

A hand made life

A family's growth to healthy independence

Barbara Scheltus – van den Berg, June 2023 – January 2024

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Summary of this self-sufficiency design

This is a design to create a more sustainable and resilient life for my family by growing our self-sufficiency. We don't want to outsource our basic needs.

In this design I explore what we already do and know, where and how we can grow and in which aspects not (yet), or what we would need help with to grow our self-reliance.

In nature nothing is fully independent and it is also not our aim to be. We just do want to not depend on unhealthy systems that pollute our health and the planet's health.

Ethics in our life

Living more self-sufficient aligns us with the permaculture ethics earth care, people care and fair share. These ethics guide us in decision making and action, not only to sustain ourselves but also to contribute positively to the broader ecological and social systems. As a family we express this by hosting volunteers from all over the world, who come here to learn about a more self-sufficient and holistic approach of life in interconnectedness with all living things. We hope to inspire them by giving an example of a simple and fulfilling natural life.

This lifestyle will ripple out more when our village grows (see my design [Growing a village](#)) and maybe I can grow into being an influencer somehow, for a simple lifestyle in self-reliance.



Earth care: we practice methods that enhance soil health, prevent erosion, and promote biodiversity. We use techniques such as companion planting, polyculture, and agroforestry to contribute to healthier ecosystems.

We make water slow down and sink in so it stays useful on our terrain (longer).

We have less need for driving a car for grocery shopping, we have less packaging so we produce less landfill and therefore we lower our ecological footprint on the earth. This way of life is caring for the earth.

Living self sufficient is also the ultimate **people care**. My personal people care: with taking care of our own needs I feel joy, pride and freedom. And there are also the physical benefits. My family is healthy because we live healthy. Our food is prepared within minutes after “killing” (ripping leaves off the plant), while supermarket produce can be weeks old. We clean our house with edible/drinkable home made cleaning products. My home made deodorant, tooth paste, facial cream, hand and body creams don't have added anti fungal and anti bacterial agents in them so they don't kill the protecting layer of micro “wildlife” on our skin.

Fair share and future care: we take from Nature only what we need and we give back what we can. With a self sufficient lifestyle we reuse “everything” and what can decompose we use as compost or fertilizer for our land. We share tools with our neighbours. We don't spend our money on big companies or the pharmaceutical industry; we buy what we need at the local farmers market or second hand shop.

Design framework: BOGRADIME (a variety of Heather Jo Flores' GOBRADIME). More about using this framework and why I changed it under Reflections on the design process on page 27.

Permaculture ethics under Ethics in our life from page 3 and **in fat green** throughout the text.

Various principles (Holmgren, Mollison, Macnamara) *in italic purple* throughout the text.

Tools used:

Macnamara's Design Web (under Reflections on our self sufficiency using the Design Web anchor points on page 5)

Macnamara's 7 Ways to think differently (under Shift our thinking on page 18)

Pareto's 80-20 principle (under Small effort for a large yield on page 26)

Lots of mindmapping behind the scenes to get my thoughts out, like on page 41.



Reflections on our self sufficiency using the Design Web anchor points

Envision this: you wander around in this beautiful edible landscape and you drift off to the vegetable park. Some juicy veggies are screaming: "Pick me! Pick me!" and you obey. You bring them to the kitchen where your son welcomes them on this beautiful cutting board that he made from walnut wood last year. Next to the cutting board a beautiful knife that your husband (a former blacksmith) made together with him. Your son turns the harvest into a delicious 3 course meal and he serves it with pride to your family, the guests and volunteers at the table. "All home grown and home made!" he adds proudly.

This is my life!



When I reflect on self sufficiency, being self reliant, I feel pride and resilience. It gives me a feeling of freedom, strength and confidence.

It helps that we live on this beautiful land with fertile soil. Since we started living here we seriously grew skills in food growing and preserving, wood working, scything, handling tools... We're *obtaining yields* in many ways.

But where are the limits? If food supply in Croatia would be too expensive or come to an end, that would not harm us much. But what about other supplies? A new mattress? A bicycle tire or a drill? Where does our self sufficiency stand when you look at the whole of life?

A pattern is that we need to work for money to pay for the things that we don't make ourselves (yet). If we would be 100% self sufficient (and off the grid) we would need less money. And because we need to work for money, we can't spend all our time on being 100% self sufficient. It's a cycle.

What if we would change this cycle? What if we would do our best to grow towards 100% self sufficiency? Would we be happier? Healthier? What about the social consequences? What about the kids?

I am sure that bringing in some principles in our approach of self sufficiency, will help us to look differently at it. We can install some principles in our thinking about self reliance, our choice of tools (electric vs manual) and our choice of ingredients when we establish a week menu.

If I would bring it all together, there are a few needs that would help us step it up. We can meet those needs (like more water harvesting) and stack functions (turn it into aquaponics and/or also grow fish). The biggest integration would be to tap into an extra income stream and start earning money with our knowledge and experience with self-sufficiency.

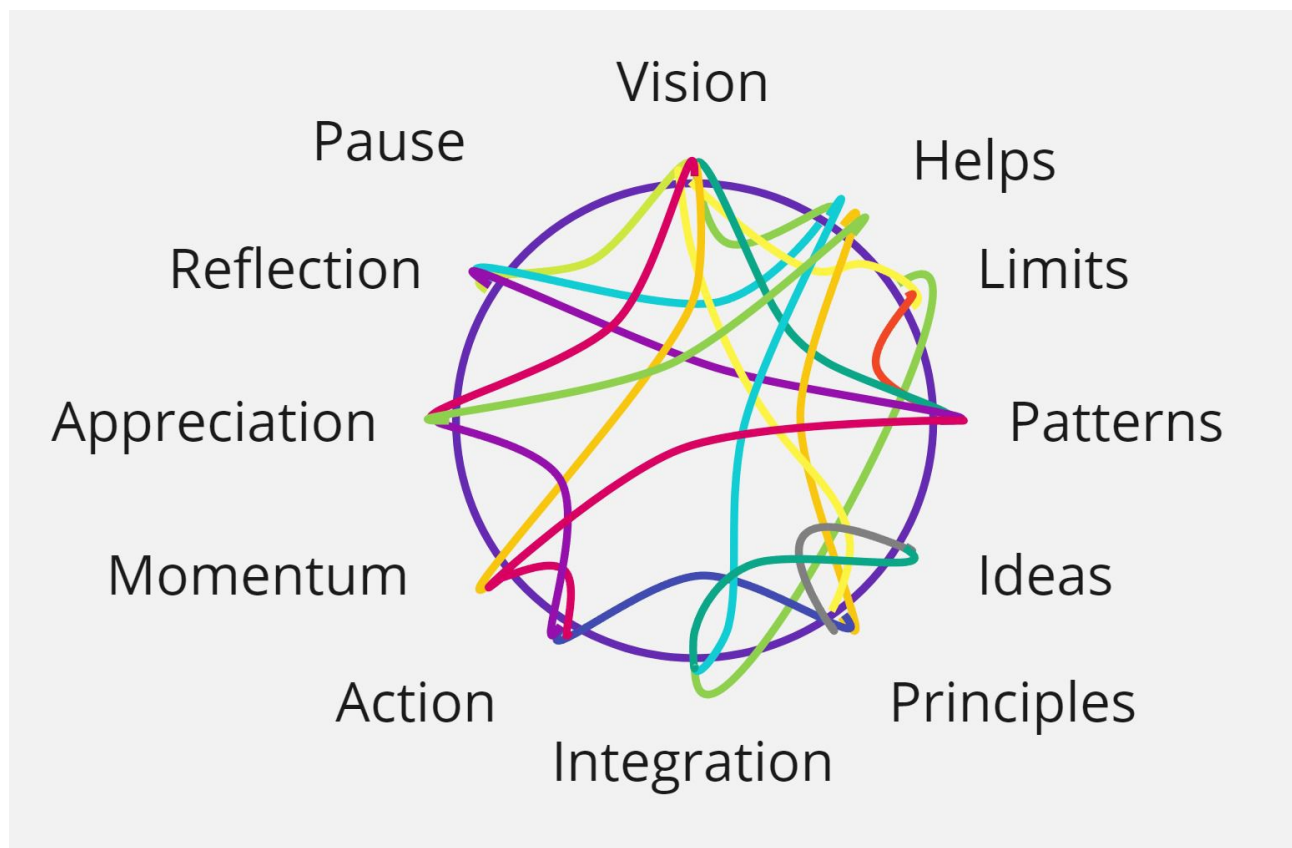
This will not all happen overnight; it is a longer term planning. Not only because it would just be a lot of extra work (to install new systems for heating water and the house with sun and/or compost,

new systems for electricity, to write articles and create materials for teaching) but also because some changes would make much more sense if there are more people living here.

Bringing in other people would be very helpful to give these projects momentum. Also becoming a blogger and/or a teacher for self-sufficient living would bring momentum.

What I really appreciate about this design:

- It makes clear what our status in self sufficiency is and how far we can take it,
- Since starting this design I have been taking our self reliance more serious,
- It did its design-magic when I realized that most of the text in this design (especially the appendices) can be a start of a series of articles, a blog or (online) course. I can *come into the light* with my knowledge and experience. So this design is the start of an extra income stream.



BOUNDARIES

We cannot *just* grow our self-sufficiency; there are boundaries to discover on a few aspects, like land, time, people, consumption, financial and technological aspects. These discoveries about our boundaries on page 29 in Appendix I – Boundaries to our self-sufficiency and the short version here:

There are edges and limits to our current and desired status of self sufficiency.

- In some aspects of our life we are fully self-sufficient (like mushrooms, herbal teas, strong liquor, medicine, wood for heating and cooking, cleaning products),
- for the majority we could technically be self sufficient if we would set our mind to it (vegetables, meat, wine, beer, personal care products, clothing),
- there are things that we would need help for to become fully self sufficient. Helping hands or more consumers for it so it is worth the effort (like making gas, aquaponics and growing fish, a compost-heater, growing all animal food),
- there are a few “impossibilities” unless we make radical choices (like sell the cars and get electrical bikes, after we have invested in a bigger solar power setup).

More details about where we stand now on page 31 in Appendix II: Inventory of our self reliance.



Making elderblossom wine, felting clothes and accessories, drying mushrooms, collecting herbs...

Conclusion about boundaries in our self sufficiency

There are “no” boundaries with the scale and type of our land because it is big and fertile and the climate is fantastic. We can still practise **earth care** while feeding a village. The scale of the mouths that we can feed is more depending on the amount of hands available; not on the amount of land.

We limit our consumption with **people care** and **fair share** ethics in mind. These limitations are about the amounts of meat we consume for instance, and where we spend our money on.

