



GROWING ORGANIC



BY MARK PAVLETICH

At Harmony Hill Nurseries in Southeast Pennsylvania, we are developing a whole new approach to growing B&B finished plants. For the past seven years, Harmony Hill has been growing a nice, healthy crop of specimen, shade, ornamental, and evergreen trees without a drop of chemicals or chemical fertilizers. And we never would have been able to do it without understanding the history of chemical horticulture. In short, we went back to our roots!

Chemical horticulture did not come from sound science; it came from a military-political decision. The military experimented with dumping chemical fertilizer on American farm fields to keep munitions plants in full production. The government was thinking that we would be at war in the future and would need to keep our munitions plants operational without creating huge

stockpiles. But after a few years, all sorts of problems arrived. Weed, insect, and disease problems never before seen began cropping up. And it was all caused by the use of chemical fertilizers.

Similarly dubious was the way pesticides were originally discovered. It was during the development of chemical warfare in World War II that researchers discovered the efficacy of these chemicals against insects. After the war, manufacturers began to sell horticultural herbicides and insecticides for the first time. Did you know the 2-4-D you spray on Mrs. Jones' lawn is actually Agent Orange?

These chemical farming practices quickly infiltrated horticulture, becoming the accepted industry standard. This junk science all

started with possibly the worst chemical experiment in history. Today, more chemical fertilizer is spread on home lawns than farmland. That's 20 million acres of home lawn, where your children play, covered in toxins for the sake of aesthetics. These chemicals cause health problems and bring disease. Using toxins for the sake of aesthetics needs to stop, and quickly.

And the worst part is there are natural ways to do the same things. If you have dandelions, you probably have a calcium problem. But instead of using Agway or processed hi cal lime, you can go to a local granite quarry and buy rock dust screenings. They are loaded with calcium and the plants will naturally break down the product as it sees fit over a period of years. If you have plantains, you probably have a compaction problem. These carrot-like roots are drilling holes in the ground to loosen the compacted soil, to create drainage, and to provide oxygen. Instead of using RoundUp and pre-emergent herbicides, use a cultivator or rototiller, like a Weed Badger, to cultivate the soil between the rows and turn the weeds into green manure.

But these natural solutions are not confined to weed control. Fertilization can also be done naturally, in any environment. What many people don't know is that soluble chemical fertilizers actually force feed trees and plants. When these fertilizers go into solution, they are taken up into the plant's water supply involuntarily. This has been proven to cause all sorts of problems



including attracting pests. In addition, chemical feeding cripples the plant's ability to attract beneficial insects if they are under attack. And these chemical fertilizers destroy and deplete the fragile microbiology that makes your soil fertile and productive.

All sorts of things make plants grow; from the soil microbiology that breaks down organic matter and transports nutrients from the soil to the plant, to the simple power of the sun and moon. Did you know timber felled on a full moon is heavier than on a new moon? By harnessing the power of the natural world, we can make plants grow safely and sustainably through a process called biodynamics.

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In 1920 Rudolph Steiner invented iodynamics to help farmers harness the earth's forces to heal the soil. Biodynamics also depends on statistically proven forces that science has yet to analyze. At Harmony Hill Nurseries, we use everything from composted horse manure, biodynamic preparations, and a liquid brew of beneficial bacteria and fungi. These fungi-bacteria break down organic matter and feed it to the trees and plants.

Another common problem that causes many horticulturists to run to the chemical shelf is pest control. At Harmony Hill Nurseries, we use no insecticides. The reason is that they do more harm than good. In May of 1963 Jerome Weiser, science counselor to President John F. Kennedy, reported to a commission assembled to examine the premises of Rachel Carson's *Silent Spring*. He argued, "[U]se of pesticides is more dangerous than atomic fallout." This assertion dovetails with Rachel Carson's query: "We are rightly appalled by the genetic effects of radiation...how then, could we be indifferent to the same effect from farm chemicals used freely in the environment?" If this is true, how could horticulturists use pesticides for a business built for aesthetics? At Harmony Hill, we enhance plant's natural defenses against common garden-killing pests by bringing out these defenses, not killing them with chemicals.

Seven years ago, we at Harmony Hill Nurseries began lining out our nursery and experimenting in tried and true methods of crop production. We look at every problem and try to find the most natural solution. If a cultural practice is not sustainable, it just isn't used. If you don't believe us, just follow the roots. Simply put, for every challenge in growing, there is an organic solution. 🌿



Mark Pavletich is the author of the recent book *Greening America to Save the World: How Chemical Horticulture is Killing You and What You Can Do About It*. This informative glimpse into the world of organic horticulture is vital to understanding the dangers of pesticides and agricultural chemicals. In clear and cogent terms, *Greening America to Save the World* explains how these chemicals became so widely used, how they can be linked to declines in public health, and how we can fix it.

With over twenty years of experience in horticulture, Mark Pavletich is a passionate green industry entrepreneur deeply entrenched in Philadelphia's business arena. After successfully founding and developing several companies, Pavletich founded Organixx LLC, an organic landcare business focused on research, development, and implementation of systems in horticulture to replace chemical fertilizers and pesticides. Recently, Pavletich unveiled his latest venture, the innovative Harmony Hill Nurseries, a Pennsylvania-based shade and ornamental tree nursery managed completely organically.

With this book, Pavletich hopes to share the secrets he has used over his long career to prevent health problems caused by dangerous chemicals. You will find him employing these practices on his farm in Downingtown, Pennsylvania, where he welcomes visits from his two children attending college.