

# Preserving your Food – Jams, chutneys, drying and bottling

## Food for thought

Not so long ago it was common practice for people to preserve lots of food, using a variety of techniques from bottling to jam and chutney making. The convenience of more pre-prepared / value added food in shops and supermarkets, as well as fruit and vegetables being readily available out of season, has perhaps led us as a society away from DIY food.

However, there seems to be something of a resurgence in home made produce, and there are lots of great reasons to give it a go. For one thing it can be great fun, and give rise to lots of opportunities for family activities (e.g. visiting a fruit farm to gather fruit to make jam, or watering the tomatoes in the greenhouse and helping to make them into chutney). Preserving your own food is also empowering. You can make your jams and sauces just how you like them, to that they are just as sweet, sour, salty or spicy as suits your taste. You can also choose your ingredients according to your own set of ethical choices, so your food can be low in food miles, fair trade, organic or pesticide free. If you are able to preserve excess food, for example your garden glut of tomatoes, or your colleague's wind fall apples (or even shop bought goods when they're in season and cheaper or simply of reduced price) you can enjoy these foods throughout the year, and reduce the amount of food that needs to be wasted. These home made products can be used in place of shop bought goods, and help to save some money too. They also make great gifts!

## Top tips

You will need to strike a balance between changing what you cook and eat to the sorts of goods that you can make, and making the sorts of home produce that you are more likely to eat. It may take a while to get this right!

Don't pick more fruit than you can process – it leads to wastage

Take bags and tubs with you when you go out for a walk, in case you find some good berries!

Keep your jars together with their lids both in storage and while cleaning and sterilising prior to use. Some jars may have lids of similar size to others but may not make such a great seal as with their original lid.

Using Certo or preserving sugar to add in extra pectin can dramatically speed up jam making time – often a godsend if you are doing this in the evening, and you want to get to bed!!

## A Simple how-to:

There follows a brief description and simple guide to the following methods for home preserving: Jam, chutney, drying and bottling. You will need to find recipes to follow to get started, however there are a great many books on the topic and online references where you will find a range of recipes.

For both jam and chutney, a stainless steel pan that is large enough to contain all the ingredients is essential. If you become keen it may be well worth investing in a preserving pan. Brass, copper or iron pans should not be used as they react with the vinegar and give a metallic flavour to the chutney.

## **Jam**

Making jam is the ideal way to preserve the taste and nutritional value of summer fruits so that they can be enjoyed throughout the year

Jam contains two essential ingredients; fruit (which provides pectin) and sugar (which preserves the fruit.)

Pectin is important to the jam's set: low-pectin fruits like strawberries need extra pectin (in the form of lemon juice, liquid pectin such as "certo" or pectin-enriched preserving sugar) to reach a spreadable consistency.

When choosing fruit, select pieces that are perfectly ripe and unblemished – they'll have the best levels of pectin and the finest flavour. If the fruit needs washing, make sure you dry it thoroughly, because excess water can prevent the jam from setting or cause mould on the finished jam.

The most important thing to remember is that the pan, spoon, and jars used must be scrupulously clean to prevent bacteria from getting into the jam and spoiling it. Making jam with 1 - 2kg of fruit at a time is ideal - more than that and it is difficult to get the jam to set because it cannot be boiled fast enough. 2kg of fruit is enough to fill 6 standard sized 450g jam jars.

The fruit should be placed in the pan and simmered in a pan for around half an hour – this helps to draw out the pectin. The sugar can be added at this point (often equal the weight of the fruit) or some recipes will suggest adding earlier as sugar hardens fruit. For example, if you are making jam from soft fruits such as strawberries, you should mix the fruit with sugar from the start as this will help prevent the fruit from disintegrating when heated.

Any froth/scum which accumulates on the surface of the mixture can be skimmed off carefully while boiling. Some recipes suggest adding a knob of butter to the pan of jam to reduce the scum.

To determine if your jam is ready to take off the heat and put into jars, you will need to test for set. There are a number of ways to do this, but the simplest is by using a cold saucer and teaspoon. Use a teaspoon to put a small amount of jam onto the saucer. Leave it for a few seconds and then push the jam with your finger. It will wrinkle on the surface when the jam is ready. If not, try again in a minute or two with a fresh saucer. The other way to test for set is the temperature test. The jam is ready when the temperature registers 105°C (221°F) on a sugar thermometer. Simply immerse the thermometer in the jam shortly before the specified cooking time is completed, keeping it away from the base and the sides of the pan. Leave in position until the temperature has been reached. Boil a little longer if necessary.