There is a big technological limit: there are many tools we “cannot” or want not live without. Like laptops, printer, phones, internet and kitchen machine.

All these boundaries made clear that for the various fields there are 4 levels in our self-sufficiency:

1. YES! fully self-reliant,
2. home made,
3. needs to GROW - partly self-reliant
4. NO! not at all.



Scatter plot chart of our fields of self-sufficiency and their levels

OBSERVATION

There is a pattern in my life of growing my own food and making things myself. It excites me and fills me with pride. Read more about this in Appendix III - I ♥ home made on page 41.

I also observe a weakness in it: the pride, skills and knowledge attract others who want to learn. But if I let others (volunteers) sow all of my seeds and they do it wrong, I loose my harvest *and* my seeds. I need stronger systems for the garden: see my design [The Garden Speaks](#).

Another observation is that small restrictions in our diet can lead to big changes. Accepting 2 or 3 leafy greens dishes in a week makes that we don't have to buy any vegetables.

My skills in preserving food aren't great. Sometimes my fermented cabbage (sauerkraut or kimchi) gets slimy (normally a sign of too much salt) and my syrups get a top of mould after a few weeks. My sun-dried tomatoes are usually not dry enough, there are small bugs rummaging through my seed collection and moths reside in my St Johns wort.



I don't have many skills in beekeeping. 3 Times I caught a swarm and we bought 3 colonies, and all 6 colonies died within the year. Despite the help I got, despite the various methods we used.

We have 4 barrels of 220 litre and one of 400 litre to store rain water. That is enough to water the greenhouse daily and provide the animals with fresh drinking water but not enough to water the garden regularly.



Me trying to keep the bees



Goldfish in rainwater



The small pond in the food forest



GOALS

In general we want to grow our independence. After observing our situation and boundaries I concluded that we can focus on:

- growing our self sufficiency in all human and animal food, and wood for heating and cooking.
- We keep on making our own housing, furniture, food & drinks, cleaning and self care products and medicine like we do now.
- We will find ways to grow our self reliance in water and electricity.



1. Food

Discover abundance. In 2025 I will look back to 2 summers of abundant harvests from the garden and terrain. Our larder is fully stocked up and our expenses on groceries are limited to basics like flour, butter, milk and oil.

I have insight in how many tomato plants we need for a weekly litre of tomato passata and 2 bulbs of garlic, 2 onions daily and so on. I know how much to grow for abundance.

My gardening skills are nearly complete, I know when to sow what, what plants need and how to create the best circumstances for them, when the harvest is at it's optimum so I know when to rip the harvest from plants and butcher vegetables.

We have excellent storage techniques of fruits and vegetables. We know how to preserve in oil/salt/sugar, how to dehydrate, pickle, ferment and put under fat.

We have designed a bi-weekly basis for a menu that contains mainly home grown produce, meat twice or 3 times a week, (store bought) rice once in these 2 weeks.

At least 75% of our meat comes from our own animals: chickens, turkeys, ducks, rabbits and lambs. The undefined animal parts of meat are turned into minced meat. I have a spreadsheet with kilo's, costs and time: when is it economically viable to butcher young animals like rabbits or lambs.

The Friday-end-of-the-week-crisps are replaced by home made popcorn and a bowl of home grown nuts. Son and I have a routine to make kombucha, kvass, beer, wine and mead regularly.

We have setup systems in which our animals cannot damage the garden and are free to forage a part of their food. The other part we grow: corn, cereals, seeds.



2. Home made

In 2024 at least half of the bread and all of the crackers that we eat are home made. We make all our jams, spreads and condiments, even soy sauce.

We are resourceful and *create no waste* when we fix or repurpose things like furniture or old clothes. Also alert attention for the tools and good & timely maintenance (like Peter does with the cars) helps with this.

In 2027 Peter and I will live in our self-built small, half underground passive house (*earth care*) somewhere hidden on the terrain and all furniture will be home made. (*people care*)



3. Health

From 2024 we take care of our health (*people care*) by making all our (non-toxic *earth care*) cleaning products, growing and foraging herbs in the right season and moon phase, mixing appropriate herbal teas, preparing tinctures and syrups for more serious situations, and making our family's non-toxic self care products like deodorants, tooth paste, soaps and creams.



4. Wood fuel

We collect all the wood for heating and cooking from our own land. We need (max) 10 cubic metres in a year and we'll have at least 5 metres backup.

With this (small) amount there is no need for a planting plan to renew our forest: Nature does that for us (*earth care*). What we take is hardly noticeable.



5. Water

Our drinking water comes from the wells, the household water (for dishes, laundry, showers, toilet) comes from the local government.

We build an extra compost toilet on the campsite to create compost and manure for trees and save on waste water (**earth care**).

We **catch and store** enough rain water for the greenhouse (30 litre daily, 60 in summer), the animals (5 litre daily) and to water the garden in dry summer months (250 litre per week).

We find a way to create swim water on our terrain which, with **stacking functions**, can double as a grey water filtering system, or triples as a biodiversity enhancer and fish pond (**earth care**). (this is another permaculture design: our natural grey water cleaning swim pond)



Pipes for rain and shower water into the forest



ending here, for a grey water cleaning swim pond.

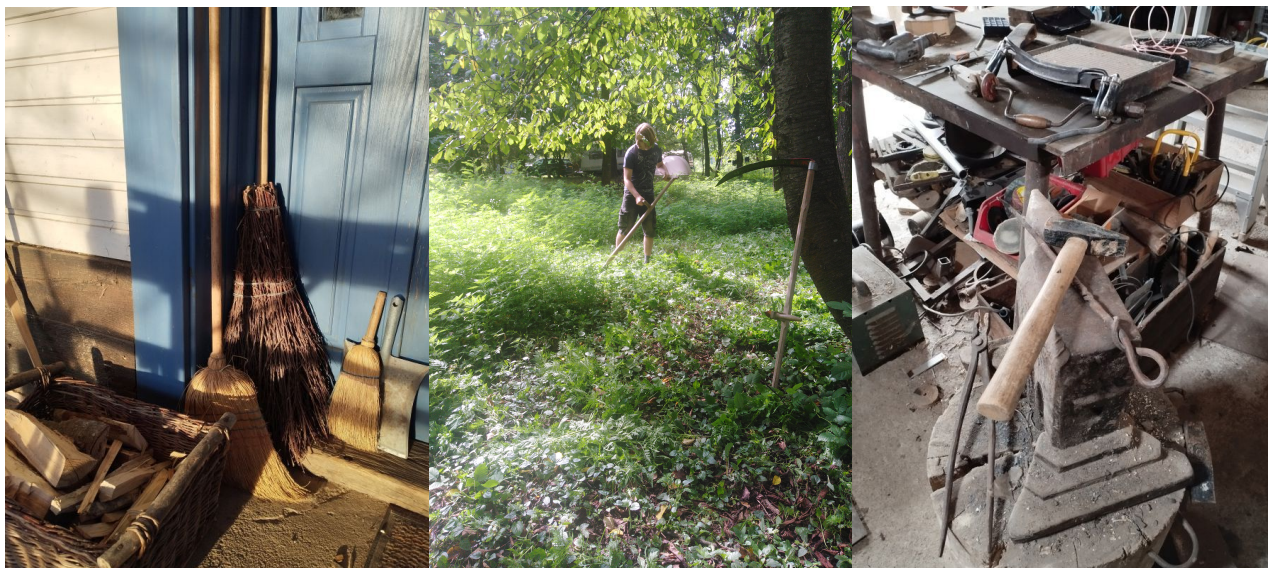
6. Electricity

We keep using or replace electrical tools and appliances by human-powered ones for **people care & earth care**:

vacuum cleaner	=	broom & dustpan
strimmer	=	scythe
kitchen machine	=	knife, garlic press, potato press
coffee machine	=	cafetière / coffee press

water boiler = heating a pot of water on stove or put a dark bottle in the sun
hot shower = cold shower
power tools in workshop = screw driver, hand drill, hand saw, sand paper

Our household electricity comes from our own sources and from the national electricity company.



RESOURCES

We have many resources:

- 6 hectares of arable land
- 6 hectares of forest (of which 2 are registered as arable land)
- fertile soil
- red soil area
- sand area
- clay area
- big stones surfacing in the forest
- 4 well water sources (or more)
- good amount of rain, spread over the year
- 3 strong adults and 1 teenager with capable hands
- volunteers and friends that are willing to help
- neighbours that are living quite self sufficient themselves
- knowledge about growing and preserving food, also for animals, how to keep them happy & healthy, how to build a house and maintain the land...
- books, internet and devices to look things up
- almost 15 years of experience
- all tools that we need for this way of life
- a small solar energy setup enough for charging phones and laptops

What we don't have:

- a river or stream or big water body on the land for more water security,
- a solar energy setup that gives us enough energy for our household
- a system to make sure that we have all food groups all year round



When we just lived here and the gravel for our driveway arrived, out of nowhere all our neighbours arrived with their shovels to help!



We're building a new house on the highest point of the food forest

ANALYSIS

Approach 1: home made and organic growth

Home made food and goods give this feeling of pride, freedom and resilience. This feeling is still there, even with half of the items store bought (home made pasta with our own eggs, store bought flour and oil). Even with *all* of the ingredients store bought I am proud of the food I create (like kimchi with store bought Chinese/nappa cabbage, carrots, onions, ginger and Korean red pepper flakes; only the garlic and sometimes the pepper flakes, Chinese cabbage and carrots are home grown).

Our home made mayonnaise has sunflower oil in it that we buy. Would there be a point in our life where we would want to make our own sunflower oil? Maybe when we have more people living here in our village, more demand for sunflower oil and more hands to do the work.



Fair share ethic: it probably has more impact on the planet if we show others how to live (more) self sufficient than to do it all ourselves. And if there is more demand, more time and there are more hands, we will take next steps in our self sufficiency.

Flexibility is valued more than sticking to our principles. We enjoy discovering the pleasures of a hand made life, that at the same time *reduce our impact* on the planet. This joy is easy to share with others and it might even inspire them.



Approach 2: serious self sufficiency

Let's assume that with more people in this village we would have some great car mechanics and we would be able to make a diesel substitute (from this same sunflower oil?) and turn Hermann into a vegan car. That would be a big step forwards in our self sufficiency. But who is going to make new car tires? Create a new blinker lamp?

Getting rid of the car is the only option if you want to be serious about being self sufficient.

No more trips to the wood supply in the city to buy straight beams to build with. We can work with round wood and we just would have to chop, strip and shave a tree ourselves. No more store bought screws; we need to make our own nails.

