Food Storage & Resilience

www.underthechokotree.com
Sustainable Living in the Suburbs

By Nev Sweeney

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0.0 Introduction

There are many advantages to having some food storage over and above your immediate needs –

1. Improving your resilience in hard times, ensuring you have food for yourself, your family and to pass on to others in need.
2. Peace of mind that if food supply (or other problems) should occur, you will still be able to eat at least.
3. More flexibility of meal planning at short notice,
4. The ability to throw a meal together in the event of unexpected guests without needing a run to the shops,
5. Reduced likelihood of running out of a critical ingredient while cooking, requiring another run to the shops.
6. Where the food items are bought in a supermarket, if you keep some stock you can wait until that item is available at reduced price/on special, thus saving you money.
7. If you are buying bulk amounts of ingredients this will also save you money as well as reducing the amount of packaging that you generate.
8. If there is a situation where supplies are getting low generally, you won't be competing for the stuff left in the shops; that can go to the people who really need it.

We found that when the Covid lockdown happened, it was pretty much business as usually for us and we didn't have to go bolting out to the shops to secure a supply food and….. toilet paper. We were not only prepared but had practiced techniques to help us make the most of the food we were storing, as well as the food which we were growing for ourselves and could share.

Even after the lockdown was over, there were (and still are in some cases) short term shortages due to supply chain issues. Our stores enable us to weather them without any real difficulty.

This eBook starts off with the original food storage program which a friend and I worked out over 40 years ago. It was not perfect (nothing ever is) but kept things percolating until the kids left home. Once that happened and our need for food storage was less, a review of the system was required. How I did that and the effect it had on our storage habits is covered in the second set of articles. The third set of articles details how we had fun practicing for a time which turned up in the form of the covid lockdown, and the fourth set of articles are some examples of the sorts of processes we used make our own stored foods and to create new foods out of our storage.

1.0 The Original Process

1.1 Introduction

In the developed world, with our readily available food supplies, most of us do not take much consideration of how much food is in our homes at any one time, why bother when all that is needed is a trip to the corner shop when supplies run out. What would happen though if you were prevented from restocking your larder by interruption to food supplies by transport or petrol strikes, floods or bushfires, terrorist activities or more personal disasters such as illness or unemployment? Even for those of us who produce our own, crop failure or contamination of our home preserve is not a disaster.

A study done in the United States a few years ago put the average household food supply at sufficient for a little under a week and there is no reason to assume that most of us are any different. As an experiment, just before your next grocery shopping expedition, note down how much food is left in the house and then REALISTICALLY work out how long it would take your family to go through it. It can be very enlightening to see just how dependant we are on that corner shop. A process of how to do this is covered under the heading of a 'Pantry audit' and is detailed in Section 2.2 of this eBook.

One obvious way to reduce this dependence is to maintain a store of food in our homes, this can act as an emergency store if food supplies are interrupted for any reason. There are other advantages also, stored food acts as a hedge against inflation by enabling you to use food bought before a price rise longer. It can save you money when you buy food for your stores in bulk and by providing a backup against running out of that critical item and having to bolt for the convenience store, paying a higher price and wasting time and petrol. Depending on what you store it can also increase

the variety of dishes that you can prepare at any given time, so it causes less problems when people drop in unexpectedly and stay for tea. Even the government recommends keeping a minimum two-week backup supply of food in case of natural disasters, so a household store of food makes sense.

A home food supply can be very important if you have children as they are the first to feel the effects of food shortages. They will also slowly starve on a diet that will keep an adult fit and healthy, so it is important to take account of their special needs (carbohydrates, vitamins, minerals and essential fats) in any food storage system. Both children and adults will starve themselves to death if they can't get food, they find palatable so don't make the mistake of thinking " If you're hungry enough you'll eat anything " as this has been proven tragically wrong in the past.

It is therefore best to follow the rule:

STORE WHAT YOU EAT AND EAT WHAT YOU STORE

In other words, don't go out and buy a dozen cases of tinned curried quail eggs that are cheap on special unless you and the family genuinely enjoy curried quail eggs. If a new product looks interesting or is available cheaply then buy a small amount and try it out on the family, if there are a number of takers include it in your storage program, if not forget it, no matter how cheap it is . It is better to pay more for something you are guaranteed to eat and enjoy than cut costs and find when it comes to the crunch the family won't touch your stored food.

1.2 The Process

Back in the 80s I did a lot of work with a local religious group, helping the members set up food storage systems, the idea being that they would end up with a year's supply of food for their entire family. Another bloke and I would meet with people in their homes, work with them to tease out what they wanted and then put together a document (Food Storage List Form- see Appendix 1) that they could work with. The document is really a list of the things they wanted to get; we had a proforma drawn up that we could fill out and leave with them. I thought they had all gone but after some intensive searching I was able to find an old blank copy (see appendix 1).

During the process we would discuss with the family all about the types of things they might want in their storage program and work through the process, it would take about 2 hours. During the process we would talk about the things covered in other articles in this section of the eBook -

- The Big Four
- Cans
- Dry Foods
- Fats and oils
- Sundries

The process we would follow was basically this –

The first things we talked about were the basic stores (aka “the big four”) the idea being that if you had the required amount per person (i.e. wheat 140kg; honey or sugar 30kg; powdered milk 35kg and salt 3 kg) this would be enough to keep you alive for a year. In most cases the families we talked to already had some of these stores, so it was just a case of multiplying the number of family members by the amounts required for the year and then subtracting the amount (if any) that they had on hand. The final figure was how much of each they needed to buy in. All of this was written down on the form.

Next we went through the tinned stuff – veggie, fruit and meat/fish. It basically came down to how many meals the family would want per week using that particular product. Work that back to the number of tins per week and multiply by 52 and then to get the "box equivalent" divide that number by 24. The box equivalent is basically the number of boxes of each particular type of tinned product. The box equivalent number was important when the family was looking at buying in bulk, so they could understand the number of boxes of each tinned product that was required to get them where they wanted to go. It also gave them some idea of the volume required to store the stuff.

There are other advantages to the "box as a whole" approach. The way we would do it is to buy a box of tins, then rather than pulling all the tins out and storing them somewhere then writing the purchase date on all the tins (critical for keeping track) we would just write the purchase date on the box. That way the oldest box of tins would go into an area for immediate use and the other fresher boxes remained in a storage area. Once that box was empty it would be replaced by the next oldest box and a new boxful of tins would be bought to replace the one used up. This prevents the problem of getting to a box of tins that is 10 years old and wondering if they are safe, or nutritious, to eat.

Anyway, that was the way the process worked, discuss each item on the list line by line and work out how much the family figured they would consume of each product in a year. This list is somewhat old of course and some things, like the tin sizes, have changed. A goodly proportion of the tins used to be 440 grams in weight as they are on the form, close to the old one pound tin, but nowadays they have revised it down to an even 400 grams (although I bet there was no corresponding reduction in price).

During this process we would also discuss places to store the food, the need to rotate your stocks to keep things fresh which is referred to these days as FIFO – first in, first out (not fly in, fly out!) as we did by the box (see above). Over a period of a couple of years we talked to over 50 families and greater than 50% of them used the process to improve their food storage programs.

1.3 The Big Four

What would you say if I told you that there were four, readily available relatively cheap , storable foods that when combined could keep you alive for a year ? "Bulldust!" most likely, but it's true. The following four foods in the ratios described will provide an adult with enough fodder to keep him (or her) going for a year. For children the diet lacks essential fats so 20 - 25 Kg of vegetable oil or edible fat needs to be included per child per year.

Food	Amount / Person / Year
Wheat	140 Kg
Honey or Sugar	30 Kg
Powdered Milk	35 Kg
Salt	3 Kg

1. Whole Wheat - This should be hard winter wheat with as low a moisture content and as high a protein content as possible, greater than 12% if possible. In practice, however, this information will not necessarily be forthcoming from the person you buy your wheat from as they may not know, but if you buy your wheat in late spring there is a good chance it will be winter wheat.

Wheat tends to become weevil infested over time, so it does need some treatment before it goes into stores. To store wheat, it is generally recommended that painted steel be used because it is both weevil and rat proof. There are no rats in our area so I use 20 to 25 litre plastic carboys or "cubes" because they do not rust and I have had wheat stored this way for over fifteen years with no problems.

To foil weevils, I put in a cupful or two of dry ice pellets into the bottom of the container. The dry ice vapourises releasing carbon dioxide gas which, being heavier than air fills the container and displacing the air. The wheat is then poured in on top of the pellets and the top screwed on loosely so the CO2 can escape. After a couple of hours, the lids can be screwed up tight but keep an eye on the containers and loosen the lid if the pressure starts to build up again. Wheat preserved in this manner will last indefinitely.

Wheat has a myriad of uses, it can be ground to make flour and turned into bread, pasta, gluten products sourdough etc or used whole to grow sprouts or cook up as a cereal, the list is endless . To make maximum use of your stored wheat (and other stores) you should obtain a copy of the book "Passport to Survival" by Esther Dickey.

Our original grinder

You also need a grain grinder to reduce the whole wheat to the more digestible flour. Again, the big point is to try wheat recipes now while failure and wastage is not critical. As an example of this approach, I had heard that you can make a breakfast cereal out of

wheat grains by boiling them up and putting them in a thermos to cook in the stored heat overnight. The next morning the wheat is strained and added to a bowl, throw in some milk and sugar and Bobs-your-auntie, hot breakfast. Too good to be true you might say and that's what I found, I know people who eat it on a regular basis, but I found it to be tasteless, floury and generally unpleasant. So, what I am saying, is to try these things now and work out what does and doesn't work for your family before things get critical.

The nutrition behind the use of the wheat base is very sound. There are plenty of goodies locked away within the humble wheat grain, a useful mix of protein, carbohydrates (sugars, starches and fibre) fats, vitamins and minerals . Thus, it is not good idea to replace wheat with say white rice, which is a source of carbohydrates only, although that is not to say that white rice should not be stored in addition to wheat.

The newer fancy electric one!

2. Honey or Sugar - Provides easily utilized energy as well as the sweet taste in our diet that we are used to, children need to replace the energy that they burn by regular inputs. The choice between honey and sugar is largely personal taste, honey contains iron and some B vitamins not present in sugar but the flavour is different and it contains some water so it is less concentrated than sugar. Both will last indefinitely in storage although honey tends to go crystalline or candied in cold weather, it can be returned to its original condition by warming it up. Perhaps the best idea is to have a mixture of both energy sources in your storage program.

3. Powdered Milk -This is the most expensive component of the big four and has the shortest life in storage. The type of powdered milk that has the longest storage life is non - instant and non - fat and to ensure it lasts in storage as long as possible it should be packaged in steel tins or foil. If you buy your powdered milk in 25 Kg paper sacks (the cheapest way kilo for kilo) it should be repacked into steel or thick polythene airtight, watertight containers. The containers should, as far as possible, be stored in a dry dark place with an even, cool temperature. Under such conditions the powdered milk should last for 7 years, but over time it may darken and develop off flavours so it should be checked regularly. The way around this of course is to rotate your stocks by using the oldest powdered milk before it goes off and then replacing it. Also, powdered milk is a source of calcium and protein and is very versatile, it can be used in cooking, baking, with cold cereal, as a drink and with the appropriate starter, yoghurt .

4. Salt - Yes, that evil white powder that everyone warns you about is actually an essential part of your diet. Plant foods are rich in potassium salts but contain little or no sodium (except certain seaweeds) so a diet based primarily on these foods can result in a lack of sodium. Most people in Australia have a varied diet and we could get all the sodium we need from processed foods so in most cases extra salt is unnecessary. On a survival diet, probably accompanied by hard work, however our salt levels would need replenishing on a regular basis so this vital component of the four should not be forgotten.

