



PERMACULTURE: BACK TO BASICS?



Permaculture seems to have grown almost as many interpretations as there are practitioners. Originally conceived as simply an approach to managing land, some fear that it is in danger of losing the plot.

SIMON FAIRLIE interviews eminent permaculturist **PATRICK WHITEFIELD** to find out more.

SF : A lot of “permaculture plots” are on a small fiddly scale. The prevalence of herb spirals, mini-ponds, willow arbours and micro-coppices, along with ubiquitous “forest gardens” are charming, but are they really any more than a current fashion trend in “alternative” gardening? In some quarters, the perceived quaintness of Permaculture (PC) gardening prevents it from being regarded as a serious method of cultivation. Are these approaches actually permacultural and if so, is PC married to such methods? Or is there room for a more efficiency-based approach?

PW : Small scale is not necessarily a bad thing. In fact there’s plenty of evidence to show that small scale food production, including gardening, actually yields more food than large scale. It may produce less per person employed and certainly produces less financial return, but on average it does produce more food per hectare.¹

The kind of garden which you characterise as ‘fiddly’ and ‘quaint’ may not produce very much food. But in describing such a garden you’ve lumped together a number of different elements, some of which are productive and others which are not. A willow arbour does not produce food, but a well-designed forest garden can be more productive than a simple orchard, and there is experimental evidence to show that a ‘micro-coppice’ can be expected to yield more per square metre than a larger area of coppice due to the edge effect²

SF : Years ago David Holmgren wrote: “The worst examples of permaculture-inspired gardens involve the use of elaborate structures and massive amounts of imported organic materials to create jungles of a diverse range of marginally useful species which merely supplement the externally supplied diet.” Would you agree that there are still plenty of such examples around — and if so, what are people doing wrong?

PW : There may be gardens like this but the only one I can remember having seen myself is the Monkton Wyld forest garden which you mention below. Have you seen a lot of others? As for what the people are doing wrong, the answer is implicit in your question.

SF : Can the concept of “broadening the yield” to take into account other benefits be taken too far so that there is too little focus on the main crop yield?

PW : How far you broaden the yield depends on your aims. If your main aim is to produce a lot of food, other considerations such as beauty, recreation and so on, won’t get much of a look-in. But in the present economic situation this isn’t necessarily the best choice. Most of us could earn in a day the cash value of the food we could produce in a domestic garden over a year. In these circumstances, giving a high priority to non-physical outputs would seem to be a reasonable approach. If we should find ourselves in the situation that Russia did in the 1990’s, where the food

which households grew on their own plots became necessary for survival, no doubt priorities would change fast. Such a time may not be very far off.

As for ‘focussing on the main crop yield’, this is monocultural thinking. In a polyculture each element may yield less than it would if it were grown alone, but the total yield will be greater. For example, a forest garden will produce less top fruit than a simple orchard, less soft fruit than a pure planting of bushes and canes, and less perennial vegetables than a straight vegetable plot. But, if that forest garden is well designed, the overall yield will be greater. Focusing on a main crop and feeling concern if anything gets in the way of maximum yield of that single crop is part of a mindset which we need to let go of.

SF : Can permaculture feed Britain? Are there any examples of it feeding a community or locality on any scale?

PW : Simon, you have already answered the first of these two questions better than I could. In your paper *Can Britain Feed Itself?* you show that permaculture is one of the options which could indeed feed Britain. You have crunched the numbers and come up with a positive.³

One of the most telling phrases in that paper was: “...organic livestock agriculture becomes more efficient and sustainable when it is carried out in conjunction with other traditional and permacultural management practices”. It’s telling because it reveals the role which permaculture actually is taking in practice, both in gardens and on farms. Very few growers of food would claim to be 100 percent permaculturists but many would admit to being influenced by permaculture and using some of its ideas. This contrasts with the role of organics: either you obey the book of rules, get certification and put the organic symbol



Z. Blakely

Horse-chestnuts? Even horses won’t eat them, but when we “let other considerations like beauty and recreation get a look-in” they earn their place. It would be hard to quantify the yield of healthy fun, and respite for parents, that a conker tree provides.

on your produce or you don't. You can't be a bit organic. Well you can but then you can't utter the word 'organic' when referring to your produce or get a premium price for it.⁴

You can very easily be a bit permacultural, though. We have farmers who come on our permaculture design courses but they go away as people who are influenced by permaculture rather than pure permaculturists. I recently asked Rebecca Hosking, who featured in the film *A Farm for the Future*, whether she considers herself a permaculturist. She replied, "I would describe myself as a farmer who has embraced the practices of permaculture, holistic management, regenerative agriculture and ecological agriculture." There are many more like her. This is surely not what the originators of permaculture envisaged when they developed the idea. No doubt they had visions of people abandoning what they'd done before and replacing it with pure permaculture. But this isn't how permaculture has developed, at least here in Britain.

