

ECOLOGY ACTION'S GARDEN COMPANION

GROW BIOINTENSIVE News from around the World



Changes at Ecology Action

A Message from John Jeavons, Executive Director

2017 was been a difficult year for the world, for our nation, and for programs that support people at the local level. We are grateful for the funding that comes to us—from those who understand the importance of empowering people to provide their own nutritious food at home or nearby, while also ensuring that their environment stays healthy. However, despite a great deal of effort on our part last year to identify and make connections with other such visionaries, we are currently only able to maintain staff and programs at a reduced level.

Accepting this current reality, while looking for additional financial support, we have been consolidating our programs and focusing on two directions: expanding the emphasis on the localization of the GROW BIOINTENSIVE system, and improving and increasing our online teaching tools to spread GB as widely as possible.

The Jeavons Center (TJC) will remain Ecology Action's headquarters, a training hub for domestic and international projects and programs, as well as enhanced national outreach. TJC will be in charge of administering all of EA's programs, acting as fiscal sponsor for international partners as well as tech-

nical adviser for our partners and others who are carrying out GB projects, and facilitating the development of, and online access to, EA publications and other GB teaching tools. Unfortu-

local farmers in its third year. It has merged its efforts with the Mendocino Seed Exchange, which hosts Mendocino Coast seed exchanges twice a year. Matt taught seed-sav-



Three-Day Workshop participants.

Photo credit Cynthia Raiser Jeavons

nately, due to the reduction in staff, TJC Mini-Farm will only maintain compost crops.

The Victory Gardens for Peace (VGfP) Mini-Farm at the Stanford Inn by the Sea, on the Mendocino Coast, managed by Matt Drewno, is growing stronger each year, both locally and globally. Its seed bank is supported by farmers and gardeners within a 15-mile radius and gave out over 500 packets of seeds from almost 200 varieties of vegetables, grains, herbs and flowers grown by

ing at this year's Seed Exchange and at the Not-So-Simple Living Fair in the fall, and made a presentation on soil restoration at a Transition Town event in December. Over 100 people participated in the classes and workshops Matt gave during the year, including the 9-Saturday Course. The owner of the Stanford Inn, Jeff Stanford, will be providing extra land so employees can learn and use GB in community plots. The Mini-Farm will be part of a key soil sustainability research project being

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Changes at Ecology Action

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carried out worldwide, and most of EA's classes, apprenticeships and internships will take place there instead of at The Jeavons Center. Matt has many plans for the future of VGfP and GB. Golden Rule Mini-Farm will maintain a 10-Bed Unit soil sustainability research project, instead of the approximately 100 beds previously under cultivation. Rachel Britten, Mini-Farm Manager of the Golden Rule Mini-Farm, is also expected to be involved in coordinating the teaching of online internships. Justin Bartolini, 2017 Assistant Manager at the Golden Rule Mini-Farm, will join Matt on the Coast as VGfP's Mini-Farm Assistant Manager Trainee.

One of the most difficult parts of consolidating our Mini-Farms and programs has been that a group of people who made long-term commitments to EA and had formed strong bonds with each other have found it necessary to find other sources of income, with a resulting dissolution of their work teams. The good news is that they will probably be staying in Mendocino County and working with agricul-

ture-related projects. We have already mentioned Matt Drewno, and Rachel Britten, who are remaining with Ecology Action. Here is the current status of the others:

- Jes Pearce (2017 Manager at TJC Mini-Farm) and her partner Keith have a goal of starting their own farm in Mendocino County, hopefully at Ridgewood Ranch (The Golden Rule Community), in partnership with the School of Adaptive Agriculture.
- Rachel Laase (2017 Assistant Manager at TJC Mini-Farm) signed a one-year contract (starting in September 2017) with For the Wild, a project to help plant redwood trees about 25 miles NW of Willits. She is still volunteering some time at TJC and is also involved at VGfP.
- Justin Bartolini (2017 Assistant Manager at GRMF) is venturing to his original home state of Washington where he plans to be teaching GROW BIOINTENSIVE.
- Lucy Kramer (2017 Apprentice at TJC) is living at Ridgewood Ranch and has taken a job with North Coast Opportunities in Ukiah, a non-profit that has helped enable many food-related projects in Mendocino County and nearby Lake County.
- Bobby Zekanoski (2017 apprentice at VGFP) is relocating to Florida, his home state. Joe Huber and

Heather Hempsmyer have moved on to different ventures in the area.