When your jam is set, turn off the heat and prepare some sterilised jam jars. To sterilise first clean them in soapy water, then you can either use a sterilising solution such as dissolved campden tablets or VWP powder, or place your jars into a moderate oven for 10 minutes.

Pour the finished jam into jars using a sterilised funnel or large spoon. It may help to seal your jam by adding a waxed paper disk at this point, before sealing with the lid.

Cool the jars at room temperature, and wipe clean before labelling

- **Chutney**

Chutneys originated in India – the name derived from the Hindu word chatni – but are now a very popular preserve all over the world. They are made from fruits or vegetables, or a mixture of the two, which are chopped, cooked, mixed with spices, vinegar and other ingredients and reduced to a smooth pulp.

Favourite fruit chutneys include spicy apple (perfect for eating with crackers and cheddar), mango or apricot (a great accompaniment to Indian foods), and the old-fashioned marrow jam (great in a sandwich). You might also wish to try green tomato chutney and plum chutney – both fruits are easily available in-season. Homemade chutney is a wonderful Christmas gift (perfect for eating with cold cuts) so make lots when the ingredients are cheap.

The scope of chutneys is endless and the combinations and permutations can be varied according to personal taste and the ingredients available. They can be sweet, sour, hot or mild. Once you've mastered the basics of making chutney, and picked up a few traditional recipes, you can play around to create a classic recipe of your own.

Unlike jam making, windfall apples, green tomatoes and other end-of-season fruit such as rhubarb can be used as there is no worry about the setting qualities. Dried fruit such as raisins, dates, and sultanas are commonly used. A big advantage to both fruit and vegetable chutneys is that they improve with age and, if properly stored, will remain in good condition for years.

The sugar and vinegar usually balance one another out – you'll note that most recipes include numerically equal amounts (100g sugar to 100ml vinegar) – to achieve that characteristic sweet and sour chutney flavour. Generally whole spices are preferable in chutney-making than ground ones which can give a muddy appearance to the chutney. Bruise these and tie them up in a muslin bag and cook with the other ingredients. However, some recipes call for a mixture of both whole and ground spices to give the best flavour.

When is it ready? Unlike jam, you don't test for a set when making chutney. It is ready when, if you draw a wooden spoon across the pan, a channel is left for a moment before the chutney refills the space. Don't forget that in its warm state, the chutney is a lot more fluid than it will be after cooling.

The success of a good chutney is that it should be relatively smooth in texture and have a rich mellow flavour. To achieve this it requires long, slow cooking and then, ideally, it should be left to mature for at least three months.

- **Drying**

Drying is a method of food preservation that works by removing water from the food, which prevents the growth of micro-organisms and decay. Drying food using the sun and wind to prevent spoilage has been known since ancient times. We all probably use dried food, without thinking about it, such as dried herbs, raisins, soup mixes, pasta and noodles. Drying will never replace canning / bottling and freezing because these methods do a better job of retaining the taste and appearance of fresh food. But drying is an excellent way to preserve foods that can add variety to meals and provide delicious, nutritious snacks such as fruit leathers. One of the biggest advantages of dried foods is that they take much less storage space than canned / bottled or frozen foods. Another advantage is that once dry, you have no on-going electricity costs in keeping your fruit and vegetables preserved as with storing in a freezer. It is thought that dried foods can maintain more of their nutritional value than frozen or canned / bottled foods.

You can dry fruit such as plums (to give prunes!) and apples (dried apple rings if you wish) berries (to use in baking) and fruit leathers. Some fruits can also be honey dipped (dunking in a solution of honey and sugar before drying) to increase sweetness. You can find recipes for creating your own dehydrated camp food, providing compact, light weight food that is easy to carry in a backpack. You can also dry vegetables to enjoy as a snack or add to soups and stews. With the removal of the water, the flavour is concentrated, which can add to the appeal of foods, such as dried tomatoes, dried mushrooms etc. If dried food is kept in air tight packaging, it will keep indefinitely.