Salt has a multitude of uses, it can be used as a cleaner for crockery, pots and pans or your teeth, as a solution it can be used to clean wounds (boil to sterilize first) or as eye drops. It can be taken in water to prevent cramps brought on by excess sweating, it can be used to preserve food and if that's not enough you can still put it in your soup to liven it up a bit. Salt is very cheap to buy and is available from catering and bulk food suppliers and some Asian groceries in 25 Kg bags. It will keep indefinitely and requires no special storage procedures other than to keep it dry. Do keep it away from iron and steel though, it tends to promote rust!

So, there it is, a diet that is relatively cheap to buy, has a long storage life and is readily available now. The trouble is that we Aussies are used to a bit of variety in our diet and for all its obvious advantages it corners the market in BLAND! For this reason, many people store other foodstuffs in addition to the minimum survival diet, this will also increase the length of time you can last on your stores.

1.4 Cans

While canned foods aren't exactly the most sustainable part of a food storage program, they do have a number of advantages - they store easily; they are robust and vermin proof; a wide variety of products are canned, some which are not storable in any other packaging. They are readily available, they already contain water and so do not need reconstituting like dried foods, most can be eaten cold or can be cooked up just by piercing the can and applying heat directly to the container. On the other hand, they are heavy, relatively expensive and getting rid of the empties can be a pain although most areas have recycling initiatives that accept food cans.

As is common with most food storage the cooler you store it the longer it keeps, you should aim to keep the temperature below 21°C and if possible close to 10°C . In the normal urban environment without a cellar this is difficult. Under the house is a good storage area if you have access to it or a well-ventilated storage cupboard in the centre of the house or on the southern wall.

A friend of mine bought some boxes of tinned vegetables and stored them in his roof, after six months he took them down to check on them and found that the contents had deteriorated so much that even the dog knocked them back. This just goes to prove that the cooler you store them the longer they last.

Just how long canned foods will last in storage depends upon which report you read, the current idea is that under reasonable storage conditions (under 21°C) most canned foods will last 18 months to 2 years . After this time has elapsed there is a slow breakdown of vitamins although the food remains palatable. I have eaten canned carrots, corn and potatoes which was 4 years old and found little or no difference between it and freshly bought canned goods. Inverting the cans once a month prevents "fallout" of particles inside the cans to the bottom which can start it rusting from the inside out, so this to will increase storage life.

Vegetables

Are usually canned in brine and can be a bit salty if you are not used to it, many "low salt" brands are available. If you do not use canned vegetables on a regular basis but regularly use fresh or frozen potatoes, carrots, corn, peas etc buy a few cans of each and try them out on the family. If you have some canned vegies in stores, it will make it easier for you to last out any interruption to fresh supplies and act as a backup to your vegie patch. Also possibly worth storing might be tomatoes, mushrooms, baked beans etc and if you like a bit of Chinese cooking mini corn, water chestnuts and bamboo shoots.

Fruit

This can of pineapple slices was over 5 years old when it 'blew'.

There is usually no prejudice against tinned fruit and most members of the family can eat and enjoy it. Tinned pineapple is more versatile than most fruits as it can be eaten in hot or cold dishes, and it has a longer shelf life than other fruits (2 years as opposed to 1 year) . Pineapple juice (available in 3 litre cans) also has a longer shelf life than other juices except tomato. Another point in its favour is that it is 100% juice not a so-called fruit "drink" ie diluted with water.

Meat and Fish

Canned protein is more expensive than fruit or vegies so make sure buy only those types that your family is sure to eat. Also be sure to buy the better quality brands and only Australian produce (the same goes for all your stores) . The cheaper Asian or European imports may not be up to the quality of the home-grown stuff, not to mention the food miles). As in all other areas of food storage try before you buy, invest in a couple of cans of each and see what will be eaten by the family and what won't. The popular items can then become part of your storage program. Due to their greater expense, it would be difficult to put away vast amounts of tinned protein but they can best be made use of to add flavour to vegetable or grain dishes. I have eaten 5 year old

spam and two year old tinned ham and found it palatable but the idea is to rotate your stocks as often as possible.

1.5 Dry Goods

Rice

Is a good source of carbohydrate and very versatile, being equally at home in hot or cold, sweet or savoury dishes, it is also comparatively cheap and available in packages up to 25 Kg if you want to bulk buy. According to the books brown rice has a limited storage life due to oils in the husk becoming rancid over time, white rice by contrast lasts indefinitely in storage if kept dry and weevil free. Brown rice is more nutritionally complete than white rice but takes longer to cook (more energy) and is an acquired taste. All in all, you should store the one you currently use but if you store brown rice it should be rotated (used and replaced) within a year. Both types of rice should be stored under the conditions described for wheat.

White Flour - (Plain or Self Raising)

I can hear you asking, " If I'm gonna store all that wheat, what do I need flour for?" Well, unless you are currently on a very high fibre diet, getting into your stored whole wheat in a big way will result in a few tummy upsets until your system gets used to it . If you store some white flour you can use it to break down the whole wheat flour initially so you can ease your system onto it gradually. We store and rotate 25Kg of plain and self-raising white flour, but it must be stored in absolutely airtight containers to exclude weevils, we use 20 litre plastic pails that have closely fitting lids. Again, according to the books, flour should only be stored for about a year or it develops off, stale flavours but we have used flour two or more years old with no problems.

Soup Powder

Is available in a variety of brands and flavours from catering suppliers in 2 to 2.5 Kilo tins quite cheaply. I have eaten soup made from one of these tins that had been stored for five years and, at the time of eating, opened for six months and the flavour was excellent, so their storage life is long. They are ideal for adding flavour to bland meals or just by themselves, we store four tins of different flavours.

Pasta

Has a very long storage life if kept dry and weevil free (although in my experience weevils don't seem to like it much anyway). It makes a nice change prom potatoes and rice as the staple carbohydrate and many of the generic, "no frills " type brands are ridiculously cheap. Also worth a go are the "two minute" style of noodles which are a good cheap quick and very versatile feed. They have a "use by" date of only about one year, but we find them still good after two or three, after this time they tend to develop an off flavour and odour due to the vegetable oil used as a constituent going rancid.

Dried Beans

For example, borlotti, navy, lima, cannellini, red kidney or black eyed beans. They are high in protein, cheap, high in fibre, versatile and have a long storage life, again if kept dry and away from bugs, they can be sprouted or planted if they are fresh enough and will grow. If you have a wheat grinder to process your wheat into flour, then the beans can be processed in the same way to produce a high protein flour which can be incorporated into flour to provide a change of taste.

Our favourites are red kidney beans but the need to be used within a year of packaging or they seem to dry out and not rehydrate properly when soaked and cooked, remaining like little bullets! They can still be ground into flour though.

Dehydrated and Freeze-Dried Foods

Many of these types of products are available from supermarkets eg. "surprise" peas, beans etc, dried vegetable mixtures and dried fruit are all plentiful. Most have long shelf lives, and they are light and take up less storage space so they can be a valuable addition to your storage program if you find them palatable. The two problems with them are that they can be expensive, and they may need to be rehydrated before they can be eaten, so you should store extra water if dehydrated foods make-up a large part of your food storage program.

Freeze dried foods in foil pouches or tins are available from camping shops. The food generally comes in the form of complete meals eg chicken supreme or curried beef, but even raw prime steak is available. They are light and compact, which is important for backpackers, but they are also expensive. Their one big advantage is that they have 10-to-15-year shelf lives so you may consider it worth putting away some as "treats" once the program is well under way.

1.6 Fats and Oils

A most important part of the food storage program as far as the children are concerned. It is critical to store enough fats and / or oils so their diet will not be lacking in essential fats. It also extends your options for cooking, there is a world of difference between boiled rice and fried rice and provides extra calories for the colder times of the year.

Vegetable oil

This is available in 20 litre tins for bulk purchases, but unless you use a hell of a lot of oil it might be rancid before you got to the end of the drum. If the oil is packed off into smaller containers (say 2 litres) as soon as you get it the problem of rancidity caused by exposure of the oil to the air would be prevented. We used to buy the blended vegetable oil in 4 litre rectangular tins, it is a bit more expensive, but the tins protect

the oil and are easily storable. Pure olive oil has the longest shelf life but this presupposes that you like olive oil, it is quite expensive but we have found the health benefits outweigh the extra cost and now it is the main type of oil we store and use.

Ghee

This is pure butterfat ie butter with all the water and emulsifiers removed, it is used in place of vegetable oil in Indian cooking. It has a flavour all its own and as such may take a bit of getting used to but it has a very long shelf life - ten years plus in the unopened tin. Once the tin is opened it will last about six months before slowly going rancid. Ghee is only used in cooking, not as a spread, it cannot be mixed with water and reconstituted into butter. Ghee is a pure fat so, unlike the original butter, it has a sharp melting point going from solid directly to liquid with no soft spreadable phase in between. Also when you finally do apply a bit to bread it tastes revolting, very fatty and unpleasant, but then I don't like bread and dripping either.

Ghee is available from Asian, Middle Eastern and Indian food shops and these days even in the major supermarkets in sealed tins ranging from 250 gm up to 2 Kg sizes, don't be fooled by the Arabic writing on the side of the tin it's all Aussie produce.

Butter and Cheese

Tinned butter and cheese, produced for the export market can also be found but it is a bit more difficult to find these days. According to the manufacturers of this type of tinned butter only has a storage life of two years (the cheese has a shelf life of 12 months) and so is not suitable for long term storage but a spare tin or two can be handy in times of electrical failure. I have noticed that the Australian produced butter is getting more difficult to find and is being replaced by New Zealand tinned butter. A dehydrated "butter concentrate" was produced for the Queensland Butter Marketing Board but is no longer available although you do occasionally see small tubes of it in camping shops.

1.7 Sundries

These are the little niceties that can make living off your stores bearable, so don't totally neglect them in favour of the more "sensible" food storage items. They don't cost much and can be picked up a bit at a time whenever you do your shopping, in the end the improvement in the variety of menus you can provide and resultant rise in morale will be worth it.

Hot Drinks

The usual types eg. tea, coffee, Ovaltine, milo and cocoa can be stored for 18 months to two years if kept dry preferably in tins . There is nothing quite like a hot drink on a cold night to make you feel human again also the caffeine content (if any) can give you a lift when you need it most. Alternatively, you could try growing and processing your own tea or coffee, hot chocolate is a bit harder!

Spreads

Jam, vegemite and peanut butter seem to be the most popular and they all help to make your daily bread a bit less dry and uninteresting. Due to the problems with storing butter you may eventually need something to liven up your bread the odd tin of jam will be a welcome change. Of the three, peanut butter has the shortest life in storage – 18 months maximum - because of its high oil content, the other two may last a number of years in storage, the sugar will preserve the jam, and nothing kills vegemite!

Sauces

Again, these add flavour to bland meals and can disguise the flavour of questionable ingredients. Tomato and chili sauce can be home produced fairly easily with the right ingredients as can other fruit sauces such as plum and apple sauce. The specialised production methods for soy and Worcestershire sauce make them difficult to home produce, they are produced by fermentation, but due to this method they have a long storage life ie in excess of 2 years. Some brands of soy sauce are mixed and not brewed

so if you intend storing it in any quantity you should ensure that you only buy the brewed type. In my experience "Kikkoman" soy sauce is the best quality for storage.