- Jake Blehm took another full-time job working for a nonprofit organization closer to his home. He is no longer Assistant Director, but helps EA with short projects in Africa related to funding a couple of times a year.
- Steve Moore stepped down as Associate Director as a result of challenges caused by his living so far away. He is continuing to assist me with advice and GROW BIOINTENSIVE. Steve prepared materials on how to do research for participants of the Latin America conference and workshop in Nicaragua, January 2018. He is also writing a key how-to publication on GB, and we are working together on a protocol for GB testing and research.

In 2018, we will start the search for an Assistant Director, which we hope will be successful by 2019. If that person proves to be right for the job, he or she will be in line to be the Director as early as 2020. At that point I may retire, except for remaining in an advisory capacity.

Reduced funding has also meant letting go of the successful Com-

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GROW BIOINTENSIVE Basic-Level Training in Haiti

This is an edited version of the report Juan Manuel Martinez, Director of ECOPOL, sent us.

ECHO* is a global NGO that brings relief assistance where it is most needed. The organization is ECOPOL's international partner and invited Juan Manuel Martinez to participate in its annual conference, held in Haiti in 2017, assistance.

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A rural farm in Haiti Photo credits: ECOPOL staff

2017 Ecology Action Research by Site

By EA Farm Staff

During 2017, EA had four different Mini-Farms in northern California, each conducting trials and research appropriate to its climate. Below is some of the research that was done, described by staff at each location. With the changes in the organization, Common Ground Garden and The Jeavons Center Mini-Farm are no longer operational. The EA Mini-Farm at Golden Rules's area of cultivation has been reduced from approximately 100 beds to 10.

Common Ground Garden

Paul Higgins, former Garden Manager, Palo Alto, urban /suburban

Two-bed vetch test: Comparing grain and potato yields using different amounts of interplanted vetch, which fixes a large amount of nitrogen in the soil but can choke out crops if interplanted too densely.

Comparing the health of spring wheat between seedlings that are

transplanted and seed that is broadcast directly into the bed.



Comparing the number of severely

slug-damaged heads of lettuce between pre-broadcasting bok choy seeds into the bed and maintaining bare soil between the plants.

Running a trial to see whether two back-to-back crops of quinoa can be grown in our region, one transplanted in February and the other in June.

Examining whether there is a difference in yield between potatoes planted in hills (raised rows) and planted in level beds.

EA Mini-Farm at Golden Rule

Rachel Britten, Mini-Farm Manager, Willits, valley land

Observing preferred planting times to try to maximize the summer season. This year sunflowers were in the ground two weeks earlier than usual (April 15). These survived multiple frosts and grew to over 12 feet tall!

Experimenting with crop varieties, including five different melons bred to mature quickly. Three exciting corn varieties are being

tried. This includes a cold tolerant corn. It both grows tall (6-7 ft)



and tassels early. Also growing a yellow (and higher-nutrition) ver-

sion of a favorite variety of the white Hickory King corn.

Trialing direct sowing versus transplanting beans. Transplanting allows the production of extra calories before putting in winter compost crops. However, a lot of transplanting means additional labor at a time when there's a lot of harvesting and weeding to be done. Experimenting to see if transplanting significantly increases the yield to determine if direct sowing might be labor-saving at a time when it is needed.

The Jeavons Center Mini-Farm

Jes Pearce, former Mini-Farm Manager, Willits, mountainous, formerly poor soil

The Eight-Bed-Unit Diet Design and a 20-Bed-Unit Diet Design are being grown to produce one person's calories and compost in the smallest area.

40 different varieties of dahlias are being grown to explore the

economic potential of selling cut flowers and tubers for propagation.

Variety trials are underway trying to get the fastest dry beans, compare flour corns versus flint corns and grow the tallest amaranth possible.

Exploring different intercropping combinations to maximize production. These include amaranth and New Zealand spinach, quinoa



and lettuce, beans and corn, squash and corn, sunflowers and

Continued on page 4

EA Research by Site

Continued from page 3

gourds, cucumbers and summer squash, and quinoa with wooly pod vetch.

We are living our research as we strive to grow, harvest, clean, cook, and eat the food grown here in a delicious and ecological way.

We are always experimenting in the kitchen, which is so important when growing your own food.

Victory Gardens for Peace Mini-Farm

Matt Drewno, Mini-Farm Manager, Coastal Mendocino County

In 2016 a diet design in less than 1000 sq ft was completed, which may be the smallest human diet footprint in human history. Two are being grown in different sec-

tions of the garden. A design that might be more realistically grown in 1600 sq ft is being considered.

