



**Ecology Action**  
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## **GROW BIOINTENSIVE<sup>SM</sup>**

### **APPRENTICE OPPORTUNITIES**



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Enclosed: Personal Data Form; Release Form; Bountiful Gardens Catalog  
"Cultivating Our Garden" from *In Context* magazine  
"The Call to Dig" reprinted from *Horticulture* magazine  
"Feeding the World" reprinted from *The Christian Science Monitor*

# INTRODUCTION

Thank you for your inquiry about apprenticeships at Ecology Action's Garden/Mini-Farm Center in Willits, California.

Our main work here is a process of studying, researching and learning from the garden/mini-farm so that we will be able to help those in need of improved GROW BIOINTENSIVE techniques and approaches for the growing of food. Because of this primary emphasis, we need to train individuals who are willing to commit the next ten years or more to thoroughly learning and understanding this work and to spend the rest of their lives living this way of life.

In order to provide an introduction to our work, we offer half-day tours (including mini-classes in GROW BIOINTENSIVE techniques) at our Willits site, and ongoing classes through our Common Ground Center in Palo Alto, California. We also offer periodic Three-Day Workshops. A Teacher Certification Program for those who have attended a Three-Day Workshop has been developed. Information on tours, workshops, and classes, as well as current developments within Ecology Action, is available through our newsletter and on our website [www.growbiointensive.org](http://www.growbiointensive.org).

Newsletter subscriptions are free to those who become Members of Ecology Action. Ecology Action Supporting Membership dues are forty dollars (\$40.00) per year. Monetary support in the form of Supporting Memberships and other donations is a vital aspect of the budget, and our work would not be possible without it.

A central tenet of the guiding philosophy of Ecology Action could be summed up in that well-known phrase of Dr. E. F. Schumacher, "Small is beautiful." Just as increased size has brought numerous problems to society and to agriculture, so does it often bring problems to organizations. To avoid the negative aspects of the large organization, Ecology Action remains deliberately small. Our work, however, has had a significant effect in the world. Since 1972, many of the basic practices of organic gardening have changed, often because of our influence. Many generally accepted agricultural and social ideas, such as what constitutes a viable farm and how best to foster health and healthy communities among the malnourished people of the world, are also now beginning to change—again, at least partially, because of our work. We have been a source of inspiration and practical knowledge for

countless projects, mini-farms, gardens, individuals, books, and magazines throughout the world.

This "small is beautiful" approach to our work has several important ramifications. One example is that our Willits site is open to the public only on tour days and for workshops and other regularly scheduled events. The staff has found that opening their garden and home to the public in an ongoing, open-ended way is distracting to the work being done, as well as to the family lives of the staff. People wishing to visit the garden are asked to come on scheduled tour days.

Ecology Action receives hundreds of letters each year expressing interest in its apprentice program. Clearly there is a need for more training centers with broad, in-depth GROW BIOINTENSIVE programs. We have found that we cannot fill this need for everyone and still do the research and development work upon which the training and education are based. There are several other opportunities for training in GROW BIOINTENSIVE, Biointensive and other organic food-raising techniques. Some of these places, scattered throughout the country, are better equipped to handle a larger number of apprentices or to accommodate people who may wish to train for only a short period of time. A partial list of these can be found at the end of this booklet.

This booklet describes the program and details the kind of person Ecology Action is seeking. It can also be used as a tool to help you determine your personal path. After reading this booklet, you may decide that our apprenticeship program is not what you want. Because of this and the fact that we have only two to three openings periodically available, we have listed other places and resources that may be useful.



## What Is Ecology Action?

Ecology Action is a non-profit tax-exempt organization based in Willits and Palo Alto, California. It operates an organic gardening supply and educational center in Palo Alto where a free gardening and homesteading library is maintained for its members and the general public. It conducts research and apprentice training in the GROW BIOINTENSIVE method, publishes information on the method, and distributes this information around the world from Willits.

Ecology Action founded the Common Ground research and community garden in Palo Alto in September of 1972 and began the formal apprentice program in the garden in September of 1977. Since 1972, the low resource inputs and high crop yields of the GROW BIOINTENSIVE method have been studied in the research gardens under the direction of John Jeavons. In piecing together his experience and results with the method, John has come up with provocative new ideas for the abatement of world hunger, for family food sufficiency, and for urban and rural small-scale farming. He continues to work to create the simplest, healthiest, smallest, and most productive and sustainable garden system possible. His goal is to give more people the capability of raising their own food and of nurturing the earth for posterity.

From the yields recorded in the Common Ground research garden, John initially determined that a family of four may be able to grow all of their own *soft fruits and vegetables* in four to eight 100-square-foot raised beds in a six-month growing season (depending on their skill and soil). Over this period of time, one member of the family would need to spend an average of as little as 20 to 40 minutes a day caring for the garden.

The smallest amounts of land needed to raise *complete diets* are also being researched. This miniaturization of complete-nutrition food production has determined that a complete, balanced diet may be grown in 1/10 to 1/4 the area normally required. The United Nations has

called for the production of increased calorie and food value per unit of area with an organic, small-scale approach as an answer to world food needs. Sustainable GROW BIOINTENSIVE mini-farming practices are one key solution to this need.

The goal of Ecology Action's Common Ground GROW BIOINTENSIVE Sustainable Mini-Farming Research and Education Center is to research and develop an equitable and environmentally sound soil-building and food-raising *system* that is manual and depends predominantly upon locally available resource inputs. As this system is "grown", *patterns* appear which make it possible to learn the *universal scientific principles* involved. The research is based primarily on observation and experience over many years more than on statistical modeling. The key to optimal results is often the consideration of multiple variables. The variables in the system are changed slowly.

The GROW BIOINTENSIVE method being developed is a *sophisticated, low-technology* food security safety net for people in virtually all climates and soils where food is grown. In the *process*, a potential for the improvement and maintenance of global sustainable soil fertility has evolved. GROW BIOINTENSIVE practices have been and are being rediscovered, developed and documented using *biologically intensive* systems which date back 4,000 years in China, 2,000 years in France and 1,000 years in southern Mexico, Bolivia and Peru. This system has the capacity to make possible Green Revolution-type high yields with a fraction of the water, nutrient and energy resources and normal open-pollinated seeds.

Individuals, communities, projects and programs in over 130 countries are already benefiting from this work in applications around the world. Most to date are using the practices for nutrition and/or economic intervention. People, projects and programs have set up successful farms for nutrition and/or economic intervention after reading Ecology Action publications and/or taking a GROW BIOINTENSIVE introductory 3-Day Workshop. A few have even set up successful economic mini-



farms. Ecology Action is encouraging these and other initiatives to use GROW BIOINTENSIVE practices to "grow soil", develop and maintain sustainable soil fertility and grow complete diets in a small area.

The Center provides the latest research information, education and technical assistance to individuals, projects and programs in person, through correspondence and through classes, workshops and courses within the United States and globally. In this way, it is a service center where staff, apprentices and interns learn as they provide assistance to others.

All of this takes time. 3,000 years are required on the average for Nature to produce the six inches of farmable soil needed to grow crops successfully. In California this process takes about 12,000 years. According to a Soil Science Master's thesis at the University of California-Berkeley, GROW BIOINTENSIVE may have the potential to "grow" up to six inches of soil in as little as 51 years.

Ecology Action's most important current focus is *sustainable soil fertility*. The issue of sustainability in agriculture has emerged as a topic of general concern. Definitions of the approaches vary; however, most promote "more sustainable practices" which are less *immediately* destructive to the natural environment. Few are more than 10% sustainable in terms of overall soil quality, which is the only true measure of *long-term sustainability*. Ecology Action's research objective is "100%" economic, environmental and soil sustainability. This work is challenging because the research is producing an expanding body of knowledge and understanding, rather than an immediately visible "product."

## **The Potential of GROW BIOINTENSIVE**

Ecology Action believes that eventually most people in the world where food is grown will be able to grow a complete vegan diet for one person annually on as little as 4,000 sq ft—and sometimes less—using GROW BIOINTENSIVE practices and a better

understanding of how to choose the crops which will produce the most calories and compost materials in the smallest area.

Four thousand years ago the Chinese were using a biologically intensive, "miniaturized" form of agriculture. The Chinese grew food with this approach and maintained soil fertility for thousands of years without depleting the soil significantly. As recently as 1890 this way of farming enabled them to grow all the food for one person on about 5,800 to 7,200 sq ft, including animal products used at that time.

Despite all its challenges, the people in Biosphere II, using techniques based in part on those rediscovered by Ecology Action, were able to raise about 83% of their diet during a two-year period within a "closed system" on approximately 2,957 sq ft per person. This experience demonstrated that an annual diet for one person could be raised on the equivalent of 3,562 sq ft—less than the Chinese in 1890. In contrast, conventional agriculture in the United States requires approximately 15,000 sq ft to 30,000 sq ft, depending on the diet involved, to produce an *average* diet—while bringing in inputs from other areas and soils in order to make even this possible.

Approximately 16,000 sq ft are used in developing countries for the same purpose given actual agricultural practices being used and actual diets being eaten.

Currently, the staff is also performing research to demonstrate that a family may be able to raise all or the major share of their *income in farming* as little as 1/8 of an acre during 8 months a year with the GROW BIOINTENSIVE method.

One of the most important aspects of Ecology Action's work is *developing a unit of approximately 40 beds where a person's food and compost materials can be grown—as little as 1/2 of an acre for 4 people*, about 1/10 of the area normally required by commercial agriculture. *This is a significant miniaturization of agriculture.* Information proving the feasibility of such a project has been provided since 1972 by Ecology Action's research and

that of other organizations and people and is still being developed.

The potential for the GROW BIOINTENSIVE method reaches far outside California. Ecology Action has corresponded with people from all over the world who want to raise food using the method. Ecology Action's manual on the method has been translated into Spanish, French, German, Hindi, Russian, Arabic and Braille. We plan to publish additional translations as funding is made available. Over the past few years, the number of people using the method in South America, Europe, Africa, China, India and Russia has steadily increased due, in large part, to Ecology Action's outreach efforts. More people skilled in the method are needed in these countries.