Sweets

These are the raw materials from which you can make endless treats for the whole family. Some like sugar, golden syrup and honey will last indefinitely, others like chocolate and condensed milk have limited shelf lives and require rotation. A few containers of food colouring and flavouring essences plus some liquid glucose and citric acid are also worth storing because they enable you to make a wide variety of sweets - and that's always a hit with the kids!

Herbs and Spices

These are relatively cheap, do not take up much space, store for a long time and are powerful flavouring agents. It is possible to grow your own herbs in most parts of Australia, but some spices will only grow in the tropical areas of our country. Here in Sydney, we can and have grown coriander, cumin, turmeric, lemon grass and ginger so if you can get plant material like seeds or rhizomes, tubers etc, give it a go and see if you can grow them in your area.

There are the more common herbs and spices - cinnamon, cloves, basil, oregano, mint, ginger and pepper that are available from the local supermarket. Also, mixtures of herbs or spices like mixed herbs or curry powder are available, sometimes in bulk amounts such as the 1.5 kg tin of Clive of India curry powder we bought. This was enough to curry all of Sydney but found that after using less than half the tin it had become stale and lost its flavour.

In Asian and Indian food stores there are many less common herbs and spices to be had quite cheaply - fenugreek seeds, cardamom pods, curry leaves, mango powder , mustard seeds and star anise . These are used in Asian and Indian recipes that are worth experimenting with; they also have their spice mixtures such as Chinese-five-spice or garam masala. In many places the more traditional herbs and spices are

available as well as the newer ones in bulk quantities at reasonable prices. We grow our own curry leaves, and the tree is quite robust.

As a rule, it is better to buy whole spices rather than ground and then grind them yourself as required, this helps them retain their pungent aromatic flavours in storage. Stone or ceramic mortars and pestles can be bought from the aforementioned Asian shops to allow you to do just this. We have found that for the spices we use regularly but in small amounts we get the ground materials for easy use while keeping a larger stock of the whole spices ready for grinding or making curry powders or pastes.
The herb and spice mixtures for sale in supermarkets such as "garlic steak spice" and "fried chicken seasoning" can be full of MSG and are very expensive. It is much more cost effective to buy your spices in bulk and mix your own, and it is also much more fun.

To help you with this I highly recommend getting hold of a copy of 'The Herb and Spice Bible' by Ian and Kate Hemphill, published by Robert Rose Inc.

1.8 Process Summary

To develop a food storage plan in accordance with the original process –

1. Download and print off a copy of the Food Storage List Form (see Appendix 1)
2. Decide on the timeframe the food is to last (we generally used 12 months).
3. Review the 'Big Four' (wheat, sugar, salt and powdered milk) and based on the number of people being catered for, calculate the number of kilos to be stored and record on the form.
4. Review the 'tinned vegetables' section, select any types that the family is likely to eat, and how often they would eat them, then work out how many tins and then boxes of tins would be required to last the time frame. Add any types missing from the list and include them in the figures. Obviously if any types of tins included on the list are not normally eaten by the family, they should be omitted. Record the findings on the form.
5. Repeat this process for tinned fruit, meat and fish.

6. Review the ‘fats and oils’ section and find out which ones are used and how often. Calculate how many of each container are required and record on the form.
7. Follow the same process for ‘dry goods’ and ‘sundries’.
8. Use the completed form as a framework to obtain your required storage foods.

2.0 Resilience and Food Storage 2.0

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Back in the 80's when I started out on this journey it was called survivalism and these days it is talked about in terms of 'prepping', but both philosophies can have negative connotations and tend to focus on the individual and depending on where you are in the world, can also focus on guns and ammo! I prefer the term resilience, which can be an individual but also a community aspiration.

It does make sense to have some form of back-up food supply in an uncertain world, not only for you and your family but also so you can help those less fortunate in times of need.

There are also other advantages to having some food storage over and above your immediate needs as well as increasing your resilience –

1. More flexibility of meal planning at short notice,
2. The ability to throw a meal together in the event of unexpected guests without needing a run to the shops,
3. Reduced likelihood of running out of a critical ingredient while cooking, requiring another run to the shops.

4. Where the food items are bought in a supermarket, if you keep some stock you can wait until that item is available at reduced price/on special, thus saving you money.
5. If you are buying bulk amounts of ingredients this will also save you money as well as reducing the amount of packaging that you generate.

Plus, if there is a situation where supplies are getting low, you won't be competing for the stuff left in the shops; that can go to the people who really need it as you will already have yours.

The downside of setting up food storage is that it is quite possible to buy in too much, or too much of the wrong stuff, resulting in the food going off or otherwise taking up space and not being eaten, with the associated wastage of both food and money. I have made these types of mistakes in the past much to my disappointment with myself, but what we do these days works very well (for us at least) so I will describe it for you.

Research

We found that if we wanted to start a meaningful storage program, we first needed to understand what food items we already had floating around home, so we did a 'pantry audit' (How we did it is in section 2.2 of this eBook) and included the fridge. This gave us a feeling for what we already and on hand and how much, so that we could avoid buying too much of stuff we already had, what it didn't do was give us a feeling for how much stuff we bought in, how often, and from where. So, to do this I put together and conducted a 'Buying audit' for four months (how we did it is in section 2.3). By knowing how much of what we were buying it was easier for decisions to be made about how much we needed to store, what could be improved by bulk buying and what opportunities there might be to home-make stuff for ourselves.

Bulk Staples

We buy most of the staples which we eat on a regular basis in bulk by the bag (12.5 kg, 20kg or 25kg depending on the material), and then store them in 20 litre polypropylene sealable buckets, most of which are kept in the laundry. Such staples include –

- **Rolled oats** – organic – used mainly for my muesli but can be used to make Linda's porridge or oat milk, which is not as disgusting as it sounds! They are great for Anzac biscuits or to make a pie crust and to grind and add to bread to for a nutty flavour. We buy them 25 kg at a time from an organic foods bulk supply. Due to issues with pantry moth, we keep the bulk bag in the freezer and pack off a 10 litre bucket for day to day use as required.

- **White Rice** – Before you email me, I know how brown rice is sooooo much better for us, but white rice lasts longer in storage, and besides, we prefer white rice. It provides a great source of carbs whether it is boiled, steamed or fried and it can be ground to flour

and used to make rice noodles or spring roll wrappers or even gluten free pasta (if that is your thing) or fermented to make a spirit or vinegar. We buy Australian long grain rice (because that is what we like) from a local Asian food supplier.

- **Whole wheat** – organic – we have been using it, bought direct from the mill, by the 20kg bag (originally in 12.5 kg bags) for years so about 8 years ago we bought a quite professional electric grain mill from Skippy grain mills and mill the whole grain to flour as we use it, for raised bread, flatbreads, pizza dough etc. Whole wheat flour can go stale comparatively quickly but as the whole grain it stores for years.

- **Powdered Milk** – We started out using the 1kg bags from woollies and got used to the taste, but we bought a 25kg bag of non-instant Australian produce skim milk and found it actually to be much more palatable than the woollies stuff. It works out to 60c per litre of milk. As well as being used as milk once reconstituted it can be used to make yoghurt or low-fat cheese quite easily. We buy it from a food industry supply place in towards the city.

- **Baker's flour** – we found years ago that whole wheat products can tend to be a bit heavy so we bake our breads etc. as a 50:50 mix of whole wheat and baker's flour. We get organic unbleached bakers flour by the 12.5 kg bag from the organic bulk food supply.

- **Sugar** – white sugar, not much to say, we tend to buy a stack of 3kg paper bags of white sugar from woollies and repack into the 20kg bucket and recycle the paper bags.

Semi – Bulk staples

These are products which we keep a ready supply of, but don't go through them quickly enough to make it worth buying in huge amounts. They are quite often bought packaging-free into our own glass jars from an organic bulk supply shop. This includes products such as

- lower use flours like white self-raising and plain flour and cornflour
- alternative rices such as basmati and Jasmin rice (yes, even a bit of brown!)
- Other muesli components such as raisins, sultanas and wheat bran straws
- Lower use sugars like brown sugar and icing sugar
- Dried legumes such as red kidney beans, black turtle beans and chickpeas
- Nuts like almonds, cashews and walnuts which can be eaten as is or put into cooked dishes.

Canned Goods

Canned fruit, vegetable and meat were the backbone of our original storage program (as described at the start of this eBook), and for most of them I committed the ultimate sin of storing them without integrating them into our meal plans, violating the cardinal rule of 'store what you eat and eat what you store'. There were a number of reasons for this but in the end it meant that some stuff was in storage for 20+ years and wound up being composted/recycled instead of eaten.

We still do store some canned goods but in a severely reduced numbers and variety. These days the cans we store in any amount are limited to corn kernels, peaches in juice, beetroot and tinned salmon. We use them on a regular basis (as was pointed out when I analysed our shopping habits) so we keep enough to last between the times when they are on special. How often they are used and the size of the can will dictate how many cans we store such that we will have up to half a dozen 825g beetroot tins but a couple of dozen 400g corn tins. This is still considerably less than the boxes of cans we stored previously. This also does not take into account the odd cans of fish,

pineapple, pie apple or whatever that are likely to appear in anyone's pantry, depending on their tastes.

Home Preserves

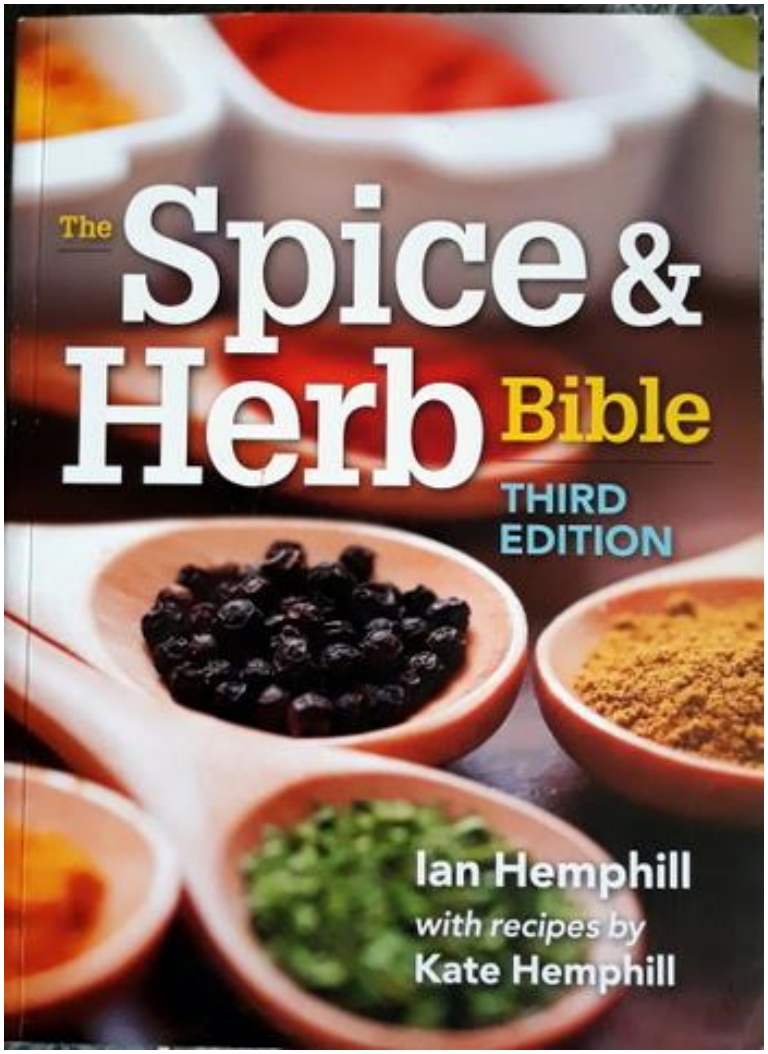
Over the years we have tried quite a few methods of preserving bought in excess or excess stuff we grew ourselves including drying, freezing, bottling and pickling. The way we grow our food these days means that we get a steady if small supply rather than the seasonal gluts we used to, so the need to preserve excess produce is reduced. There is one main exception to this – tomatoes!

