in the world, in any form, before the patent application is filed. A common way in which an invention becomes public is if it is described in a journal or at a conference. However, showing members of the public an inventive product with no restrictions will usually also disclose it. This is why it is often advisable to file a patent before performing market research on an inventive chocolate product. Once the invention is disclosed it is no longer novel and so cannot then be patented. If someone could have analysed your product and found what was new about it, then the invention is considered disclosed even if no-one actually analysed it.

Some countries, such as the United States, Canada, Australia and Japan, allow a grace period between an inventor disclosing their invention and filing the patent. In these countries, even if the inventor discloses their invention, it will still be considered new if the inventor files a patent application within a certain time. The conditions vary; some disclosures can only benefit from a grace period in the country where the disclosure happened. The grace period is usually six months or one year. However, many chocolate businesses are global, and so to obtain patents in a wide range of countries it is important to keep your invention secret before filing the patent. For example, there is no grace period for European Patents (apart from in a few very limited situations).

In general, if two people invent the same thing and both apply for patents, then it is the person who filed their patent on the earlier date who will be granted a patent. It is therefore important not to delay unnecessarily in getting your invention filed at the patent office. In the United States there used to be a *first to invent* system rather than this *first to file* system, but that changed in 2013.

Inventive. Patents are granted for solutions to technical problems. The solution to a problem is considered inventive if, when compared with what is already known, it would not be obvious to someone skilled in the relevant technical area. Patent offices have developed different standard approaches to test for inventiveness, but it is not an entirely objective decision. If you develop something new,

and it is not simply a trivial modification, then it might be worth discussing with your patent advisor whether to file a patent application.

Capable of industrial application. "Industry" is used in a very wide sense here and it is unlikely that inventions related to chocolate manufacture and use (on any scale) would not be considered industrially applicable.

Not excluded. There are a number of things which are not patentable in most countries. For example:

- Diagnostic, therapeutic and surgical methods for the treatment of humans or animals;
- Plants and animals other than micro-organisms, and essentially biological processes for the production of plants or animals (e.g. breeding plants through crossing and selecting in the traditional manner).

Although plant varieties cannot be patented, there is another form of intellectual property to protect new varieties of plants called Plant Breeders' Rights. These rights could be used, for example, to protect a particular variety of disease-resistant cocoa plant obtained by crossing and selecting. However, the detailed situation is complex and varies around the world so it is important to seek professional advice.

Patents are generally intended to cover products or processes with new technical or functional aspects; patents are therefore concerned with, for example, how things work, what they do, how they do it, what they are made of or how they are made. There is a misconception that patents are only for "groundbreaking" inventions. In fact, the vast majority of patents are for incremental improvements in known technology.

29.2.2 International protection

Patents are territorial rights, so, for example, a patent granted just in the United Kingdom (UK) would not stop someone using the invention in Japan (although it would stop someone importing the product of the invention into the UK). Even if your business operates only in one country, you should think carefully about whether you might want to file patents abroad. Your business might grow in the future, or you might want to make money by licensing your patent to a company in another country.

If you wanted a patent in many foreign countries it would be difficult to make a separate application in each country. Fortunately there is a system to help you. Around 150 countries have signed up to a treaty called the Patent Co-operation Treaty (PCT). As long as you are a resident or a national of one of the PCT countries you can file a single international patent application and designate any of the member countries. This is equivalent to filing the patent in each of the countries individually, but much more convenient. There is no such thing as an international patent however. Each designated country will have to examine the patent individually and decide whether or not to grant it.