

Composting: A Pattern of Recovery

By

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A farmer in Wisconsin grew potatoes the size of one's hands. He grew them every year. He was the talk of the region. No one grew potatoes like he did. It turns out he really needed to grow 'big' ones.

Farming was more than a way of life. In the depression years, for a family with ten children farming was life itself. Farming for potatoes became the means of providing 'bread' for the table. The potato was not only the crop of choice: it was the crop of survival. How did it happen? How did the farmer manage to bring in a crop of potatoes each year that enabled his family to make it through the difficult years? Large potatoes at that.

It was a small farm of 24 acres, small compared to today's commercial enterprises. Acreage given to potatoes was limited by lack of equipment, need for pasture, what could be done by working hands. It covered two acres. What made the land so productive? Enough to feed a family. Hand sized potatoes.

All the farms in the area had cattle, particularly milk cows. That meant hay. Hay was a prime crop even in those years of Wisconsin's cheese production. Not every year's harvest of hay was cattle food: there was always a partial stack of hay in the farmyard.

Each spring boys of the family went to neighboring farms and gathered hay that had rotted over the winter. They gathered a lot spreading it thickly over the two acres that were to be planted with potato 'eyes'. That was the farmer's secret: compost in process. Rotted hay. Well rotted hay. Hay with nutrients that would, be washed into the soil by summer rain. Hay which would protect the soil's natural elements. Hay covering amendments added to the ground the previous fall. And, the potatoes were big.

Leaves fall. Trees break down. Storms wash through a forest's canopy. Birds, animals deposit rich ingredients into the soil. Worms and fungi break up plant material. Bacteria provide chemical changes converting organic substance into important elements vital to composting. Air and water blend vital ingredients guaranteeing decomposition.

The natural world has been through the ages a planet of carbon/nitrogen systems given to decomposition. The repeated recycling of organic matter has long provided the earth with components important to ongoing life. Vast seams of oil, deposits of crude oil so vital to life today can find beginnings in the forests and swamps of a time long forgotten and never known. The origins of organic farming finds roots in the examples nature provides in managing even today the uniting of nitrogen and carbon into useful humus. Well would be for contemporary civilization to acknowledge the unending forces active in making available resources dedicated to enhancing practices in food production, animal husbandry, and general horticultural consumption. Compostion happens...and it did.

Synthetic chemical fertilization has become so common as to be the norm of contemporary farming practices. So much a norm as many people are now discovering composting a new practice to be considered important within the whole framework of recycling. Composting was recognized in yesterday's world as discovered in the writings of early century scholars. We are told the ancient scholar Pliny the Elder (AD 23-70) makes note of it in his writings. The traditional piling of organic materials until used in a following planting season is not relegated to the present age: farmers throughout the years have followed the simple practice of storing and aging organic waste both human and non human. Hebrew scriptures, ancient Chinese writings, the Bagavad Vita have all documented composting practices in the chronicles of their people. Civilizations of the Mesopotamian Akkadians, the ancient Greeks, Romans, and early Native Americans, found various processes using natural matter helpful to continuing food resources. Medieval monastery's practiced good agricultural methods. Rodale notes: "It is only natural that the charters of two old English abbeys, St. Albans (1258) and the Priory of Newenham (1388), should enjoin the use of compost for soil fertilization". The Rosdale Book of Composting, p.3

Early American pioneers made good use of natural materials in their farming methods. Presidents George Washington, Thomas Jefferson, and James Madison are well known to develop farming practices in lands they either owned or managed. Their practices included extensive fertilization using animal manure and the concept of composting as regular techniques in land augmentation. The established work of George Washington Carver is known to include promoting compost production. Fish and the 'muck' of the barnyard were significant amendments to the soil of the New England farmer. A University of Illinois Extension article describes composting in that era: "Many New England farmers made compost as a recipe of 10 parts muck to 1 part fish, periodically turning their compost heaps until the fish disintegrated (except the bones, One Connecticut farm, Stephen and Sons, used 222,000 fish in one season of compost production." Such practices as these and others of a similar nature continued for many generations of farm leaders until quick-fix solutions using artificial means gave way to older but tried and true traditions of land preparations. Mentors of organic farming today may be recovering what has been set aside for measures of expediency.

In Chapter one of An Agricultural Testament by Sir Albert Howard we learn that of the four main groups that have evolved in a study of various agricultural systems in soil fertility the Asian world has changed little. He writes: 'the practices of the Orient have been almost unaffected by Western science'.

