Tolhurst Organic Partnership CIC

November 2025

"We are one of the longest running organic farms in the country. We have been looking after food and land for over 40 years. Our organic certification with the Soil Association began in 1976."

"We have a very low carbon footprint. Compared with supermarket conventional produce, we are 90% more efficient. Our whole farm produces the same amount of carbon as the average household and supplies 400 families, so we are probably one of the greenest Box Schemes available."

Tolly (Iain Tolhurst)

Chris Hoadley

Tamara Schiopu

David Price

Overview

We visited Tolhurst Organic Partnership just an hour from London, on the afternoon of the 21 st October and were treated to an organic lunch prepared by Tamara and an in depth tour with Iain Tolhurst (Tolly) himself.

Background

Tolhurst Farm has been based on its current site at the Hardwick Estate in South Oxfordshire since 1986—almost 40 years. The farm covers just 20 acres, including a 2-acre walled garden and just under 18 acres in the field. It is an intensive growing system with no livestock inputs or products. Soil fertility is built primarily through composted woodchip and green waste, cover crops, crop rotation, and green manure.

The main business is in the form of three outlets which are box scheme, farm shop, and colleges in oxford. Tolhurst Farm is the main vegetable grower on the estate turning over 120 tonnes of vegetables annually. Diversification into hosting events and festivals has resulted in converting half of the walled garden into grass and green manures, this is more economically sound than growing small areas of crops, even strawberries. Labour has become very expensive, so field scale growing is much more economically viable.

Issues

- The walled garden inherited two soil borne diseases, Fusarium Wilt and Allium White Bark.
- The soil is a stony shallow clay loam which is effected by dry weather especially in the summer. There was a very dry summer this year which increased cost of irrigation, the water charges have increased three fold over the last couple of years.
- Mains water supply in the garden is a higher cost than the bore hole in the field. This is providing another reason to favour expanding production at field scale rather than in the walled garden.

Walled garden

Other vegetables

- The tunnels are on a 5-year rotation. Fennel is a second crop in the tunnel and Tolly finds it a really good winter crop as are celery, leeks and Chinese cabbage also. All the crops are under sown and left in winter.
- In Spring some of the tunnels are used for plant raising especially peg plants for example brassicas, and celery. Peg plant leeks are sowed at 3,500 seeds per row, 120 seeds/m and ending up with 70 plants/m planted 12 inches apart.
- Winter salad tunnel is direct drilled, a stale bed system is used and harvest is started 3 weeks after sowing. There is a break mid-December to end of January.
- In terms of worm count in the tunnels the no dig section is the lowest, however they think this is potentially due to chlorine in the mains water rather than any other input or lack thereof.

Salad tunnels

Strawberries

- The walled garden is still used to grow strawberries as they are high value easily marketable crop. There is also an income from pick your own (PYO). The main outdoor crop in the garden is strawberries, and only one variety which is “Christine” has served and continues to serve really well as it’s a very high cropper.
- There are three lots of Strawberries in the walled garden on rotation. Each crop is left for 2/3 years depending on weather and disease. The third year can be hit and miss, rain on the third year results in very low yields and the possibility of increased disease. Often use third year crop for self-pick as this activity yields higher percentage. £8/kg average price for strawberries this year.
- Wood chip is used on the pathways to keep weeds down, and straw is added on top of chip for comfort in harvesting, however it is getting more difficult to get organic straw so they are using less and less. 2,500 plants yielded 800kg of fruit this year, even though they had expected 1000kg or more from a first-year crop but they were late going in this year (mid-August). The later they are planted the lower the yield, the aim is to go the middle of July in order to guarantee 0.35kg yield per plant. The strawberry plants are covered with plastic cloches only from Feb to end of picking to give an early crop, and this brings forward the fruiting by three weeks.

