

Ecology Action's
GROW BIOINTENSIVE®
4-Month Extended Summer Internship
Information Booklet

2021 Season:
Jun 5 - Oct 16, 2021

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About Ecology Action and GROW BIOINTENSIVE®

Ecology Action is a non-profit tax-exempt organization based in Willits California, with affiliated partner organizations in five other countries. We conduct research and training programs focused on the GROW BIOINTENSIVE method, as well as publishing and distributing information about the method around the world.

Ecology Action founded the Common Ground research and community garden in Palo Alto in 1972 and began the formal apprenticeship/internship program in 1977. Since then, low-input and high-yield farming has been studied in training/research/demonstration min-farms under the direction of John Jeavons. The years of work have resulted in positive, paradigm-changing ideas for the abatement of world hunger, for family food sufficiency, and for urban and rural small-scale farming. Our goal is to give more people the capability of raising their own food while nurturing the earth's resource base for the future.

GROW BIOINTENSIVE® Sustainable Mini-Farming (GB) is the original regenerative agriculture. Ecology Action developed it as a sophisticated but low-tech food security safety net for people in virtually all climates and soils where food is grown to use, right where they are, without special tools, seeds, or chemicals. The method is based on thousands of years of traditional smallholder farming methods and is supported by modern science. To ensure long-term sustainability, the GB method is designed to operate as a “closed-loop” system, where nutrients and biomass are recycled back into the soil in a very specific way, to provide almost indefinite productivity. The system includes eight important elements: the creation of double-dug raised beds, carbon-sequestering compost with specific carbon:nitrogen ratios, intensive planting, companion planting, carbon farming, calorie farming, use of open-pollinated seeds and seed-saving, and the combination of all these elements into a whole-system approach.

Lack of access to water and land as well the high cost of buying outside inputs like fertilizers and hybrid seeds are challenging problems to tackle within the framework of conventional agriculture. GROW BIOINTENSIVE seeks to address these challenges by minimizing the need for outside resources and maximizing the use of available land. In addition, GB creates a more sustainable system of farming that does not use chemicals and can increase soil fertility dramatically. In this way, GB offers people a way to produce nutritious diets *sustainably*, even if resources are scarce. And if you are lucky enough to have access to abundant resources, it offers the ability to increase productivity *sustainably*, without increasing inputs and costs, and without placing an additional burden on the Earth.

For more complete information about Ecology Action and the GROW BIOINTENSIVE method visit: <http://www.growbiointensive.org/>

Introduction

Despite technological advances in agriculture there are still more than 1 billion malnourished people in the world.¹ Rising food prices have led to political unrest in many countries.² In addition to the social problems of our global food system, current farming practices are unsustainable. Conventional agriculture depends heavily on non-renewable resources, outside inputs from other soils, and depletion of farmable soil - our most important finite resource. The UN Food and Agriculture Organization has stated that the solution to these problems can be found in small scale, localized, low-input agriculture:

"Global food production is more than enough to feed the global population, the problem is getting it to the people who need it. In market-marginalized areas, organic farmers can increase food production by managing local resources without having to rely on external inputs or food distribution systems over which they have little control and/or access³."

Aware of the intensifying world challenges and the basic need of people to feed themselves, Ecology Action has worked since 1972 to develop an elegant, small-scale, truly sustainable agricultural system. This system, known as **GROW BIOINTENSIVE® Sustainable Mini-Farming (GB)**, is a high-yielding agricultural method, based on history's intensive food raising systems, emphasizing local food production while growing and regenerating the soil that feeds us. Ecology Action's network of affiliate organizations and internship graduates are using GB around the world to empower people to grow good health and sustainable food security.

Ecology Action's training programs focus on using our small-scale, organic, non-mechanized food-raising techniques as a way of life. Participants must have commitment, responsibility, patience, time, attention to detail, willingness to follow detailed instructions, self-motivation, and mental and physical stamina. While we do not wish to discourage those genuinely interested in the program, we also want to make sure interns can enjoy a lifestyle of *simple living* focused on holistic health and sustainability.