No more new winter shoes from a shop in the city; I will make a few pair of Uggs from a sheep and knit some matching socks.



Approach 3: off grid Doomsday scenario

We make a radical choice for “home made” and go hard core self reliant. The rest of the world doesn't matter; we have everything to survive.

No car, no internet, no phone, no laptop, no avocado or banana, no plastic, no store bought clothing, no garbage bags.

But will we thrive?

Our live would be similar to that of people 100 years ago, except that everyone would think that we are weird now. This sounds like a “plan C” to me and I am not even considering to discuss this with our teenage kids.



One of the well water sources



now with a new pipe and lid

DESIGN

Looking through the lens of **people care**, starting with *small and slow solutions*, the first approach – **home made and organic growth** (see analysis on page 16) is the best approach of our family's self sufficiency for now. It is the *least change for the greatest effect* to shift our thinking, grow our skills and find more people to cooperate with (see design [Growing a Village](#)). *Many minds are better than one*.

Later we can *creatively use and respond to change* and aim for organic growth into approach 2 when the village is growing.

Approach 3, hard core off grid full self-reliance, would only be necessary when national food supply, fuel or our money is coming to an absolute end.

The 3 approaches can succeed each other.

Shift our thinking

Mainstream thinking like “but you have to...” and “you cannot just...” and “but you need...” can lead us to fear and feelings of inadequacy. We have noticed over the years that people with such a mindset can (in a moment of weakness) uninstall our satisfaction with simplicity and our gratefulness with the abundance we have by comparing and judging. In moments of stress or vulnerability or moments of not overseeing the whole, we can get confused and these damaging mindsets can set root.

To help us stand strong on our path and grow our self-sufficiency, it would help to have our vision clear and add reminders (like a poster), find more people who are like-minded or like-hearted to strengthen our values, and to speak about the subject with our family regularly. Especially the kids meet a lot of people who try to influence them with what they are “supposed” to do.

If we grow our feelings of pride, mainstream thinking has a hard job to break through this pride.

If we grow our self-sufficiency into one of our income streams, we have an even bigger reason to feel being on the right track and not get mis-led.

We need to keep stretching our thinking and our creativity.

7 Ways to Think Differently

Solutions thinking: to make a first step and *the least change for the greatest effect* towards growing our self sufficiency, we need a shift in our diet **from “eating what we like” to “eating what we have”**. We need to shift from pork meat to lamb and chicken, from rice to potatoes and legumes, from chips/crisps to popcorn and nuts. A bi-weekly meal planner as in Appendix VII - Weekly menu-pattern for self-sufficiency on page 49 would help.

Abundance thinking: to create a feeling of abundance around the “eating what we have”, we need to grow our skills in preserving the harvest like drying, curing, smoking, canning, fermenting and pickling. *Catch and store energy*. We also need to grow a wide variety of fruits and vegetables so we can *use and value diversity* on our plates.

Putting an anti mouse screen in the larder window would help with better storage in a well ventilated room.

Systems thinking: grow the more delicate things on our morning-sun balcony or on the front porch, so they get more attention and it is easy to *observe and interact* with fragile crop. Grow all ingredients for our favourite dishes together in their own garden beds. The “Italian area” for instance will have tomatoes, basil, parsley, oregano, spinach, onions, aubergine and garlic growing together.

Design a grey water cleaning swim pond as a system for **earth care** (increasing biodiversity,

cleaning and reusing waste water), **future care** (water safety) and **people care** (a close by swim option that helps the family to stay fit and probably makes camping guests stay longer). This will be a future design.

Future thinking, **earth care** and **stacking functions**: cycle Fleur to school in stead of bringing her with the car. This saves fuel, car repair, money and it helps me to feel more fit.

Preserve as much as we can (food, wood, water) so we're prepared for any future. A **small, simple and slow solution** for collecting wood would be to bring some home every time we walk in the forest. Or to turn all cabbage leftovers into sauerkraut in 1 jar.

Design for disaster: store my seeds in glass jars (and not in paper envelopes) and stretch climate edges: collect seeds for slightly colder and slightly hotter weather.

Cooperative thinking: we don't have to do it all ourselves; we can exchange with others. And find the others to live here and grow our self-reliant village.

Before people start living in walking distance, we can organize gatherings with the like-minded and like-hearted in the wider area (Igor, Blaža, Daniel, Jessie, Lucas, Christina, Marjo, Salzlechner...)

Thinking like nature: Bogata Šuma is an excellent place to harmonize with natural cycles and patterns, to work with nature and benefit from its strength and flexibility.

The ethical principle of **voluntary simplicity** is what we see in nature and what our family lives by too.

Our village might also grow organically when people find out that this is *the* place to be to help growing a self-reliant village and learn more about all the details of it. **From thinking to doing**.



Grow our skills

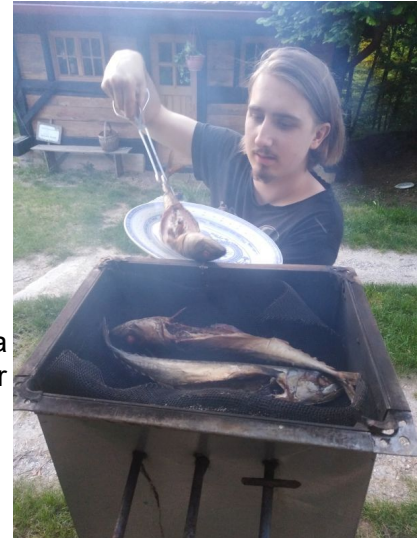
Strategy in the garden: *anchoring my roots while branching out*. Level up my growing skills by **reading into all the details of 5 plants each year**. Preferred soil and fertilizers, recipes for cooking and how to store them properly. Dive into the details of only 5 plants per year to keep it fun and effective.

In order of importance: potatoes, onions, garlic, tomatoes, beans, cabbages, carrots/roots, leafy-greens, chickpeas, lentils, soy, beetroot, cucumbers & pickles, peppers, eggplant, okra.

Just like how I grew from incidentally making yogurt to having a routine in making it twice a week, I can also **grow a routine in bread baking** and level up my skills and aim to bake all our bread. Start with baking a bread in the weekend, adding a mid-week bread, grow into baking 3 or 4 times a week. A side-product from the surplus of sourdough can be these spicy seed crackers.

My son cures, smokes and dries meat and fish. I am sure he would like to **experiment** with curing, smoking and drying vegetables as a way of preserving them. Smoking salt and garlic would diversify our diet.

Cooperative thinking: a few of our **neighbours** love to pickle and can(ning). Son and I can ask them for a **pickling class**, bring our produce and share the abundance.



Cooperate

We don't have to do it all ourselves if we **grow our community** or village and there are more people to cooperate with. Especially in technicalities like aquaponics or installing a solar energy system or setting up other systems to *catch and store energy*.

Son is a cook. Make him interested in helping in the garden to grow better ingredients for his dishes. If he picks up gardening, I have a permanent and daily helper :-)

Educate helpers better. In stead of seeing volunteers as clumsy kids who I'd rather not have in my garden, I need to optimize the effectiveness of my instructions. Not only the HOW, but also the WHY, so everyone can fully understand the garden. This needs its own design: "[The garden speaks](#)".

Store my **seeds** in glass jars, not in paper envelopes. Keep track of where I spread my seeds: keep a list of nearby friends (similar climate) who grow my seeds. Make plans with them to keep seeds of the strongest plants and exchange seeds annually.



Stacking functions

Give attention to what you want to grow. Use the garden as a teaching tool: start giving self sufficient gardening courses and workshops. In-person courses and also online classes with the garden as the star.

(my design [The garden speaks](#) would be a great help for that)

Use the too much text in this design to showcase my knowledge and experience through articles (*the problem is the solution*). Revive our self sufficiency blog and set it up to make an extra income stream. (This needs its own design)

Peter is repairing the old well in the forest; the one where all neighbours would get their daily jug of drinking water in the past. When the new pipe and fresh filtering stones are in, I can make a **daily walk to the well to get healthy water and work on my physical health** with the walk down and back up.

Aquaponics would be a nice way of stacking functions (fish supply, plants, watering system) but we don't know enough about it yet. This could be a project for when there are more people living in our village (or when a volunteer with this expertise arrives). This also needs its own design.



IMPLEMENTATION

By giving it more attention, our self sufficiency already grew since I started this design. See appendices 5 - 7

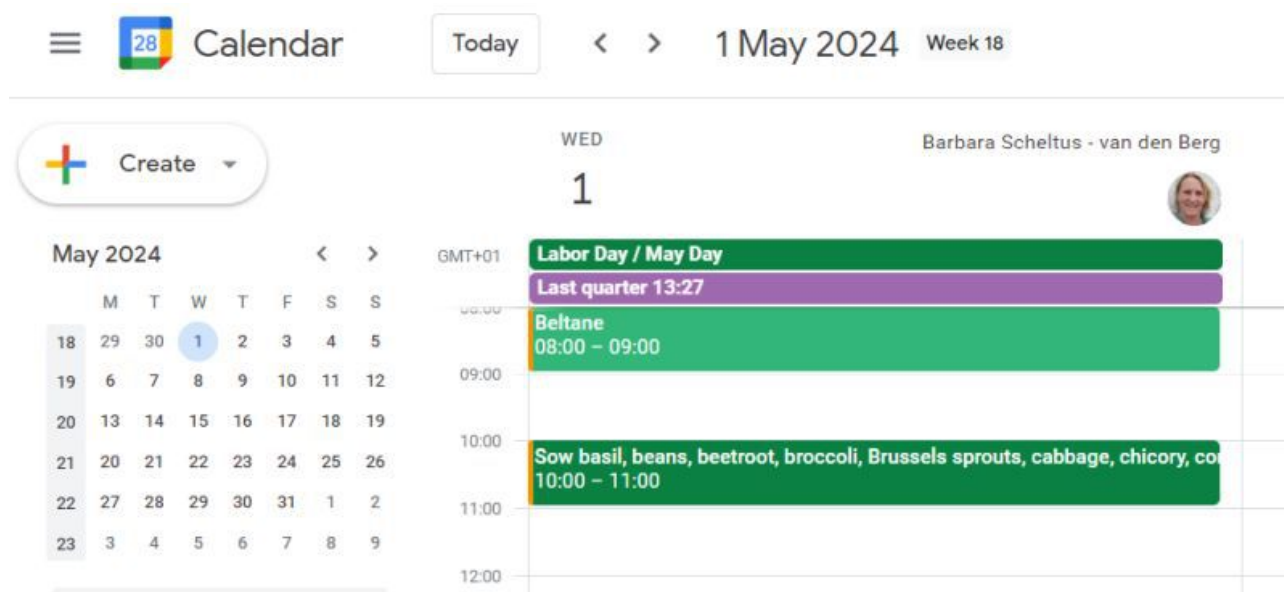
1. Food goal:

The fence around the garden is almost finished so animals have a harder time getting in.