The mini-farm and its apprentice program are financed by sales of Ecology Action publications, supporting memberships, grants and donations, and sales of garden produce.

## Ecology Action in Perspective

Ecology Action is known internationally for its research and development of small-scale food production techniques utilizing GROW BIOINTENSIVE food-raising practices. The comprehensive and sustainable cropping system developed by Ecology Action may enable people in all regions of the world to grow balanced diets on small plots of land.

The GROW BIOINTENSIVE method has the capacity to produce yields 2 to 6 times those reported by commercial U.S. farmers, while using 33% to 12% the water, 50% to 0% the purchased nutrient (in organic fertilizer form) and 3% to 1% the energy per pound of food produced.

Today, Ecology Action provides a unique "GROW BIOINTENSIVE Farm Skill Preserve," one of the few places in the world where the philosophy and techniques which validate small-scale farming still exist. One man who has taught Biointensive mini-farming practices in Corsica said that he had to come to Willits to learn the techniques formerly used in Corsica,

so they could be returned to his country. An official from the Chinese Agronomy Society in Beijing wrote recently that he learned a significant amount from Ecology Action over ten years ago and now wants to learn more because China has recently developed an interest in resource efficiency, not just high yield.

Ecology Action's tiny headquarters on a hillside overlooking the Willits valley and near the Pacific Ocean and Redwoods reaches out to individuals and projects throughout the United States and in countries worldwide to share the concepts and techniques of GROW BIOINTENSIVE sustainable food-raising. *The training provided here is unique in its breadth and depth.* In addition to training and code-breaking research, this global GROW BIOINTENSIVE headquarters facilitates problem-solving and other assistance for GROW BIOINTENSIVE projects, both domestic and international, by serving others with its conceptual frameworks and by providing answers to questions and problems.

Although university programs in GROW BIOINTENSIVE are beginning and major projects are taking shape both nationally and worldwide, none are yet as interdisciplinary as Ecology Action's program in Willits, where the purpose is to provide the broadest perspective and the most in-depth focus for other programs and projects.

Ecology Action's research goal is complete economic, nutritional, environmental, and soil sustainability. Achieving sustainable soil fertility requires working with the natural system. It is a gradual process that involves not only learning techniques, but also understanding the interrelationships in Nature and working in harmony with its yearly cycles. For most of us, that requires slowing down so that our hands, hearts, and heads can fully observe, feel and understand the whole of the environmental fabric as well as each of its threads.

It took us at Ecology Action seven years of patient observation and persistence to 'break the code' for optimal wheat production. We can now teach that skill in a short class, so that

others can benefit from our mistakes, failures and successes. We experience poor germination, crop failures, and/or other problems as we search for the best solutions. It is not that the solutions are complex or sophisticated; often, they are very simple and can be learned quickly—once they are discovered!

For the Chinese, *farmers are living libraries*. The knowledge embodied by Chinese farmers has accumulated from centuries of experience and transcends academic knowledge. *Becoming a living library involves slowing down to allow learning to happen gradually*. Perception and understanding take time. Farming is *more than a series of techniques*; it is *a way of life*. Understanding a whole range of practical solutions enables us to best raise crops while enhancing the environment.

It is not necessary to come to the Common Ground Mini-Farm, or to any other project, simply to learn GROW BIOINTENSIVE approaches and practices. You can learn just by working with them in your backyard. Ecology Action has over 30 publications being used by hundreds of thousands of new and experienced gardeners around the world. Experience, after all, is a good teacher. To enlarge your experience and fine-tune your skills, Ecology Action's 3-Day Workshop provides a unique short-term training opportunity.

We can all be a part of the solution, no matter how we do it.

## Understanding GROW BIOINTENSIVE

Alan Chadwick, after 50 years of gardening, said he was still learning. GROW BIOINTENSIVE sustainable mini-farming concepts, techniques and practices are never fully finished and are continually evolving and "growing" as we continue to learn. It was after 27 years in 1999 that the perspective of growing 60% compost/grain crops, 30% special root crops and 10% vegetable crops was fully developed conceptually—and now, in 2008, we continue to implement this more fully. It has been said that it takes 50 to 200 years to fully

test a new farming system. We are only part of the way into the process of testing, developing and actualizing the potential of GROW BIOINTENSIVE practices in a difficult farming soil and water situation. This learning takes time.

Alan Chadwick prepared the soil differently for each crop. Ecology Action has simplified this process while maintaining good yields and nutritional quality. The soil is prepared, composted and fertilized the same for each crop, so, once you know how to "grow" carrots, you also know how to grow such crops as potatoes, tomatoes, wheat, cotton and bamboo. Generally, the only element that changes is the spacing. Overall, what is being tested is the GROW BIOINTENSIVE *system*—so what is learned from growing radishes may provide a key to the growing of sorghum and fruit trees and vice versa.

## The Research Environment in Willits

In 1979 Ecology Action lost its research and development site in Palo Alto, when the area was needed for a construction project. During 1980 and 1981 the work to date was evaluated, and a Self-Teaching Mini-Series of "how-to" booklets on specific topics was initiated. In 1982 a new site about three hours north of San Francisco was obtained.

Ecology Action's very small headquarters at Willits, California, is on a hillside overlooking the Little Lake Valley. Ecology Action's research goal is complete economic, nutritional, environmental and soil sustainability. Achieving sustainable soil fertility requires working with the natural system. Crop failures and other problems are experienced as we seek the best solutions. Usually, discovering the answers is part of a "shotgun" testing process that tests many strategies, crops and varieties to discover the best approach for the goal desired. Once discovered, the answers are often simple, based on sophisticated principles, and can be learned easily.

Generally, most test beds are 100 sq ft though some test beds and test areas are smaller or larger. The quantities of organic fertilizers applied are generally the amounts prescribed by the Timberleaf Soil Testing Service.

The mini-farm research generally uses cured compost made from materials grown in the garden. Because many tests have been and are being run which are not fully sustainable, and because our new understanding of how to best grow sufficient compost materials is just beginning to be implemented, low levels of cured compost are still being added to most test beds. We are looking forward to reaching a point where we are adding more cured compost to the soil over the next several years.

## Research Emphasis

Ecology Action's research currently emphasizes the "growing of soil" through annual compost crops, such as wheat, corn, pearl millet and sorghum, which produce both compost materials and food to eat. This is especially important to a large number of the world's people who live on marginal soils with low organic matter levels and low mineral levels in developing-nation conditions. Tree crops are not an emphasis even though several kinds and varieties are grown on the site. Also, conventional organic farming, Bio-dynamics, Fukuoka Natural Farming and Permaculture are not significant emphases in the program.

The experiments on site sometimes deviate from the techniques described in *How to Grow More Vegetables, Fruits, Nuts, Berries, Grains and Other Crops ...*, as ways to improve techniques and soil and food quality are explored.

## Research Challenges

The *constraints* that have kept our research and soil improvement at Willits proceeding at a slow rate, and our yields often *much* lower than the norm in better soils, are similar to those in many developing countries.

The yields are good considering the challenges noted below. Higher yields with even greater resource efficiencies are possible in better soil and climatic situations and are often obtained by others using GROW BIOINTENSIVE techniques in such conditions.

The challenges in the Ecology Action Common Ground Mini-Farm/Garden have been:

**Climate** — Both the Alaskan and the Hawaiian jet streams pass over the Willits area. This creates dramatic temperature fluctuations for the garden. During the growing season, there is often a forty- to fifty-degree *daily* temperature fluctuation. A nightly air temperature of at least 15.5°C (60°F) appears to be desirable for the microbial life in the soil to flourish. That level is only reached at the Willits site a few times a year. It is also desirable to have daytime temperatures under 35°C (95°F) because pollination is reduced when the temperature goes above 35°C (95°F). A significant number of over-35°C (95°F) daytime temperatures occur during the most-active four- to five-month growing season. This growing season is also an arid period with no rain, and the porous soil does not naturally retain water well. However, *significant* improvements in the quality of the soil have been made through the use of GROW BIOINTENSIVE practices.

**Soil** — The loam (almost sandy loam) soil (approximately 49% sand, 36% silt and 15% clay) was rated as only fair for grazing at the point when cultivation began—partially because of its very high magnesium levels that make it a serpentine soil. These soils generally do not produce high yields—at least initially. It also had less inherent soil fertility than the C-horizon material where we performed tests at our former Palo Alto, California, site in the Stanford Industrial Park. The background soil sample of the Willits site exhibited a poor calcium/magnesium/ potassium ratio in addition to being very high in magnesium, contained some sodium and was low in organic matter, calcium, potassium, phosphorus-1 and -2, sulfur, zinc, iron, manganese and boron. Due to financial constraints and location considerations, this was the land that was



chosen. It was less than ideal for ease of soil improvement, yield increases and reduced resource consumption. The mountainside situation, however, is similar to the farming conditions many people in the world experience. The first crop of alfalfa grew only a few inches tall with only two harvests. Now that the soil nutrients are better balanced, alfalfa test yields as high as three times the U.S. average have been obtained.

**Water** — The wellspring water we use contains an excess of both sodium and magnesium. The water is also cold, which tends to retard microbial life in the soil, and therefore plant growth, when we water the garden beds with it during the main growing season, which is arid.

**Organic Matter** — Crops are grown with the goal of producing a large amount of mature compost material per unit of area on a "closed-system" basis. This is a way of working towards "100%" sustainability. Presently, due to tests that by their very nature do not produce sufficient organic matter to ensure sustainable soil fertility, there is often much less compost produced than is optimal for the test area as a whole. This situation often produces lower yields than are eventually expected. Current key research experiments are bringing a better understanding of how the system can best produce the optimal compost quantities necessary for the best crop growth and sustainable soil fertility.