Our 4-Month Extended Summer Internship teaches qualified participants the GROW BIOINTENSIVE method and a low-technology lifestyle. 4-Month Interns will learn the GB method, how to design a GB garden with a specific diet plan in mind, and to implement seasonal farm planning techniques. Upon completion of the program, participants will be equipped to grow their own food, and to act as GB resources for their communities, involved in hands-on demonstration and teaching sustainable agriculture and closed-system food production.

IMPORTANT NOTE: Ecology Action's focus is teaching motivated people about the principles of small scale, sustainable food raising and community involvement. *The garden sites are not market farms.* If you are looking for experience with production and marketing on an organic farm, we suggest you visit the WWOOF or ATTRA websites. Also, we appreciate that people who are interested in sustainable agriculture are interested in exploring other methods. However, this program focuses *exclusively* on the GROW BIOINTENSIVE method, and is not for people who are "shopping" for a method to use in their lives, but, rather, for ones who have decided biologically-intensive farming is their choice and want to become expert practitioners. _____

¹ <http://www.bbc.co.uk/news/science-environment-11503845>

² <http://www.guardian.co.uk/environment/damian-carrington-blog/2011/aug/25/food-price-arab-middle-eastprotests>,

³ United Nations Food and Agriculture Organization, <http://www.fao.org/organicag/oa-faq/oa-faq7/en>

<http://www.voanews.com/english/news/middle-east/economy-and-business/2011-Food-Price-Spikes-Helped-Trigger-Arab-Spring-135576278.html>

Program Information

Ecology Action's summer teaching program returns with a 4-Month Extended Summer Internship from Jun 5 - Oct 16, 2021 at Ecology Action's Victory Garden for Peace Mini-Farm site in Mendocino, CA.

Ecology Action offers this internship, which includes and builds on all the techniques taught in our 2-Month internship, to people who want to learn the GROW BIOINTENSIVE method, **plus** how to *design a nutritionally complete diet* and how to *use biointensive planning techniques to maintain a sustainable vegetable garden or mini-farm over time*.

The program focuses on growing your own heirloom vegetables and rare grains and emphasizes diet design and the creation and maintenance of sustainable soil fertility through the seasons. Living and working onsite for four months, you will immerse yourself in the method, and will learn the eight principles of biointensive gardening that will increase your yields, grow your soil and conserve resources for the whole planet. ***Successful participants will leave the internship prepared to establish an intermediate-level mini-farm garden, to design and plan for a nutritionally complete diet within the scope of their mini-farm, and to teach people what they know at the basic level (without certification), and for advanced participants, to run a basic GB demonstration site.***

The 4-Month internship is best suited for those who have already participated in an Ecology Action 3-Day Workshop (growbiointensive.org/workshop.html). The internship covers the basics, and goes into depth of understanding and experiential learning, with a combination of:

- Lecture and demonstrations,
- Study,
- Field work, and
- Guided Practice.

This combination is designed so that participants learn the GROW BIOINTENSIVE method both *theoretically* and *practically* and can understand the processes that are involved in starting this type of work (GB farming, low-tech living, demonstrating the method to others) as well as performing these activities over the long-term, as a lifestyle choice. The internships, in addition to providing a personal learning opportunity, are also an opportunity to assist Ecology Action in accomplishing its mission: to teach people to grow food and soil fertility while conserving resources. As an intern, you become part of the global GROW BIOINTENSIVE network.

During the internship, emphasis is placed on the developing the ability of the intern to farm and develop GB designs and approaches naturally, in the belief that the most creativity and strength come from people joining forces and working as a team *after* they have fully developed a sense of their own strength and independence. We have found that skill levels can be dramatically upgraded with this type of training, but it also requires interns who are proactive self-starters.