Another role which permaculture has taken is to pioneer ideas which later on have become mainstream. Twenty years ago we were working with things like reedbed sewage systems and vegetable box schemes. They were considered wacky at the time but by now they've become generally accepted and fairly widely adopted.

Any form of food production which is more sustainable than the current norm suffers from the handicap that we pay a ridiculously low price for fossil fuels. Organics is somewhat cushioned from this by the premium price but permaculture is not and never will be: it's not a set of rules, it's a way of thinking. Whenever I give permaculture advice to farmers I tell them you have to look at your farm with bifocal glasses: consider both what's financially viable in the immediate term and what's sustainable in the long term. The two are very rarely the same and the result is rarely something which can be looked upon as pure permaculture.

SF : *To what extent are polyculture, companion cropping, stacking etc compatible with a level of mechanisation (tractor or horse driven) necessary to produce food in sufficient quantity to feed a nation?*

PW : There's no doubt that you can have a greater degree of diversity in a home garden than you can on a larger scale. Diversity does go down as the scale gets larger but fortunately the first step away from monoculture is the biggest. The yield increase in changing from monoculture to a mix of two crops is big, that from two to three is less, from three to four less again and so on. (I should point out that you'll only get a yield increase with a well designed mixture. A random mix could just as easily give you a decrease.)

A simple mix of barley and field beans, for example, has outyielded the monoculture by 85 percent and this is a simple thing to grow, harvest and process with existing farm machinery.⁵ Agroforestry, the mixing together of field crops and tree crops, is much practiced in France. The usual pattern is to grow the trees in rows, leaving alleys between them for machinery to operate and grow the field crops.⁶

SF : *To what extent is PC an experimental system with verifiable results in terms of yields and soil health criteria? Is anyone counting the potatoes it puts on our plates?*

PW : There's a distinction here between the components of permaculture, such as no-till, polyculture and agroforestry, and overall permaculture design. Individual methods can be bean-counted by reductionist science by means of simple experiments including a control. But it's less easy to measure the value of taking a design approach to a whole system, be it farm, garden or any other unit. You would have to start with a definition of a permaculture farm or garden. Then you would need to get a statistically significant sample of comparable farms or gardens, half of which had had the benefit of a permaculture design and half of which hadn't. Given the way permaculture is developing in Britain, as I described above, both of these steps would be problematic.

Many of the components of permaculture are indeed based on verifiable experimental results. At the end of my book *The Earth Care Manual* there's a list of some 500 references, many of them to reports of experiments in scientific journals, others to authoritative books. This is the science on which permaculture is built. For a comprehensive summary of the science I recommend Dave Jake's *Edible Forest Gardens, vol 1* and *Agroecology* by Stephen R Gliessman.⁷

Teaching

SF : *Many permaculture experts seem to be teachers, rather than farmers who earn their living from the land. Some see a touch of the Ponzi scheme here, where people earn a diploma so that they can teach other people to get a diploma. We are sometimes told that this is because "permaculture is about design". Does that mean it's only about design?*

Yes, there certainly is a disproportionate number of permaculture teachers. I don't see a connection between this and the design component of permaculture, but there's no doubt that permaculture does appeal to a lot of people whose interest is theoretical rather than practical. They do no harm, and attending courses is a harmless or benign occupation whether it leads to practical action or not. This in no way lessens the value of people who do put it into practice.

Grass and Trees

SF : *Grass is a biodiverse, perennial, fertility-importing and productive crop, and the crop we grow most easily in the UK climate. But many permaculturists, including some who acquire a bit of pasture, seem to attach little value to it. Does this make sense?*

PW : I don't recognise a general disdain for grass. The only context in which I think you might have a point is in the case of lawns, which are apt to be energy-consuming and mainly cosmetic elements in garden design. I have yet to meet a permaculturist who wants to eliminate productive grass. If there is a general tendency it's rather to develop pure grassland into something more resembling savannah by planting widely-spaced fruit or fodder trees in it. The two complement each other well and the resulting agroforestry, if well designed, can be more productive than either on its own.