Around the end of the year, we mix our own tomato produce with bought in stocks (organic when we can afford it, but local at least and preferably chemical free) and turn some into pasta sauce/passata, some into diced tomatoes (see section 4.0 DIY) and some into pizza sauce. We usually process enough in a couple of weekends to last us for the coming year.

We also do a bit of drying, mostly leaf crops, but I am interested in growing or buying mushrooms and then drying them for later rehydration and to be turned into powder as a flavouring agent.

Sundries

These are the little bits that add flavour like spreads, sauces and spices. For the most part we will keep one or two spares of the usual size container we buy so that we don't run out at a critical time and have to go bolting for the shops! The exception is spice mixes. Rather buy in jars of spice mixes like curry powder, Mexican spice or stock powder, we keep stocks of whole spices which we then grind and blend ourselves. It is not as difficult as you might think and there are some recipes elsewhere on this site, but we have found that having a copy of Hemphill's 'Spice and Herb Bible' invaluable in making our own spice mixes.



Practice

No, I don't mean screaming "We're all gonna die!" and running for the bunker. Life is busy and you might not get to practice your skills every day, so some programmed practice time is a good thing. Get the family involved and make it a fun challenge! Every year we do 'No Buy July' and this gives an opportunity to test our skills and preparations which we hope will make us more resilient. You can read the detail in Section 3.0 - Practice, but essentially we commit to buying almost nothing for a month, just subsisting on our stores and what we grow, using the skills we have learned in cooking, food processing and using what we have. If we are short of something, or have run out, how can we make use of what we have to get where we want to go?

Running 'No Buy July' gave us the motivation to make use of the skills, ideas, and preparations we had made to improve the resilience of our lifestyle to see how well they worked. It was fun and most educative to see what worked, what didn't, where we were successful and where more thought, training or practice was required. At the end of No Buy July (it could be any month or any time for you) we look at how things went. What the learnings were and how we would improve for next year.

Conclusion

The approach we use is not a knee jerk, '*go out and buy a warehouse full of toilet paper corona is upon us'* type of approach. It is a measured approach taking time to design things so that waste is minimised. It worked well for us and made sure we were storing the right stuff, the right way, for us, and that we were able to use it when needed. Everyone's tastes are different so if you want to put together some food storage, for any of the reasons outlined above, you need it to fit your families' needs, and to work for you. So give our process a go and see how it works for you.

2.2 Conducting a Pantry Audit

While this article was originally written around the idea of reducing the amount of food packaging waste, it is still a great tool to understand the types of food you regularly buy and how purchases can be modified to improve resilience. Doing a pantry audit is a great thing to help you understand what foods you use and how much of them to keep in stock.

Using a pantry audit (and including the fridge) can give you a handle on the food packaging waste you are generating and have on hand, and then provide the information needed to help you start reducing it. Addressing food packing waste is a great way to start on your journey towards zero waste!

It doesn't take long to do, I did ours in about half to three quarters of an hour, with some extra time taken to sit down and analyse the results. The prime issue is plastic food packaging, especially after all the issues we have been having with sending Australian recyclable plastics overseas, then the receiving countries no longer accepting it. We have little in the way of local processes to recycle it, so now a lot is ending up in land fill. As you conduct your audit, making a note of the type of packaging the food was bought/stored in will make later analysis easier as you can hit the stuff in plastic packaging first.

Also, the frequency you use each item is worth recording so that you can hit the biggest fish first (to coin a mixed metaphor). I did this by using three numbers to set out the highest use stuff –

1. used daily to weekly (high use)
2. used monthly or less (low use)
3. Dead stock. (forget it!)

If you are anything like us you will have dead stock in your pantry. That is to say stuff that we never use and which has been sitting around forever, taking up valuable space in our pantry. It may be dead stock because our tastes have changed over the years, it was something which looked good but when we tried it we found it not to our tastes, or it may be something we over-bought which has gone out of date and we are not game to use it. Or it may be that it was an impulse buy which seemed like a good idea at the time but, if we had thought about it, we would have known it was not really 'us'. Rare, but it does happen!

To conduct the audit is fairly simple, download the **excel spreadsheet** I put together, or develop your own, then go through your pantry (and fridge if you want that in your terms of reference) item by item and write down every product in there. Against each item you can also make a note of the packaging type (plastic bag, paper bag, glass jar, cardboard carton, plastic jar etc.) and if you want to be really thorough, the pack size and number of packages which you have. You can then make an estimate of the frequency of use of each item using the one to three scale above. By looking at the amount you store and the usage score it will give you an idea of which items to hit first to get the best bang for your buck in terms of the volume of packaging waste you are generating.

The next trick is to highlight any and all pantry and fridge contents which are in packaging which you find unacceptable. To help you decide how far you want to go, I suggest you consult the **hierarchy of packaging,** which lists packaging types from the best (ie none) at the top, to the worst (non-recyclable plastics) at the bottom. You decide how far up you want to go.

Once you have developed all this data, it is then a case of analysing it and working out what changes you are going to make. From the work I did with our pantry/fridge audit, it seemed to me that there were four (or in reality five) options that I could see –

The Options

1. Buy a similar product, packaged further up the hierarchy
2. Buy from one of the emerging 'bulk buy/packaging free' places
3. Make the product at home (ideally from bulk sourced or home-produced raw materials)
4. Use up and not replace
5. Oh yes! I have no idea at the moment!

The Details

1. Buy a similar product, packaged further up the hierarchy – So maybe you buy your mayo in a plastic jar and there is another brand available in glass, or you have been buying your flour in 1kg plastic bottles, but it is available in paper bags or even better, bulk, packaging free! I realise there are some other issues at play here. You favourite hot sauce may be available in a non-recyclable plastic bottle and you know the other brands packaged in glass bottles just won't do the trick. It can leave you in a quandary because you really, REALLY like that hot sauce! If you can't make an equivalent one yourself, one approach I suggest is a blind taste test.

The Blind Taste Test

Get hold of a small amount of all the readily available hot sauces, which have been appropriately labelled, from friends and acquaintances or even buy a small container of each. Have someone trustworthy (this is NOT the time for practical jokes!) put a small amount onto a plate or in a container like a shot glass labelled as 1,2,3 or a,b,c; etc, anything so that you don't know which is which. Try each one and rate it from best to worst according to your taste. Then review the results with your trusted colleague to find out which brands were high on your list of acceptable ones and what they were packaged in. I tried this approach when we were looking at mayo and found that my pre-conceived notions were just not correct. By doing a blind taste test, it is the actual flavour of the product you are rating, not the brand and you may find that hot sauce in a glass bottle is actually OK!

2. Buy from one of the emerging 'bulk buy/packaging free' places etc. – There are a whole stack of places opening up which will allow you to by bulk pantry staples such as flours, pasta, rice, sweets etc. into your own containers or glass jars you can buy in the shop. We have a number around here including The Source, Nom Bulk Foods, Honest to Goodness, Naked Foods and Scoop Wholefoods. They are scattered all over Sydney, although if I were honest, the concentration is greater in the east than out here in the west. We now buy flour, dried beans, oats, dried fruits, nuts and sweet treats (shh!) and other staples in our own bottles and jars regularly.

There are other options too, particularly for refrigerated items, like your friendly neighbourhood deli and greengrocer, who are likely to allow you to buy their products

weighed into your containers, especially if you become a regular customer. Food coops are another possibility and if there is not one in your area, maybe you could start one? Farmers markets quite often are not just for fruit and veg (although packaging free fruit and veg is great too!) but also have lots of artisan and value-added products like jams, sauces and chutneys etc in re-usable glass jars.

3. Make at home – There are many books and websites out there dedicated to people who want to make their own stuff, including pantry staples like jams and sauces, preserves, spice mixes, pasta – all sorts of things. We have put together a couple of spice mixes that allow us to use some of our home-grown herbs and other packaging free components to create superior substitutes for the commercial products. We make a stock powder (see section 4.4), equivalent to chicken stock, which is based on nutritional yeast. The stock cubes it replaces were wrapped individually in a paper/foil composite which was not recyclable. Likewise, the Mexican spice mix (see section 4.3) we use for our burritos used to come in foil throw-away pouches, but now that we produce our own from packaging free and home grown ingredients that source of waste has been eliminated. It is also enormously satisfying to make this stuff yourself!

4. Use up and not replace – This is mostly our go-to for dead stock, unless it has well and truly exceeded its use by date, then it gets composted and not replaced! I bought lentils to try, but found that Linda is not a fan, I don't mind them, but it won't be a huge disappointment if we use the ones we've got and call it quits. Likewise, we have fooled around with wine vinegars in various guises, but I am not a fan and Linda isn't much of a fan either so I am casting around for recipes that are not too disgusting, failing that they will be used as weed killer or disinfectant!

5. I got no idea! – Hopefully you won't get too many of these. One that came up for us was marshmallows, packed in soft plastic, we use them rarely in winter over the fire when the kids are here.

Now with your recording an analysis done, you are primed for action! Have a recce in your local (or as local as you can find) packaging free store and see what they have that

will allow you to switch some of your purchases over to bulk. Or pick a product or two and work out your waste reduction strategy for them and then implement it. The whole process is interesting, gives us an appreciation for the waste we generate, and can be lots of fun. It will also move you towards your waste reduction goals, whatever they may be. Good luck!

2.3 Conducting a 'Food Buying' Audit

A buying audit is complementary to a 'Pantry Audit' in that the pantry audit tells you in some detail of the food which you have on hand at the time of the audit, the 'Buying Audit' allows you to track the type, amount and cost of foods coming into the household over time.

I have a fair idea of the sorts and amounts of food which we buy in general, but there is no substitute for measuring and for recording the data. We have a supermarket, greengrocer and butcher within walking distance and to save transport energy these tend to be our go-to.

I wanted to know what we were spending so I could see what opportunities there were for –

- Home production
- Bulk buying
- Substituting from other sources.

First, I set the criteria for the audit. It would cover food purchases from the supermarket and greengrocer and to a lesser extent, butcher which we have been using less and less as we move towards a plant based diet. It did not include: takeaway (traditional on a Friday night) or bulk purchases like a 25kg of rolled oats and skim milk powder ($90 and $120 respectively) which occurred during the time of the audit.

To help me record the data I was generating I put together a (very) simple Excel spreadsheet. Excel spreadsheets also have a 'sort' function which helps me to analyse the data by grouping together purchases of similar products over time. The headings I used for the grocery sheet was –

Date – so that I had an idea of the time that items I purchased regularly would last before they needed to be rebought.

Item – this one is important to get right and by that I mean to use the same item name each time they are entered on the spreadsheet. If an item is entered as 'baked beans' initially then 'beans, baked' when bought next and then as 'Fred's Baked Beans' a third time it makes sorting for analysis very difficult. Entering each item under the same name each time means they will group together when sorted. Simple I know but it easy to make a mistake……. Or so I've heard!

Size – how many grams, kilos or litres of each product is bought at a time, which can give you a feeling for how much of each product is bought over the time of the audit, and can then be extrapolated over a month, 6 months or year or whatever. Thus you can hit the high use stuff first.