## Research Choices

The amount of time, funding and test bed area available at Ecology Action's research mini-farm/garden limits the number and types of tests that can be performed. Generally, Ecology Action's goal is not to attempt university-type rigorous statistical development and analysis with its multiple replications. Rather it is Ecology Action's goal to run key tests, the results from which may stimulate university and test station research around the world in all types of climate and soil where food is grown. Its goal is also to develop baseline information

about yields, plant spacing/density, fertilizer and compost amounts and cropping patterns to be used to maximize the probability that the practices used by GROW BIOINTENSIVE farmers, mini-farmers and gardeners will be as fully sustainable in terms of soil fertility as possible. In order to accomplish this, multiple-year tests will sometimes be performed in some areas.

Another purpose of this research is to perform long-term soil building tests that most organizations, institutions, programs and people will not perform due to the length of time required. For example, at our new site near Willits, California, 14 years of soil building were required before noticeable improved plant health occurred in 1995. In nature this usually takes hundreds of years. At this point there was still not a noticeable increase in compost crop or diet crop yields. An additional 4 years passed, for a total of 18 years, before significant increases in dry biomass and grain calorie yields began to be indicated in 1999. An additional year, for a total of 19 years, passed before these biomass and grain yields spread to a significant number of additional test areas in 2000 when annual grain crops exhibited almost a doubling of biomass yields and some increase in caloric production.

## The Common Ground Mini-Farming Site

The food-raising area is part of 20 acres on a hilltop overlooking the Willits Valley. The land is owned by John Jeavons, with part of the land and facilities made available to Ecology Action for \$1.00 a year.

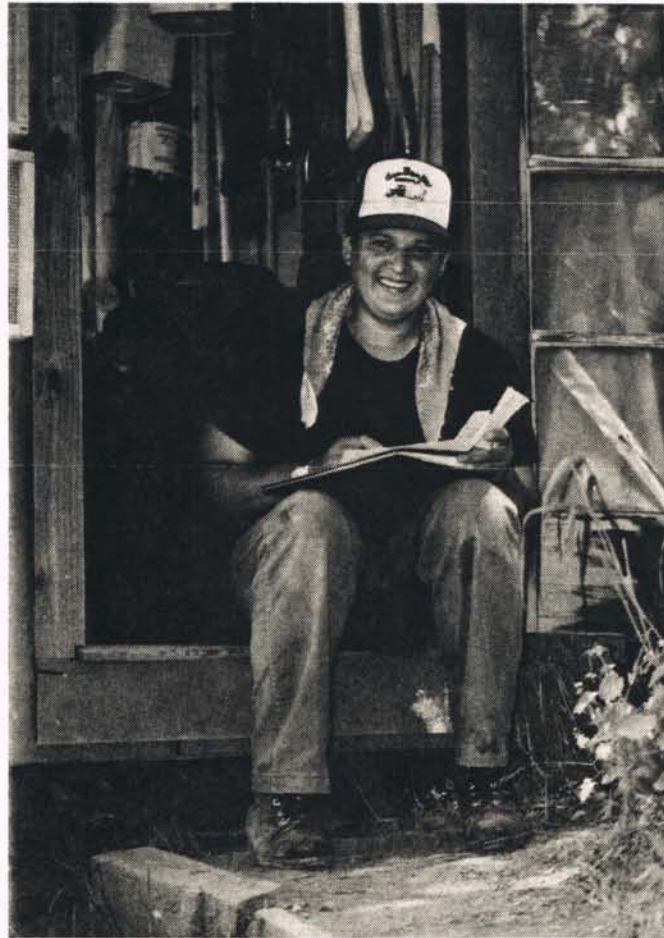
The site is steep with a bit of a hike down to and up from the garden. During the first season, two staff members and some volunteers fenced in 1-1/4 acres for the research garden, laid out water lines, and prepared and planted 40 beds. During the second season, 40 more beds were added. Today, there is the equivalent of 110 beds—many of which are used to grow compost crops. Much of the garden will eventually be terraced.

Currently, a small staff is living on the site. The basic buildings include a solar home, a small office and storeroom, simple living accommodations, an outdoor shower/bath, a composting toilet, and two garden buildings for tools, fertilizers and seeds. We have a telephone and limited solar electricity. There is a feeling of camping out, especially in the summer months, and accommodations will, of necessity, be somewhat rustic as additional housing is slowly added. Life at the site is more rustic and simpler than in most of the United States, but it is not a fully developed "way of life" yet. For example, since the staff and students collect and analyze data, teach and write in addition to mini-farming, probably only 25% of the food eaten by those living on site is raised here. Common Ground Mini-Farm values a non-smoking, low-alcohol, drug-free environment.

The temperature range during the winter is 25° to 75°F, with a daytime mean of 55° and a nighttime mean of 44°. During the summer months the temperatures range from 50° to 105°. The first and last frost dates are October 15th and May 15th for the intermittent "soft" frosts, and November 15th and April 15th for "hard" frosts.

Rainfall, although variable, usually begins about October 15th and lasts until about April 15th, with a range of 35 to 80 inches during this period. It almost never rains from June through September. Some snow can be expected at least once during the winter, but it quickly melts.

Winds range from 0 to 70 miles per hour on top of the hill, and 0 to 20 miles per hour in the garden areas—with the strong winds in the winter season.



# THE APPRENTICE PROGRAM OF ECOLOGY ACTION

The apprentice program of Ecology Action offers serious people an opportunity to become proficient in the GROW BIOINTENSIVE method of small-scale farming, to learn from and with the mini-farm staff as they learn from the many farming experiments that are undertaken each year as part of the on-going research. While apprentices learn the skills needed to become a better farmer in the process, the ultimate success of an apprentice is dependent upon that person's own involvement, initiative, drive, focus, follow-through and hard work. The program in itself cannot guarantee a good farm for a graduated apprentice. The success of a farm is dependent on many variables including soil quality, climate type, water quality, and markets as well as farming knowledge and skills. Learning how to farm really well takes many decades. The Ecology Action staff does not know everything, as we are all learning, too, from one of the oldest organic farm research programs in the United States and the world. The Apprentice Program's main purposes are to better enable a person to learn the most effective farming practices in a given situation and to train teachers and program and project staff. The most successful apprenticeships involve a person taking responsibility for an increasing number of key tasks and following them through to their completion.

At the Willits site, where the yield and resource consumption limits of the method are being tested, we are still determining the factors that make the key differences between low and high levels of resource consumption, high and low yields, and sustainable and soil-exhausting forms of food production. The garden is our living research "laboratory"! Apprentices learn the scientific principles and actual practices being used for the specific GROW BIOINTENSIVE system at the Willits site, which is also being developed as a general model for other

applications globally. Over time, apprentices also become involved in the *ongoing development* of the mini-farming concept and the functioning of the research garden.

People come here to learn our GROW BIOINTENSIVE research system, to learn from what we are doing. Our research began at the basic "how-to" level of technique and grew into the cognitive "why" level. Now we are at an advanced fine-tuning level. Even though all levels of research are practiced and taught all the time, the general work that we are doing involves an understanding of advanced concepts. We expect an apprentice to take the responsibility to learn and understand our system before beginning to think about modifying it.

The work is often hard. All produce must be weighed and recorded, as well as all fertilizer/compost inputs. Time, water use, and other factors are also monitored. Strict procedures are adhered to and evolve slowly, so that we know what works and does not work and why. We grow vegetables, flowers, herbs, grains, potatoes, high-protein beans, crops for compost, trees, berries, grapes, some novelty crops, and income-producing crops such as lettuce, parsley, and basil.

There is work to do even during the winter: maintaining paths, growing compost crops, controlling erosion on garden beds, weeding, planting trees, chopping wood, and other outside work, as well as reading, textbook research, and garden planning.

The time spent in different kinds of work is approximately 50% in the garden, 25% reading/teaching/planning, and 25% other, although percentages will differ from month to month, and year to year. Research and writing skills are an important asset: apprentices often write procedures, information sheets and booklets. Independent thinking, creativity, and teamwork are expected, but there are also well-



defined priorities, and each apprentice must be able to follow direction. Work activities are shared by all; there is no separation of work duties among garden staff.

Apprenticeship is full-time, so no outside jobs are possible. The understanding and developing of GROW BIOINTENSIVE are expected to be the primary focus of the staff, apprentice and intern workday. This is a working mini-farm with work to be done 7 days a week; mini-farming is not a 9-to-5 job. Each week consists of 5 to 5-1/2 workdays and 1-1/2 to 2 days off, depending on the season and the number of people on-site. The gardening and planting routine is a complex, tightly choreographed process each year, and twelve-hour days are the norm, though sometimes from November through March the pace in the garden is more relaxed. Even in this winter period, however, the amount of time in the garden fluctuates with the weather. This is a time for reading, studying and writing.

Our schedules are arranged based on what is most optimal for the garden and may need to be adjusted, depending on the conditions at the time. We all need to be flexible.

Everyone needs to have and use a watch, as certain tasks need to be optimally performed at specific times during the day.

Vacations are arranged according to the needs of the gardeners as well as the needs of the garden. Except for special circumstances, vacations are scheduled in August (one week maximum) and November through March (3 weeks).

## Goals of the Mini-Farming Program

Our goal is the development of food-growing systems that can be understood and used worldwide by people with the fewest resources, as well as by those in developed countries who see the need for a more sustainable, resource-conserving agriculture. We are most of the way through this process ourselves, and the apprentice program is a way

to learn from our many years of experience while working with us.

The program consists of a flexible schedule of demonstrations, talks, practical work, observation and directed readings. Much of what an apprentice learns will come through doing and individually structured tutorials. The topics covered in reading and/or field work include:

Techniques: History, Philosophy, Bed Preparation, Compost, Seed Propagation, Double-Digging, Companion Planting, Insect Life, Pest and Disease Prevention, Data Collection.

Crops: Vegetables, Grains, Beans, Fodders, Compost Crops, Fruit and Nut Trees, Herbs, Flowers, and Novelty Crops.

Mini-Farming: Basic Concepts of Mini-Farming, such as Yields, Land Use, Nutrition, Economics, Resource Use, Fertilizers, Water and Organic Matter, Soil Limitations, Functionality, and Modularity.