Tomatoes

In the tunnels tomatoes are planted the 2nd week of April directly into winter salad crops. After the salads are finished a ground cover of white cover and yellow trefoil are sown in mid-June. These are broadcast, hoed in and watered. This is the only water they get as the tomatoes aren’t watered after mid-July because they split if overwatered, and much better flavour if dry.
Tomatoes grow very prolifically in the tunnels. Varieties include Yellow Submarine, Gardeners delight, Cerico and Cherry plum. Yield from tunnel is approx. 1500-2000kg of tomatoes in a season. There are very high nutrient levels in the soil so the amount of compost added will be reduced. Currently Potash, Organic matter OM (over 10%) and Potassium are too high. Nutrients that are applied in the form of compost last a long time in the soil, especially OM. Compost is applied every rotation which is every 5 or 6 years. Tolhurst farm doesn’t have much trouble with blight, they rarely experience it. Badgers are one of the main pests they have to deal with, electric fences are needed to prevent crop and tunnel damage. Fusarium wilt affects peppers.

Tomato tunnels

- No dig versus continuous cultivation areas – Tolhurst Farm has been monitoring and comparing these systems over the last 20 years and have found no difference in yield, soil quality or weed volume between the systems. Cost of set up maybe the only difference between the systems in Tolly's opinion. The change in weather has resulted in more growing in the winter than 20 years ago as there are not as many frosty days, however there are also darker/duller days that can increase the risk of disease.
- Propagation is carried out in the oldest working building on the farm which is 150 years old. Although it doesn't make economic sense to propagate due to labour costs and would be cheaper to buy in plants, Tolly feels it is very important from both a quality, ecological and sustainable point of view to continue to propagate. There is only one organic producer of plants left in the UK and Tolly is not happy to risk this to source.
- The farm uses its own woodchip compost to propagate. They produce 40,000 plants a year in this building as well as 40,000 peg plants. Mainly salad. The process is standardised as much as possible, only 77 trays are used. Blocking is too labour intensive at this scale, so it is not used.

Propagation building

Sieve for compost

Tool shed

Tools

- Tool shed is full of manual tools that are used in the garden. This was the most growing machinery we were exposed to on the trip. The garden still very manually worked but the field is becoming more mechanised with three tractors on hand, all older and with a combined age of over 150 years!
- The tool shed also houses the equipment used for making the woodchip compost. The compost is composed of 95% woodchip (very high in N) and a very small amount of green waste.
- Water, 25% vermiculite (to improve water holding capacity) and wood chip compost are added to the cement mixer and then sieved to produce the compost used throughout the farm from propagation, nutrient addition to mulch.