I made an inventory of my seeds, listed what was easy to grow and bought the seeds of what I didn't have any more. It feels complete now.

Next step is to store them in jars in stead of envelopes. It's on the to do list.

I made a serious sowing schedule for my seeds and also noted it on every 1st and 15th of the month in my calendar. See Appendix VI - Serious sowing schedule on page 48.



I made more calculations and I have a better idea of how much to sow of certain crops. See Appendix V – Calculating for self-sufficiency on page 46.

I sowed sugar beets to make our own sugar but unfortunately the sheep ate all the plants. Next year better).

I started looking into the details of growing legumes, cucumbers/pickles/loofa and okra's and this year I will construct cages for my tomato plants.

The loofa pieces can replace our dishwashing sponges. (for my skin I prefer felted wool over loofa)

In spring 2024 we will diversify our flock with ducks and turkeys.

I still need to make a spreadsheet to calculate the costs of animals/when is the best time to butcher them.

Son (cook) and I designed a menu with home grown produce as the star. See Appendix VII - Weekly menu-pattern for self-sufficiency.

After the last volunteer-chef left, we started eating only what we have. The larder is stocked up and the groceries are limited to basics like butter and oil.

I tacked a metal mesh in the larder window frame so mice cannot get in anymore and we can air the larder better so our produce stores better.

When someone offered me 50 young asparagus plants, I immediately jumped at it, picked them up the same day and planted them in the next days. What a great opportunity! These plants need little care and will produce a delicious spring crop annually for the coming 20 years!

I made a big effort to make our soil more rich and healthy and feed the plants some home made liquid fertilizer and home grown Effective Micro-organisms. It seems that my plants are bigger and healthier now.



2. Home made-goal

I made all our crackers but made less bread.

Unfortunately it was too wet or birds ate all the soy seeds so I couldn't experiment with soy sauce. I did make hot sauces, sambal and lots of ajvar.

We have a new habit of having a pan with stock on the stove. We put chicken bones, onion peels and garlic peels in it, some carrot scraps, bay leaves and a piece of celeriac. This stock makes that we don't have to buy bouillon any more.

I have been making liquid soap from ivy and filmed the process so I can use it on my blog. I have been making all our laundry soap with soda, salt, citric acid and a soap bar.

I tanned the hides of our (home butchered) lambs and made warm slippers with the 1 hide that didn't turn out so well.

When I told the kids that I didn't have a festive blouse for my mum's birthday, they suggested me to make one myself! I love their thinking and their trust in my skills.

3. Health goal

I stopped buying deodorant and son and I started using only the home made deo. Same for facial cream and hand cream: my daughter is in and I will not buy it any more.

Next: only using home made tooth paste.

I made all our cleaning products except dishwashing liquid.

I made all our herbal teas, tinctures, syrups and boosters like ginger-lemon juice. I was the only one using an occasional pain killer this year, with heavy head aches.

We aren't fans of doctors anyway, and last year we didn't visit a doctor at all. My teas, tinctures, salves and chicken bone broth were enough to prevent illness or cure it quickly.

4. Wood fuel goal

We have half of our winter wood ready; there is still some lying in the forest.

5. Water goal

Yes we managed our rain water well this year and collected enough for the chickens, rabbits, sheep and the greenhouse. Quite often I have also watered the garden with this rainwater; I used tap water for the garden maybe 5 times this year.

Peter cleaned the well and put in a new tube with the help of a neighbour and a scouting group. He needs to finish 1 more small thing before well water is accessible.

We are now more seriously planning to build an extra compost toilet and a natural grey water cleaning swim pond.

6. Electricity goal

No change yet, except that son and I used the scythe more often and strimmed less.

Extra income streams around self-sufficiency

Since 2022 I facilitate a course called "Introduction to sustainable living and permaculture" five times a year. Now I moved all gardening related subjects to 1 day in my course setup, so I can offer this day as a self-sufficient gardening course for other people as well.

I moved things around on my laptop and started a folder called Self-sufficiency. Here I collect materials for courses, an e-book, video tutorials, printables, newsletters, social media posts... I also started a very practical design of how to tap into an extra income stream and earn some money with my knowledge and experience of self-sufficiency.



MANAGEMENT

In 2023 one of our chickens decided to become a mum. Now we have an extra rooster... In stead

of butchering him, we decided to get more chickens so we can have 2 roosters. And of course we will always have enough eggs then, and we can easily sell them to camping guests.

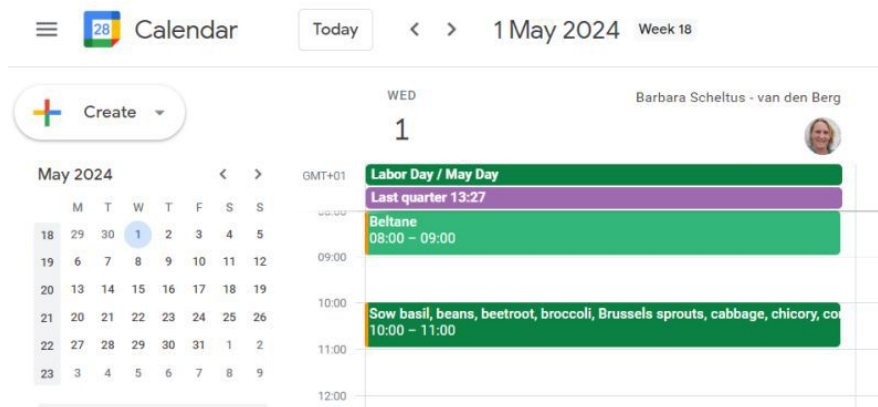
In stead of watering the garden on hot summer evenings, I will make an effort to install simple drip systems for watering. A bucket on the high end with drip tubes coming from it. This is easier than getting the hose out on mosquito night and spend an hour being bitten.

How to maintain momentum with sowing and planting?

Every 1st and 15th of the month I have an automatic reminder of what to sow in that time of the year. That has been working for me in the last year and I added “Wednesday sowing day” as a new habit.

I do need a way to connect sowing time to climate and not to date though. I notice that the weather has been cold and wet in spring '24 so I postponed some sowing, and autumn was so warm and sunny that I could still sow earlier crops.

Also the fact that groceries went up in price (since corona, wars and the introduction of the euro in Croatia) and our income didn't grow along, helps a lot. Growing much more of our own food is necessary now.



EVALUATION

Home made and organic growth seems to fit us well. We love to live a handmade life and it makes us feel resilient.

I have been taking our self-sufficiency much more serious and therefore there were more successes. A few examples: bi-weekly sowing makes sure that there is always salad greens. Repairing the sewing machine was the start of me making more of my own clothes. Putting the scythe in sight (in my greenhouse) made me scythe the grass in the garden much more often, which resulted in more fresh greens for the rabbits and therefore more healthy rabbit manure to fertilize the garden with.

2024 Was not an abundant year because it rained too much for some crops and the frost came back late in spring so we had almost no fruits, but yes the garden always had food and we had a freezer full of lambs.

We grocery-shopped much more mindful and our shopping budget almost halved.

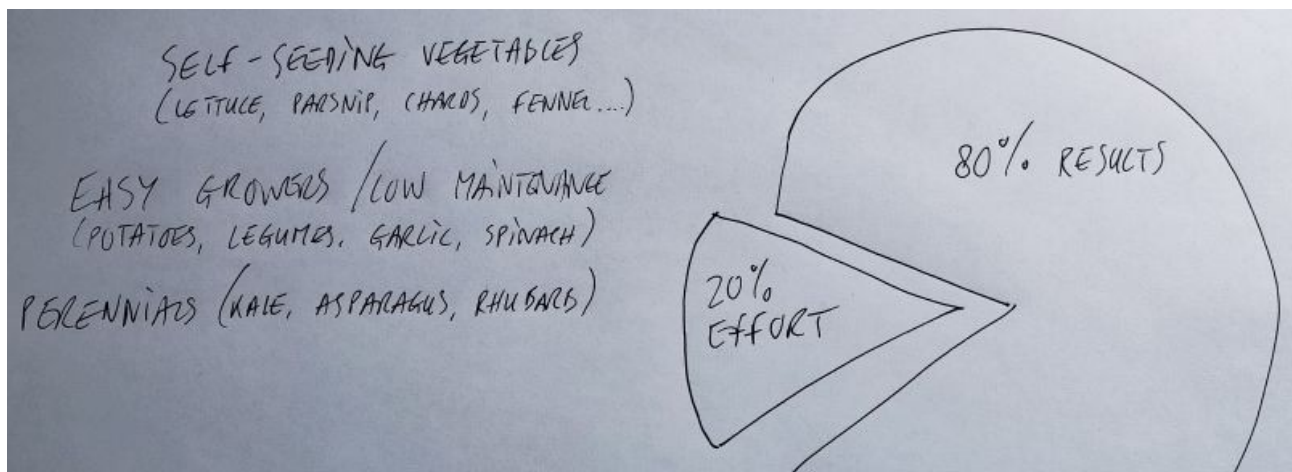
Stacking functions

I wanted to take time for a sit spot, exercise more and give the garden more attention. I stacked these function into a "walk spot": I walk through the garden at least twice a day now in surround awareness, and pick salads and vegetables for our meals.

Another benefit of taking our self-reliance more seriously is that my skills grow and I get more creative with the harvest, which I can use in a course or blog posts or video tutorials. It might feed a future income stream.

Small effort for a large yield

An 80-20 analysis helps to identify the most effective activities that yield the greatest results.



It is quick and easy to make our own condiments and they bring much more flavour to our meals, adding variety and enjoyment without consuming too much time.

Some crops (like tomatoes and eggplants) need more attention and effort, but they are essential. While they take more time, they provide diversity in your diet and can be preserved for use during their off-season. I guess the tomato cages that I will make this spring, will help with easier tomato maintenance.

Daily bread baking is time-consuming but provides a staple food. Bread is important in our household so I could explore alternative bread-making methods or batch baking to streamline the

task. Maybe also involve long-term volunteers or tell my son that it is a great workout.

Not worth the effort (yet?) is growing grains for flour, making our own walnut or sunflower oils and keeping bees. There is much more knowledge necessary for that.

By focusing on the 80% activities that bring the most yield with less effort and strategically managing the 20% tasks, I can streamline my efforts toward a more self-sufficient lifestyle and make sure that we have a diverse and nutritious diet.