Applications: Detailing of mini-farming scenarios for the areas in which the apprentices expect to work. If possible, apprentices should provide the following information about the locality where they expect to work:

- ◇ Monthly rainfall amounts
- ◇ Monthly minimum and maximum average temperatures
- ◇ General soil type, texture, and nutritive levels (including pH, N, P, & K), and notable trace mineral deficiencies)
- ◇ Market demands
- ◇ Local diets
- ◇ Kinds of tools and materials locally available

The present objectives of the Mini-Farming Program include:

✓ Determining and demonstrating the minimum area of land required to grow a complete, balanced vegetarian diet on a "closed-system", self-sustaining basis.

✓ Developing a successful economic mini-farm which can be managed by hand and which could also remain self-sustaining in terms of organic matter for compost fertilizer on a "closed-system" basis.



✓ Applying the method in rural and urban gardening systems in developing countries.

✓ Developing and utilizing simple, sophisticated, low-technology applications appropriate for small-scale farming.

Apprentices work on the development of these goals as well as their own areas of specialized interest.

The GROW BIOINTENSIVE method is a unique system of farming. A single aspect of the method—such as intensive seeding, deep bed preparation, or companion planting—cannot reach its full potential when separated from the whole process.

There is a difference between the *accumulation of ideas* and the *development of a system of understanding*. The emphasis of Ecology Action's apprenticeship program lies in enabling the individual to develop a deeper understanding of how the various components of the method work together and to obtain a knowledge that is not only conceptual but *integrated into a demonstrable lifestyle*. This knowledge evolves gradually through a learning process which involves an initial period of *expansion* as the apprentice is exposed to new ideas and new ways of looking at problems; a period of *contraction* as he/she synthesizes this knowledge into a simpler and more easily understood conceptual framework; and, finally, the application of an actual *living* demonstration of the understanding.

The mini-farm/garden procedures are standardized for ease of communication, understanding, general operation and research. Sometimes there may appear to be an easier way to perform a particular task or prioritize a series of tasks, but that apparently easier way would often be problematic for the mini-farm/garden learning and research experience as a whole. Apprentices are expected to be able to follow guidance and work well with others and are responsible for completing daily garden tasks in a timely and efficient manner under the guidance of the garden manager. Acquiring knowledge and understanding is a very long process, and the research garden is complex. Patience is essential. Full understanding of a

task, a process, a way of doing things and the system involved may take a long while, because the many variables involved only come fully into focus after an apprentice has studied and practiced in the field for several years. One of many examples is the fact that some tasks receive a high priority even though they do not need to be accomplished immediately; they are given a high priority in these cases because there will probably not be time before their ultimate deadline to do them.

## Benefits of the First Year

This process takes time, and the apprentice will go through these stages several times as he/she develops deeper appreciation and understanding, and more skills. During the *first year*, an apprentice will develop *beginning* levels of sensitivity and skills and will have a limited number of opportunities for making decisions. The apprentice will be exposed to an entire year of GROW BIOINTENSIVE food-growing experience in the garden. The apprentice will develop three classes on GROW BIOINTENSIVE techniques to be presented first to Ecology Action staff, then (normally in the second year) at the Common Ground Store in Palo Alto and finally at Ecology Action workshops. The apprentice will also develop and present three crop classes to EA staff and apprentices. Depending on interest, skill and time, the apprentice may also work on a project. Sometimes student projects are chosen to become booklets or books.

During this period we hope to endow you with the 10% of the information that can be learned easily which will allow you to obtain 90% of the results. The remaining 10% of the results, which requires 90% of the learning time, is left to you to obtain on your own with gradual improvement in your own skill and knowledge.

## Benefits of the Second Year

The *second year* of the apprenticeship program enables a person to develop

*intermediate* levels of GROW BIOINTENSIVE skills and should develop confidence in the practitioner to relate to the *constantly changing* yearly growing cycle. As crops grow differently in response to an improving soil, improved skills, and climatic changes, the *learning process really begins*. The apprentice develops and presents six more classes on other techniques and crops. Increased opportunities for decision-making develop, and the apprentice is given more responsibilities.

At the end of an apprentice's second year, there may be a possibility of arranging a visit in a developing country. This can enable the student to broaden his/her perspective and allow for hands-on application of the knowledge gained in the Mini-Farming Program.

### **Benefits of the Third Year**

The *third year* enables an apprentice to develop an *advanced* level of experience, skill, and sensitivity. At the end of this period, a person should be able to plan, develop, and run a GROW BIOINTENSIVE food-raising project at a new site on a sophisticated low-technology basis. After three years of food-raising, study, and continually changing experiences, a person should be able to develop creative solutions to most situations likely to be experienced in the future, and to "land on his/her feet" when faced with the unexpected. During this year, much more independent decision-making and responsibility are expected, though the apprentice is still under constant staff supervision. Independent study in areas of the person's interest is expected; this may evolve into a special project or a booklet.

Apprentices are asked to make a minimum commitment of three years because it takes several seasons to understand and fully internalize the method, the way different crops may be grown, and the annual farming cycle.

The techniques used are adequately explained in Ecology Action publications; the knowledge and skill come with applying these techniques together with additional reading, research, and "paperwork" time which apprentices do during their three-year stay. Also, at the end of the third year a *learning synthesis* usually occurs, which enables the person to "know" much more than three years' worth of experience.

Looked at from Ecology Action's perspective, the apprentice's first year involves time and money spent on the learning process. At the end of the second year, with the apprentice's increased awareness and skill, Ecology Action "breaks even". By the third year, Ecology Action is able to benefit from the apprentice's accumulated expertise. During the *fourth and fifth years* of GROW BIOINTENSIVE learning and gardening, *teaching skills* can be honed. Full participation in the annual mini-farming research and planning process occurs in the fourth year if it is mutually decided an apprentice should stay on as a staff member. It is obvious, then, that a long-term commitment benefits both Ecology Action and the apprentice.

### **Staff Apprenticeship**

A staff apprenticeship is sometimes offered by Ecology Action when there is a promising candidate and a potential job opening within Ecology Action or one of its associated projects. Generally, this type of program begins with a regular three-year apprenticeship and leads to a regular mini-farm staff position after successful completion of the training period. The type of work performed by Ecology Action mini-farm staff is similar to that performed by a mini-farm apprentice, except that a staff person normally has more responsibility and, because of his or her increased skill- and experience-levels, does more work.

## ECOLOGY ACTION'S EXPECTATIONS

- We are not interested in admitting someone to the apprentice program so he/she can learn the techniques of the GROW BIOINTENSIVE method. For that, you should read *How to Grow More Vegetables ...* and try it out in your own backyard or community garden.
- Apprenticeships are for those who wish to become better equipped to teach teachers in GROW BIOINTENSIVELY sustainable ways of life: by living such a life and actively catalyzing this process in others. *To fully benefit from the learning process, the student must already know what he/she plans to do with the skills which will be obtained during the apprenticeship.*
- Ecology Action's program is not a place to decide what one wants to do with one's life, but a place to better equip oneself to accomplish what one has already decided to do. Ecology Action is seeking individuals who have reached the point in their lives where they want to be of service to humanity and the environment. This service often takes the form of daily "drudgery" with occasional high points; it requires perseverance, patience, rootedness and groundedness.
- We are looking for an unusual combination of qualities:
  - highly motivated, but willing to be satisfied with modest monetary rewards;
  - having strong convictions, yet flexible;
  - willing to help people help themselves, not do things for people;
  - willing to take responsibility for one's own growth and learning, rather than waiting to be taught;
  - able to make a long-term commitment.
- Ecology Action's program goal is to create a positive sustainable farming system and way of life and does not emphasize the negative aspects of any particular farming system or way of living.

We are a small, often overworked group, and we expect equal energy from apprentices. The main rewards are the results of all our work. Thomas Edison once noted that creativity is 1/2% inspiration and 99-1/2% perspiration! We see our work as service that involves, *not an escape from the real world, but an escape to a viable solution to some of the problems that so many people prefer not to face.*

For the foreseeable future, the focus of our apprenticeship program will be to provide people to fill long-term, permanent positions on Ecology Action's staff. These staff people are needed to enable Ecology Action to teach GROW BIOINTENSIVE mini-farming to more people more efficiently and more effectively. (Some shorter-term applications for a three- to five-year commitment with Ecology Action may be considered.) Previous experience is not a requirement for admission to this program. Also, it is expected that some of our graduate apprentices will, over time, be sent overseas to head up key GROW BIOINTENSIVE food-raising projects around the world.

The first four weeks of the program are considered a trial period to enable the participant to better assess the program as well as his/her own level of desire for this kind of work. Periodic reviews are scheduled for the four-month, six-month, one-year, and two-year points.

During the first year of the apprenticeship period, the apprentice generally receives no money from Ecology Action or from the Common Ground Mini-Farm, the apprenticeship experience being defined as the exchange of work for knowledge. (See "In Defense of Old-Fashioned Training" elsewhere in this booklet.)

## Tuition Fees and Expenses

There is a tuition fee for the first year. The apprentice is expected to make a \$2,920 payment *one month before the scheduled date of arrival* (\$1,000 for tuition; \$1,560 for food; \$360 for fuel and other expenses). The second year, only the amount for food, fuel, and other expenses is charged (\$1,920). The third year, the apprentice is paid a stipend for his/her work (to be determined according to the funding available and personal needs). The charges listed cover approximately 50% of program costs.

Ecology Action pays for Working Person's Compensation in the event of accidents "on the job". The apprentice is responsible for his/her own medical and dental expenses. Major medical insurance is required to provide for unexpected expenses. A medical package that pays approximately 80% of expenses is

available for approximately \$1,800.

Dental/Vision insurance is available for approximately \$480. Dental/Vision insurance is provided beginning the second year.

Apprentices are responsible for all of their personal expenses. This amount will differ from person to person (a few who have been here have managed with very little), but will probably not need to exceed \$2,400 per year, not including medical and dental expenses.