Interns have minimal administrative responsibilities, and so can focus on learning through reading, classwork, and fieldwork. Time may be available for an independent study project, and there are periodic one-hour meetings with an Ecology Action staff member to ensure progress is being made. There are also weekly meetings with staff and other interns to discuss progress in the garden. The Interns will take part in seasonal courses and workshops presented by Ecology Action. Depending on the work done and the level of involvement demonstrated by the intern during and after the

internship, it is possible that the internship can lead over time to an Ecology Action certification as a GROW BIOINTENSIVE Teacher at the Beginning, Intermediate, Advanced, or Master-Level.

Ecology Action's research, demonstration and education mini-farm garden sites, while beautiful and enjoyable to work in, are first and foremost research gardens where a multitude of experiments are run concurrently. Interns should bear in mind that the focus is on using the GROW BIOINTENSIVE method to conduct scientific tests and collect data to provide practical solutions to the challenge of growing food, creating and maintaining sustainable soil fertility, and conserving resources on a closed-loop basis, while living a sustainable life.

This program overlaps Ecology Action's 2-, 6-, and 8-month internships, and two 9-Saturdays Class Series. It hosts farmers, students, researchers, and food-growing activists from the U.S. and abroad, giving all the interns a chance to network with people interested in similar work. Interns must be comfortable living and working with a wide variety of people and interacting with the public.

An internship at Ecology Action is an opportunity to learn valuable techniques and information, to experience an alternative living style, to make lifelong ties with other interns, and to assist Ecology Action in accomplishing its mission to help farmers, gardeners, and communities around the world to raise food, conserve resources and build fertile soil sustainably.

Schedule and Routine

All interns and members of the regular garden/mini-farm staff work (and learn) Monday through Thursday, from 8:00 a.m. to approximately 6:30-8:30 p.m., with time off for lunch and dinner. Days often include a 2-3-hour siesta after lunch. Most days will be spent learning in the garden. A typical day could involve preparing beds for planting, seed propagation, harvesting, taking and recording samples, transplanting, seed saving, and other garden tasks. At least one day a week and sometimes more will be spent in the classroom.

Classroom days will include lectures, discussions and multimedia covering a range of topics. Interns will have readings and homework to complete each week. The weekly readings and homework will pertain to the practical and conceptual aspects of GROW BIOINTENSIVE and food security issues around the world. At least one and a half days and as much as two days a week will be free for personal time. (The "week-end" consists of approximately 1-1/2 days off during the next three days (for example, Friday and 1/2 of Sunday; 1/2 of Friday and all of Saturday; and so on, with the pattern of days-off changing from week to week to ensure that all interns have equal opportunity for rest and socialization). When there are enough people in the program, there are two-day weekends off every other week). Ecology Action's staff is small and extremely busy, so weekend activities are determined by each intern. The internship program is intensive, and other than the designated days off, time is not available for extracurricular sight-seeing, travel or farm visits. The experience is demanding but rewarding to those willing to engage themselves.

Program Site

Victory Gardens for Peace (Mendocino, CA)

The Victory Gardens for Peace (VGfP) site in Mendocino, California is situated on the grounds of the Stanford Inn by the Sea, an eco-resort nestled on the cliffs overlooking the confluence of the Big River and the Pacific Ocean. Our program is focused on: improving the soil and teaching the GROW BIOINTENSIVE method and developing the GROW BIOINTENSIVE model for our coastal, cool, foggy climate. There are many challenges at the site that create opportunities to demonstrate practical and effective ways of maximizing resources and managing fertility. There is an inherently good soil here, but it underwent years of compaction as a horse paddock. We are working to build soil structure and fertility to restore the soil health. We experiment with growing complete diets and different crop varieties to find which are best suited to this unique growing climate. Our internships and classes are unique and offer a great experience in water conservation, soil fertility management and food raising through the GROW BIOINTENSIVE method.

Simple accommodations are provided, with other needs provided for by the intern (see “Suggested Items ...” on p.10). Our commitment to simple living includes simple eating. Food is supplied by Stanford Inn, with communal meals eaten twice daily (10:30 AM and ~5PM) with the staff members at the Inn. The entire property is 100% vegan, with *no animal food products allowed on site*. No facilities for on-site cooking are provided, but the town of Mendocino has numerous restaurants, cafes and grocery stores if you feel the need for variety.