Reflections on the design process

The aim for this design was to create a more resilient life for my family by growing our self-reliance. This design made me realise what we already do and have and how we can transform to more self-reliance with small adjustments.

With the pride there is also confidence now, and trust that we have safety.

I have met a few people that were very enthusiastic about the GOBRADIME design process and I wanted to give it a try.

I was a bit sceptical because I have always started my design processes with vision. Who am I, what are my values and where do I want to go with a project. It is not about the what; "what" is depending on "who" and "why" in my world.

But for this self sufficiency design I thought that this jump to the "what" (Goals) could work. I thought I could simply start the design with "Our family wants to be X% self sufficient by year 202X". But boundaries kept popping up, I felt it needed explanation and I don't know how to calculate the % of being self sufficient for making it a SMART goal. I needed context for the goals.

I have no intention to reinvent the wheel or to know it all better, but working from Goals to Observation to Boundaries just didn't work for me. So I *moved the tools* and alternated GOBRADIME into BOGRADIME and that gave such a relief! It brought back the flow in this design and I was able to put all the text surplus in appendices.

The magic in the design process happened when I thought of stacking functions and reviving my blog <https://livingselfsufficient.wordpress.com/> with all this surplus of text from the design, and all the ideas and insights I got from it.

I also changed our profile text as a host on volunteer platforms like [WWOOF](#), [WorkAway](#) and [Worldpackers](#) and added more focus on our growth in self-sufficiency. It immediately brought a different kind of volunteer applications. From a majority of "hip" people who like the idea of permaculture, we now reach more serious people who want to learn country life skills for an abundant life on the land for themselves.

And that brought me to design and organize a course in sustainable living and self-sufficiency, from 7 - 11 October 2024!

What I learned as a designer

Designing truly brings me further in my projects. It prevents mistakes or getting stuck in a phase, or like in this case: it makes clear where we stand and how to proceed.

I love to *do*, be in action, but without the thinking beforehand the doing isn't always effective.

Now with this design #8 on my Diploma path, I feel that I can play with design frameworks. In my idea designing has just a few basic steps:

- what do you have
- what do you want
- how will you get it
- how will you keep it

All design frameworks are a variation on this theme and some have extra's like tweaking, appreciation or celebration.

What do you have you can also call Observe, Survey, Resources or Helps & Limits, or even Boundaries would fit.

What do you want you can see as an Analysis or Vision or Goal setting

How will you get it is the Design part, or Ideas & Integration, Implementation

How will you keep it means Management, Maintenance, Monitoring or Momentum

What I learned as a designer is that if you have a basic idea around your design subject, you can simply look through something like the Frameworks cards in the [Permaculture Design Deck](#) or you scroll to the right page in the book [Permaculture Design Notes](#). Both great and seemingly complete resources for the serious permaculture designer.

If you chose a framework or tool but you get stuck, just *move the tools* and *trust the process*.

Appendix I – Boundaries to our self-sufficiency

When we came to live here on our land in 2009, all neighbours lived self sufficient. Money didn't play a big role in their lives; kinship did. They worked together, bartered, co-owned more expensive machines and lived as a community. Just as they had been living for hundreds of years. You live with sunlight, hand tools and water that you get from the central well.

This lifestyle changed when we were connected to the water (and got bills), mobile phones became mainstream (with their bills), and more and more of the elders moved in with their city-children or/and died.

Technically there is still no limit for living fully self sufficient in this area. We own 12 hectares of land, of which 4 is officially "forest". This is plenty for feeding ourselves (and many others) and creating enough wood fuel year round.

For now our land is not limiting us in the volume that we can grow, nor in fertility or water supply. If we would need more growing space, we can cut a few trees on one of our parcels that looks like a young forest but is registered as "oronica"/arable land.

There is a climate boundary: this is more or less compatible with hardiness zone 7 (but later spring frost chance and first frost not in fall but winter). Our long, hot and usually dry summers make it difficult to grow lettuce from June until September. We have cold winters so we can't grow Mediterranean perennials like citrus or olive trees.

For stretching the growing season, we have a greenhouse with a stone wall that accumulates heat during the day and keeps the temperature moderate in the night. In this greenhouse I planted 3-4 year old avocado trees against a south facing, heat accumulating wall, but the above-ground parts didn't survive their first winter in the greenhouse with -10°. Two of the trees did grow back from the roots though.

Time boundaries

If we had all the time in the world, we would live much more self sufficient. But that is not realistic; we need to spend time on earning money to pay bills, pay fuel for the car, some groceries and clothing.

Our time is spent on

- welcoming guests on our campsite, administration and marketing
- organizing, marketing and facilitating courses
- finding and instructing volunteers, administration
- household: cooking, cleaning, animal care

We have to be available for people and put more effort in maintaining the terrain and the house because of the expectations of guests. We compensate that by hosting volunteers who can take care of the garden and do some simple tasks, but only when we pick the "right" volunteers and to a certain extend. Volunteers aren't workers.

Scale of self-sufficiency

To make calculations for food self sufficiency possible, we need to define an amount of people we want to feed from our land. Only our family of 4 in the winter months, on average 4 volunteers in the warmer months and a few guests in summer. We don't have to feed a village yet.

When there are more people living permanently on our land, we can reconsider or grow the scale of our self reliance. There would be more demand for things like flour, sunflower oil and (risotto) rice, so it would be worth the effort to grow or make it.

Limits to our consumption

If we would strive for more or even full self sufficiency in food, we have to put boundaries on *what* we consume. Ethical boundaries like **earth care**: no ingredients from more than a 200km radius for instance and no products that pollute or produce waste. So no coffee and green tea, no chocolate or bananas, nothing with palm oil. No more rice until I grow an Italian Arborio rice myself.

Also the amount we consume matters if you consider the permaculture ethics **Fair share** or **Future care**. I think that diversity in our diet is healthier than potatoes every day or meat every day.

If we would eat 150gr meat per person every day, that would be almost 500 kilo of meat in a year (with our average of 9 people at the table - see page 43). That is 10 mature sheep. Of course we can raise 10 sheep, but it is unnecessary. 2 Or 3 times meat per week is enough. We can use one of our other protein sources for a well balanced diet, like legumes or nuts.

Potatoes every day would be difficult to grow (200 gram per person so almost 2 kilo daily, is 657 kilo in a year. That would be 165 square metres of potatoes: a guarantee for bug investigations and plant diseases.

Economical boundaries

Our finances limit our spending. Our household income gives us a boundary and makes that we are creative with our resources.

In winter, when our income is much lower than in summer and we don't host (many) guests and volunteers, we live a simpler life and therefore much more self reliant. We have all the fresh kale and chards, stored squashes, all frozen, pickled and fermented summer vegetables for just our family.

Economical boundaries from another point of view: dried beans I can buy for around € 3,- for a kilo. When I grow them myself, I spend an hour or two in the garden to make bean teepees and sow them, over the 4 months of growing I feed, water and mulch the plants regularly and then I harvest the beans, find a good sunny spot to dry them on a plastic sheet and a few days later I take them out of their pods.

If I would calculate an hourly rate, it would not be very economical to grow beans.

But if I would be able to calculate health, pride, nitrogen fixing, food for our bees and the joy of being in the garden, it is totally be worth growing beans!

Technological boundaries

We need 2 cars because we live 5 kilometres from civilization. Because of the possible danger of bears in summer, wolves in winter and wild boar all year round, we don't want to let our teenage daughter walk or cycle up and down the hill by herself. We bring her to school by car.

We need laptops to work and write, have online calls and do our marketing. We need smart phones to reply to questions from guests and volunteers on various media.

We need a stick blender and a kitchen machine because with just a knife you get different results. We need metal pots and pans, cutlery, a stove, gardening tools, sheers, saws, scythes, a strimmer...

There are lots of tools we can't and don't want to live without and there is no way that we can make (or even repair) them ourselves.

Appendix II: Inventory of our self reliance

Fruits

We grow lots of berries, apples, pears, peaches, plums and persimmons. Almost every year I plant another variety for diversity. Easy to grow an abundance when the last frost allows. The spread over the months is also OK: our fruit season starts with strawberries in May and ends with persimmons in November. With fruits it is more a matter of storing the nutritional value than growing enough.

Vegetables

We grow year round (so also in winter) fresh vegetables. Some perennial (like the asparagus, Jerusalem artichoke, rhubarb), some bi-annual (like kale and chards), some self seeding (like French spinach, winter cress and lambs lettuce). Also edible flowers.

Besides red, white and yellow onions from the garden and 3 types of garlic, we forage ramsons (wild garlic) in early spring. We grow leeks and “spring onions”, and in case we buy those in a shop we re-plant the part with the roots to grow it again.

Roots & tubers

We grow potatoes, carrots, parsnips, beetroots, Jerusalem artichokes, day lily tubers.

The 1 year I tried to grow enough potatoes for a year, there was a drought and all potatoes were tiny. The amount was right but the size wasn't.

Growing enough parsnip is easy because it seeds itself out, but I don't think it would be possible for our family to grow enough carrots. We would need at least half a kilo a week.

My beetroots, kohlrabi and turnips need more/other nutrients and more water by the look of their size.

Legumes

We grow peas, broad beans, beans for drying, green beans, chick peas, lentils and soy.

Grains

I haven't seriously tried growing grains yet. The handful of rye, wheat and oats that we grow, usually come from seeds in the straw mulch.

We grow a tiny bit of rye and a little bit of wheat and oats. More accidentally than deliberate.

I bake bread regularly. Sourdough bread (with fermented flour which acts as yeast) and bread with added yeast. The sourdough I make myself; flour and the yeast are store bought.



Nuts & seeds

We are growing into a nut farm (see permaculture design). Nuts go well, except with a late and heavy night frost which happened 2 years in a row.

We grow walnuts and hazelnuts, we forage sweet chestnuts and beech nuts.

We grow sunflower seeds for birds and a wild variety of flax in the field.

Growing seeds for eating (like flax, chia, poppy, sesame, cumin) I haven't seriously tried yet. Only coriander and fennel seeds do well.

We grow seeds from all our vegetables (except carrots), to sow next year.

The fruit seeds (like peach, cherry and apricots) go in the compost and sometimes hatch again in the garden.

For years I have been growing my own seeds for sowing all vegetables, usually successful (except carrots). But what if seed saving goes wrong? I need to setup a good seed saving system that makes sure I still have my seeds if a crop doesn't give good seeds for 2 years.

I spread my seeds, usually for free to people that I don't really know. It would be nice to cooperate with someone nearby so we can function as each others seed bank.

Meat

We grow rabbits for meat (and for their manure which we use as fertilizer).

Since a few months we also have sheep.

