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GOING ORGANIC: The Future of Farming

bantay

Kinaiyahan

Watershed Issues in Brief

Bantay Kinaiyahan is a regular publication of Interface Development Intervention, Inc. to provide the public with relevant and concise information on pressing watershed issues



■ What is Organic Agriculture?

Organic agriculture is a production system that grows food naturally. It does not use synthetic chemical fertilizers and genetically modified organisms to influence the growth of crops. Organic agriculture relies on an ecosystem management that combines traditional knowledge, innovation and science to protect earth resources and creates a natural self-sustaining balance that help to get high quality food in healthy quantities year after year¹.

■ What are the major benefits of organic agriculture?

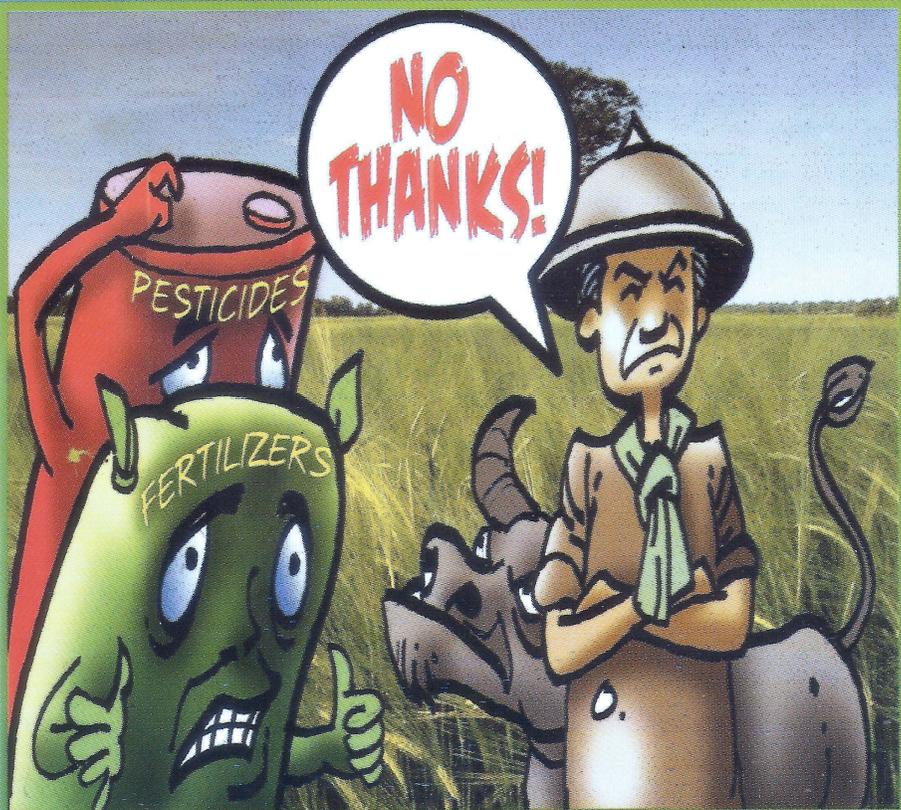
Environmental Benefits². Organic agriculture ensures a safe and healthy world for future generations to live in.

Soil. Organic inputs come from natural biological materials that, when applied to the soil, help the soil maintain the right balance of vitamins, minerals and other properties needed to sustainably produce food.

Water. Organic agriculture improves water retention capacity, as organic matter act like tiny sponges which can hold water up to five times their own weight³. It also keeps water systems and ground water clean by filtering toxic chemical contaminants that can leach into the soil.

Air. Organic agriculture mitigates air pollution because it does not use synthetic farm inputs. The production of synthetic farm inputs contributes to carbon emissions. Because organically managed soils convert greenhouse gases like carbon dioxide into a food-producing asset⁴, it mitigates the negative impact of global warning on the environment.

Biodiversity. Absence of synthetic chemicals, like toxic pesticides and fertilizers, in the organic field are conducive to supporting a wide variety of suitable habitats for wildlife. A literature review of 66 published comparative studies concluded that on average wildlife is 50% more abundant on organic farms and there are 30% more species than on non-organic farms⁵.



Organic farmers protect diversity by collecting and preserving seeds and growing different varieties.

Health Benefit⁶. Organic foods are free from harmful pesticides and fertilizers. Organic produce has more vitamins, nutrients and anti-oxidants because they are grown in good quality soil. In contrast, foods which are grown with synthetic fertilizers tend to contain more water and less actual solid food content. To maximize our nutrient intake, eating organically grown produce is the way to go.