Curriculum: Biointensive Skills, Design, and Planning

Over the course of the program, in addition to study, fieldwork, and guided practical applications, the following topics will be covered. Publications listed are to be purchased by participants onsite (cost included in Program Expenses, below).

Part 2: Developing Your Biointensive Skillset			
Class #	Date	Topic	Assignments
9	6/1	Intro to Ecology Action	<ul style="list-style-type: none"> Workshop Manual: In Defense of Old Fashioned Training, Dear Workshop Participant, WorldWide Soil Loss and Possible Solution, Ecology Action In Perspective, The Functions of Ecology Action, GB 7 Year Approach
10	6/8	Principle 1: Deep Soil Preparation	<ul style="list-style-type: none"> HTGMV9: Introduction and Soil Creation pgs. 1-32 Workshop Manual: Double Digging vs. Roto-Tilling, Double Digging vs The U-Bar, Triple Digging, Cultivation, Living Quarters for Plant Roots.
11	6/15	Principle 2: Composting	<ul style="list-style-type: none"> HTGMV9: Composting pgs. 44-62 One Circle: Amino Acids pgs. 34-40
12	6/22	Principle 3: Close-Plant Spacing	<ul style="list-style-type: none"> HTGMV9: Sustainability pgs. 33-39, Fertilization, Seed Propagation and Transplanting pgs. 63-90 Workshop Manual: Art, Craft and Efficiency of Scale
13	6/29	Principle 4: Carbon Farming	<ul style="list-style-type: none"> HTGMV9: 60:30:10 pgs 39-43 One Circle: Vitamins and Minerals pgs. 41-72 Workshop Manual: Micro-Macronutrients
14	7/6	Principle 5: Calorie Farming	<ul style="list-style-type: none"> HTGMV9: Sample Garden Plans pgs. 180-190 Booklet 26: Learning to Grow All Your Own Food pgs. 1-25
15	7/13	Principle 6: Companion Planting	<ul style="list-style-type: none"> HTGMV9: Companion Planting and Rotations pgs. 101-118 2WFC Video: Crop Rotations, Cover Crops and Multi-Cropping with Steve Moore
16	7/20	Principle 7: Seed Saving	<ul style="list-style-type: none"> Booklet 13: Growing to Seed pgs. 1-38 2WFC Video: Seed Saving and Plant Breeding with Steve Moore
17	7/27	Principle 8: Whole Systems Perspective, Planning	<ul style="list-style-type: none"> HTGMV9: Watering, Moons and Season Extension pgs. 86-100; Interrelated Food System and Balance pgs. 119-132 Workshop Manual: Industrial Economy by Wendell Berry

Part 3: Diet Design and Planning			
Class #	Date	Topic	Assignments
18	8/17	Soil Fertility Simplified	<ul style="list-style-type: none"> Bklt 31 Form 2: Solving the Diet HTGMV9: Sustainability pgs. 33-43; Fertilization pgs. 63-74 Future of Fertility Past, Present and Future and Four Goals pgs. 1-23
19	8/24	Seed Propagation, Transplanting and Practical Watering	<ul style="list-style-type: none"> One Circle Diet Intro, Area and Weight Efficiencies pgs. 1-33 Bklt 35 Growing More Food With Less Water pgs. 1-25 Bklt 31 Form 3: Preliminary Diet Design Future of Fertility Recycling Urine pgs. 24-35
20	8/31	Qualitatively and Quantitatively Improving Compost	<ul style="list-style-type: none"> Bklt 31 Form 4: Preliminary Income Design Bklt 31 Form 5: Preliminary Compost Design Booklet 32: Growing Compost pgs. 1-35 Workshop Manual: SOM Flow Chart
21	9/7	60/30/10, Data Collection; Design by the Heart	<ul style="list-style-type: none"> Bklt 31 Form 6: Initial Diet Design One Circle pgs. 130-144 Bklt 1: Cucumber Bonanza pgs. 1-15
22	9/14	Exploring Sustainable Mini-Farm Design	<ul style="list-style-type: none"> Bklt 31 Form 8: Income Design Bklt 36: Experimental 33-Bed Unit Workshop Manual: Challenges to the Development of the 40-Bed Unit Future of Fertility: Recycling Humanure pgs. 36-60
23	9/21	Pest/Disease Control; Income	<ul style="list-style-type: none"> Bklt 31: Form 7: Diet Design HTGMV9: Pest/Disease and Ecosystem pgs. 119-128 Future of Fertility: Recycling Humanure pgs. 61-83
24	9/28	Soil Testing; Test Your Soil With Plants	<ul style="list-style-type: none"> Bklt 31: Form 9: Compost Design TYSWP: 2 pgs. 1-10, 92-130 Future of Fertility: 2 Examples of Systems pgs. 110-117
25	10/5	Trees, Arid Farming and Applied Permaculture to GB	<ul style="list-style-type: none"> Video: The Man Who Planted Hope Workshop Manual: Applying Permaculture in a Biointensively Mngd System, Use of Water in Agriculture, Permaculture Ethic and 12 Principles Put Together Final Design
26	10/12	Finalizing the Design	<ul style="list-style-type: none"> Bklt 31: Form 10: Complete Nutrition