We have bought pigs from neighbours almost every year. We butcher the animals (after the veterinarian kills them) ourselves.

I have collected and bred snails in the past.

I created a habitat for mealworms, which I feed to the chickens now. We have been thinking of eating them ourselves; they actually look quite appetizing.

Sometimes (less than once a year) we find a fresh road kill or our vegetarian friend Igor finds a fresh dead boar in the forest.

We have chickens, mainly for their eggs. When they are sick or too old we butcher them and use them for soup.

As long as we don't grow our own pigs, we should buy a mature pig from a neighbour for our bacon, pork and lard supply. We have successfully smoked an annual supply of bacon twice. With the cuts that aren't nice, we can make minced meat and sausages.



We don't know how to kill a sheep yet (in a respectful way) so I guess the sheep will be quite expensive as well if we don't make a plan and stick to it.

Our skills in butchering are growing. We know our cuts, techniques and how to freeze meat properly. We have made minced meat and sausages and we have smoked bacon successfully.

I should collect and breed snails again. Catching them prevents vegetables from being eaten, and it provides us with a nice starter.

When I would do my best, I can grow many more mealworms to feed the chickens (and maybe also ourselves?)

The wild boar do a lot of damage on our terrain. It would make sense to catch at least one to scare the others off and to pay off the damage.

Same for deer: they eat a lot of our vegetables in winter. If we can catch one, the damage would hurt us less and it would feel more in balance.



Our collection of vineyard snails. They lay 100 eggs each!

Poultry

We should butcher our chickens after 3 years (and not after 4 or 5) and we should encourage them to have their own nest.

Besides chickens we could grow other birds like turkeys, geese and ducks.

Fish

We don't grow edible fish.

When we have more people living here, we could think of setting up an aquaponics system with edible fish. For now that would be too complicated.



Mushrooms

We have grown oyster mushrooms, shii take and Judas' ears on logs.

All year round (and especially in fall) we forage puffballs, champignons, Judas' ears, chanterelles, porcine, parasol and other mushrooms from the forests.

We live surrounded by various types of forest, with various types of mushrooms. Our mushroom hunt usually provides us with plenty for a few meals. I have tried and it is not worth the trouble to grow mushrooms on logs.

Dairy

We have sheep with lambs so we could start milking. We don't h

If and when our sheep provide us with milk, it will not be enough
Sheep milk is quite fat, so we might try to make butter with it one

There is an old lady with a few cows on the road to school,
where we sometimes buy 5 litres of fresh milk.

We use milk to drink, for making yogurt, kefir and cheese. We
buy butter, sour cream and more heavy cream for cooking.

Cooking cream, sour cream and heavy cream/crème fraîche
are expensive to buy. Often we replace them with
béchamel/white sauce, that we make with lard, flour and milk
(or bouillon).

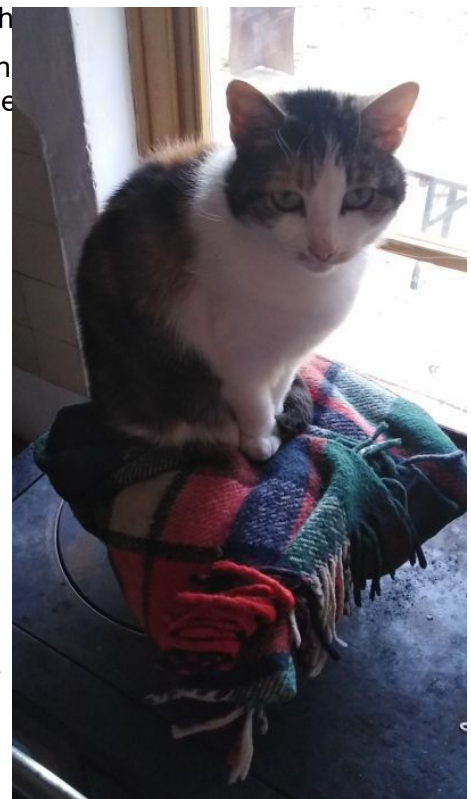
When there are many more people living here and also taking
care of animals, we will reconsider having a cow and/or goats
for milk.

Condiments

I make ketchup, mayonnaise, red pepper sauces and barbecue
sauce but all use store bought ingredients like oil, salt or sugar.

Pesto we make from any green that is abundant (basil, kale,
rucola) with any seed or nut that we have (sunflower seeds,
walnuts) and oil.

Ajvar (Balkan sauce) and vinegar we can make from only home
grown ingredients.



*Cat keeping the yogurt (wrapped in a
woollen blanket) warm :-D*

For all condiments we need sugar, salt and oil: things that we still need to buy.

We need a storage solution: usually we make more sauce than we need but it spoils quickly.

Snacks

We grow hazelnuts and walnuts for a snack. Sometimes we candy a batch of walnuts (oil them, sprinkle with sugar and bake).

This year for the first time we grew peanuts.

We “candify” citrus peels and we make dried fruits with apple slices and plums.

Fruit leather and caramelized walnuts are the best snacks. Cheap, easy to make and you can store them “forever”.

The snack made from “waste” like the sourdough crackers and the “candied” citrus peels are also great.

Popping corn is a skill, baking crisps is complicated. We like to pop corn or amaranth and both we grow ourselves (but never enough corn for our popping habits).

When I make wine from fruit juice, I make dried “fruit leather” from the leftover pulp.

We never made raisins from the grapes.

We have experimented with making our own crisps from thinly sliced potatoes and kale.

Also fried and pressed pig fat, called čvarak (cracklings), the by-product from making lard, is a good (and greasy) snack.

With the sourdough starter and some nuts and seeds I make crackers.

Herbs & spices

We grow all our kitchen herbs (like coriander, dill, rosemary, thyme, oregano, parsley and nettle!) and we have grown a little ginger and turmeric.

We grow red hot chilli peppers and other varieties of peppers, also to dry and make powder. We tried but didn't manage yet to make smoked paprika powder.

We have made veggie-bouillon powder “vegeta” ourselves: powder from dried vegetables as a tasty ingredient for soups.

Easy. We can also just use what we have and not make meals too complicated.

Sweeteners

We have our own honey, we made a sweetener from birch juice and we grew stevia.

Last year I sowed sugar beets but the sheep ate all plants.

Oil

We managed to get some oil from walnuts once.

When we butcher a pig, we render lard from pork fat. One adult pig gives lard (to use as cooking fat and butter) for a year.

Wine

We have made wine from honey, many fruits (plums, apples, peaches for instance), flowers (primrose, dandelion, elder blossom) and many berries (grapes, rose hip, mulberry, blackberry). We have all supplies to make wine.

Beer

We have made beer a few times, and Peter has a "beer mentor" (who used to work as a quality manager at a beer factory). We have all equipment, we just need to find a supplier for the ingredients.



Strong liquor

We have made strong liquor (42%) from our own peaches, apples and plums. We drink it sometimes, or sell it to camping guests. I make liqueurs with it (limoncello, other fruits or nuts infused) and herbal tinctures.

Cordials

We make cordials from everything that we have a lot of, like lemon balm, nettle, mulberry, aronia/chokeberries.



Spreads/on bread

Ajvar mixed with butter and garlic gives a delicious Balkan spread for on bread.

Sour or broken dairy (milk, yogurt, kefir) we strain through a cloth, add salt, parsley and/or chives and/or garlic and/or paprika powder so it becomes a dairy spread.

We make hummus from chickpeas, cilantro, sunflower seeds and oil.

We make baba ganush from eggplant, garlic, cumin, parsley and oil.

Animal food

We cut our grass, dry it and store it as food for the rabbits and sheep.

For our animals we grow a bit of corn & grains, we give them garden “weeds”, kitchen waste, old bread and we feed them eggs.

We forage sweet chestnuts for sheep and rabbits.

We don't grow (much) of their straw yet (the waste product of growing wheat or rye) but the rabbits can also sit on sawdust (the waste product from Peter's sawing).



Scythed grass drying in the field, for hay as animal food

Health/medicine

We drink tea made of herbs from our land.

For scratches and wounds we have a home made calendula salve.

For a cold or throat ache we use a home made tincture mix (thyme, goldenrod, echinacea, agrimony and propolis tincture).

For an infection we use home made oregano oil and/or tincture. If that doesn't help (enough), I make a sauce from garlic, oil, horse radish, ginger and turmeric, and we eat a bit more kimchi.

I made wild lettuce tincture as a painkiller and we also buy painkillers.

Personal care products

I make hand creams and facial creams, after shave cream, lip balm and deodorant.

I made my own (washable) pantliners on the sewing machine.

Cleaning products

I make all our cleaning products (except dishwashing liquid) myself. Dishwashing soap we buy.

The only cleaning product I make without anything from a shop, is the liquid laundry soap from ivy.

The laundry powder uses all store bought items (like soda, borax & soap).

The all purpose cleaner uses Effective Micro-organisms that I make (grow) myself, and home made vinegar.



Clothing

Some clothing items I have made myself, or my mother made it for me. But the majority of the families clothing comes from a (2nd hand) shop.

We have sheep (and all our neighbours as well) and I know how to spin and felt wool. I have dyed wool with various herbs from our terrain and at the moment I am tanning my first sheep hide.

We have a little flax growing in the field; technically we might be able to make linen.

We have lots of Mulberry trees. Whenever I get the chance, I will get silk worms.



Housing

Our house is partly built with wood and insulated with local straw and clay. It is on our wish list to build our own house with only natural materials, but we will probably also need concrete (with store bought ingredients and metal).

We have made animal housing from beams, sticks, clay and straw, even experimented with home made wooden roof tiles, but there are limits to what is practical. Natural materials need more maintenance and tend to go back to nature and not last a lifetime.

Furniture

Peter made the majority of our furniture from wood and metal. He also made some hand tools to work with.

We don't like stuff from shops and usually it is not practical. Peter loves to design and make tables, chairs and benches and he is a skilled blacksmith and wood worker.

Tools

Peter has made tools himself (like blacksmithing pliers, mallets, ladders, nails, clinches, clamps) and I have made a broom, but it is definitely not a subject we want to be self sufficient in. And also: all these tools are made with store bought tools.

Heating, cooking

We cook and heat the house on wood that comes from our forests. General forest maintenance gives more than enough wood for a year.

We have wax from the bees so every now and then we melt it to make candles.

Electricity

We get almost all of our electricity from the government: Hrvatska ElektroPrivreda. We do have 1 solar panel and a few batteries to store the solar energy, as a test setup.

We don't have many electrical appliances. We'd rather sweep and mop the floor than vacuum-clean it.

Water

Our water comes from the government too, although we have a few well water sources on the terrain, an 8 meter deep pit with rainwater and several 200 litre rainwater barrels.