Composting in the Asian world has long been a process of humanure for centuries, even millennia. The Chinese small farm has remained stabilized in the use of humanure continuing into the present day with little to no change in farming practices. Jenkins Publishing of Chapter 6 in the Humanure Handbook as noted on the Internet tells us of composting 'has been practiced by farmers and gardeners throughout the world for centuries'. "In China the practice of composting (humanure) with crop residues has enabled the soil to support high population densities without loss of fertility for more than 4000 years". It also notes however that "composting (the standardized management and hygienic disposal of excreta and urine) was only initiated there in 1964)".

Essentially two methods of composting are presently used in China; that of "1) surface aerobic continuous composting; and 2) pit aerobic continuous composting". The aerobic process is described using a compost pile around a framework of

bamboo in which human, non human organic refuse and soil are placed, covered with earth and an earth horse/manure mix and allowed to decompose for 20 to 30 days. The material is then used in agriculture. The pit aerobic method is comprised of a number of various lengths and widths of pits into which organic matter is placed, covered allowing for decomposition. The report further indicates similar methods of decomposition are used in other countries of the Oriental world. A later development, the Bokashi method with origins in the Far East, using a mix of microorganisms to cover food resulting in fermentation, is later Asian approach to composting.

The origins of composting in today's Western world, appears to have begun by the Europeans around 1920. Two names are foremost in this development: that of Howard and J J Rodale (1898-1971).

Sir Albert Howard and his wife Gabrielle Howard were plant breeders in India from 1905 to 1931. Dung was used at that time for both fuel and fertilizer; there was no established tradition of composting. The Howards became convinced that a method of decomposing using both dung and plant waste could be helpful in agricultural use. Observing the methods of farmers in or near the town of Indore and utilizing his scientific knowledge he developed a method of compost making naming the process the Indore method. The method included three parts of green plant refuse and one part of farm manure layered along with one layer of soil, turned and aerated for about three months. It was discovered the matured mixture increased soil fertility resulting in crops having good nutrient value. Howard, along with the Indore method, is now recognized as an early leader in the development of organic farming.

J J Rodale was deeply influence by the work of Sir Albert Howard, particularly his emphasis on a healthy lifestyle using organically grown foods. Sir Albert was founder of Rodale, Inc., Emmaus, Pennsylvania. He also established the Rodale Organic Gardening Experimental Farm in 1942. "To Rodale, agriculture and health were inseparable. Healthy soil required compost and eschewing poisonous pesticides and artificial fertilizers. Eating plants grown in such soil would then help humans stay healthier, he expounded". (Wikipedia) Rodale became a leading exponent of the natural food movement which became popular in the late 1960's.

His influence will be well remembered in the continuing growth of the organic movement as nurtured by Howard.

The organic farm is here to stay. Spurred on by the recycling/composting movement following World War II, the influence of pioneers such as Rudolf Steiner, founder of a farming method called biodynamics, persons Sir Albert Howard, J J Rodale, E E Pfeifer, developer of practices in biodynamic farming, and Paul of Walnut Acres in Pennsylvania, the movement, beginning in the early 1900's in response to the shift in farming to synthetic nitrogen fertilizers and pesticides has grown in a fast pace. What was once a fad to a particular few has today become a widespread force in food marketing.

Whole new industries have come to be as a result of organic farming. Whole food stores now can be found in most grocery marketing areas. New businesses have been founded; older corporations now include organic choices among their products. Organic meat, poultry, eggs, and dairy products now can be found in all regions of the country. Organic cosmetics are available. Veterinary medicine has found new frontiers. New forms of pesticides have been developed that do not pollute the environment. Greater diversity is now part of the farming industry. The quality of soil and water is enhanced for years to come. Composting is part of a rapidly growing scene.

Composting: A Pattern of Recovery. Composting happens...and it did. The stories of composting, those who did it, those who do it, those who will do it, are/will be legion. It is no longer yesterday's tool for the future; it is tomorrow's tool for survival. And, a farmer grew hand sized potatoes.

"Plants, animals, insects, and people are all inextricably linked in complex web of interrelationships with air, water, soil, minerals and other natural resources playing vital roles. Compost, too, plays an important role. There is a cycle, a continuity to life.

"We are only at the very beginning of an understanding of all the parts of this cycle of life. But we are learning that upsetting the life patterns of only one kind of plant or animal, even in a seemingly minor way, can have effects on many other living things. All of the environmental problems we face are rooted in a failure to appreciate the live cycle and to keep it intact. We can use our understanding of

the interrelationships of living things in active ways, too, to increase productivity of our fields, forests, orchards, and gardens. Composting is one way to work within the life cycle in the furthering of our welfare." J J Radale: The Rodale Book of Composting. P. 10

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