Program Expenses

This is an unpaid, fee-based internship program. All fees are non-refundable. By the end of the program participants will have a strong understanding of basic gardening and farming principles which will increase yields sustainably, using fewer resources and building soil in the process. Cost for a 4-Month Extended Summer Internship at Ecology Action is:

Item	Cost
Tuition and Administration	US\$2,000
Room	Included. (\$250 cleaning deposit required – refundable for interns who adequately clean their accommodations before leaving (as determined by site manager) and take all their belongings with them upon departure.)
Food	Included
Utilities	Included
Supplies	\$200
Publications and Educational Materials	\$320
Telephone/Internet	Provided by participant
Incidentals	\$800
Medical Insurance	Medical Insurance must be provided for by each participant – proof of coverage is required within one week of acceptance to the program. Uninsured participants will not be permitted to stay in the program.
Transportation	Provided by participant
TOTAL Payable to Ecology Action, non-refundable except for cleaning deposit as specified above:	\$3,570
A \$1,250 deposit is due within one week of acceptance (includes \$250 cleaning deposit).	

NOTE: The hosting of onsite internship programs is contingent upon COVID-19 safety regulations. If safety considerations make it necessary to cancel an internship program before it begins, registrants will be provided with a full refund of all fees. If a program is cancelled after it begins, participants will either receive a pro-rated refund based on the work completed, or be provided with online coursework and guidance necessary to complete the internship as a distance-learning program, or the opportunity to transfer to a future program, whichever makes the most sense for the progress of the participants, as determined by the program coordinators.

Follow-Up Activities

One of the unique aspects of this program is that we will allow you time throughout the summer/fall to plan your next steps after you complete the course. It is expected that graduates of the 4-Month Internship Program will be prepared to use the knowledge they gain in some project within their home community, their school, or in some other way to help promote sustainable food raising. During the program, participants will be able to work with a staff member to help plan and work through their future activities.

Suggested Items for Interns to Bring

Be prepared for semi-rustic conditions with limited water and electricity

Telephone on-site telephone is not available except in emergencies. All internship participants are responsible for providing their own cell phone and paying for their coverage plan. Please make sure your service provider covers the region (Mendocino County, California, USA) before you arrive.

Internet is available for general daily use, such as checking email. If you require high-speed internet/streaming services, you should arrange for an appropriate data program with your cell service provider.

Laptop computer or tablet for personal use. (Ecology Action computers are not generally available for personal use.)

Notepads, pencils, etc.

Clothes for hot or cold days, cool or cold evenings, rain, snow, etc., including rain gear. (Day-time temperatures at all sites can vary from 55°F to 105°F [12.7°C to 40.5°C] in one day, and night-time temperatures can be as low as 25°F [-4°C]). Old work clothes are best. Bring plenty — self-service laundry facilities are 30 minutes away by car, in town.