Number – This is just there so that when I bought multiples of the same item, I didn't have to enter each one separately, but I would still be able to work out the total numbers of that item over the period being measured.

Total cost – how much each item (or number of items) cost all up to give me an idea of how much I was spending over time. This column could be aggregated to give me a total spend during the audit timeframe.

I then put together as similar sheet for Fruit and Veg, and meat. If you want a blank copy to model your own on, it can be downloaded **here**.

A	B	C	D	E
Date	Item	Size	Number	Total cost
2/01/2019	Peaches - Sliced	825g	2	$7.00
21/12/2018	Peaches - Sliced	825g	2	$5.60
16/12/2018	Peaches - Sliced	825g	2	$5.60
6/12/2018	Peaches - Sliced	825g	3	$7.50
23/11/2018	Peaches - Sliced	825g	3	$10.50
17/11/2018	Peaches - Sliced	825g	2	$7.00
30/10/2018	Peaches - Sliced	825g	1	$1.75
21/10/2018	Peaches - Sliced	825g	4	$11.20
8/10/2018	Peaches - Sliced	825g	3	$10.50
25/09/2018	Peaches - Sliced	825g	3	$8.40
15/09/2018	Peaches - Sliced	825g	2	$5.60
15/09/2018	peanut butter - smooth	780g	1	$6.50
8/10/2018	Pie apples	800g	2	$8.60
15/09/2018	raisin toast	650g	1	$3.50
5/11/2018	Salada wolemeal crackers	250g	1	$2.00
5/11/2018	Salmon tin - spring water	95g	2	$3.00
15/09/2018	Salmon tin - spring water	95g	2	$3.00
5/11/2018	Shampoo Elvive	325g	1	$8.00
21/10/2018	Soy Sauce - Kikkoman	1 litre	1	$8.00
16/12/2018	Tartare Sauce	220g	2	$4.00
21/10/2018	Tofu - Macro Sate	200g	1	$4.00
16/12/2018	Tomato sauce	500ml	1	$1.47
21/10/2018	Toothpaste - Cedel	110g	1	$1.75

Sample of what the records may look like

To operate the audit was a fairly simple matter. Every time I made a purchase within the criteria I had set out I made sure to get the receipt and then as soon as I got home (mostly, alright I saved them up until the end of the week!) entered the data for each one into the spreadsheet. I did this for a period of four months, but you could do it for as long or short as you like, bearing in mind that the longer it goes on for, the more information it will yield.

After four months I sat down and did a bit of analysis, the easiest way to do that (for me) was to sort for item name so that the items were aggregated, and it turns out over that 4 months we bought –

- 9 tins of sliced beetroot, total weight 7.5kg for a bit over $21 (could be home produced and/or preserved)
- 26 tins of sliced peaches (in juice), total weight 21.5kg for $80.65 (no way to grow at our place but could be bought in bulk in season and home preserved)
- 16 x 750g loaves of bread for $76 (home baking)

- All up $746 worth of groceries, $260 worth of F&V and $10 worth of preserved meats for homemade pizza (we did have some meat in the freezer we were working through to use up).
- Not too bad for a family of 2 for four months I think!

It depends on what is important to you and what your big-ticket items are in your journey towards living a sustainable life, but whatever they are decide what you need to measure to control them, and then do it!

2.4 Process Summary

1. Decide if you want to implement a food storage system like Food Storage 2.0, preferably in discussion with the rest of the family, or others who will be part of this system.

2. Do your research, conduct a pantry audit and conduct a buying audit for the length of time that appears to be most appropriate for your situation.

3. Based on your research, work out how much of what foods you intend to store, and where you are going to store them.

4. Get hold of some food grade 20 litre buckets for your bulk staples and start buying the staples in and filling the buckets for storage as you can. Don't start using these bulk staples until you have consumed any staples remaining in your original system.

5. Work out how much of your semi-bulk staples you will need to store and obtain appropriate containers like 10 lite food grade plastic buckets or large glass jars. Set up a program to fill your containers over time. Start using them once the existing stocks have been consumed.

6. Review you canned goods and determine how many you want to store and where they will go, make it easy to tell which ones are the oldest so you can use them first. Copy buying (buying two or three with the shopping instead of one) is a great wat to build up stocks.

7. Work out what makes sense for you to home produce, either by growing it or buying it in in season and preserving it yourself. A bit of study here on how specific foods are preserved is worthwhile and start out small to ensure that they are to your taste.

8. Review and identify the sundries you wish to store, this is another area where copy buying can be used to build up stocks slowly and methodically.

9. Once you have a functioning food storage system, consider running a practice session, which is the subject of the next chapter!

3.0 Practice

3.1 'No Buy' July - Putting it Together

I was reading a very nice article in the latest Earth Garden magazine (No 184) by Rachel Altenbacher where she ate only out of her garden for a month. This included a 7.5 x 2.5m veggie patch, produce from her orchard and chooks and some other pantry and swapped items. I thought this was an intriguing idea. I am also about halfway through David Holmgren's book "Retrosuburbia" in which he talks about a "Home-based lifestyle" which I also found intriguing.

We decided to synthesize these and a few other ideas (it dovetails well with Plastic Free July and Zero Waste) together and came up with "No Buy July". The idea of no-buy July is to just use what we have on the property as much as we can for the next 31 days, so that we can –

Reduce unnecessary consumption and with it, waste – I think we are pretty frugal, but I want to test that theory and at the same time challenge ourselves to be more resourceful and innovative with what we have.

Save money – We have a fixed amount of cash to live on and we need to get the most out of it.

Make best use of existing resources – We do rely on our own resources, but I feel we could do better and by focussing on doing better we will –

- Learn new ways of looking at things.
- Learn new skills.
- Have fun – I think that by challenging ourselves to do better we can have a lot of fun rising to that challenge.

What about the extra stuff can't produce?

We have allocated $50 per week maximum, which we won't touch if we don't have to but can cover minor unforeseen shortages.

Exemptions

There are a number of exemptions to the no buy rule being mainly -

- Pharmaceuticals
- Regular bills (energy, water etc)
- Gift cards, birthday money etc accumulated prior.

Petrol

Just to make things interesting I have allocated 1 tank of petrol for the month, which I topped up on the afternoon of June 30th. We usually go through a tank of petrol every one to two weeks, so this will encourage us to use walking, biking and public transport more. I still want some petrol available for things like our monthly permaculture Sydney West meeting, which is at night and we have a whole stack of crap to take with us. Travelling home on bus and train at 10:00pm loaded to the gunwales with PSW gear does not exactly thrill me.

How will we do it?

Home Harvest

We only have our 600m2 block to draw from, but having said that it does provide us with fruit, veg, herbs and eggs. The chooks are firing pretty well at the moment and giving us 2 eggs a day, we have lots of citrus: lemons mandarins, oranges and limes and all the usual herby suspects are available from the herb "wedding cake" and other parts of the garden.

In terms of veg we have lots of leafy greens with silver beet, bok choi, tatsoi etc and some brassicas such as cabbage, kale, broccoli and cauliflower starting to come on. We also have celery, snow peas, water chestnuts, lettuce, carrots, chokoes (of course) and Jerusalem artichokes. Unfortunately we have just run out of home grown onions, until the next crop comes in.

We do also make use of wild greens like sow thistle, wild lettuce, mallow and dandelion which we mainly harvest from around the yard but can also forage.

Shopping in the Pantry

We have a fairly comprehensive pantry anyway and have recently been getting back into bulk buying to reduce costs and packaging waste. We have a bulk supply of flours, whole wheat (plus we have a nice electric grinder), skim milk powder and now we have red kidney beans and black beans as well as our own home preserved tomato pasta sauce and diced tomatoes. We don't grow enough potatoes so buy them by the bag (organic) through our friends Greenhills organics. A bag usually lasts us about 2 – 3 months and we restocked a couple of weeks ago.

Doing stuff we know how to do but stopped

In the past we used to make bread a lot more and make our own pasta and the like but due to a number of factors like too much to do (and laziness on my part) we don't do as much of anymore, so that is going to re-start.

Doing stuff we haven't tried before

I want to give some new stuff a try, like using our stored skim milk to make ricotta cheese (for homemade ricotta and silver beet ravioli or tortellini) and Greek style yoghurt. I like sour cream on our home made Mexican bean tortillas, but I want to try substituting with homemade Greek style yoghurt and see how it goes. Also we want to try new vego/vegan meals to widen our repertoire.

Freezer

Which I suppose brings us to meat. We have some in the freezer but our current meat consumption is down to one or two nights per week, so I don't see this is a big issue. It has been interesting to note that with the reduction of the importance of meat, the freezer has become a less critical piece of equipment for us too. Once upon a time we

would buy a side of beef (pasture fed) a side of lamb and/or pork and some chook bits. If we were to do that now the meat would go out of date well and truly before we could use it. So it is more a case of buying stuff as we need it.
We also have some (homemade) ready meals in the freezer if we do hit a patch where we don't have time to cook, reducing the likelihood of dipping into the cash reserve to get takeaway.

Shopping at the Shops
We did one last "standard" shop on the Saturday. It covered the stuff we would buy on a usual grocery shopping trip, although the variety and volume of stuff we have been buying over the years has declined somewhat due to the bulk buying and home production.

So there you have it! We are ready to go "home based" and see where that takes us. I am looking forward to the challenge, and also having the time to do more "from scratch" stuff as well. I am hoping that being barred from that quick trip to the shops will make us more creative, and as a by-product make things more fun and satisfying when we rise to the challenge.

3.2 'No Buy' July – How it Went

If you remember, here at the Choko Tree we were going to get by on the contents of our pantry and garden, and avoid going out and spending unnecessary cash, we were going to do this for the entire month of July and christened it: No-Buy July (NBJ) (see above). If you want to know how it went, read on!

Initial Thoughts

The first few days of NBJ felt strangely like a final exam. Sort of like just having finished a class where you have been taught a whole stack of techniques and then have to put them all together for a final exam. Probably because we had been doing a lot of these thing on and off for years but not necessarily all at once. Anyway, that's what the first

few days were like, until we settled into a routine and then it just became “how we do things around here” or in other words – business as usual.

In terms of what we set out to do as mentioned in the previous article, ie –

- Reduce unnecessary consumption and with it, waste.
- Save money.
- Make best use of existing resources by learning new ways of looking at things and learning new skills, and
- Have fun!

It was a resounding success on all fronts! Here is some detail on how things went –

FOOD

Breakfast – I usually have muesli and Linda usually has porridge in winter, and we had sufficient of both of those in our stores to continue on as we usually do for the month, but during this time I did think about my muesli. I am going to buy in a larger supply (25kg) of organic rolled oats then design up a “muesli concentrate” which can be mixed with the oats to make…….muesli!

Lunch – typically I/we like a cheese and salad sandwich or wrap for lunch. Anyway, this is simple in summer but to provide fodder for a salad-based lunch is a bit more difficult at this time of year (winter!). We have some cheese in the fridge but would need to buy in salad fixings. That was until I came up with the idea of teaming up some of our bottled diced tomatoes (see 4.2 below) which were already in the pantry with pickled beetroot (also a pantry staple), lettuce from the garden and then a boiled egg or two (from our own chooks). This made a nice salad sandwich or wrap, depending on what bread was available.

