

## APRIL 2018

### **Monocultures, Polycultures, and why we should eat organic food.**

So what is a monoculture? It is the method of arable farming we are all used to; one crop grown in a field, or any plant grown as a single species and variety. The benefits of this are that it is much easier for the farmer to sow, feed and harvest mechanically: if for instance your peas all ripen at the same time, you can use a specially designed machine to pick and process them all at once. However, harvesting a large field all at once increases soil erosion, as it will be some time before new plants establish, leaving the soil bare for a while. Because the height of the plant is all the same, there is sometimes problems with airflow, leading to higher uses of fungicides, such as with wheat. One type of plant leads to an abundant food source for pests to feed on, and less habitat for their predators, leading to more pesticides. They will also compete for the same nutrients in the soil, meaning more fertiliser is needed. So a monoculture makes it very difficult to be organic.

In contrast, a polyculture; a mixture of two or more species or variety of plant grown together, more closely resembles nature. Different heights of plants allow better use of the available sunlight and allow more airflow. Different depths of roots and nutrient requirements utilise more volume of the soil, and help reduce soil erosion. Some plants even have beneficial relationships, fixing nitrogen for others, or attracting predatory insects for their pests. Polycultures have the potential to give a higher yield per acre, with less chemical input. We must also consider that maximum yield isn't everything, the stability of the system and ability to provide food in the future is also important. Polycultures make sowing and harvesting the crops on a large scale more difficult, but is this just because we haven't designed the machinery yet?!

While research continues on how to utilise polycultures in modern large scale farming, you can support small scale, organic farming right now. Ray's veg, (to order your veg box call 07791 604329), is an example of an old fashioned market garden, who has turned their back on modern intensive farming, to grow a mixture of many types of vegetables on his 6 acres. Or you can order a veg box from "steepholding", an organic permaculture farm near Greenham, by visiting [www.steepholding.co.uk](http://www.steepholding.co.uk).

The above are as close to a polyculture as is feasible in a few acres, however we can create our own true polyculture at home, maximising productivity in a small space. The potager style garden, which grows vegetables and flowers together, or the forest garden concept (eg. Martin Crawford's book "creating a forest garden") which uses trees, bushes and underplanting, are ways you can provide food for yourself in your garden, in an environmentally friendly way.

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