In a year it rains enough to supply for our entire water need with all the roofs that we have. We just don't have a good way to store the rainwater.

Especially the camping guests use a lot of water. We could lower the water pressure in the camping showers and make an infographic about the planet's water.



Transport

I could use my bike more to go to the village.

With an electric bike the way back would be easy too.

We drive a car and a pickup, both on diesel. We also have 3 bicycles, 2 wheelbarrows and a benzine mower with cart behind it.

Services

I could cut my families hair.

We could homeschool the kids and we have the skills to turn them into responsible, happy adults.



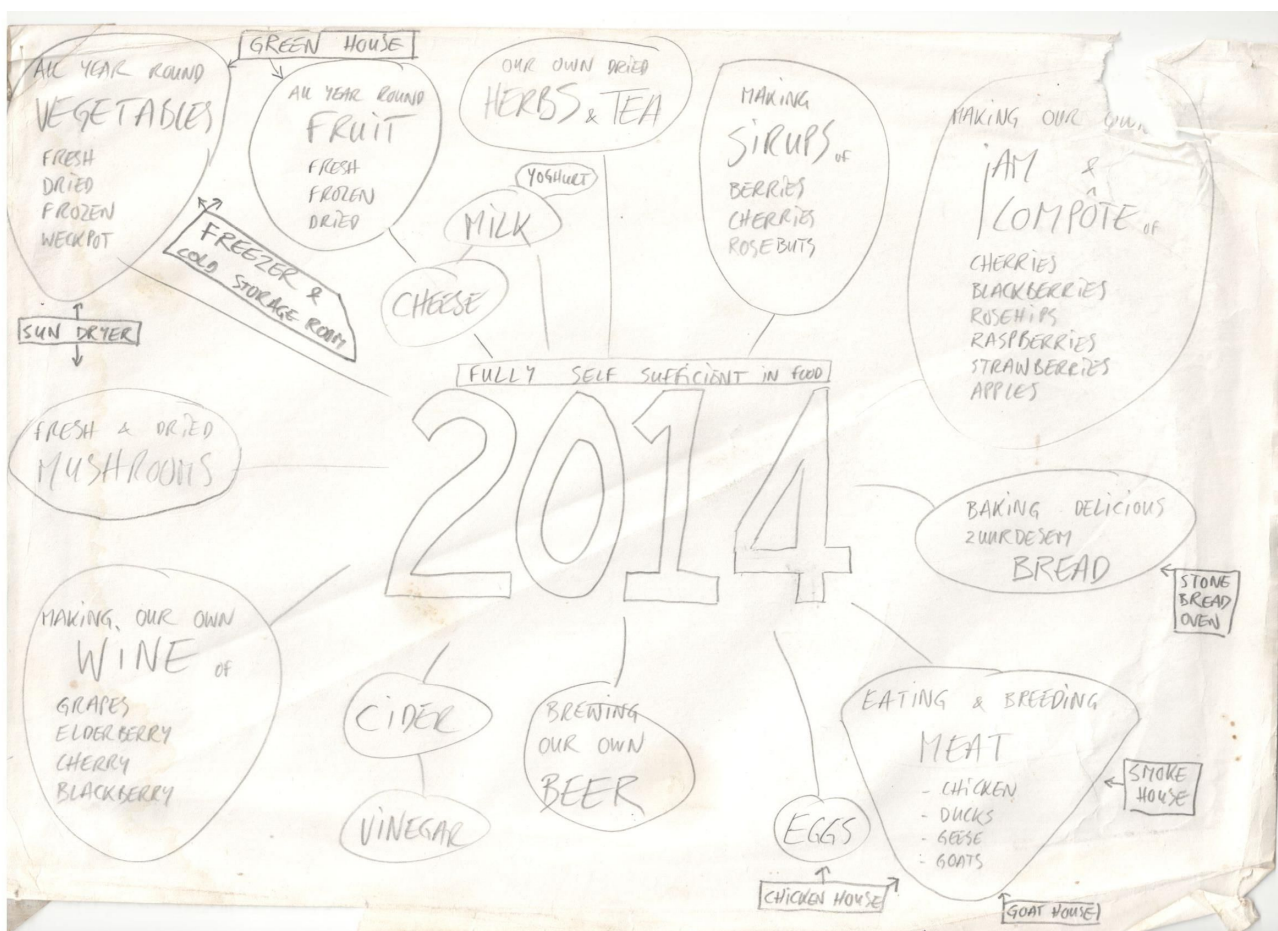
Our daughter Fleur (7 on this picture) and volunteer Lou making the wooden frame fit

Appendix III - I ♥ home made

I have always lived with this pattern of growing my own food and making things myself. I was unhappy with the price, the quality or functionality of store bought clothing so I would make items myself. As a kid I was excited about the mini tomatoes, mini carrots and mini corn in my corner in the back yard. Later, living in Amsterdam in a tiny apartment without even a balcony, I would grow tomatoes in the window sills. Later when I had a 2x3m patio, I grew food 3D to maximize the use of the space. I married a blacksmith who is also very handy with wood and other materials.

My excitement of growing our food-self sufficiency resulted in a mind map with 5 year-goals that seemed a far reach back then. I made the mind map when we still lived in the city (centre), a month before we moved to our 12 hectares (30 acres) of land in Croatia.

The mind map represented all my wishes about our (food-)self sufficiency. Baking our own bread, foraging herbs on our land and turning them into herbal teas, making wine, cheese, our own sausages...



Scan of the mind map made in 2009 about desired self sufficiency

In the first years of living on our land, we slowly and small scale started all these processes and yes, in 2014 (within the 5 years) we had done everything at least once. In the years after we grew and extended our skills and growing spaces.

Our own produce, grown with the **earth care** ethic, leads to **people care**. It gave us health, strong immune systems, much lower expenses on groceries, fantastic quality food on the table and a son who is growing into a chef.

But now I observe that there are limits to our growth. Things that grew well in the past, don't grow so well any more due to new seasonal patterns. We even lost some seeds due to bad weather (and garden mismanagement and 11 sheep escaping into the garden, chickens in the garden...).

We need to find a new approach of our self-reliance and make a permaculture design about it. 1 Of the 10 designs for my Diploma in Applied Permaculture Design.

Appendix IV – Analysing in details

How to be self sufficient with a fluctuating amount of people?

We are a family of 4. In the 8 warmer months of the year we host between 2 and 6 volunteers, in the summer months we regularly have course participants and camping guests at the table... So we cook for 4 – 20 people. How do we grow for that?

Winter vegetables are available from October until April, Summer vegetables are ready from June until September. We need to do our best for April-May-June.

We can also approach our food self sufficiency in calories. If the 4 of us would need 8.000 calories per day, we would need to grow almost 3 million calories in a year.

1 Daily meal of potatoes for our family of 4 would be just over 200.000 calories to grow in a year. Complicated calculations.

More difficult is to collect enough rainwater for showering camping guests. Some people shower twice a day and/or for 20 minutes.

When the local water supply would come to an end, our family and volunteers could live with only well water and the collected rain water. We could go back to handing everyone 2 big 2 litre bottles to put in the sun for a warm shower, like we did in the first years of living here.

January	4 people
February	4 people
March	6 people
April	8 people
May	10 people
June	14 people
July	18 people
August	18 people
September	12 people
October	8 people
November	4 people
December	4 people
110 / 12 m	9 people average

How much is enough

So we used to shower with 4 litres, and 6 when washing our hair. That was enough. Now that water comes out of the tap, we use sooo much more for a shower!

With a few crops I do make calculations for having enough yield for a year. See Appendix V – Calculating for self-sufficiency on page 46. But you can't calculate for weather conditions: one dry year the amount of potatoes was right but they were all small; their weight was only 20-25% of what it was supposed to be.

I calculated to grow a few jars of hummus, but didn't anticipate poor chickpea plants that would grow only 1 chickpea in each pod (and only 6 pods on the plant). Bad seeds?

In 2023 all legumes didn't grow well or at all because of the abundant rain.

Although we have a fence around the garden and 2 dogs on the terrain, the wild deer still see chances to eat the chards and lettuces. Even planting an abundance with the idea of sharing doesn't help: the deer just have a bigger feast. They don't do "fair share".

I calculated the electricity need for all our electric appliances. It isn't much, we could store this in batteries, but this is theory that doesn't calculate for camping guests who bring water boilers, coffee makers and even air-conditioners in their camper van. Or dark and cold winters when we use more electric light and watch more movies. Or a volunteer with 2 phones, a laptop, powerbank, complicated watch, hairdryer and an electric toothbrush (yes we found this all on 1 person).

Crops go wrong

My gardening skills and knowledge aren't sufficient for all vegetables that I grow. I should look deeper into soil health and the details of things like cabbage (heads), broccoli, cauliflower, into

specific nutrients/fertilizers for certain vegetables and I need more beds with a watering system. Also leaving important tasks to volunteers regularly results in disaster like losing all seeds of a variety or ending up with a dead SCOBY for kombucha.

We still buy food

Because I *believe* that our kids, guests and volunteers will start complaining if we have potatoes 5 times a week, I buy rice, bulgur, couscous and pink lentils as extra staple food.

I *believe* they wouldn't want to eat only the vegetables from the garden so sometimes I buy diversity in our diet (like cucumbers or melons).

I also just never have grown enough tomatoes to be able to make 52 jars of tomato sauce (one for every week). Would that be 52 plants? That can be a goal.

Because we also host vegetarian guests, we haven't fully substituted oil and butter for lard yet.

We like to cook lasagne and sarma (fermented cabbage rolls) and meatballs and all dishes have minced meat. That is a mix of pork and beef that we buy at the butcher. If we would shift to mincing parts of the lambs meat and maybe the old chickens (and the family approves of the change in flavour), we use our own resources.

Some crops seem too much effort

To make a kilo of flour, 1.5m² soil needs to be prepared, sow the wheat (80 plants per square meter), grow it, scythe when ready, thresh the wheat to separate the grain from the chaff, grind the berries until the right size of flour and use immediately (or freeze) because it is a fresh product. A kilo of organic flour I can buy for € 1,- or € 1,50.

Growing chickpeas have given a 1:6 Return On Investment (ROI) in the past. You put 1 in the ground and get a small plant with around 6 pea pods with only 1 chickpea in each pod.

Aubergine (eggplant) somehow doesn't like our soil or our climate. I tried indoors, outdoors, I tried to grow from seed and with plants that I bought on the market... almost no yield.

I learned so much about vegetable gardening in the last 15 years, that I can safely assume that there is a lot more to learn for a better yield. Now I know better what I don't know yet.

