Introducing JADAM Organic Farming

President: Youngsang Cho
Homepage: en.jadam.kr
Email: jadamorganic@gmail.com

We need a right perspective

I went back to the soil in the 80s to farm for myself; to raise crops and animals and search for an alternative system of farming. I studied modern science, modern agriculture, and modern organic farming to find the answer; but it was in the system of Korea’s traditional farming that I found profound wisdom. This land had fed my people for millennia while the soil grew richer every year. Without fertilizer companies, pesticide producers, machine manufacturers, our ancestors did fine; they made their own fertilizer, pesticide and all other farm inputs.

I do not blindly exalt traditions; instead I value foremost what is verified, what produces results. I studied, experimented, and verified Korean traditional farming; I gathered data from member farmers who reported their results; I applied the theories and methodologies of modern science. Finally I succeeded in putting together “JADAM organic farming – a system of farming that is superior (high yield, high quality, environment-friendly) to conventional agriculture yet costs much less.” I firmly believed that a farming method had to be economically feasible to offer any hope; I am satisfied that by establishing JADAM organic farming, I have achieved that goal. Some organic farming methods care too less about profitability but that will only result in farmers and consumers both turning away.

JADAM suggests that farmers make all farm inputs (fertilizer, pesticide, etc.) themselves in order to break away from dependence (relying on factory-made products) and high-cost (having to spend money). Some ingredients that JADAM values are crop residues, wild grass, leaf mold, rock powder, food waste, human manure, seawater and similar material – all cost almost nothing.

JADAM opposes some of widely and wildly believed principles in farming. First, that crop rotation is desirable. This is promoted to overcome the problems raised by repeatedly growing one crop in one place (monoculture). How much of the conventional farmland is free from trouble of repeated mono-cropping? Organic farming is no different; all agree that crop rotation is good. But look at nature. Does a plant wither and fall sick by living on the same spot for generations? No. In nature, soil grows richer and richer as monoculture continues; it is the fundamental force that turns the planet green. The error is in the method we practice monocropping, not in monocropping itself. You have to give back to soil what you took out. You need a perspective of nutritional balance.

Second, that grass are weeds that need to be eliminated. JADAM strongly recommends cover cropping. It is a must in orchards and recommended to the extent possible for veggies. Growing grass and not leaving the soil bare: prevents fluctuation in soil temperature thus protecting roots; allows grass roots to reach deep into the soil, enriching it; prevents soil from drying; feeds soil microorganisms and small animals, sustaining a healthy micro-ecosystem; attracts pathogens and pests to stay on the grass instead of attacking crops; and turns into abundant organic fertilizer.

Third, that compost has to be fully fermented; applied in spring; deeply into the soil. Farmers are
busy all winter turning compost. Excavators are sometimes mobilized, and cost skyrockets. Because of spring application, incompletely decomposed compost gives off gas and invites pests. Mixing compost deeply into soil means you need to buy and operate machines. Do as nature does. Just scatter fresh, undecomposed matter on soil surface in autumn. Then forget about it. After harvest, just leave all the crop residues on the field to decompose. If you have cover crop, cut them down and leave them to rot.

Fourth, that crop residues are source of pests and diseases, and need to be thoroughly removed. Plants engage in photosynthesis and absorb nutrients from the soil in order to build their bodies. What has been removed from soil needs to be put back in; or else, soil will lose fertility. Best fertilizer for tomato comes from physical body parts of tomatoes. Best food for pepper is pepper. To complement, bring wild grass and feed it to your crops; they are mostly the same in material composition.

Fifth, that aerobic fermentation is good and anaerobic is bad. Everybody in organic farming circle believes this; they go through arduous process of adjusting green to brown ratio and building a pile and turning it often to mix with oxygen. This is back-breaking. JADAM suggests that we discard this compost method. JADAM instead makes fertilizer in water (anaerobic fermentation); or scatters crop debris on the field to rot on its own. It is true that anaerobic fermentation smells awful compared to aerobic. But who decided that good smell is good and bad smell is bad? Strangely, a strange idea that worms are good but maggots are bad, some microbes are beneficial while some are evil has become prevalent.

Sixth, that you have to culture microbes at a particular temperature. But if you make microorganism solution or liquid fertilizer fixed at a certain temperature, only the microbes that like that temperature will thrive. That means a loss of biodiversity. Only the microbes well adapted to the environment that the crops are in, with all the changing and fluctuating temperature, moisture, sunlight, etc., will help the crops. To fix the temperature, it is cumbersome and you need expensive machines. JADAM suggest that you just prepare a few plastic bins, leave them on the field (or greenhouse) where the crops are, make your own microorganism solution or liquid fertilizer there.

Seventh, that you ferment using sugar or molasses. This method suddenly gained popularity but JADAM is against it. High sugar content actually inhibits fermentation (due to osmosis), and the fertilizer you get as a result is highly acidic. Sugar canes are only grown in some parts of the tropic, that you rely on imported products is against the spirit of self-sufficiency. JADAM’s choice for starting fermentation is common leaf mold.

High yield, high quality

How is high yield possible? Roots have to reach deep, wide and become huge. The area that the root secured (=water and nutrients) is directly translated to quantity of yield. Health of roots determines health of crops. Soil is most important for roots. Soil must have: high activity of microbes, resulting in rich deposit of nutrients (microbes’ excrements=plant food); properly functioning microbial check and balance where no particular pathogen can gain dominance; optimized soil properties (air-, moisture-, nutrient-holding capacity, pH, etc.).