Scholarships are sometimes available for especially good candidates. A scholarship can include \$5,620 for tuition; food, fuel, and other expenses; plus 50% of medical insurance; and \$1,800 toward personal expenses.

Given current visa restrictions, those from other countries should apply for a six-month internship at Ecology Action or a six- to twelve-month internship at the Golden Rule Community. (See the Ecology Action website [www.growbiointensive.org](http://www.growbiointensive.org).)

### Apprenticeship Expenses

	<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>
Tuition	1,000	—	—
Food	1,560	1,560	1,560
Fuel, etc.	360	360	360
Major medical insurance (estimate)	700-1,800	700-1,800	700-1,800
Dental insurance	480	provided	provided
Personal expenses	<u>2,400</u>	<u>2,400</u>	<u>2,400</u>
<b>TOTAL</b>	<b>6,500-7,600</b>	<b>5,020-6,120</b>	<b>5,020-6,120</b>

## Personal Supplies To Bring

### BEDDING, ETC.:

Sheets and/or sleeping bag, pillow, pad  
Towels, washcloths  
Bowl/wash basin, water jug, water glass,  
portable solar shower (if available)

### CLOTHING:

Everything from shorts to warm jackets  
Old work clothes  
Sunhat  
Rainwear

Shoes/work boots with good tread  
Good pair of waterproof boots with heavy treaded soles

### OTHER:

Flashlight, battery-powered lantern  
Battery-powered shavers and other appliances  
Rechargeable batteries  
Favorite recipes  
Musical instruments, art supplies, etc.



# LIFE AT THE MINI-FARM

## General Working Schedule of the Garden and Mini-Farm

The garden directly reflects our understanding of it. It also reflects our relationship with it. It calls on us to cultivate both the soil and a strong sense of responsibility.

Varying somewhat with the weather, the time of year (and even with the time of day, especially during the hot summer), and the amount of work to be done, the regular workday often lasts from early in the morning to well into the evening. Giving the garden the hours from seven or nine in the morning to six or nine in the evening allows for proper watering and transplanting time and helps to ensure that it is well run.

Certain tasks such as watering particular sections of the garden or harvesting and marketing garden produce are arranged among the gardeners on a long-term basis due to the need for continuity. The work to be done on a day-to-day basis is periodically written on a blackboard, so that we can keep track of the many projects to be completed. Do not hesitate to ask questions about the work to be done. See to it that you take part in a variety of garden activities from day to day for different learning experiences. Often, working with another person can help you learn a lot more and can make the work more fun.

Ecology Action is a deliberately small organization. Simple housing such as trailers and tents is provided. Solar showers are available in the garden in warmer weather. Meals range from vegetarian to vegan (no meat/fish is cooked or eaten on the Ecology Action site.) Apprentices and interns fix their own breakfasts and lunches and take turns cooking the evening meal, doing dishes, and cleaning up. There are also other tasks to be shared not directly connected to the garden.

Laundromat facilities are in town, 30 minutes away.

Willits is only twenty minutes down the hill by car and about half-an-hour by bicycle. (Uphill by bicycle takes an hour to an hour-and-a-half, depending on how fit one is.) Transportation back and forth to town is limited, but usually someone goes to town every day or two. Accommodation for emergencies will, of course, be made. There is a wide range of churches in town. There are also good Greyhound bus connections from town to the San Francisco Bay Area and other parts of the country.

## The First Few Days in the Garden

After you are settled into your place to live and you are ready to begin working in the garden, there are a few things that you need to know in order to get going. The gardeners already at the site will make sure that you know about:

- 1) where the tools are kept and how they are cared for;
- 2) the watering arrangements;
- 3) the location and identity of crops, herbs, weeds, flowers, vines, and trees in the garden;
- 4) garden tours and workshops.

Before you begin any task, make sure that you are confident about how to do it. Hopefully, as time goes on, you will discover *why* you are doing things in certain ways. When unsure, just ask someone.

## Personal Learning Responsibilities

We all have different motives for being in the garden, but the "Common Ground" which we share is being here to learn. While the garden and staff help provide basic direction,

you must provide the motivation and realize the meaning of your learning. And just as one learns to speak and read *by listening and observing*, one learns the language of the garden by doing the same. It does take time, and really, the learning never stops. But to learn, we must give the garden time to teach us what we need to know—and remember that it never stops teaching us something new if we are willing to listen and observe.

The weeks and months pass quickly. You can better fulfill your personal learning responsibilities by:

1) realizing that *this apprenticeship is only the beginning* of your education and experience in this area of interest, and that you have a whole lifetime ahead to learn and experience more—no matter how old you are (or think you are);

2) trying to *focus your interests* as much as possible, especially in regards to how you plan to utilize in the future what you learn here. It is better to learn a few things well than to become scattered, and you can then have a foundation on which to learn other things—and, hopefully, a network of other people to help you learn more;

3) keeping in mind some sort of *timetable for doing readings and personal projects*. There is some assigned reading, but most experience and study outside of the garden routine is up to you. There is an extensive library representing most facets of agriculture, homesteading, alternative energy, and so on, at the Willits site, which has been very helpful to all of those who have spent time as apprentices.

You will generally find that as you become better able to define what you want from the garden, your sense of accomplishment and satisfaction with your learning will increase. The sooner you are able to make those definitions (allowing for changes in perspective, of course), the better.

The following comprise some suggestions to help your learning along:

1) Keep a *written journal*, diary, or notebook of your experiences, thoughts, feelings, or whatever. Writing is an excellent

way to work out thoughts and "relearn" what you have learned. It is also a good way to note your learning progress when reviewed later.

2) Take *written notes* when you read, otherwise much important information may be missed or forgotten. Discussions of reading materials are much more productive when you have notes to which to refer.

3) After the first month or so, *list* a few *learning goals* for yourself (anything from how to identify nutritional deficiencies to how to grow hardwood cuttings—and everything in between). Following each goal, figure out what would be the best way to fulfill that learning goal, whether it would be through personal instruction from a staff person or researching information on your own.

These are only a few suggestions to assist learning. There are many others that might work better for your needs. Most of the learning takes the form of *experiencing and working in the garden*, in addition to instruction, discussion, reading, and a few field trips. Any suggestions for ways to improve the learning process are necessary and much appreciated.

## Day-to-Day Learning

Many learning opportunities occur every day in the garden, ranging from profound questions to identification of new insects and plants to development of an attitude of acceptance and understanding for some of the more monotonous yet important tasks in the garden. Ask questions as they arise, or write them down for later, if necessary (it is helpful to *carry a pen and a small notebook*), but do not put them aside and forget them. When you have questions, ask someone who would know the answer or look it up in one of the books in the garden/mini-farm library. (The combined total of books, pamphlets, and papers at the Willits mini-farm site amounts to over 5,000 pieces.) Common Ground is here to learn from, and things are never so busy that you cannot take a few minutes out to get an answer to a question. Get to know the local people, too. They are full

of experience and knowledge about all kinds of things, including gardening.

Over time, as you gain observation skills and increased feeling for the plants and soil, you will find yourself asking better questions which require more complete or "whole" answers. These questions can serve as a partial gauge of your learning progress. Holistic questions ask of you a certain level of care, patience, and observation. They will lead you to learn how to discover your own answers therein: "*The garden makes the gardener.*" Your questions and insights will greatly help the staff and other apprentices and contribute to the greater body of knowledge and understanding of the world we share, as well.

## Garden Projects

Consider taking on a garden project or projects. The focus, interest, and energy a project provides and develops within you can make the learning better and easier. If you are interested, discuss and exchange these ideas with others in the garden. Projects can be almost anything from crop research to designing and building garden structures and tools. A few ideas for projects are:

- 1) Save some of the seed from garden crops;
- 2) Plan and teach a garden mini-class;
- 3) Explore the possibility of marketing cut flowers locally;
- 4) Maintain the garden library.

## Garden Meetings

Garden meetings are held each week, formally or informally. Discussions revolve around garden topics and related subjects. The meeting is a chance to ask in-depth questions and to share experiences concerning the garden.

## Reading

Reading is important for gaining information and to help stimulate your own

opinions, ideas, and creativity. One morning each week is available during your working hours for this study (except during April, May and June), and you are strongly encouraged to spend additional time each week as necessity, energy, and motivation allow.

## A Typical Year

- September — Plant autumn compost crops, weatherize paths, collect seeds
- October — Order trees, cut wood, repair drainage ditches
- November — Frost and rain periods begin  
Build autumn compost piles, begin mini-greenhouse growing period
- December — Annual planning, order seeds, weeding
- January — Plant trees, berries, grapes, roses
- February — Prune trees, grapes, roses; plant grains
- March — Begin spring food-raising, raise spring seedlings
- April — Frost and rain periods end  
Food-raising work accelerates, build spring compost piles
- May — Warmer-weather growing begins
- June — Hot-weather growing begins
- July — Begin major harvesting period
- August — Prune berries, begin major re-preparation of harvested growing beds.

## Teaching Opportunities

*Palo Alto Classes* — Classes on GROW BIOINTENSIVE topics are given at Ecology Action's Palo Alto, California, Common Ground Garden Supply store by Ecology Action mini-farm staff, GROW BIOINTENSIVE certified teachers, Ecology Action GROW BIOINTENSIVE apprentices and sometimes others who have

taken a GROW BIOINTENSIVE<sup>SM</sup> Three-Day Workshop and have prepared specially to give a particular class.

***Mendocino College Classes*** — Classes on GROW BIOINTENSIVE topics may be given at Mendocino College, Willits, California, by Ecology Action mini-farm staff, GROW BIOINTENSIVE certified teachers, Ecology Action GROW BIOINTENSIVE apprentices and possibly others who have taken a GROW BIOINTENSIVE<sup>SM</sup> Three-Day Workshop and have prepared specially to give a particular class.

***Three-Day Introductory and Five-Day Teachers Workshops and Summer Course Topic Classes*** — Classes at Ecology Action's Willits, California (and other locations), Three-Day Workshop on GROW BIOINTENSIVE topics are given by Ecology Action mini-farm staff, GROW BIOINTENSIVE certified teachers, and second- and third-year Ecology Action GROW BIOINTENSIVE apprentices who have prepared specially to give a particular class.