Timeliness

With our 12 hectares of land it is not that we ever need to buy wood. It is only when we don't pay attention to timing or just not take action (too busy, too injured, too lazy, too rainy, pick up truck in repair...) that we need to buy wood for heating and cooking. Or chopping a tree in summer when all sap streams are running, while the wood is already half dry when you chop a tree in winter when it is dormant.

Same for growing food: I need to make an effort to sow seeds every 2 weeks otherwise we miss crops. And pay attention to timing when pruning or propagating. Know when to prune or propagate what, and don't postpone when there is a good day to do it.

Out of season, out of climate

Ideally we live with permaculture ethics but we aren't rigid. We prefer to consume only local, seasonal produce because it doesn't travel (*earth care*), we spend our energy and money locally (*fair share*) and it is healthier (*people care*) but life isn't always ideal. Sometimes we host an excellent chef with 35 years of experience who can teach our aspiring chef-son so much, that it is worth buying extra eggs for crème brûlée or driving to the Asian store in Zagreb for ingredients that can teach him special techniques.

Citrus fruits we buy all year round. We grow only a handful on our balcony and indoors in colder months, because it is a Mediterranean fruit. We grow a few; the majority we buy.

We still drink coffee. We (probably) can't grow it in our climate, we don't like substitutes, coffee makes us happy so we buy it. (I did buy coffee bush seeds in Bosnia though and will give them a try)

We eat chocolate every now & then. Cocoa trees grow in the tropics.

Bananas are our favourite fruits. We try to not buy them, but sometimes we do. I have heard of a variety that could grow in our climate. Of course I will give it a try when I find the seeds or plant.

Preserving the harvest

For some vegetables we have to make a plan for processing and storage. We have a cold room for storing fruits and vegetables but since we have put a fridge in there, it is less cool. There are also techniques of which we only know a few. Like leaving not less than an inch (2.5cm) of stem on a pumpkin or squash makes that you can keep it for up to 6 months. Or collecting fern leaves as an underground and in-between layers for storing your apples.

We need to grow our skills in fermenting and pickling, start using the recipes that volunteers leave here, like "bread and butter pickles" which is so tasty that you need nothing else than bread and butter with the pickles. I can experiment more with fermenting carrots, turnips, kohlrabi and softer cabbage leaves like nappa cabbage or Asian cabbage leaves. We can preserve tomatoes and peppers in sriracha, sambal or tapatio. Eggplants can be stored as ajvar or baba ganush.

We also need to repair and install our solar dryer again and grow our skills in dehydrating (mushrooms, zucchini slices, apples and other fruit, sun dried tomatoes, flowers and herbs for tea and for cooking).



The solar dryer (without glass; it broke again) in the garden

Appendix V – Calculating for self-sufficiency

I am working on a spreadsheet with amount of people, and per vegetable the serving weight per person (200 grams of vegetables per person for instance), how often we want to eat it, how many plants we need, the plant distance and how many square metres that is.

This is a valuable spreadsheet that I might sell to people who are serious about their self-sufficiency.

Here some notes as examples:

Potatoes

A potato meal 4 or 5 times a week,
1 plant gives at least 1 kilo,
so 4 plants would be enough for 1 week of potatoes,
on 1 square metre I grow 4 potato plants,
so we need a square metre per week: 52m² potatoes.

Garlic

2 bulbs of garlic each week,
52 weeks = planting at least 104 cloves,
and 25 extra as seeds for planting out next year.

Onions

2 onions daily is a lot but we also make onion jam regularly.
So 15 onions weekly, is 780 onions annually.
Space onions 5-10 cm apart,
that is 80 bulbs per m²
so that's almost 10 square metres.
(But I decided to plant onions around the edges of all my beds...)

Beans

We eat beans once a month now, and usually when we have a lot of guests at the table because we prepare them in a traditional Croatian way. So let's say we cook them for 10 people.
1 person eats 80 grams of dried beans; 10 people 800 grams.
In 12 months that is 9.6 kilo of dried beans.
40 Plants for 1 kilo of dried beans so 384 plants
Per square metre 9 poles with 4 plants each,
We need 96 poles on around 10 m².
And a metre extra for next year's seeds.

Minimum garden for self-sufficiency

770 onions	2 onions daily
100 garlic	2 bulbs weekly
25 pomodoro plants	1 litre passata per week, 4 kg tomatoes on a plant for 2 litres of passata
10 tomato plants	for sun dried tomatoes
10 tomato plants	for eating fresh

50 bean plants	400 gr beans per week
20 asparagus plants	20 meals in spring
20 broccoli plants	25 meals in winter and spring
100 kale plants	kale twice a week
50 chards plants	chards once a week
25 m ² chickpeas	33-50 plants per m ² for 800 gr
6 m ² carrots	85-90 seeds per m ²

Appendix VI - Serious sowing schedule

This is a list of fruits, vegetables and herbs that we like to grow in our garden & greenhouse.

This summing up is noted on the concerned dates in our calendar and is printed and laminated to hang on the wall as well.

January: tomato, aubergine, leek, onion, cauliflower, kohlrabi, lettuce

Mid January: tomato, aubergine, leek, onion, cauliflower, kohlrabi, lettuce

February: broad bean, pea, cabbage, carrot, onion, parsnip, wheat, aubergine, broccoli, Brussel sprouts, cabbages, celery, kale, kohlrabi, leek, lettuce, paprika, pepper, physalis, tomato, turnip

Mid February: arugula, broadbean carrot, onions, parsnip pea potato, shallot, wheat, artichoke, asparagus, aubergine, broccoli cabbages, celery, celeriac, kale, kohlrabi, leek, lettuce, milk thistle, oregano, paprika, pepper, physalis, radish, soy, sprouts, tagetes, tomato, turnip

March: arugula, artichoke, aubergine, beet, broadbean, broccoli, carrot, celery, celeriac, greenbeans kale, kohlrabi lettuce, milkthistle, okra, onions, oregano, paprika, parsnip, parsley, pea pepper, physalis, radish, rocket, soy, spinach sprouts, tagetes, turnip, watermelon, wheat

Mid March: basil, beans, arugula, aubergine beetroot broccoli broadbean cabbages carrot, celery, celeriac, chards, cumin, dragon, echinacea, greenbeans, kale, kiwano, kohlrabi, leek lettuce, milkthistle, onions, oregano, parsnip, parsley peas, pepper, physalis, potato, radish, rocket, rhubarb, shallot, soy, spinach, sprouts, squash, sugarbeet, sweetpotato, tagetes, tomato, turnip, watermelon, wheat, winde, winter cress, witlof, zeekraal

April: amaranth, basil, beans, beetroot Brussels sprouts, Californian poppy, celery, chards, coriander, courgette, cumin, dill, dragon, echinacea, kiwano, kohlrabi, leek, lettuce, nasturtium, onions, oregano, parsnip, parsley, patiŝon, peas, radish, risotto, soy, spelt, spinach, squash, sugarbeet, sweetpotato, tagetes, turnip, watermelon, winde, winter cress, witlof, zeekraal

Mid April: amaranth, basil, beans, beetroot, broccoli, Brussels sprouts, cabbage, Californian poppy, chards, coriander, corn, courgette, cumin, dill, echinacea, feverfew, greenbeans, kale, kiwano, kohlrabi, leek, lettuce, nasturtium, parsnip, parsley, patiŝon, purslane, radish, risotto, soy, spelt, spinach, squash, sugarbeet, sunflower, sweet potato, turnip, watermelon, wi de, winter cress, witlof, zeekraal

May: basil, beans, beetroot, broccoli, Brussels sprouts, cabbage, chicory, coriander, corn, courgette, dill, echinacea, fennel, feverfew, greenbeans, kale, kiwano, kohlrabi, lettuce, nasturtium, New Zealand spinach, parsnip, parsley, patiŝon, purslane, radish, rapes, risotto, spelt, spinach, sunflower, sweet-potato, turnip, valerian, winde, winter cress, witlof, zeekraal

Mid May: beans, beetroot, broccoli, Brussels sprouts, cabbage, chicory, corn, courgette, cucumber, dill, fennel, feverfew, kale, kiwano, kohlrabi, lettuce, nasturtium, New Zealand spinach, parsnip, parsley, purslane, rapes, risotto, spinach, sunflower, swedes, turnip, valerian, witlof, zeekraal

June: beans, beetroot, broccoli, cabbage, carrots, corn, feverfew, kale, lettuce, parsley, rapes, swedes, turnip, valerian, zeekraal

Mid June: beetroot, cabbage, carrots, cauliflower, chards, chinese cabbage, coriander, kale, lettuce, rapes, rhubarb, swedes, turnip, valerian

July: beetroot, cabbage, carrots, cauliflower, chards, chinese cabbage, coriander, endives, kale, lettuce, rapes, rhubarb, swedes, turnip

Mid July: carrots, chards, chinese cabbage, coriander, endives, lettuce, rapes, rhubarb, rocket, swedes, turnip, winter purslane

August: chards, chinese cabbage, coriander, corn salad, endive, leek, lettuce, oriental leaves, radish, rhubarb, rocket, spinach, swedes, sweet potato, turnip, winter purslane

Mid August: chards, chinese cabbage, coriander, corn salad, endives, kohlrabi, leek, lettuce, oriental leaves, radish, rocket, soy, spinach, swedes, sweet potato, turnip, winter cress, winter purslane

September: arugula, broccoli, cabbage, cauliflower, chards, kale, kohlrabi, kohlrabi, lettuce, peas, radish, soy, sweet potato, turnip, winter cress

October: broccoli, cabbage, cauliflower, chards, lettuce, soy, spinach, wheat

November: Cauliflower, lettuce

December: -

Appendix VII - Weekly menu-pattern for self-sufficiency

MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
salad	salad	salad	salad	salad	salad	salad
soup	soup	soup	soup	soup	soup	soup
vegetables	vegetables	vegetables	vegetables	vegetables	vegetables	vegetables
legumes	potatoes	pasta	potatoes	flour	potatoes	potatoes
		meat		meat		meat

Examples

Salad: fresh lettuce, rucola salad with seeds or nuts, cabbage salad, tomato salad, lettuce with fruits

Soups: bean soup, pea soup, pumpkin soup, mushroom soup, chicken broth, lambs broth

Vegetables: steamed broccoli, asparagus, kale, chards, spinach, okra, leek, glazed carrots, beets, tomatoes

Legumes: beans, peas, chickpeas, lentils, broad beans, green beans

Pasta: spaghetti a la carbonara, tagliatelle a la bolognese, lasagne, cannelloni with spinach

Flour: hamburger, Italian pizza, Turkish pizza, empanada, tortilla

Meat: lamb, rabbit, chicken