Social Benefit. Farmers who are passionate about organic farming tend to join with those who have similar inclinations in order to share seeds, innovations and on-farm research. This builds a network of organic farmers which further expand the growing movement of organic farming advocates.

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STATUS OF ORGANIC AGRICULTURE IN THE PHILIPPINES

Organic farming has long been practiced by small organic farmers in the Philippines. Today, with the growing demand for organic products, more and more local government units are launching their own initiatives to mainstream organic farming.

The latest International Trade Center Country Profile of the Philippines indicates there are 14,140 hectares or 0.12% of the country's total agricultural area which are under organic management. In 2006, the International Federation of Organic Agriculture Movement (IFOAM) & the Research Institute of Organic Agriculture (FiBL) further reported that there are 35,000 organic farms in the country. This represents a major increase from 3,500 hectares in 2004 when there were only 500 farms operating in organic farming¹⁴.

There are five (5) major types of organic products produced locally and sold in the domestic market, namely:

- rice : well-milled white rice, red rice and brown rice (semi-polished)
- vegetables : culinary herbs, tropical and semi-temperate
- sugar : muscovado
- banana : as ingredient for banana chips
- coconut : virgin coconut oil, vinegar, cooking oil

Other organic products are also occasionally available, including poultry meat and eggs, processed pork meat, salad dressing, processed vegetables, beverages and honey. Inputs are also available for organic crop production such as compost fertilizer, botanical pesticides and microorganisms.

The Philippines has managed to export the following:

- Muscovado sugar - USA and Europe
- Banana chips – Europe
- Dessicated coconut – USA and Europe

- Virgin coconut oil – USA, Europe, Australia
- Dried banana leaves – Japan
- Pineapple – Japan
- Fresh Cavendish banana – Korea, Japan, Singapore and New Zealand.

Some products are exported under fair trade labels, including bananas shipped to Japan, rice to Switzerland, virgin coconut oil to Europe and USA, and fresh mango to Europe. All exports of organic products are certified by International Certifying Bodies.

In April 2010, the Philippine government enacted RA 10068 or the Organic Agriculture Act of 2010, to promote, propagate and further develop the practice of organic farming, protect the health of farmers, consumers and the general public and help cut expenses on imported farm inputs. The implementing rules of the law was also passed in the same year and is now on its first year of implementation nationwide following the Organic Agriculture roadmap.

There is also an increasing local recognition on organic agriculture in areas such as: GMO- Free Bohol, GMO- Free Mindoro, MOA on Negros Organic Island, GMO Ban Ordinance in Negros Island, Organic Agriculture Ordinance in Negros Oriental and Organic Agriculture Ordinance Of Davao Del Norte.

In 2010, the local government unit in Davao City also passed Ordinance No. 0384-10 or the Organic Ordinance of Davao City 2009 which institutionalizes, promotes and develops organic agriculture in the city. This was followed by the adoption of the ordinance's implementing rules and regulations in June 2011.

Can organic agriculture feed the world?

Findings from the International Assessment of Agricultural Knowledge, Science and Technology for Development (IAASTD), which was conducted by nearly 400 international experts, reveal that the conventional, large scale and pesticide-intensive farming being done by

agricultural corporations CANNOT solve the world's hunger. These experts, who spent three years conducting the assessment, say that industrial agriculture which focuses on increasing yields, without taking into account the externalized costs of food production, is not sustainable. According to them, small-scale farmers and their ecologically sensitive methods of farming are the way forward in solving the world's hunger. The IAASTD further showed that the agricultural knowledge of indigenous people and peasant farmers can play an important role in meeting the food demands of today. Such indigenous knowledge is the sum of accumulated practical knowledge and knowledge-generating capacity that is needed if sustainability and development goals for food security are to be reached. Accordingly, the UN Convention on Biological Diversity has recognized that these traditional knowledge, identities and practices of indigenous and local communities are embodying ways of life relevant for conservation and sustainable use of biodiversity⁷.

Organic agriculture is the ideal strategy to eradicate hunger because of its sound farming practices which begin at the local communities:⁸

- *Small, community-scale farmers* around the world would re-take control over the tools of their trade. Farmers, rather than corporations, would be in charge of seeds, knowledge and practices, appropriate pest control technologies, land and access to markets.
- *Communities & their governments* would be in charge of their own agricultural trade policies. People would democratically work out their own vision for food and agriculture at local, state and national levels.

How can organic agriculture help mitigate global warming?

In conventional agriculture, the excessive use of inorganic fertilizers and pesticides contribute a lot to greenhouse gas emissions. In contrast, organic agriculture's contribution to greenhouse gases is less than half that of conventional agriculture according to scientific studies conducted in the US, Australia and Europe. In fact, a nine-year study of four arable farming systems by Michigan University concluded that organic farming has a global warming potential of 43% that of conventional on a per unit yield basis. A recent Australian study supports this figure, showing organic farming in Australia to have less than half the greenhouse gas intensity than conventional farming⁹.

