

Horticulture and Sustainability Project

Earthworm Housing Co-Op

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Introduction

My motivation for spending time at Earthworm Housing Co-op was founded in my desire to learn more about practical skills for sustainability, principally horticulture, and experience an alternative way of life in a radical rural housing co-op. It seems to me that if we are to begin living in a more harmonious way with each other and non-human life we not only need to learn the practical skills, but we must cultivate a different way of life. Trying to work towards this within mainstream culture can be a disempowering experience: difficulty in access to land, public apathy and cynicism, belief in the economic growth mantra, and dismissal of practical land-based work as merely a middle-class hobby or a livelihood of drudgery. Trying to embody the practices and values of a more just a sustainable future can be much easier within an autonomous group who have access to a home and land which provides them the opportunity to live and work in a different way.

Preparation and Planning

I began my time at Earthworm at the end of February 2013. After settling in my initial responsibilities were: increasing the area of cultivation in the vegetable garden, planning the gardening year, and management of the fruit trees and bushes.

The first of these three tasks mainly involved removing couch grass and other pioneering plants that had taken over parts of the vegetable garden after a few years without cultivation. I did this by hand and succeeded in creating slightly raised and edged beds. We then added some well-rotted garden compost to boost fertility. However, as this piece of land has been used horticulturally for a long time, the soil was already incredibly rich. To save on labour we decided just to cut an edge to the beds rather than use any wooden edges. We can observe over the year and beyond, and if this results in a lot of soil erosion there is this option of improving the beds in the future.

In terms of planning, along with the full-time residents we went through an organic gardening manual selecting what we wanted to grow. As most of the produce was for self-sufficiency, great importance was given to what the co-op members themselves wanted to eat. I found it an interesting process learning about people's cooking and eating preferences and having that inform our gardening plans. It gave a more direct sense of purpose and working together. We then ordered the seeds and planned a 7-year crop rotation. The main gardener has quite a cautious approach with pests and diseases, hence the long rotation.

There was also a plan to cultivate more ornamental plants, especially plants that attracted pollinators. We were also researching companion planting and information about what plants not normally included in a strict vegetable rotation would be good to include. Marigold was one that appeared to be very useful amongst many of the vegetables, and also offers very useful flowers: medicinally they are one of the most powerful antiseptics within the British native flora.

Humanure: completing the cycle

In the orchard I helped finish off the winter pruning of the apple and pear trees, and tidied up the fruit bushes. I also added a mixture of garden compost and manure to all the fruit bushes and trees. There is no animal husbandry at earthworm but there is an in-house source of manure from the compost toilet. Nitrogen-rich human faeces is mixed with carbon-rich straw and sawdust and over a 2-year period is left to mature into a rich nutritious humanure. For reasons more linked with sensibilities than hygiene, the humanure is used on fruit trees and bushes rather than onto the annual vegetable plants or anything eaten directly. The potential for compost toilets to improve soil fertility, reduce water use and energy consumption is massive. By flushing our faeces out to sea we are opening up the closed nutrient cycle and slowly depleting our soils of valuable nutrients like phosphorus. In conventional horticulture this deficit is made up by adding phosphorus non-renewably obtained from an energy-intensive mining process. Whilst organic agriculture is more discerning about the sourcing of organic matter and nutrients, as long as we continue to discard our own 'wastes', the nutrient cycle between us and the land is broken and we will deplete our soils. It seems that the main obstacle to using humanure more sensibly is cultural aversion, perhaps with a basis in the role human faeces historically played in deadly outbreaks such as The Plague. However, from our research, we found no evidence of problems with pathogens from properly decomposed humanure.

Late onset of Spring

After planting some seeds outdoors the weather in March became very cold and when the snow came work in the garden came to an almost standstill. I focused on the polytunnel where I was growing a variety of plants from seed, such as coriander, mustard, lettuce, oriental salads, tomatoes, and French beans. I learned how to prepare seed compost and got lots of practice in making precise drills of seeds. The seed compost has to be composed of finer particles of soil and less nutritiously intense. We obtained our seed compost by sieving what we believed was relatively seed-free garden compost into finer particles and mixing it with some sand and vermiculite.

While there was less opportunity to be outside I read lots about holistic orchard management and tried to plan the grain growing trail. The idea was to grow a few different types of grain: wheat, barley, oats, and rye, and observe how each of them fared in our climate and conditions. A small patch of land was earmarked for this and we began clearing old unproductive raspberry canes to make way for the grains. The plot of land for grains was small enough that it could easily be harvested with a scythe and processed by hand.

Once the weather improved in mid-April weeding became an almost everyday activity. There was an issue with rabbits which required some fence repairing. We also erected a new rabbit fence around an area that had been covered with Mypex for a couple of seasons. This was my first experience of the full process of building a fence. We built it with sturdy cornerposts with a third of their length in the ground.

Harvest and Nourish

In May I began to harvest the first salad leaves. This supplemented the small but regular supply of wild greens we had been harvesting since the snow melted: chickweed, dandelion, nettle, and hogweed, for example. While wild green often lack the bulk of cultivars, they can contain a high concentration of nutrients and a little goes a long way. We also harvested a lot of nettle and comfrey with which we began to store to make a compost tea. Nettle compost-tea is particularly high in nitrogen, and encourages shoot growth. Once the tea was ready I applied it, diluted with water, to plants like the tomatoes and squashes. As comfrey is also very high in nutrients like potassium, as well as nitrogen, it encourages fruiting and flowering and the tea was being prepared for a later application.

In April and May I helped with the preparation and application of the neem oil based fruit tree spray. Instead of spraying to kill pests and diseases, this spray mix is designed to encourage natural processes within the tree that prevent fungal attacks and pests. It is 'spray for life' rather than 'spray for death'. I was pleased to note that many of the currant cuttings I had planted on a brief visit in December had now taken and would be ready for transplanting from the seedbed the following year.

Towards the end of May I transplanted some of the seedlings from the seed bed and polytunnel into their final growing position. The idea is to move them from their nutrient-poor seedbed into the richer soil of the garden. By the end of May the garden was looking good after a slow start. The garlics and onions planted in the august/winter before I arrived were almost ready for harvesting. Unfortunately I did not have the opportunity to carry out the grain-growing trial. I was not able to obtain seeds in a small enough quantity (as small scale grain production is very rare these days) and this added to the already challenging conditions with the late onset of spring. I also did not introduce many ornamental plants like we planned. I sowed plenty of pot marigold in pots but in the end the food-producing plants were prioritised.

Summary

My time at Earthworm was one rich in learning and practical experience. It would have been better to continue this work until the autumn but circumstances precluded this. It was my first taste of working in a garden day-in day-out. It certainly encouraged me to continue in this line of work and after May I spent the majority of 2013 working in horticultural/agricultural contexts. It is my wish to set-up a working cooperative that cultivates the land consciously, producing for self-sufficiency and trade. Ideally it will also have an educational element, where we can provide on-site, courses and workshops on sustainable horticulture and the wider context of agroecology.

Budget Breakdown for Earthworm Project

Expenditure

3 months rent to housing co-op:	£270
Food:	£150 approx.
Utilities:	£30
Travel:	£50
Total:	£510

Funds

Merlin Trust Grant:	£250
Personal finances:	£250 approx.