The most obvious place for drying food is in the oven. The heat should be on a low setting – around 60° C on an electric oven. If using a gas oven for drying, turn the dial to 0 or \_ - the lowest flame possible. It will probably also be necessary to prop open the oven door to assist the drying process providing some ventilation. With solid-fuel oven, the heat maintained after cooking sessions can be utilized. This may mean that the drying process is not continuous and has to be carried out over several days but this should not affect the quality of the finished product. In the summer months it may be possible to dry some food by the sun, and you will find plans for creating simple home solar dryers in books or online. Although you may find that here in the Highlands, we are limited in the days when there are sufficient hours of sun and the humidity relatively low when it would be successful. You may wish to partially dry some food resting on a non-stick sheet on a sunny window sill inside, and finish off perhaps in the oven. You can also dry your food in a specialist food dehydrator, which is handy if you are wishing to dry a large quantity of food at a time. A food dehydrator is a small electrical appliance for drying foods indoors. It has an electric element for heat and a fan and vents for air circulation.

For drying purposes, vegetables are best picked when slightly immature, whereas fruit should be left to ripen thoroughly. In general, the faster the food is dried, the better the result, however, this shouldn't be at temperatures which are too high resulting in cooking the food. You can chop your food into slices and lay them out to dry, shred finely, or puree, to create dried leather. A good non-stick surface (such as silicone baking sheets) to place your food on while drying should prevent it getting stuck on.

- **Bottling / canning**

Bottling / canning is a method of preserving by heating in a sealed container. Food is preserved in the jar as a vacuum is created, so the food doesn't need sugar or vinegar to help preserve it, although often. It is the homemade equivalent to tinned food. To ensure that it will keep, the fruit has to be heated sufficiently so that micro-organisms, enzymes and yeasts that are naturally occurring in fruit are destroyed. There are two types of vacuum jar that can be used – a screw topped jar with a rubber seal built into the lid (e.g. kilner), and a clip jar, with a separate rubber ring gasket (e.g. le parfait). These rings should only be used once, since they tend to stretch and deteriorate during use.

Fruit is often bottled in a sugar syrup, which helps to maintain colour and adds to taste. You can vary the strength of the syrup according to taste, but often 400g sugar per 1 litre water is used. It is also possible to bottle fruit in fruit juice, or wine. Spices such as mustard seeds, cloves, allspice, coriander seeds and black peppercorns can be added. You may also create sauces such as a tomato / ragout sauce, which do not contain sufficient sugar or vinegar to preserve the food, which can be stored by bottling.

Bottling should be carried out with care, as lack of quality control in the process may allow ingress of water or micro-organisms. Most such failures are rapidly detected as decomposition within the jar causes gas production, which may lead to a hissing sound as gas escapes. There are more likely to be problems with the reintroduction of bacteria and associated toxins (an extreme example being botulism) with bottling vegetables, so it is recommended to bottle just fruit at home.

Processing the bottles may be done on the hob or in the oven. The hob method is known as the water-bath method of which there are two main variations, the quick water-bath and Pressure Cooker. A false bottom is recommended with each method so that the jars are not in contact with the base of the pan as the heat rises.

The oven method involves placing the jars with syrup or juice in a pre heated oven and leaving for the required time according to the recipe you are following – different types of fruit will need different times. Place the lids on top but not the clips or screw bands. Put the bottles 2 inches (50mm) apart on a baking tray or tin lined with newspapers (in case any liquid boils out during processing) on the centre shelf of the oven.

With both methods, after the bottles have been left for 24 hours and are completely cool, it is necessary to ensure that a complete vacuum has been formed during the processing and that no air is in the bottles. Remove the clips or screw-bands, lift the bottles carefully by the lids and, if these are tight and secure, the seal is complete.

## **Other references**

### Books:

AFRC Institute of Food Research, 1989, Home Preservation of Fruit and Vegetables

Piers Warren, 2003, How to Store Your Garden Produce

Phyllis Hobson, 1994, Making and Using Dried Foods

### Websites:

[www.self-sufficient.co.uk](http://www.self-sufficient.co.uk)

[www.fruitexpert.co.uk](http://www.fruitexpert.co.uk)

[www.allotment.org.uk](http://www.allotment.org.uk)

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