This is because organic agriculture avoids the use of synthetic fertilizers, thereby lessening its use of fossil fuel. It also improves soil fertility and nitrogen supply because it uses leguminous crops, crop residues and cover crops, which lead to a stabilization of soil

Special Feature

NANAY KILING: Davao's Own Farmer Scientist

Wangan, Calinan District – At 55 years old, Tranquilina Alibango, better known as Nanay Kiling, moves sprightly among the rows of organically planted eggplants and pechay. This petite woman, sunburnt from working in the field, moves with vigor uncommon for women of her age.

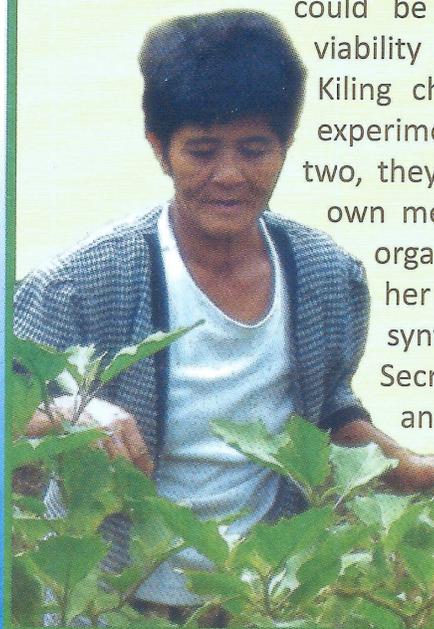
"My diet of organically grown products has helped me maintain a strong and healthy body despite my age.", she proudly says, showing her dark, healthy hair as further testament to the benefits of eating organic produce.

As a member of the Peoples Organization (PO) partner of METSA Foundation, Nay Kiling shifted to organic farming in 2004, after undergoing a series of trainings on organic farming conducted by MASIPAG, another NGO into sustainable farming. At first, her decision was met with derision by her neighbours as well as her husband. "They called me crazy for concocting all these organic liquid fertilizers and for being meticulous in implementing organic farming techniques," recalled Kiling.

But Kiling persisted. Her innate thoroughness, which once led her to counting the entire number of grains in a rice stalk (which is part of a process in getting the characteristic of palay in a trial farm), paid off when her organic farm began to give a high return of income, enabling her to nearly clear her debt with the local Chinese moneylender in Calinan.

"Unlike my husband, I no longer need to borrow money from the moneylender to buy synthetic fertilizers and pesticides because I make my own inputs using natural Indigenous Micro Organisms (IMO)", she said. This also freed her from the obligation to sell her farm produce to the moneylender at a lower price.

Her husband, meantime, took some time before he could be convinced of the economic viability of organic farming. In 2006, Kiling challenged her husband to an experiment. Dividing their farm into two, they both planted rice using their own methods. Kiling planted rice using organic farming techniques while her husband used his arsenal of synthetic chemicals to grow rice. Secretly recording his expenses and comparing them to her own, she was able to prove to him that going organic was more



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organic matter and in many cases to a sequestration of carbon dioxide into the soil, increasing the soil's water retention capacity. This contributes to better adaptation of organic crops under unpredictable climatic conditions with higher temperatures and uncertain precipitation levels. Organic production methods also emphasize soil carbon retention, which makes its crops most likely to withstand climatic challenges.

Organic agriculture systems are also highly adaptive to climate change due to the application of traditional skills and farmers' knowledge, soil fertility-building techniques and a high degree of diversity¹⁰.

■ Myth and Reality of Organic vs Non-Organic¹¹

Myth: Consumers are paying too much for organic food.

Reality: NOT SO. Because there are only few organic farmers in the Philippines, organic food production remains small, leading to higher cost of organic produce in the market. However, with the direction of the government to fully implement the Organic Agriculture Law in the Philippines by putting up support systems for organic farming, organic food production will be more widespread, stable and affordable to consumers.

Also, when you purchase organic produce, you're essentially buying food that does not have the potential to make you sick or cause trouble for the environment. In contrast, there are hidden costs when buying conventionally grown produce. While cheap, there are risks from pesticide contamination which may lead to illnesses and environmental disasters which will cost more for the consumer in the future.

Myth: Food quality and health: organic foods are no healthier than non-organic foods. There is no evidence available at present to say that organic foods are significantly different in terms of their safety and nutritional content to those produced by conventional farms.