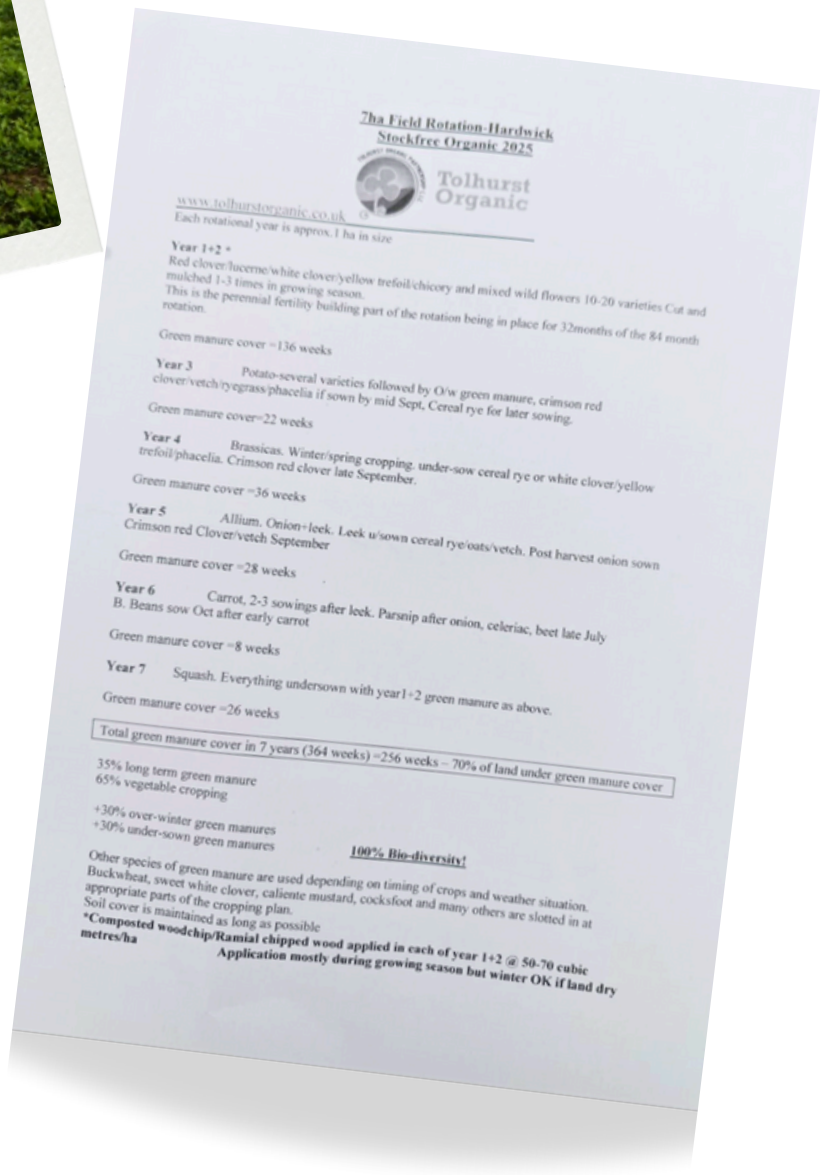
Farm Shop

- The Farm Shop is off grid and sells almost solely the produce from the farm. Really aiming to keep everything local, enabling people to eat nutrient dense local organic produce.
- The hungry gap is May to the end of June however the farm doesn't buy in to fill this gap which may be a barrier to customer retention.
- The shop was well stocked with everything from carrots, leeks, apples and juice.
- Self-service honest box model working very well for them. Supplying 10/12 mile radius so keeping very local and providing a hub for the community.

Farm shop

Field scale growing

- Field Scale growing is on a 7 year rotation – copy of hand out below. The main take homes from this was that 70% of the land is under green manure (GM) at one time. Building fertility, biodiversity, biology and resilience in the soil is the main aim of the whole system. Without this there is nothing.



7ha Field Rotation-Hardwick
Stockfree Organic 2025

Tolhurst Organic

www.tolhurstorganic.co.uk

Each rotational year is approx.1 ha in size

Year 1+2 +
Red clover/lucerne/white clover/yellow trefoil/chicory and mixed wild flowers 10-20 varieties Cut and mulched 1-3 times in growing season.
This is the perennial fertility building part of the rotation being in place for 32months of the 84 month rotation.

Green manure cover =136 weeks

Year 3 Potato-several varieties followed by O/w green manure, crimson red clover/vetch/ryegrass/phacelia if sown by mid Sept, Cereal rye for later sowing.

Green manure cover=22 weeks

Year 4 Brassicas. Winter/spring cropping. under-sow cereal rye or white clover/yellow trefoil/phacelia. Crimson red clover late September.

Green manure cover =36 weeks

Year 5 Allium. Onion+leek. Leek u/sown cereal rye/oats/vetch. Post harvest onion sown Crimson red Clover/vetch September

Green manure cover =28 weeks

Year 6 Carrot, 2-3 sowings after leek. Parsnip after onion, celeriac, beet late July
B. Beans sow Oct after early carrot

Green manure cover =8 weeks

Year 7 Squash. Everything undersown with year1+2 green manure as above.

Green manure cover =26 weeks

Total green manure cover in 7 years (364 weeks) =256 weeks – 70% of land under green manure cover

35% long term green manure
65% vegetable cropping

+30% over-winter green manures
+30% under-sown green manures

100% Bio-diversity!