Shoes/work-boots should have good tread. In addition to garden work, paths are steep, so make sure your feet are prepared! A good pair of waterproof boots with heavy treaded soles is also useful.

A good sun hat is a must. Remember to bring non-chemical/non-nano **sun screen/lotion** and a swimsuit, if desired. We try to allow time for a swim in a nearby pond, work and weather permitting.

Towel, washcloth, etc. — Solar showers will available at least every other day. Shavers and appliances need to be non-electric or battery-powered.

Lighting — Flashlights and possibly a battery-powered lantern, for reading at night. Bring plenty of operating rechargeable batteries. Be aware that The Jeavons Center site is off-grid, so battery life is important!

Bedding:

Optional for U.S. participants only: sheets for full-size bed, pillow, pad, and other warm, durable sleeping items. If you do not bring your own bedding, it will be provided for you.

Other items:

- Favorite vegetarian/vegan recipes
- Battery-operated radio and/or CD player and two sets of rechargeable batteries
- Musical instruments, art supplies, etc. are welcomed.

Parking space is very limited — small cars for US participants and/or carpooling is encouraged.

Arrival and Departure

It is important to schedule your arrival at the research garden site in time to quarantine before you officially begin your internship. **The 2019 internship officially starts Saturday, June 5; interns should schedule arrival to allow time for the required 10-day quarantine for Thursday, May 27.** A time-stamped negative COVID-19 test is required for admittance to the program. If you do not provide proof of testing, you will not be allowed onsite.

If you are flying in and need us to arrange for transportation from the San Francisco Airport to the research site, **schedule your *arrival* at the airport for the morning of THURSDAY MAY 27, 2021 for us to get you to your internship site by early evening.**

Looking ahead to when you finish your internship, **schedule your departure flight to leave the San Francisco Airport during the late afternoon or evening on SUNDAY OCTOBER 17, 2021**, as we will be leaving your research sites in the morning, and must allow time to reach the airport, which is 4-5 hours away, and to leave time for airport processing (airports recommend arriving at least 2 hours before your flight is scheduled to depart).

Please note: *Any excess baggage fees to or from the site are the responsibility of the intern.* It is a good idea to determine well in advance of your departure how much baggage you will be carrying, and what each extra bag will cost by weight/size. Interns are not allowed to leave excess baggage for future shipping – before you leave the internship site, you are responsible for removing your possessions and cleaning your living quarters so that the next interns have a comfortable and welcoming experience!

HOW TO APPLY

To apply for this program, please fill out our secure online application, which you can find at <http://www.growbiointensive.org/SummerInternship#FourMonth>.

No scholarships available. Participants from USA only. Time-stamped negative COVID test req'd. Arrive 10 days before classes start to quarantine.

2021 Season: Applications will be accepted through May 15, 2021.
Candidates will receive notice of acceptance no later than May 21, 2021.

If you have any questions, please email contact@growbiointensive.org.

If accepted to the internship program, you must send:

- 1) a **signed** hard copy of **the release form** (following page),
- 2) a **deposit** of \$1,250 to secure your place in the program, and
- 3) valid **proof of medical insurance** to the address listed on the form

To:

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

A time-stamped negative COVID-19 test must be provided upon arrival.

INTERNSHIP PROGRAM PARTICIPANT RELEASE FORM

Name: _____ Date: _____

Age: _____ Date of Birth: _____ Male / Female: _____

City/State/Country of Birth: _____

Emergency Contact:

Name: _____

Address: _____

City/State/Zip Code: _____

Country: _____ Telephone: (____) _____

Do you have a heart condition, back condition, or other present and/or pre-existing conditions that could limit your full participation in the physical activities of this program?

If so please describe in detail:

Please list any medications you are currently taking:

Date of last medical examination:

Please provide your current primary/catastrophic medical insurance coverage information

Carrier: _____ Policy No: _____ Exp. Date: _____

Waiver:

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. I understand that I am responsible for the coverage any medical expenses incurred before, during, or after my time at Ecology Action and my participation in their program.

Signature: _____ Date: _____