## 2 ORGANIC VS NONORGANIC

It is obvious to all that organic products contain more benefits than non-organic, which is probably why a lot of people are willing to spend more on them. In the following chapter we will be mentioning about the characteistic of organic products.

OR HEALTH, There are three major benefits from organic food to our health. We want to show to the readers how organic food can really become a wonderful things to health. First is about the nutrient content from organic food, second about the toxic metal contain in the food and the last is about the pesticide residue amount exposure in the conventional food.

A study in United Kingdom, particularly in Newcastle University has figure out the evidence that the food made from organic, are nutritionally better to than conventional food products. The report was published in the prestigious British Journal of Nutrition. They are analyzing 343 studies and successfully found out that organic crops and organic crop-based foods are having more than 60 percent number of antioxidants compared to conventionally crops. This research also showed that organic is safer to consume, researcher's study found significantly lower amount of pesticide residues and lower levels of a toxic metal (Cadmium) in the organic food. From this study, we can know that conventional crops were four times to contain pesticide residues than the organic crops. The high exposure by pesticides will give bad affect to our body, particularly in brain development especially in young children, give risk for pregnant women.





Organic milk has 62% more healthy omega-3 fatty acids than conventional milk



**\$ 48%** 

Organic crops have 48% lowerlevwls of the toxic metal cadmium than conventional crops





Pesticides are found 4 times more frequently in conventional crops than organic crops

**OR ENVIRONMENT**, There are six major benefit from organic crop to the environment, the first one is for the sustainability over the long term. Organic farming not only produce food to fulfil human needs, but also keep the balance in ecology and preserve soil fertility and prevent pesticide problems. Organic farming takes the proactive approach to oppose treating problems before they occurred.

Second is about soil, it building practices such as crop rotations, inter-cropping, symbiotic associations, cover crops, organic fertilizers and minimum tillage are central to organic practices. These encourage soil fauna and flora, improving soil formation and structure and creating more stable systems. In turn, nutrient and energy cycling is increased and the retentive abilities of the soil for nutrients and water are enhanced, compensating for the non-use of mineral fertilizers.

Third is groundwater. In agriculture areas, many pollution of groundwater, and the usage of improper dosage of chemical fertilizers and pesticides become serious problem. The usage of any chemical substance now prohibited in organic agriculture, they are replaced by organic fertilizers (for example compost, animal manure, green manure) and through the use of greater biodiversity (in terms of species cultivated and permanent vegetation) to enhance soil structure and water infiltration.

The fourth is about air and climate change. Organic agriculture reduces the usage of non-renewable energy by decreasing agrochemical needs which required a high amount of fossil fuel to be produced. Organic agriculture also mitigating and preventing the greenhouse effect through its ability to eliminate carbon in the soil.

The fifth is biodiversity. Organic farmers are custodians and users of biodiversity. Traditional and adapted seeds are more demanding because they possess more level of resistance to diseases and resilience to climatic stress. A recent study reporting on a meta-analysis of 766 scientific papers concluded that organic farming produces more biodiversity than other farming systems.

The last is about the ecological services. Ecological services is consist of soil forming and conditioning, soil stabilization, waste recycling, carbon sequestration, nutrients cycling, predation, pollination and habitats. The impact of organic agriculture will give interactions within the agro-ecosystem that are important to agricultural production and nature conservation. By choosing organic products, the consumer automatically promotes a less polluting agricultural system and more environmental friendly farming system.

## "If you think organic food is expensive, have you priced cancer lately?"

- Joel Salatin, Founder of Polyface Farms-