Other species of green manure are used depending on timing of crops and weather situation. Buckwheat, sweet white clover, caliente mustard, cocksfoot and many others are slotted in at appropriate parts of the cropping plan.
Soil cover is maintained as long as possible

***Composted woodchip/Ramial chipped wood applied in each of year 1+2 @ 50-70 cubic metres/ha**
Application mostly during growing season but winter OK if land dry

Cover crops

- Cover crops containing deep rooting species like chicory can access nutrients deep in the soil and make them available, chicory roots can be up to 2-3 metres deep.
- Ramial woodchip (from small medium sized branches) is an important part of the whole system, this is bought in from trusted local sources as well as from coppicing the agroforestry trees and willow growths on farm, this is done every 7 years and the chip is applied at a rate of 5L/m^2 directly on to GM.
- The on-farm coppice is chipped between December and March. Iain stressed that without the high biological function in the soil that they have created the wood chip could not be applied directly. It would need to be applied as compost which takes 1.5-2 years and then applied at twice the rate of the fresh woodchip, this is the case on most farms as the soil is not as positively active as Tolhurst Farm. Wood chip feeds the fungi which in turn play a major role in the diversity of the soil. Bacteria, fungi, green manure and wood chip all contribute to the fertility and diversity of the soil.

Green Manure

- Green Manure provides ground cover over winter as well as mopping up fertility. This fertility is kept in the plant and subsequently worked into the soil filling it with an abundance of bioavailable nutrients.

Field Pests

- Pests in the field: Flea beetle decimated the swedes this year as it is in abundance if the temperature goes above 30 Celsius, which was the case three times over the summer. Nature has started taking care of a lot of the pests, when systems are in balance there are less issues.
- There were a lot of Cabbage White larvae on the brassica this year however they were sorted out by the predatory wasp Apanteles glomeratus which lives in the hedges. The lesson being that when nature is in balance and you're working with it, there are less extremes experienced.
- Pheasants cause damage to the green manures and badgers again snack on the sweetcorn, electric fences do the job! Balance not reached here yet!

Badger fencing

Wildlife

Red Kites have made a really good come back and put on a great show for us. Tolly commented on their abundance when he is ploughing, showing how the soil is teeming with worms as well as other living beings. Overall he has noticed an increase in the various wildlife species over the years he has been growing.

Agroforestry

- Across the road the Agroforestry field has been in production for the last 10 years.
- Still learning. GM at every stage of the crop, either under sown or after crop.
- As soon as the crops begin to become established they are under sown with GM giving the longest possible time to building fertility.
- Spacing between the rows of trees were decided to accommodate the width of the irrigation boom, so that only one pass is needed to irrigate the crops. Therefore the spacing is 23m from centre to centre, the boom being 18m wide.
- A bore hole provides the water for the field and agroforestry crops, it feeds at a rate of 25mm in 5 hours through 3 inch pipes. As only 560 mm yearly rainfall in this area, an irrigation system is needed to grow effectively.
- Takeaways from the agroforestry system are: space the trees further apart, 30m for veg production and 50 m for arable. This takes machinery into account. Cherry trees and willow don't work with crops, they compromise growth. Replace these species with Alder or Wild Plum. The shade created by the trees do have an effect on growth.

Leeks in the agroforestry system

Lessons learned

A big lesson from Tolly is the importance of locking up nutrients in plants rather than leaving them free to be lost. The importance of a variety of plants not just in the form of crops but also weeds and GM. Weeds give a deep cheap ground cover and a seed bank of weeds is needed to ensure a greater range of fungi. No weed seed bank results in less fertility. The key to building fertility is fungi! Fungi loves woodchip and unlocks fertility and feeds the diversity in the soil.

"The importance of a variety of plants not just crops but also weeds and GM."

Main challenges

- The main challenge is not weather according to Iain, it is keeping customers, customer base and selling the produce. Iain says they can deal with weather, “always had extreme weather, even before climate change was invented”, “we’ve had weather changes for the last 50 years” weather comes second in terms of things we have to deal with - pest, disease and weeds are occasional problems but customers are the real challenge.
- “Soil is the driving force for everything we do, we have made our soil resilient” according to Iain. Soil biological function and biodiversity are the main armoury against disease, they are the key to everything. Woodchip feeds the fungi and these in turn enhance the biological activity in the soil making it appear darker. Tolhurst farm has an average of 1500/m² of worms, living proof that what they are doing is working.

“The farm is a biological ecosystem, a complete organism and we need to strive to replicate what nature does.”