# THE APPLICATION PROCESS

The **first** step in applying for an apprenticeship is to read the following Ecology Action publications:

- ◇ *The Sustainable Vegetable Garden*, 1999
- ◇ *How to Grow More Vegetables ...*, 7th edition, 2006
- ◇ *The Backyard Homestead, Mini-Farm and Garden Log Book*
- ◇ *Biointensive Mini-Farming: A Rational Use of Natural Resources* (Booklet #0)
- ◇ *A Perspective* (Booklet #9)
- ◇ *The Complete 21-Bed Biointensive Mini-Farm* (Booklet #14)
- ◇ *Biointensive Micro-Farming: A Seventeen Year Perspective* (Booklet #19)
- ◇ *Microfarming as a Key to the Revitalization of the World's Agriculture and Environment* (Booklet #21)

The enclosed articles are also required reading:

- ◇ "Cultivating Our Garden", *In Context* magazine
- ◇ "The Call To Dig", J. Tevere MacFadyen, reprinted from *Horticulture* magazine
- ◇ "Feeding The World", *The Christian Science Monitor*

The following are recommended but not required:

- ◇ *One Circle*
- ◇ Booklets #12, #15, #17, #25 and #26

The **second** step in the apprentice application process is to attend one of our **scheduled tours or workshops** (see the enclosed Bountiful Gardens catalog).

If you think you are ready to make a *commitment* to Ecology Action's work after reading these materials and this booklet, the **third** step is to submit your application. Please write us with your thoughts on the following Key Questions. You need to convince us that the time spent will be worthwhile to both you and us. Include the enclosed Personal Data

Form and Release Form with your application and \$30 for processing.

The most desirable starting point for the apprentice would be the first half of September, although exceptions are sometimes made. Please explain your particular circumstances if you wish to propose another starting date.

It is best to apply six to twelve months in advance. The processing period often takes at least two to six months and can involve an exchange of correspondence and/or phone interviews. Those passing this stage may be asked to travel to the site for a four-day to one-week work-visit.

## Key Questions for Apprentice Applicants

Tell us what you think of hard work, alternative technology, world hunger, and the idea of freedom as self-chosen obligations to oneself and the world. How do you see the future, and how are you preparing for it? Are you attached to creature comforts? Which ones? What do you do if you are bored? Are you a talker or a doer? In what way? How are you on follow-through? What are your needs? Do you type?

Please tell us about your background—and also your present physical condition (there is always plenty of work to be done in the garden, and going up and down to the garden a few times a day takes some getting used to!). Please list any conditions, previous injuries or operations that might make certain tasks difficult for you. Do you have any previous horticultural or agricultural experience? If so, please describe.

What successes are you most proud of? What challenges have given you the most difficulty? What lack of success have you experienced?

Briefly describe some of the things you would hope to learn in the Common Ground Garden.

Based on what you know about the GROW BIOINTENSIVE method at this time, describe how you hope to apply the method in the future. What do you expect to be doing in ten years? (No matter how large-scale or small-scale your ideas, we are still interested.)

## Financial Plan

Also, please indicate in detail how you intend to finance your apprenticeship (see pp. 12-13).

Please send a letter of application, your essay, financial plan, Release Form, Personal Data Form and \$30 processing fee to:

ECOLOGY ACTION'S MINI-FARM  
APPRENTICESHIPS  
5798 Ridgewood Road  
Willits CA 95490-9730 U.S.A.

We hope the decision process will be as creative for you as it is for us, and we hope to hear from you soon!

## The Renewal Process

Once a person has begun the apprenticeship program, a written request must be made three months before the end of the first and second years if he or she wishes to continue in the program. "Apprentice Opportunities" should be reread before requesting to continue to ensure that the apprentice's goals can be met within the site program. Otherwise, it will be assumed that this person wishes to leave at the end of the first, or second, year. Upon receiving a request to continue, the Ecology Action staff will review it and will respond with a decision within one month. If an apprentice wishes to become a short-term (one to two additional years), medium-term (three to seven additional

years) or long-term (eight to seventeen additional years or more) GROW BIOINTENSIVE sustainable mini-farming program staff person, a written request must be made six months before the end of the third year. Long-term staff people provide all-important *continuity* for the research and for interns, apprentices, other students and the outreach program around the world.

## Change of Status

If the apprenticeship is not working from the point of view of the apprentice or Ecology Action's senior staff, either party may decide to terminate the relationship. For those apprentices deciding that the type of work in the Ecology Action program is not right for them, a notice of at least one month, and preferably three months, is appreciated.





## ECOLOGY ACTION STAFF

### Willits, California

The Mini-Farm/Garden is run under the direction of Ecology Action Executive Director, John Jeavons, and is supervised by our Research Mini-Farm/Garden Manager, Carol Cox. Both teach interns, apprentices and students at the site. John is in the growing area only periodically for reviewing the test crops, teaching and checking skill levels, as his administrative, writing, fund raising and teaching activities often keep him busy outside of the Mini-Farm/Garden. Carol is in the test area almost all the time.



**JOHN JEAVONS**, President and **Executive Director** of Ecology Action, has been Director of the Mini-Farming Program since 1972 and is the author of *How to Grow More Vegetables ... on GROW BIOINTENSIVE sustainable mini-farming*, which is currently in use in over 105 countries in English, Spanish, French, German, Hindi, Russian, Arabic and Braille. He is author, co-author and/or editor of over 30 Ecology Action publications. His major responsibilities include directing field and library research and education in GROW BIOINTENSIVE food-raising. He also directs fund-raising efforts for Ecology Action and related key GROW BIOINTENSIVE programs. He advises GROW BIOINTENSIVE projects in Mexico, Kenya, Russia and India, as well as in all corners of the U.S.

**CAROL COX**, a development professional for 20 years, completed a three-year apprenticeship at Ecology Action and has been **Garden Research Manager** at the Willits Mini-Farm. She has Master's degrees in Teaching English as a Foreign Language and Library Science, and her experience has included teaching English and French in West Africa and Jamaica. She compiles the yearly garden plan, supervises the day-to-day activities in the garden, and teaches apprentices and workshop participants. She also maintains the Ecology Action library collection, is the author of Booklet #26, and has co-authored *The Sustainable Vegetable Garden*, a simplified book of the most important GROW BIOINTENSIVE techniques.

## In Defense of "Old-Fashioned" Training\*

Hartmut von Jeeze

The question is often asked, "How can I become a Biodynamic farmer or gardener?" Of course it is best for anyone who really wishes to follow that calling to find a place where he can get training. I will make an attempt, however, to describe some methods which an aspiring farmer or gardener may be able to apply, even if he does not yet happen to be on a Biodynamic farm or garden.

What I will describe was, only a short time ago, considered an indispensable part of any training. It is still mentioned in text books today, although in books on Biodynamic agriculture it is more apt to appear between the lines. To an experienced farmer or gardener, therefore, I am not really saying anything new. At a time when mechanized operations and fast returns are the order of the day, I hope only to throw some light on what no longer appears on the surface.

Anyone traveling through the Amish country or on the European continent will find one thing common to the farmers in these areas: an almost ritualistic **devotion to order**. Order permeates every facet of work and life on the farm and in the garden. If you had the opportunity to be an apprentice on one of these farms, you would probably find that, for the first year or two, more emphasis would be placed on the acquisition of certain skills than on what might seem directly related to farming or gardening. Nowadays, such an emphasis is often considered petty, although, as we shall see, there are good reasons behind it.

Today's virtual separation between the attitude of the person performing a job, and the actual product or work, may be considered a necessary evolutionary step. In earlier days, the manner of working was an inseparable part of the created product. We need only think of the old craftsmen, although many other examples could be given. Here,

as Goethe said, "The What bethinks, yet more the How."

Our relation to labor today, largely the result of automation, has changed all this. However, while an engineer who does a poor job designing a bridge will have to face up to the consequences of his negligence, the same laxness in professions dealing with living organisms (e.g. farming and gardening) may not have such immediate and obvious results. And yet it is precisely in the area of working with living organisms that **sensitivity** is required as a first condition; without it, we cannot even realize what domain we are in as we work on a farm or in a garden. Considering this, we may not find it hard to believe that the old-fashioned steps of training—leading from apprentice through journeyman to master—may have had a purpose. Some of these steps shall, therefore, be described below. (I might add that, in earlier times, an apprentice often had to pay for his training, and certainly never received anything, to begin with, except board and lodging. Think of college students today.)

The initial step, for one who enters upon the path of learning a trade—such as an apprentice in Biodynamic agriculture—is **the acquisition and development of certain disciplines** to the point where they become second nature. These disciplines are quite simple, and the first one—already mentioned above—is **order**. What does order have to do with farming? At the very least, it must be agreed, a farmer whose house, barn, tool shed, field, etc. are in order will have everything he needs at his fingertips.

Such order may be difficult to achieve at first; life itself must often come to one's aid. Imagine, for example, that you are plowing, have to stop for a repair, and find that you left the hammer lying on the tractor wheel, at the last fixing job ten furrows back. Or you are trying to attach a trailer to your tractor,

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\*Used with permission from BIODYNAMICS Magazine, Spring 1977, #122, pp. 7-11 and Summer 1977, #123, pp. 23-26. Subscription to this excellent quarterly magazine (which includes membership in the Bio-Dynamic Farming & Gardening Association) is \$30 per year. Write: Bio-Dynamic Farming & Gardening Association, P.O. Box 550, Kimberton, PA 19442, U.S.A. [Emphases added by Ecology Action.]



with the boss standing by, when you remember that you left the hitch pin on the bench in the tool shed, half a mile away! Few of us have escaped such lessons.

It is the effort that counts, however, and one day the apprentice will see that his attempts to achieve order are paying off. Not only will he find things at his fingertips when he needs them, but he will eventually discover that orderliness has an immense power to turn things around him into willing servants in the execution of his work. They become just as helpful as the orderly thoughts necessary to an engineer, for example, if he is to be successful in his trade.