Ah, yes! Bread. We had made quite a bit of bread in the solar oven over the years, but at this time of year I can make it in the oven attached to the slow combustion wood heater. I have gotten a bit lazy and it is easier to buy a loaf of stone ground wholemeal, which comes in a recyclable/compostable paper bag than to bake our own. But this is NBJ! So I needed to get back into baking. We use a fairly simple bread recipe but it takes a number of hours for rising and such and I need to be organised to do it so we have bread when we need it, so what to do if time was short?

The answer? Make unleavened tortillas! (Check out section 4.6 below) I can throw them together in less than an hour (and most of that is waiting time) and they make a great wrap, as well as bean burrito or whatever else. I just needed to take a bit of a mind shift to realise that tortillas also make a great lunch as well as dinner. That was a winner!

Dinner – For the most part this didn't change much and we still made stuff which is mostly vegetarian, but we also tried some new stuff, like making spinach and ricotta dishes based on our own home made ricotta (See 4.5 below) and likewise vegetarian Indian dishes based on our home made paneer.

The dishes we normally made that have sour cream (I lurve sour cream!!) in them could have been a problem, but we have been converting over to Greek style yoghurt instead

and have started making our own based on powdered skim milk and using commercial pot set yoghurt as a starter. (which you buy once).

We have also been making our own desserty type stuff like choc chip biscuits, impossible pie, apple pie, which we restrict to Friday nights……and possibly Saturday nights as well.

Friday night dinner has been, since time immemorial, special and we usually get takeaway. This is more often than not a hamburger/steak sandwich/chips/fish cocktails or whatever from our really nice, privately owned (ie not chain or corporate) local hamburger shop. When we originally talked about NBJ I was in favour of laying in a stock of the bits and pieces to make such treats and do that at home, however, my sweetie pointed out that there was little point in buying in all the stuff just so we could make it at home. So I caved and we used some of our discretionary fund (to the tune of about $16) to pay for dinner on Friday nights. We also used to buy in dessert for Friday nights but as mentioned above, we now produce this ourselves.

DISCRETIONARY CASH

Well, to me the above bit is a great segue into how (or if) we used our weekly $50 allowance. Taking into account the four full weeks in July and how much we allowed per week, that gave us $200 to cover off any stuff we needed but could not produce during NBJ.

How much did we spend? All up of the $200 allotted we spent $106.45.
This mainly went on Friday night dinner, stuff we couldn't produce but needed for a certain dish such as mushrooms and a small tub of pot set yoghurt to kick ours off. Linda was taken to a farmer's market by the kids and picked up a couple of small bits and pieces and then there was coffee, which requires an entry on its own!

Coffee

I don't smoke, drink or gamble, but over the years I have come to look forward to a cappuccino at our local shops after breakfast and Don (our local barista) makes a good one. However I found over the years that a small drain on funds can cost a bit when you add it up and I would get my cappuccino (in a keep cup by the way) on average six times a week.

Unfortunately, when I did the math this worked out to somewhat over $1300 a year. (say what?) To be fair I had resisted some efforts to get me to reduce my consumption previously but NBJ meant that I had to get serious and so I cut my store-bought coffees down to 1 per week (to be consumed with the other members of Grumpy Club). This in itself would save us over $1000 per year. So on the other days I would have a home coffee, using jars of coffee we had accumulated and which Linda could no longer drink. This meant that the coffee I was consuming had already been bought and which would have gone stale over time and had to be thrown out if they were not used, so it was essentially free. After doing this for a month, I have found it is possible to habituate myself to this coffee and still enjoy it.

PETROL

To make things interesting I decided to allow one tank of petrol for the whole of NBJ. A tank will usually last us from one to two weeks, and I was hoping to push it to a month. Unfortunately, that was not to be, not because we went out all over the place and ignored the whole NBJ thing, but because neighbours and family required being ferried around all over the place. While I wanted to see if we could make it or not, unusual circumstances cropped up and I needed to do the driving because assisting neighbours and family comes before arbitrary limits set up as an experiment. In the event we made it to halfway through the third week before I needed to refill the tank.

Going Out

As luck would have it, for most of NBJ we spent at home with the odd outing to visit family or attend required meetings such as the permaculture Sydney west general and committee meetings and our own sustainability group. We did intend to go on an outing one day but for various reasons it did not happen. Planning it did make me more aware that a greater percentage of our going out involves a "retail experience" at some point in the outing and the opportunities for doing free stuff in our area are not that great.

WHERE TO FROM HERE?

In the words of my brother, Jim, now we move into "spend like a drunken sailor August".

A couple of days after the end of NBJ we sat down and had a look at what we did, how it all went, and then talked over where we were headed next. Surprisingly, we liked most of the experience of NBJ, and the challenges of making do with what we have on hand. Another amazing thing was that all of the experiments we tried with making new foods from scratch or using exiting supplies in new ways turned out well. They were edible and tasty to the point where we are going to keep doing most of them.

Saving the cash did not hurt either.

We have decided to continue doing most of what we started, but with the odd coffee, meal and trip out thrown in. Next year we might even give No-Buy July another go, but take it to the next level (whatever that means!)

3.3 Process Summary

While it would be interesting to try this out as a prelude to setting up any food storage program, to point out the holes in your system, I think it would be a lot more educative and, dare I say it, fun, if you are already part way along your food storage journey! Having some food growing will also make things easier.

- Discuss the concept with your family, significant other, housemates etc. because without their buy-in this will be difficult, if not totally impossible!
- Do a pantry audit (again if you did one originally) and include your food stores, so you know how mush you have stocked away.
- Research recipes and skills so that you will be able to make the best use of your storage.
- Enjoy! Give it a go and see how you do!
- After you have finished your month, analyse things and work out what worked, what didn't, and what you would do differently next time.

4.0 DIY

4.1 Making Tomato-based Pasta Sauce

Every year we make a load of pasta sauce the traditional away and diced tomatoes the easy way (see 4.2 below), usually around 50 jars of each, enough to last us a year.

The Tomatoes

We just don't have the land to grow as many tomato plants as we need to keep us in passata for a year. I do make a half dozen jars from our own tomatoes when we have a good year but that is about the most I can hope for, so I buy them in. I do get them from a number of sources, mainly from a couple who grow them locally at their farm about a half hours drive away, but I have bought organic (when I have the cash) from my friend who runs the organic shop, and chemical free (not certified organic, but almost the same thing), from a farmers market about 40 minutes drive away. I have also gone in to Flemington markets on a Saturday morning and bought directly from there. Depending on how many bottles are left over from the previous year, I usually get 50kg to 70kg of tomatoes all up, but this will be over several weekends. I can process up to 25kg at a time, more than that just gets too much.

The Pots & Jars

Over the years the size of the pots I cook up has increased, the old 4 litre pot just doesn't cut it anymore! My current go-to tomato pot is a 20 litre 'Ball' brand preserving pot, with a curved glass lid. It is the biggest pot we have, and it enables me to fit a full 16kg box of tomatoes into the one pot. Also, unlike my older 4 litre pots, it has a steel insert allowing me to use the solar powered induction cooker when I can. If we don't have enough sun then it is back to the gas stove.

For processing (boiling) the filled jars of tomato sauce, I have a 'Baccarat' brand 10 litre pot which is also able to be used on the induction cooker. While I did not buy it with one, I was able to get hold of a circular rack exactly the right size to fit in the bottom of it, to keep the jars up off the hot bottom of the pot during the boil. The 10 litre pot will accommodate 10 of the 375gm jars which we use for preserving quite comfortably. While we have used a number of different sized jars over the years, we find that with just the two of us, the 375gm jar is now ideal.

The Tomato Squeezer

For years we used the 'fruit press' referred to in the original article and while it was lots of fun and extracted the good stuff in one pass, it was PAINFULLY slow. To process half a dozen jars did not present much problem but the number of jars we were looking at these days it just did not cut the mustard. So we looked around to see what else there was (check reviews **here**) but settled on a 'Gulliver' brand tomato squeezer. It is a bit of a pain to clean, but it is so much faster than the fruit press, that I could whip through 5 times the jars in half the time of the old one.

So most years we use our hand powered 'Gulliver' but a couple of years ago we got my elder daughter a high grade electric tomato squeezer, and it makes the poor old 'Gulliver' look pretty sick. Again, though, it is a fair amount of work to clean up so it makes the most sense to use it for as many jars as we can manage on the day, such that we generally use it when we are getting together to prepare tomato sauce for all of the Sweeney clan.

The Process

This is pretty much the same, but here it is in more detail –

1. I wash the tomatoes as I take them out of the box, slice them in half and add them to the cooking pot. Once the pot is full I put the heat on low, so I don't burn any of the tomatoes at the start, and put on the lid, after an hour or so or when there is liquid from the tomatoes in the bottom of the pot I take the lid off and put the heat up higher.

2. At this point, the tomatoes will have packed down and I will add more if we have more to process. Once I get a good boil going I back the heat off to a simmer again. I will give the pot a mix every time I walk past it. I usually start this up between 9:00am

and 10:00am, and then at this point leave things to simmer uncovered until around 3:00pm.

3. Towards the end of the simmering time I pull out the jars I intend to fill (most have been used at least once) and the lids, most of which have also been used at least once. I do buy some brand-new lids every so often just to make sure I can replace any dodgy ones, but I bought a load of jars 10 years or more ago and those, along with some recycled ones, work well for us. I sterilise them either by boiling for 10 minutes or sticking them in the oven in an old baking dish at 130°C for 10 to 15 minutes. If I time it right I can pull them out just as the tomato mush is ready to process.

4. I set the 'Gulliver' up on the corner of our kitchen bench and then grab a couple of 20 litre containers we use for bulk store to place underneath the edge of the bench, this is just the right height for the output from the Gulliver to fall into a glass jug, for pouring the processed tomato sauce into the sterilised jars. On the other side of the 'Gulliver' goes a bowl to catch the waste seeds and skins.

5. I then carry the, by then 2/3 full hot tomato pot, over and place it on the bench (with a tea towel underneath it, you think I'm suicidal?) and then ladle out the cooked tomato mix into the 'Gulliver' and turn the handle. This delivers processed tomato into the jug and waste into the bowl. Once the jug is almost full I tip the waste form the bowl into the Gulliver again and process it a second time, this extracts the maximum of the goodies. I then stir the jug to distribute the concentrated tomato goodies into the rest of the sauce. When the waste goes into the bowl a second time it gets tipped into another container reserved for tomato waste, which is usually given to the worms.

6. I use the jug to fill up jars, usually about 2.5 jars per full jug (it is only 1 litre), screw on the lids and then place them into the 10 litre water bath, which is hopefully close to boiling. I redo the process until the water bath contains all 10 jars, I put the lid onto the pot and then boil the jars for an hour. Once the jars are boiled I remove them from the water bath and place them on a tea towel to cool. I then repeat the process with the second batch. One 12kg box of tomatoes produces roughly 20 completed jars.

7. The jars just sit there overnight, but depending how hot they were when they went into the water bath, the indicator button in the centre of the lids will start to 'click' into

the down position (you can hear the audible 'click') within a few minutes. If they fail to do this there is a problem, probably a dud lid, so the lid will need to be replaced with a new one, and the jar re-boiled.

8. That's it, just label and store in a cool dark place until you need them.
This all sounds like a bit of work, and it is, but it is also very satisfying to look over the fruits of our labours at the end, and to be able to pull out a jar from the pantry in the middle of winter and make a pasta dish with the taste of last summer's sun in it.

4.2 Bottling Diced Tomatoes – The Easy Way

We are in early summer here at the choko farm and we are taking advantage of the availability of tomatoes, home grown ones but also some bought in from local farms. I have mentioned elsewhere how we make our yearly supply of tomato pasta sauce about now and I have just finished off this year's batches. I bought in a load of tomatoes and found that there were some left over, but not enough to start another batch of sauce. Coincidentally Linda has been campaigning for bottled diced tomatoes as well as the sauce so I have processed some diced bottles, and this is how I did it.