How is high quality possible? I traveled around the world and have tasted organic food; surprisingly they are not so tasty despite the high price. Well-nourished healthy plants will produce tasty
fruits. Here arises the problem of fertilizer. Farmers buy expensive synthetic fertilizer, organic fertilizer and other compost products to nourish their plants; but they are missing an important perspective. Fertilizer is food for plants; any food should be judged on its nutrient content. Give plant the nutrients it needs. Putting in the wrong food in the soil is an irreversible act nothing short of soil contamination. Crop residues are the best food for the crop. Give wild grass as supplement and seawater or rock dust for minerals.

**JADAM organic farming inputs**

JADAM microorganism solution (JMS) is made by culturing microorganisms from leaf mold feeding them potatoes in water. It is a very scientific method that uses the JMS at the point when microbial population reaches peak per volume. There are millions of different microbes in leaf mold. Do not divide them into good and bad. Good and bad are one. Embrace them all. JMS normalizes and accelerates soil microbial activity. As a result, crops are well-nourished (microbes’ excrements=plant food), and soil property improves, eventually dissolving any compacted soil layer. A robust micro-ecology will prevent any pathogen from taking over.

JADAM liquid fertilizer (JLF) is made by decomposing particular ingredient (crop residues, wild grass, food waste, human feces, fish, shell powder, bone meal, rock dust, ash, etc.) using leaf mold in water. Normally you can use after 3 months of fermentation, but it gets better with age. Crop residue and wild grass JLF can be used as general purpose fertilizer; or you can prepare JLF with particular function (example, high nitrogen JLF to boost growth).

JADAM natural pesticide (JNP) is JADAM’s most original methodology. Many organic growers commit the error of completely not intervening for pest or disease control. Some even say fertilizer is not necessary. Zero-input is possible if you desire zero-yield. It does not make sense to say that because the crops are healthy, the insects or animals will not eat it. It is irresponsible to advise to “leave it to the nature” when plants are dying from disease. JADAM researched for years to come up with a pesticide that is easy to make, environmentally-friendly, and effective. JNP is made by putting together the three pillars – JADAM wetting agent, JADAM sulfur, JADAM herb solution – in different combinations. By controlling the combination, it has the strength to adapt to millions of different changing environments and conditions. JADAM does not sell pesticide it invented; JADAM only teaches how to make this pesticide.

JADAM wetting agent (JWA) is made by mixing plant oil with caustic potash. Pesticide is dysfunctional without a wetting agent. Wetting agent is what delivers the pesticidal substance into the target. It also helps with an even coating; which is important to prevent marks on your fruits. The problem is that most synthetic surfactants, emulsifiers and wetting agents are highly toxic both to human health and the environment. JWA is made from substances permitted under organic production; they are safe and just as effective as synthetic ones. Note that you have to use soft water to make JWA.

JADAM sulfur (JS) is made by melting sulfur and red clay in water with caustic soda. It is a strong disinfectant; especially effective in controlling diseases. There exists a method of melting sulfur with lime but it needs heating, takes a long time to make, and has several other difficulties. JS can be made without heating in less than 20 minutes; and further has the merit of not damaging plastic or steel pipes. JS is also made from substances permitted under organic production.

JADAM herb solution (JHS) is made by boiling herbs with pesticide and/or repellant properties.
There are many, many plants that work. Three most commonly used (and commonly available) are Jerusalem artichoke, ginkgo, and Korean pasque flower root. JHS is not as effective if sprayed in water-based solution; always mix with JWA to increase coating and penetration effect. JHS is plant extract; itself functions as an excellent fertilizer.

Easy, effective, ultra-low cost, environment-friendly

Some believe organic farming is impossible in large-scale. Methods relying heavily on arduous human labor cannot go large-scale. One farmer cannot turn huge amount of compost and scatter it over the field. But JADAM method can go large-scale or mechanized easily. Most inputs are in liquid form.

Some believe conventional and organic farming cannot go together. However, all JADAM inputs can be used in conventional farming. JMS, JLF are easily applicable, and even JADAM natural pesticide (JNP) is quite promising. Chemical fertilizer and chemical pesticide are the two main reasons for rising cost for conventional farmers; if you can make your own at an ultra-low cost, there is reason for hope. But take note that when using JNP with synthetic pesticides, you do mixture test and concentration test. JADAM is an extremely versatile system of farming that can be applied and re-created to many other fields including small gardening, urban farming, and aquaculture.

JADAM established a system of farming that is easy, effective, ultra-low cost, and environment-friendly. This is not a theory, not at an experimental stage. Already, for over a decade, some tens of thousands of our member farmers have been applying it on their fields, and have verified it. Collective knowledge is growing larger every day. It is now extending beyond Korea to reach out to farmers of the world.

JADAM ultimately aims to bring farming back to the farmers. No longer should they stay trapped in the cycle of poverty. The system of technology that became dominant; the system of theory behind it; the system of knowledge that is the root all seem to have fallen into the hands of outsiders. Technology and knowledge have been taken from the farmers and are being returned in the form of commodity to be sold back to the farmers. Technology and knowledge have become so complicated and high-cost that farmers have lost any access to them. Products disguised with the label “scientific” yet is not half as effective as farm inputs of our ancestors are being touted as the only solution.

JADAM voluntarily gave up all patent to its inventions including JADAM wetting agent and JADAM sulfur. JADAM believes knowledge has to be shared; benefits from knowledge serve humanity. JADAM is a system of technology but is not only technology; it is a philosophy, a movement, and a spirit.

Farmers of the world! Let us be the owner of technology; be the creator of knowledge. Then let us share. For farmers, for consumers, and for Mother Nature, let us hold hands so that farmers may once again be the master of farming. (Jan 2016)