All experienced farmers can confirm that this is so. An old hand will be unable to walk past a pitchfork negligently left lying on the barn floor, or placed prongs up in the corner, by some novice. He will instinctively grab the fork and place it securely, probably thinking, "I wonder who will look for this tomorrow morning!" Or consider the nail carelessly dropped in the farmyard. There will most likely be a hot afternoon, with a storm on the way, when the tire of your hay wagon will pick it up, or—even worse—an ailing cow may unsuspectingly swallow it.

Many an eager beginner in the all-out attempt to bring order into his life finds that almost everything, as if by agreement, seems determined to defeat him. Although it will not necessarily happen to everyone, most of us have experienced frustration when a tool that was always there suddenly vanishes, or when the pin that has held a piece of equipment together for years breaks on the very day when we actually arranged everything *well*, and work is finally progressing smoothly.

We should not be deterred or discouraged by all this. We must realize that our efforts are strong enough to be causing a response—and that we still have much to learn. One problem may be that we do not yet have the appropriate inner relationship to the things we come in contact with. Perhaps we are too eager in our efforts, in which case things will have a way of breaking or going wrong under our fingers; or maybe we are not yet really "there", with our mind on the job, and so objects continually get lost.

To help the novice over this hurdle, a second discipline is necessary: **the ability to submit oneself completely to doing what one is asked to do.** Again, obedience to this discipline may be hard at first. There are so many times when what we have been told to do could be done differently, or with

much less effort, or perhaps more efficiently with a machine.

But right here is the crux of the matter. At this stage of our training, it is not a question of how we can do something easier, quicker or better. The real point is that a certain inner strength and quality—which we alone can develop—must not be dissipated too soon in outward concerns but allowed to grow within us. As the germinal force of the sprouting seed has to be held back for a while, if a strong bud is to develop, the willingness to do what is asked, without questioning motives or pushing alternatives, gives strength to a special virtue that is well worth every bit of effort.

The apprentice who persists long enough in this discipline will, sooner or later, discover a stability within himself that he has not known before; perhaps he hasn't even suspected that it could exist. The fruits of obedience will also give him a sensitivity to his surroundings by virtue of which he will approach an understanding of inner, universal laws. This will help him to overcome the "bad luck" syndrome. As he discovers that "efficiency" is beginning to become his companion, he can experience it as a kind of inner space, existing between the person and the things around him.

Everyone is familiar with repetitive work. It has a flavor of its own, especially for beginners. Confronted with the task of singling turnips, weeding, picking stones, or any similar work for eight to ten hours a day, in a field that may take weeks to complete, one can learn a great deal—and not only about the weather.

An apprentice placed in such a job for the first time soon finds himself surrounded by what seems to be an endless sea of plants, weeds or stones—alone. Any old hands who may have started out together with him have moved out of talking distance, if not out of sight, by dint of their ease of movement and skill. Thus, left to himself, the beginner finds that time seems to stretch almost as long as the rows of plants before him. Aching backs or hands and other discomforts may add to his plight. Situations like this may well test the apprentice's vow to his chosen profession.

Sticking to one's guns in this test is, however, essential; if we persist in our task, we soon develop skill. Moreover, we soon discover a certain rhythm of movement contained in all repetitive work. Once we have found this rhythm we have gained a powerful ally. For it is as if this rhythm would lend to us its own strength. With its aid we soon learn to

move through the weaving rows with the same swiftness as the experienced worker. An inner stability begins to manifest itself in our work, making us immune to the change of weather, to boredom, or to any other irritations that had beset us to begin with.

Finally, the **submission to repetitive tasks** will engender in us an equanimity unknown to us before. Once we have reached this point in our apprenticeship we have gained a great deal. We have not only learned something about work, but about ourselves. We have gained a certain detachment from ourselves, giving us a new relation to the element of time. We know now how much can be done in a given time. We can move on.

At this stage in our training we will find ourselves involved in all manner of tasks in and around the farm. Most tasks will be known to us by now and we are actually well on the way to becoming journeymen. What we will now need is **perseverance**.

Few things foster skill and strength more than perseverance. I remember well a situation which I considered insoluble. One day, having to replace a broken part on a plough, I found myself hopelessly stuck trying to dismantle certain parts. Just then the farmer happened to come by and looked at the plough for a few moments. Then he looked at me and said, "If man has put it together he can also take it apart," and walked on. I succeeded. Recollection of this situation has helped me many times since. Perseverance duly practiced not only gives us outer strength. It lends certainty and tranquility to all our work. Its result is an outgoing efficiency, which will begin to permeate all our work.

An old proverb says: There are no dirty jobs on a farm. Few apprentices realize the wisdom of this proverb. We may have come very far in our knowledge about farming practices before we are faced with the full weight of this statement. For we will probably be a good way into the journeyman stage of our training before we realize how much preference we still carry in us for certain jobs rather than others. Yet, if we wish to aspire to mastery of the trade, preference for some jobs over others is a barrier we have to overcome. Only the ability to turn to one job, with the same fullness of attention as to another apparently less enjoyable, leads to that flexibility, openness, and ability to judge situations which we need if we want to stand responsible for our trade. **Non-preference**, if acquired, leads to freedom from self in all we do.

Lastly, a trainee who has acquired the five virtues previously outlined will, if he wants these to be effective in his daily life, have to pay attention so that they do not get lost. A sixth exercise or step, therefore, consists in **devoting attention to all the above virtues**, to the point where they become an inseparable part of him. He who achieves this will find a way to harmony with himself and the world. He will also gain a living relationship to the land, which will help him a long way on the road to mastery of his trade. He will acquire a certain gratitude towards his daily work.

The careful reader may find that the above stages, described as part of an outer training, contain the same elements which Rudolf Steiner gave as subsidiary exercises for those who want to go a path of inner development. To those who may ask if such a parallel is justified, I should like to say, "Is there any true outer training which is not at the same time an inner one?"





## OTHER LEARNING OPPORTUNITIES AND APPRENTICE PROGRAMS

You can learn almost everything you need to know about GROW BIOINTENSIVE from our publications. But you may still want a more formal working-learning experience to fully develop your skills. You may also find that working and learning with others is a rewarding experience.

This list of references for hands-on training contains two types of listings:

- those which offer programs themselves
- those which serve as networking liaisons.

Remember that when you write to any of these people, it is considerate to include a self-addressed, stamped envelope (and possibly even a dollar or two) to help them defray the cost of replying. Tell the people why you are writing and a little about yourself, and give them at least a general idea of what you are looking for. This will help them help you. If you make an agreement and commit yourself for a period of time, make every effort to keep your commitment.

The following entries marked with an asterisk (\*) have programs that teach Biointensive or Biointensive-type methods.

\* Agroecology Program, Department of Environmental Studies, University of California, Santa Cruz, CA 95064.

This program was started as an adjunct to the Farm and Garden Program (see below) and is now a permanent program with the University of California. Agroecology, as a field of study, is based on the application of ecological principles to the design and management of agricultural systems. Headed by Steve Gliessman, this group is working toward the development of ecologically, socially, and economically sustainable agricultural systems through their ongoing

research and education program. Write for details, costs, and college credits and criteria.

Alternative Farming Systems Information Center, USDA, National Agricultural Library—Rm. 11, 10301 Baltimore Blvd., Beltsville, MD 20705-2351.

"Educational and Training Opportunities in Sustainable Agriculture", 5th edition, November 1992.

Angelic Organics, 1547 Rockton Rd., Caledonia IL 61011.

(Phone: (815) 389-2746)

This a 300-member Biodynamic CSA farm which strives to create a healthy balance between work, study and creativity. Housing and stipend offered. Previous farm experience and a multi-year commitment valued. Main season: March-November; additional openings: May-September. Request their Introductory Booklet.

Aprovecho Research Center, 80574 Hazelton Rd., Cottage Grove, OR 97424.

(Phone: (541) 942-8198)

Located about twenty minutes from Eugene, Aprovecho offers intensive two-and-a-half-month internships in simple living skills, focusing on sustainable forestry, organic gardening appropriate technology, and indigenous arts and skills. Also publishes *News from Aprovecho*. Inventors of the simple, energy-efficient Lorena cook stove.

ATTRA (Appropriate Technology Transfer for Rural Areas), P.O. Box 3657, Fayetteville, Arkansas 72702.

(Phone: (800) 346-9140)

Two ATTRA Resource Lists are available for extension agents, agricultural support groups, researchers, educators, and

agribusinesses: Sustainable Agriculture: University Programs and Contacts; and Internships, Apprenticeships, Sustainable Curricula Including On-Farm Experience, and Working Farms Programs in the U.S.

Bio-Dynamic Farming and Gardening Association, National Headquarters, PO Box 550, Kimberton, PA 19442

Has lists of farmers throughout the U.S. practicing Bio-Dynamic techniques on the farm and in the garden and can direct (or redirect) inquiries directly to farmers.

California Certified Organic Farmers (CCOF), 303 Potrero St., Ste. 51, Santa Cruz, CA 95060.

(Phone: (408) 423-2263)

Provides a list of members who offer apprenticeships.

California FarmLink, 1823 Eleventh St., Sacramento, CA 95814.

(Phone: (916) 443-4225)

Assists retiring farmers who want their land to stay in agriculture and aspiring farmers who want help getting started in farming.

\* Camp Joy Gardens, 131 Camp Joy Rd., Boulder Creek, CA 95006

The folks at Camp Joy run a small (4 acres) family farm in the Santa Cruz Mountains and grow a wide array of vegetables, fruit, flowers, and herbs for themselves, local markets, and "to encourage a healthy plant and animal community" in their immediate environs. They have a summer apprentice program, classes/workshops, garden tours, and a work-exchange-for-produce program. Open to adults and children (no dogs, please). A flexible contribution of \$50-\$100 per month to offset food and utility expenses can be worked out. Write about your interest in gardening, living collectively, and pertinent experiences you have had.

Centre for Alternative Technology, Machynlleth, Wales, SY20-9AZ United Kingdom.