The process is incredibly simple. I grabbed a large glass bowl, cut the part where the tomato attaches to the bush out and then diced the tomatoes into the bowl. Those of you out there who are real cooks should probably look away now! The easiest way I came up with for dicing the tomatoes was to cut the tomato lengthways then crossways almost all the way through, the sliced the through the tomatoes from the side so that they collapsed into roughly one centimetre cubes.

With the tomatoes cored and diced I got hold of my preserving jars, I just use recycled glass jars with pop-top lids. Using my newly acquired stainless steel jam funnel I ladled the cubes into the jars up to about one centimetre from the top. I used the cylindrical handle of a wooden spoon to pack the diced tomatoes in as tightly as I could to push out air bubbles. A light sprinkling of citric acid on top ensures that the pH is low enough to prevent botulism, then top the jar up with a bit of water or tomato juice.

With the lids applied they can now go into the water bath for processing. I placed the jars so they are not touching the bottom or each other. I was lucky enough to pick up a 25cm wire round cake cooling stand which fits the bottom of the pot I use as a water bath pretty well and that keeps the jars of the bottom of the pot, fill to just below the lids with cold water. I put the pot on the flame and applied the heat and kept an eye on the temperature such that it took an hour or so to rise from cold to boiling. My jars were only 375ml so I kept them in the boiling water for 30 minutes but if you were using large jars (say over 2 litres) I would leave them boiling for another 10 or 15 minutes to make sure the heat penetrates fully.

Once the allotted time was passed, I pulled them out and placed them on a wooden cutting board to cool and made sure the lids were tight. As the jars cool the pop top lids pop down with a loud click, letting you know they are properly sealed! Once cooled I labelled them with the contents and especially the date. If you do this on a regular basis it can be very handy to know when an individual jar was processed, so that you use the oldest ones first.

There you have it! Tomato wastage averted and a happy wife, and as we all know happy wife = happy life!

4.3 Spice Mix – Making Stock Powder at home.

Making your own stock at home can be fun and rewarding, but it can also be time consuming and if (like me) you are crap at stock making it can be disappointing and frustrating. So if you want to make up a batch of stock quickly for, say, a soup noodle or you want to add some concentrated flavour to a dish you are working on, stock powder (commercial or home produced) can fill that need.

There are other reasons why you may want to make stock powder –

- You know what's in it – if you don't put in any MSG, artificial colours, flavours or preservatives you can be absolutely sure there is none of them in your mix.
- Zero waste – this applies particularly when you are looking to replace stock cubes, but if you get your raw materials supplied bulk, into your own glass jars or (in the case of dried herbs) produce them yourself, the product will be zero waste.
- Blend to your own taste – it may be you find the commercial stuff not to your taste, so you can experiment and come up with your own version which suits you.
- Freshness – you know the freshness of your ingredients and if you are regularly using your stock powder you can be sure it will always be fresh.
- Interesting – making your own stock powders from scratch is a fascinating pastime – and you get food at the end!

Having decided to have a go at making our own stock powder, I did a bit of research and came up with a starting formulation based on a recipe in the "Naked Kitchen Veggie Burger Book" by Sarah Davies. This is what I came up with:

½ cup nutritional yeast
1 tablespoon onion powder
1 teaspoon garlic powder
3 teaspoon salt
1 teaspoon thyme
1 teaspoon parsley
¼ teaspoon ground sage leaf
¼ teaspoon rosemary crushed or ground
Pinch turmeric

A couple of notes about the ingredients –

Nutritional yeast – this usually comes in the form of flakes and can be bought bulk into your own containers at places like the Source Bulk Foods or packaged in health food stores and sometimes supermarkets. It is baker's yeast which has been "deactivated" (read "killed") by toasting and gives a wonderful nutty cheesy taste often described as umami.

If you have some yeast which is no longer giving your bread a good rise, try toasting it in a pan on the stove until it is golden, thereby making your own nutritional yeast.

Onion and Garlic Powder – this is also available in bulk from a local spice supplier and we get it weighed into our own jars. It also comes in flake or granule form and because we use the flake in other recipes I buy that and use a coffee/spice grinder to grind it to powder when powder is required.

It is quite doable to dice up your own bought or home grown onions and garlic and dehydrate them so that you can reduce costs, use up home grown produce, or ensure only organic ingredients are used.

Parsley, Sage, Rosemary and Thyme (sounds like a good line for a song) – these can all be easily grown and dried at home, or bought packaged or bulk if home production is not feasible for you. They can be ground in a spice grinder or mortar and pestle before use to improve ease of mixing. It is also possible to rub the fresh herbs through a fine sieve before adding to the mix but the shelf life of the stock powder will be very short, requiring it to be used immediately or stored in the fridge for only a few days.

Turmeric – is a bit trickier but can be grown and processed at home, we did it.

Testing

My flavour reference was Massell Chicken Stock Cubes because we like them and I use them quite a bit. Once I had a mix I was happy with I got two identical cups, put in half a stock cube in one and a teaspoon of the stock mix (figuring one was equivalent to the other) and added a (250ml) cup of hot water into each. Without her knowing which was

which I gave them to Linda to taste. Without hesitation she identified the homemade one as very weak and bland. (bugger!)

To discover what my problem was I weighed both the half a stock cube and the teaspoon of stock powder. Low and behold, while the half stock cube weighed 6 grams the teaspoon of powdered stock only weighed 3 grams. No wonder it tasted bland! I added another teaspoon of stock powder to the original cup and we both had a taste test. This time the two cups were difficult to tell apart. Success!

Storing and Using

So the big hint is, for stock equivalent to good chicken stock add two teaspoonsful of stock powder per cup (measuring cup = 250 mls) of hot water. Store the made-up stock powder in a sealed container stored in a cool, dark, dry place and it should last 12 months.

4.4 Spice Mix – Mexican Spice

This took a little bit of work. We used to buy the packet stuff but had some concerns with it as noted above. We downloaded a few recipes off the net but it took some

fooling around to get to a formula we liked the flavour of and was not so hot it took our heads off.

The formula we worked out is as follows;

- 1 teaspoon chili powder
- 2 tablespoon + 2 teaspoons ground cumin
- 1 tablespoon salt
- 1 teaspoon ground black pepper
- 2 teaspoons garlic powder
- 2 teaspoons onion powder
- 2 teaspoons paprika
- 1 teaspoon dried oregano
- 2 teaspoons cornflour

This is a good start, and you can go from here. We buy the spices whole or grow our own and grind them just before use, which keeps the flavour fresh. As far as the onion and garlic powder goes, you can buy the powder, buy dried granules and grind in the spice grinder before use or grow your own, dry and then grind. The oregano is also easy to grow, dry and grind. We have not tried anything with DIY paprika, so it is bought in as well.

Add 3-4 dessertspoons to the filling mix below, cook up for a minute or two then add ¾ to 1 cup of water which will thicken things up nicely as it reheats.

4.5 Homemade Ricotta Cheese

We have fooled around with cheesemaking in the past, and had some fun with it, but I never really thought about it in terms of serious food production. If we had access to a cow or had our own goats it would make sense, but there didn't seem much point in buying all the raw materials then making it ourselves, but recently things have changed! Over the past few months we have been buying powdered skim milk, to save money, reduce our packaging waste output and to improve our resilience, and very recently we

bought a 25kg bag of the stuff to take things to the next level. So if we have a guaranteed supply of skim milk, using it to make cheese, yoghurt etc, rather than buying it, makes a whole lot of sense to me!

Also, we use ricotta cheese on a regular basis and it is Simple (note the capital "S") to make.

All you need is –

2 cups skim or full fat milk made up into 2 litres of water (to make 2 litres of skim milk from powdered milk put one litre of water into a container, whisk in two cups of skim milk powder until they are dissolved and then top up to two litres with water)
1 teaspoon citric acid (you could use lemon juice, vinegar or other acidulant)
1 teaspoon of cheese salt

The Process

Place the milk into a heavy bottomed pan.
Mix the citric acid with ¼ cup of cool water and then pour it into the milk, mixing well.

Place the pan on the heat and heat gently to 85°C – 90°C, taking 20 to 30 min and stirring throughout to stop the milk catching on the bottom as it heats. Coagulation of the milk will start about 80°C.

Once at temp, leave for 10 min to coagulate

Ladle the curds into a filter made from several layers of cheesecloth sitting in a colander, retain the whey if you are going to use it for something else.

Pull the corners of the cheese cloth together and tie them up and suspend it to drain for 20 – 30 min or until you reach the consistency you are looking for.

Remove from the cheese cloth and store it in a sealed container in the fridge, it should last for a week.

When we made ricotta using the above process, using skim milk, we got a yield of 385 grams.

General comments

We made a batch with full cream milk powder and skim milk powder. While the skim gave a smaller yield it and was a bit chalky in texture it tasted great and worked well in the recipes we tried it in.

4.6 Tortillas/flatbreads

I like Mexican food (the admittedly anglicised stuff available here anyway) in general and tortillas wrapped around it in particular. Mind you I was concerned by some of the additives and the level of packaging of the things so maybe something a bit more home cooked was called for.

They turned out to be a wonderful addition to our culinary repertoire. They only take a bit over half an hour to make, use only four or five pantry ingredients, are super tasty and super versatile. They are worth adding to your regular menu.

We make these fellas on a regular basis, at least once and sometimes twice a week as a bread substitute and they are always popular.

Ingredients

Wholemeal flour (ground on our new mill!) 1 cup
Bakers flour 1 cup
Salt ¾ TSP
Olive oil 3 Tbsp
Water (warmed) 2/3 cup

To make:

Mix the flours, oil and salt in a bowl and then slowly add the water while mixing it in with your fingers. Keep adding the water and mixing until it comes together into a dough, turn out and knead for a couple of minutes. Put back into the bowl and let the

dough rest for 20 minutes. Cut the dough into 4 equal wedges for wraps or burritos or 8 equal wedges for soft tacos or quesadillas and then form into balls. Using an elliptical rolling pin, roll out each ball into a thin disc. Place into a lightly oiled man on medium heat and let it cook until bubbles form, for me this was a couple of minutes, then turn over and cook on the other side. Consume immediately or store in an airtight container in the fridge. Freeze if you want to keep them longer.

The end product might not be too pretty (or at least mine weren't originally) but they tasted good and were flexible enough to wrap around the filling. All up they only took half an hour to prepare including waiting time and a couple of minutes to cook each one. They are a worthwhile addition to your culinary repertoire.

4.7 Experiments with Crackers

This was something I wanted to play around with during No-Buy July (see chapter 3 above); a snack food we could make at home from stuff we have hanging around in the pantry makes sense to me! They would be cheaper than the commercial ones and there would be no strange additives to worry about. We even used organic flours. To make things easier I used our pasta maker to roll out the dough and a ravioli wheel cutter to give the crackers a crinkled edge, although I could have used a pizza cutter or even sharp knife but I like the look of the crinkled edge.

My approach was two-fold, first I made a batch of the cracker dough, turned it into crackers as per the process below and then divided the unbaked crackers into 4 portions. The first one I left bare as a control, sprinkled onion flakes over the second portion, homemade curry powder over the third and a commercial biryani spice mix over the fourth. I only used my fingers to sprinkle the spice mixes and onion so it was a bit hit or miss, in future I will use a sieve.