Reality: WRONG. Organically produced food contains fewer contaminants. Some scientific studies have shown that there are more nutrients in organically produced food. It has been demonstrated that organically produced foods have lower levels of pesticide and veterinary drug residues and, in many cases, lower nitrate content.

In fact, is now widely accepted that organic milk has higher levels of Vitamin E, beta-carotene (Vitamin A precursor) and short-chain omega-3 fatty acids than conventional milk¹².

Nanay Kiling...

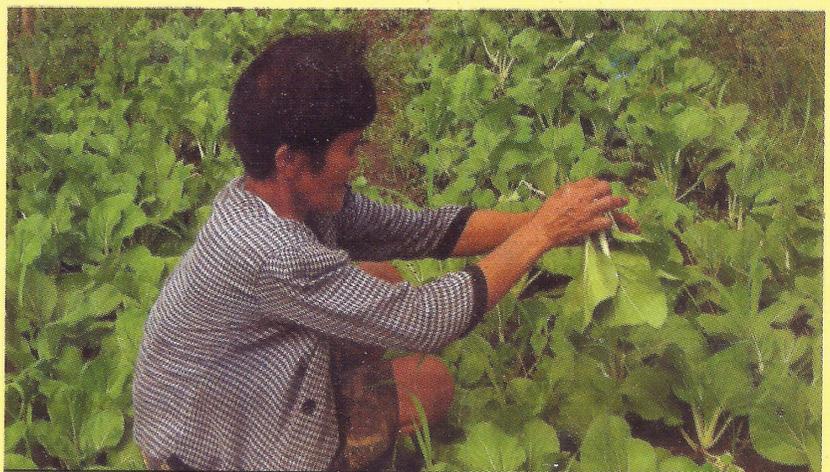
economical. After two harvesting cycles, she was able to show him that sixty three percent (63%) of his gross income was eaten up by his expenditures, leaving him only a thirty seven percent (37%) net income. She, meanwhile, only spent eleven percent (11%) for expenditures, having a net income of eighty nine percent (89%). From then on, her husband became a convert and now practices organic farming. Today, their farm is an example of a diversified, integrated organic farming system. At least 4 varieties of rice are growing in her area and intercropped among these are various fruit trees and vegetables.

Nanay Kiling's greatest realization is that shifting towards organic farming requires courage and determination because by nature, the method is laborious. But the benefits outweigh the initial difficulties.

To further promote organic farming, she now shares her indigenous knowledge to other farming communities interested in organic farming. METSA Foundation and MASIPAG now regularly invite her as a resource speaker for organic farming among farming communities all over the Philippines. Recently, she was invited by GREENPEACE to Thailand to share her experience as an organic rice producer.

She is also active as an Advocacy Officer in the Kababaihang Nagtataglay ng Bhirang Lakas (KNBL), an all-women farmer federation in the third district of Davao City. The women of KNBL all share a common advocacy for mainstreaming organic farming in Davao City.

"Organic farming is really the only way to ensure food sustainability and security", said Kiling. "The more farmers are adopting it, the better it is for our environment and for our health", she added.



Nanay Kiling harvesting organically grown pechay at her farm

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Source:

1 <http://www.living-organic.net/organic-farming.html>

2&5 www.fao.org/organicag/oa-faq/oa-faq6/en/

3 "Greenhouse Gases in Intensive Agriculture: Contributions of Individual Gases to the Radiative Forcing of the Atmosphere" by GP Robertson, EA Paul and RR Harwood; Science, Vol. 289, pages 1922-1925, 15.9.2000

4 <http://www.reference.com/browse/Carbon+Sink>

6 Wood R, Lenzen M, Dey C, Lundie S. 2006. A comparative study of some environmental impacts of non-organic and organic farming in Australia. Agricultural Systems 89 (2006) 324-348

7-8 The IAASTD-report (International Agricultural Assessment of Science and Technology for Development) is the result of an intensive consensus building of more than 800 scientists from all over the world. It took more than four years in preparation and also involved representatives from civil society.

9 Dr. Rodel Maghirang of the University of the Philippines in Los Baños speaking during the national vegetable congress held in February in Puerto Princesa City, Palawan

10 Publication by the International Trade Centre UNCTAD/WTO and the Research Institute of Organic Farming (FIBL), entitled 'Organic farming and climate change'

11 Organic food and farming: myth and reality. www.sustainweb.org/pdf/myth_real.pdf - United Kingdom

12 Benefits of Organic Cows Milk. <http://rosebayagro.com/benefits.html>

13 <http://www.ifoam.org>

14 as cited in Department for Environment, Food and Rural Affairs - January 2008 The Contribution That Organic Farming Makes in Supplying Public Goods