(Phone: 0654-2400)

Located north of Aberystwyth near the west coast of mid-Wales, the Centre for Alternative Technology is open to the public and receives about 55,000 visitors each year. With working displays of small-scale solar, wind, and water power, low-energy buildings, organic growing and nature conservation, the Centre offers a wide array of two- to seven-day courses—from blacksmithing and wind power to woodland skills and coppice crafts. Accommodations are provided, and rates are charged on a sliding scale according to ability to pay. Write for complete course listing and rates.

\* Farm and Garden Apprenticeship, 1156 High Street, University of California, Santa Cruz, CA 95064.

(Phone: (408) 459-4140)

These gardens were first established by the late Alan Chadwick at the invitation of the University of California. The apprentice program brings about 40 individuals from around the world for a 6-month course of study and hands-on experience in the garden. Write for details.

\* Hedgerow Farms, 8328 Valmont Rd., Boulder, CO 80301.

(Phone: (303) 666-4566)

Organic Farm Opportunity / Market Garden Internship:

Hedgerow Farms is a Colorado Certified Organic market, garden, and nursery, situated on 20 acres near Boulder, Colorado. They produce vegetables, cut flowers, and culinary herbs for the Boulder Farmers' Market and for their subscription service. Hedgerow is affiliated with the Naropa Institute in Boulder and is involved in educational activities. They are in need of a full-time intern to assist in production and marketing from mid-spring through mid-fall. The internship involves varied physically demanding tasks and skills, like preparing the soil, weeding, watering, compost building,



harvesting, and selling at the Farmers' Market. The intern will "learn by doing", gaining experience in the Biointensive method in a semi-arid climate on the high plains. The prospective intern should have some educational and/or work experience in horticulture or gardening, and must be dedicated to organic agriculture. In exchange for full-time work, there is housing, food from the garden when available, a \$200 monthly stipend, and Worker's Compensation coverage. Please send cover letter and resume to the above address.

Land Link, Center for Rural Affairs, PO Box 405, Walthill, NE 68067-0405.

(Phone: (402) 846-5428)

The Land Link program aims to get land into the hands of beginning farmers who will practice sustainable agriculture, by linking them with landowners who want their land to be farmed sustainably. Write for information.

Maine Organic Gardeners and Farmers Association (MOGFA), Apprenticeship Placement Service, PO Box 2176, Augusta, ME 04330.

MOGFA's placement service matches up prospective apprentices and farmers in Maine according to information submitted on their respective application forms. Open to men and women 18 years and older with or without previous experience. Typical apprenticeships run from May to September, but can continue into the winter. A non-refundable application fee of \$15 is required to help cover the costs of the program.

Michael Fields Agricultural Institute, W2493 County Road ES, East Troy, WI 53120.  
(Phone: (414) 642-3303; Fax: 642-4028)

Their Educational Activities Update lists apprenticeship positions on organic farms, mostly in the Midwest. They offer a two-year training program with practical instruction in all facets of organic, sustainable agriculture as well as training in and studies of holistic farm and garden management systems, primarily but not exclusively of Biodynamic origin.

Middle Atlantic Workers on Organic Farms (MAWOOF), Jeanne A. Nye, 1601 Lakeside Ave. #607, Richmond, VA 23228.

Provides information for those wishing to work on organic farms in Delaware, Maryland, North Carolina, New Jersey, New York, Pennsylvania, Virginia, and West Virginia. Workstays last from a day to several months or more. Dues are \$8 per year and include MAWOOF's newsletter.

NEWOOF USA, New England Small Farm Institute, P.O. Box 608, Belchertown, MA 01007.

(Phone: (413) 323-4531)

Ohio Ecological Food and Farm Association, Farm Apprenticeship Program, 1735 Neil Ave., Columbus, OH 43210. (Phone: (614) 292-3786)

This program matches apprentices and farmers, providing an opportunity to learn agricultural and homesteading skills and organic farming methods. \$15 non-refundable application fee. Write for application and details.

Ohio Land Link, Kamyar Enshayan, c/o Stratford Ecological Center, 3083 Liberty Road, Delaware, OH 43105.

Program similar to Land Link, Center for Rural Affairs.

Spring Meadow Farming and Gardening Research Center, P.O. Box 3084, Sag Harbor, NY 11963.

(Phone: (516) 725-5725)

Matches prospective employees with appropriate employers to further the development of organic/sustainable agriculture and promote a satisfactory lifestyle for those interested in organic farming as a business and a way of life.

Tilth Placement Service, PO Box 85885,  
Seattle, WA 98145-1855.

Issues names and addresses and information about both farms and individuals seeking placement on farms. Subscription rate is \$8 per year or \$1.50 for a single issue. (The March/April/May 1988 issue also supplied fifteen names and addresses worldwide for people interested in WWOOFing (Working Weekends on Organic Farms) around the world.) Mostly lists people in the western United States.

Western Working Weekends on Organic Farms (WWWOOF), 13201 Hearding, Sylmar, CA 91342.

Same as MAWOOF (above) but for the western U.S.

Willing Workers on Organic Farms,  
Southeast WWOOF/Janus Farms Institute, Rt. 3  
Box 494, Siler City, NC 27344.

Willing Workers on Organic Farms  
International, Box 2675, Lewes BN7 1RB,  
England, UK.

WWOOF USA, P.O. Box 510, Felton CA  
95018.  
(Phone: (831) 425-3276) [www.woofusa.org](http://www.woofusa.org)



**PROCEDURAL SCHEDULE FOR  
APPRENTICESHIP APPLICATION PROCESS**

- Do required reading
- Visit at scheduled time—Tour or Three-Day Workshop at Willits (see Bountiful Gardens catalog)
- Send in application materials (Date sent: \_\_\_\_\_)
  - Application (see p.13)
  - Financial plan (see p. 13)
  - Release Form
  - Personal Data Form
  - \$30 processing fee
- Ecology Action consideration of application, which may involve a two- to six-month dialogue
- In-depth visit arranged by Ecology Action
- Final decision

Beyond voluntary simplicity deals with the great resource of human energy. We have been giving the poor a technology that can't use their greatest resource. There is always enough human resource to keep people out of misery. 'For every mouth a pair of hands.' *Poverty is not misery*. Poor peasants have existed forever, but miserable and destitute villages and the urban pavement dwellers ... not in wartime ... and as a seemingly permanent feature, is altogether abnormal in human history. The poor are blessed, all spiritual traditions have recognized this, but misery is the product of a modern consumer culture. *Poverty is a goal!*

From an article entitled "Conscious Culture of Poverty"  
by Dr. E. F. Schumacher

The more days I spend in [my new farm], the more I recall everything you said. When I water the plants, I remember how rebellious [I was], but now that I am experiencing gardening on my own, I realize how right you were. All the concepts taught at EA are becoming clearer to me, such as the idea of biomass production, a balanced ecosystem, etc. It is clear that biomass production is more difficult than food production. You won't believe it, but I think I am becoming a truly Biointensive advocate.

From a letter from Angela Gomez,  
former Ecology Action apprentice, August 2001



ECOLOGY ACTION  
COMMON GROUND MINI-FARM  
5798 Ridgewood Road, Willits CA 95490-9730  
Phone: (707) 459-0150 Fax (707) 459-5409

## PERSONAL DATA FORM

Name: \_\_\_\_\_ Date: \_\_\_\_\_

 **Note: All categories must be completed, as specified.**

Age: \_\_\_\_\_ Date of Birth: \_\_\_\_\_ Male / Female: \_\_\_\_\_

City/State/Country of Birth: \_\_\_\_\_

Height (needed for garden tool size): \_\_\_\_\_

Single  Married  Number of Children \_\_\_\_\_

If English is not your native language, please specify your native language: \_\_\_\_\_,

and rate your English language ability on a scale of 10 (fluent) to 1 (can barely manage):

\_\_\_\_ Listening \_\_\_\_ Speaking \_\_\_\_ Reading \_\_\_\_ Writing

### **Non-U.S. Applicants:**

Passport Number, Date and Country of Issue: \_\_\_\_\_

Passport Date of Expiration: \_\_\_\_\_

Beneficiary (for medical insurance) \_\_\_\_\_

Name

Relationship

Address: Street

City

State

Country

### **U.S. Applicants** (check one):

My major/catastrophic medical insurance coverage:

Carrier: \_\_\_\_\_ Policy No: \_\_\_\_\_ Exp. Date: \_\_\_\_\_

I understand that I am responsible for covering the deductible.

I choose not to have major/catastrophic medical insurance. The results of this decision are my responsibility.

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

**ECOLOGY ACTION**

5798 Ridgewood Road, Willits CA 95490-9730  
Phone: (707) 459-0150 Fax: (707) 459-5409

**RELEASE FORM**

(This form should be mailed or faxed to us at the above address or number.)

Name: \_\_\_\_\_

Address: \_\_\_\_\_

City/State/Zip Code: \_\_\_\_\_

Country: \_\_\_\_\_ Telephone: (\_\_\_\_) \_\_\_\_\_

E-mail address (if available): \_\_\_\_\_

**EMERGENCY CONTACT: -**

Name: \_\_\_\_\_

Address: \_\_\_\_\_

City/State/Zip Code: \_\_\_\_\_

Country: \_\_\_\_\_ Telephone: (\_\_\_\_) \_\_\_\_\_



I have a \_\_\_\_\_ heart condition, \_\_\_\_\_ back condition, \_\_\_\_\_ other present and/or pre-existing conditions which could limit my full participation in the physical activities of this internship. Please describe in detail on the other side. Also, please list any medications you are currently taking.

I hereby certify that I am in good physical condition and do hereby release, acquit and discharge ECOLOGY ACTION, its staff, officers and members, of any and all claims, causes of action or damages whatsoever, in any way arising out of or in any manner connected with their program or any medical treatment rendered in event of need.

Date of last medical examination: \_\_\_\_\_

Name: \_\_\_\_\_ Date: \_\_\_\_\_

Signature: \_\_\_\_\_