The second experiment was to put the flavouring agent into the dough and then make the crackers as normal to see how the flavours worked out. I used garlic powder in one and some homemade chicken stock powder to flavour the other. I did wonder whether

cooking the crackers would make the flavour stronger or weaker but in the event it make the flavour weaker, but the end result was pretty good anyway.

Recipe

1 cup baker's flour
1 cup wholemeal flour
2 teaspoons salt
2 teaspoons sugar
3 tablespoons of olive oil
2/3 cup water
For the batches I added the flavouring agent to I added 2 tablespoons homemade stock powder to one and 2 tablespoons of garlic powder to the other.

Process

1. Measure out the dry ingredients into a bowl (including flavour powders if used) and mix them around to combine (I used a whisk for this).

2. Add in the wet ingredients and mix (I used fingers!) and knead them together to form a ball of dough.

3. Pat the dough between your hands to give it a rectangular shape and run it through the pasta maker on setting '1', folding it over until it holds together as it goes between the rollers, then run it through on '2' and then on '3'. This will get it to the right thickness.

4. Place the dough onto a flours surface and cut the crackers into the desired shape with the ravioli cutter or whatever you want to use. Pierce each cracker a number of times with a table fork so that they do not bubble up during baking.

5. If you want to add your flavours on top, brush some water onto the top of the unbaked crackers and then apply your chosen flavouring.

6. Place the crackers onto a silicon baking sheet so that they are slightly separated from each other and bake in the oven at 230°C for 12 to 15 minutes. Towards the end of the bake, keep an eye on the crackers as they can go from perfect to burned in a short time!

Results

Sprinkled flavours

Control (unflavoured) – tasted OK, would go well with any number of dips.
Onion – The onion had a tendency to burn and it wasn't the best tasting cracker I have ever had.
Curry – Definitely a winner! If I had a more even coverage for the curry powder they

would have been perfect.
Biryani Spice – As for curry above!

Incorporated flavours

Chicken stock powder – I found these to be really great and took them along to a PSW meeting and the feedback from everyone was that they thought they were very good too. If you find them a bit salty for your taste, leave out some of the salt in the dough recipe.

Garlic Powder – I also found these to be good, but my personal taste is that I prefer the stock powder ones. I took these to the PSW meeting too and again, they were very well received.

The types of flavours you can sprinkle on or incorporate into the basic cracker is almost endless and I will definitely be trying crackers with our home made Mexican spice mix and onion powder too.

5.0 Resources

How to Store Your Garden Produce – Piers Warren – Green Books (UK) 2008 ISBN 978 1 900322 17 1 – This first part of this book discusses the techniques of preserving fruit and vegetables including clamping, freezing, drying, vacuum packing, salting, bottling, jams etc., fruit butters and cheeses and fermenting. The second part of the book covers each type of produce and how the basic techniques apply to it. A small book with some colour photos in the middle, and lots of good info.

How to Store Your Home Grown Produce – John and Val Harrison – Right Way Publishing (UK) 2010 ISBN 978 0 7160 2246 6 – This book has twenty small (4 to 10 pages) chapters, starting out with health and safety, then moving on to how food ripens and rots, followed by where to store and natural storage. The book then moves on to salting, lacto-fermentation, bottling, then chutneys, ketchups, sauces and pickles. This is followed by jams, juicing cider and perry, drying, storing in oil, freezing, vegetables, fruits, herbs, eggs and conversion charts. The book has quite a few colour pictures and some line drawing. The book has a small amount of information on a lot of subjects.

Root Cellaring – Mike and Nancy Bubel – Storey Publishing (US) 1991 ISBN 978 0 88266 703 4 – The book has good B&W photos and line drawings. It starts off with growing and harvesting vegetables for root cellaring, then covers treating fruits and vegetables before storage. The book also has a large section on the DIY root cellar and some ideas are translatable to the urban and suburban environment. This is a good book and worth getting if root cellars are your bag.

The joy of Keeping a Root Cellar – Jennifer Megyesi – Skyhorse Publishing (US) 2010 ISBN 978 1 60239 975 4 – Regardless of the title, this book also covers drying, canning, picking and freezing for food storage, with preservation of meat, dairy and eggs also being covered. All told only about 20% of the book actually covers root cellaring. There are lots of colour photos which gives this book a “coffee table book” feel and reduces the amount of information presented although there is still some good info.

Passport to Survival – Esther Dickie – Bookcraft Publishers (US) 1969 ISBN 978 0 39449 228 5 – This is THE original book on the survival Four foods (wheat, sugar/honey, powdered milk, salt), the idea being that this is the most cost effective, storable diet that can be salted away in case of hard times. It gives lots of recipes for the survival four in various combinations, and some are pretty out-there! The book is divided into four parts, the first part is an introduction cover why they might be necessary, introducing the survival four foods, also other foods that can be included in a storage program and how the diet works. Part two provides a whole stack of recipes based on the survival four. Part three covers other techniques like food preservation and storage, water and other necessities and outdoor survival. Part four covers other options for the future. The book has a small section of colour plates at the centre and there are a few B&W photos scattered throughout.

The New Home Larder – Judith Wills – Transworld Publishers (UK) 2009 ISBN 978 1 905 81131 1 – (Larder = pantry = store cupboard) As the blurb on the back of the book says about setting up a larder – "….You'll have everything you need to make delicious and nutritious meals without shopping for items everyday". The book has three parts, part one is 'Your Larder' which provides information on setting up your own home larder including why it is important, detail on setting it up and practicalities of operating a larder including cleaning and clearing, avoiding and treating larder pests and making the most of space. Section two, almost half the book, provides a series of recipes based on the stores in your larder including easy suppers, salads and side dishes, preserves and preserving, baked goods and festive occasions. Part three is entitled 'resources' and gives a detailed paragraph on all of the larder staples and where you can get them (UK Based). The book has lots of colour photos.

Independence Days – Sharon Astyk – New Society Publishers (US) 2009 ISBN 978 0 86571 652 0 – I love Sharon Astyk's stuff! The book has seventeen chapter in two parts, and each chapter has a number of recipes associated with it at the end of the chapter. Part one is 'Independence Days', the first chapter covering the problem and why we should prepare for hard times; chapter two talks about making the most of what we have – Local Eating, Pantry Eating; Chapter three covers how much food you should store. Chapter five talks about food storage on the cheap and chapter six talks about eating from your food storage – every day.

Part two covers food storage and preservation how-to. Chapter six covers the mechanics of food storage and chapter seven covers energy conscious food preservation, Chapter eight covers root cellaring and season extension. Chapters nine, ten and eleven cover dehydration, canning (bottling) and fermentation respectively. Chapter thirteen covers cooking when the power is out, chapter fourteen covers medicines, health care and special diets, chapter fifteen talks about managing your food storage and chapter sixteen covers sreating and using community resources. Chapter seventeen covers bring it all together. There are no lin drawings or photos in the book, text only.

Cooking with Stored Foods – Carlene Tejada & Caroll Latham – H. P. Books (US) 1981 ISBN 0 89586 120 8 – While this is primarily a recipe book, there is a section at the start covering why food storage is a good idea, rotating foods, store-a-meal, electricity power outage and storing water for emergencies. The rest of the book (130 pages) are a series of recipes (over 200 recipes) grouped around meals (breakfast, appetisers, desserts) or ingredients (vegetables, meats, wheat, breads, soups, wheat, chicken & fish). Most of which you can get from your garden, store cupboard or food storage area. On a quick look through there were not too many weird ingredients but a couple like 'butter flavour granules' or 'sweet pickle juice' you might have to look a bit hard for. The book has lots of colour photos.

Healthy Food Storage Guide Book – Karen Lee – Sun Bounty LLC (US) 2013 ISBN 978 0 615 91696 5 – The book is composed of two sections, section one is entitled 'Healthy Eating for Tough Times' and takes up about a quarter of the book. It has some 'interesting' ideas. The second part of the (the bit I am interested in) is entitled The Healthy Food Storage Guidebook. Chapter one covers 12 reasons why you should store food, Chapter two, twenty food storage mistakes and tips and chapter three details how to start a feed storage program. Chapter Four covers water storage, Chapter five grains (and potatoes for some reason!), Chapter six legumes, chapter seven milk and dairy, chapter eight canned goods, Chapter nine freeze dried and dehydrated foods. Chapter ten sweeteners and chapter eleven oils. Chapter twelve covers storing in buckets, chapter thirteen grain mills, chapter fourteen stoves, heaters and cooking and chapter fifteen covers water filters and cleaning items. The book has the odd B&W photo.

Appendix 1 – Food Storage List form

HOUSEHOLD: **DATE:**

BASIC STORES

ITEM	AMOUNT/PERSON	NO OF PEOPLE	AMT REQUIRED	AMT HELD	BALANCE
WHEAT	140 Kg				
HONEY } SUGAR }	30 Kg				
POWDERED MILK	35 Kg				
SALT	3 Kg				

TINNED VEGETABLES

ITEM	TIN WEIGHT	No	BOX EQUIVALENT
POTATOES	440 gm		
POTATO WHIP	2.5 Kg		
CARROTS	440 gm		
PEAS	440 gm		
GREEN BEANS	440 gm		
CORN - NIBLETS	440 gm		
- CREAMED	440 gm		
BAKED BEANS	440 gm		
WHOLE TOMATOES	440 gm		
TOMATO SOUP	440 gm		
MUSHROOMS	220 gm		
BEETROOT	440 gm		

TINNED FRUIT

PINEAPPLE RINGS	440 gm
PEARS	850 gm
PEACHES	850 gm
APRICOTS	850 gm
TWO-FRUITS	850 gm
FRUIT JUICE	3 LITRE
OTHER	

TINNED MEAT AND FISH

ITEM	TIN WEIGHT	No	BOX EQUIVALENT
SPAM	340 gm		
CORNED BEEF	340 gm		
CAMP PIE	340 gm		
HAM	450 gm		
TUNA	440 gm		
SARDINES	100 gm		
SALMON	210 gm		
FRANKFURTS (PLUMROSE)	425 gm		

FATS AND OILS

ITEM	PACK SIZE	No	TOTAL
VEGETABLE OIL			
SHORTENING	700 gm		
GHEE	500 gm		
BUTTER	375 gm		

DRY GOODS

FLOUR - PLAIN	25 kg		
- SELF RAISING	25 kg		
- CORN	500 gm		
SOUP POWDER	2.5 kg		
ROLLED OATS	25 kg		
PASTA - SPAGHETTI	500 gm		
- MACARONI	500 gm		
- SHELLS	500 gm		
- 2-MINUTE NOODLES	85 gm		
YEAST	500 gm		
BAKING POWDER	1000 gm		
DRIED BEANS (eg. CANNELLINI)	500 gm		

SUNDRIES

ITEM		PACK SIZE	No	TOTAL
DRINKS	- OVALTINE			
	- MILO			
	- ECCO			
	- COCOA			
MILK	- SWEETENED CONDENSED	400 gm		
	- EVAPORATED	400 gm		
SPREADS	- JAM	680 gm		
	- VEGEMITE	455 gm		
	- PEANUT BUTTER	780 gm		
SAUCES	- TOMATO			
	- SOY			
	- CHILLI			
	- WORCESTERSHIRE			
	- BARBECUE			
SWEETS	- ICING SUGAR - MIX	500 gm		
	- PURE	500 gm		
	- LIQUID GLUCOSE	500 gm		
	- COCONUT (DESSICATED)	500 gm		
	- GOLDEN SYRUP	500 gm		
	- TREACLE	500 gm		
	- CHOCOLATE	200 gm		
	- CUSTARD POWDER	500 gm		