I have on occasion come across people who buy a smallholding, find that the amount of land they need to produce their fruit and vegetables is a tiny proportion of the land they have, decide they don't want to keep animals, can't think what else to do with the land and plant it up as woodland. Planting woodland on good agricultural land is a very bad idea. Non-food trees

grow quite happily on land which is too steep, stony or infertile for food crops and we need to keep the good farmland to feed the population. People who do this are hardly motivated by a dislike of grassland. If they have a fault it's that they don't realise that the permaculture design process starts before you buy the land: it's not a good idea to buy 10 acres of grassland and only later ask yourself whether or not you want to keep animals.

SF: "Many permaculture teachers have taken methods appropriate to the tropics, and tried to apply them in temperate climates with rich glacial soils. Well, I won't deny that you get some nice trees, habitat, a bit of fruit and herbal flavours, but the yields at ground level under a mature canopy are at best modest. There just isn't enough light. If you want high yields the trees have got to be managed very strictly, and are usually not worth the trouble." (Peter Harper) Any comments?

PW: Permaculture started in Australia and some of its original practices were unthinkingly followed by early practitioners in Britain. Liberal use of mulch is one such practice and most of us now realise that in this climate the disadvantages of mulch usually outweigh the advantages. I refer, of course, to our dear friends the slugs.

However there is no-one anywhere who believes that it's possible to grow a productive understorey beneath a mature canopy of trees - unless the understorey is mushrooms. I don't know where Peter Harper got that idea from. Agroforestry, including forest gardening, involves wide-spaced trees, which allow sufficient light to reach ground level to grow a productive layer. The model is savannah, not closed-canopy woodland. There is experimental evidence to show that this model outyields single-storey food production.⁸

Bad Permaculture

SF: Patrick, you and I recently walked round a site (Monkton Wyld) where an employed permaculture designer had introduced a number of grant funded innovations, that were found by subsequent occupiers to be counterproductive. These included:

- (i) A large pond that served no apparent purpose and that leaked water into the surrounding grassland causing a large infestation of reeds (*juncus*).
- (ii) A band of coppice woodland planted in the middle of reasonably productive pasture that threatened to cast shade on the pasture behind, that required twice yearly mowing to keep back weeds, and that was so long and thin that it required excessive amounts of fencing to protect it from livestock.
- (iii) A so-called "forest garden" that you observed was loads of work for very little return.

Would you say that this is not permaculture, or that it is bad permaculture? What would you say is the cause of this kind of approach?

PW: As someone said "there's no such thing as good compost: all compost is good or it isn't compost." Calling what we saw at Monkton Wyld "bad permaculture" or "not permaculture" is a rather semantic point. I don't know who the designer was,

but it was clearly someone who had had some permaculture education but hadn't really grasped what it's all about.

In General

SF: Is there a need for a "back to basics" movement, re-inventing permaculture with the defined purpose of feeding ourselves (in planet-friendly fashion, of course) in perilous times? If so, how might this be accomplished?

PW: What you describe here is exactly what I endeavour to teach. One former course participant now refers to me as Patrick Mr-Reality-Check Whitefield. There has been a tendency in permaculture towards over-enthusiasm, to take wild claims at face value and believe that things which work on the page of a book will necessarily work on the ground. I do my best to correct that. I don't see it as a re-inventing of permaculture but as winnowing the chaff to lay bare the golden grain.



SF: PC now serves as a framework for certain individuals and groups in the same way that organised religions function. Taken to extremes, this gives the impression of a cult. How do you see this apparent tendency towards orthodoxy, fundamentalism even? Is it a danger to experimentation and the evolution of fresh ideas and methods?

PW: There was quite a bit of that going on when I first got involved in permaculture over twenty years ago but I haven't come across it recently.

SF: We urgently need an ethical, credible, human-scale alternative to mega-farming which can hold its own against the giants or indeed aim to replace them eventually. How would Permaculture go about doing this?

PW: There are no grand answers. Although the world's problems are huge, the solutions are small and humble. Each of us needs to play our part in the way we feel most able to. I don't see permaculture as an overarching movement that will sweep away contemporary agriculture and replace it with something more benign. It's most likely that the future will be a rich mixture of good and bad. All any of us can aspire to, is to make our own contribution to the good. That's both a personal statement and the way I see permaculture.

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