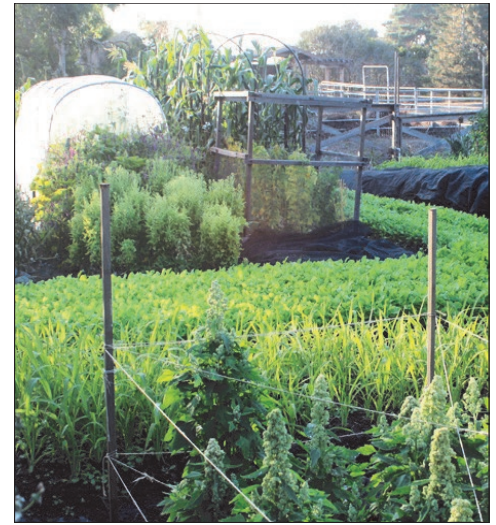
Conducting spacing trials on basil, quinoa, leeks, kale and others in the clay section of the garden; spacing can be slightly closer perhaps due to the clay and increased cation exchange capacity.

Growing out several key varieties for the Seed Bank with a focus on crops favorable to the maritime climate. This also includes the biomass values for total carbon production and built-cured compost.

Research continues on salinity-tolerant species with a focus on barley over other grains, and a move away from beans. Gypsum applied at different times of the year seems to help leach the salts.

Developing a model to train ap-

prentices, which uses 8-bed units instead of 3-bed, to expose them to the importance of diet design and efficient planning.



GROW BIOINTENSIVE Basic-Level Training in Haiti

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That country is still recovering from its 2010 earthquake, and is greatly benefiting from ECHO's assistance. At the conference, Juan taught a GROW BIOINTENSIVE (GB) Basic-Level workshop for 28 people and made a presentation for 130. Juan said "The response was enthusiastic, with many inviting the instructors to continue training in that region." Additional GB instructors included Ricardo Romero and his daughter Haya from Las Cañadas in Veracruz, Mexico. For more information please visit ensia.com/features/the-farm-that-grows-climate-solutions/.

Juan states that Haiti has 11,023,000 inhabitants with 60% living in urban areas—primarily two cities: Port-Au-Prince the capital, and Cite' Soleil. Since the



Juan demonstrates during a workshop in Haiti.

earthquake, cities are slowly recovering. However, 40% of the population lives in rural areas and the circumstances there are much like those of rural areas in America.

Juan reflects on Haiti, "When I think about the concept and opinion we have of this country, I understand most of it is manipulated by the information we receive from

the media. Without ignoring the big problems facing Haiti, I found answers using the Biointensive method. There is great energy and awareness among groups of Haitian small-producers and national and international NGOs. I will return next year to strengthen the work of the groups we've taught this year."

Ecology Action's 2017 Training Program

Photo credits: EA staff

Last year EA got creative with the annual training program. There were three programs running side by side. In an effort to maximize the effective use of funds it was decided to present most of the eight-month internship to international interns through online training. After the course work was complete, we had hoped to bring them to the Mini-Farm for some direct in-the-garden training.

The 9-Saturdays Course, which was successfully offered in 2015, was offered again last year. This course is open to everyone but is most often attended by local gardeners and mini-farmers looking to expand their understanding of the GROW BIOINTENSIVE method. A second 9-Day Course focused on diet design and garden planning for high yields and healthy rotations. These two courses are part of the growing Biointensive initiative in Mendocino, CA.

We are happy to introduce the two two-month interns who came last year Laura and Pauline, both from California.

Laura Navarro Golden Rule Mini-Farm



I'm originally from Castro Valley, CA, and currently in my junior year at the University of the Pacific majoring in environmental science. I'm a Student Garden Coordinator at the university's Robb Garden. The vision of the garden's previous director, Walter Robb, was to have students learn Biointensive practices. The garden has strayed from these practices, but the new Garden Director, Dr. Patty Gray, would like to bring back the original vision. I have become very interested in learning more about the Biointensive method. I'd like to take what I learn from Ecology Action to Pacific University so the garden can continue to follow Robb's original intention.

I'm also a Student Garden Coordinator at the university's community garden. I am responsible for several plots and a quarter of the fruit orchard. Daily tasks include pest control, filling compost bins, landscaping and weeding.

I'm interested in learning all I can about the Biointensive method of farming and how I can apply this method to future garden projects.

Pauline Montemayor, Golden Rule Mini-Farm

I am originally from Castro Valley, CA, and a senior at the University of the Pacific pursuing a Bachelor of Science degree in environmental science with a minor in sustainability. I'm a full-time student, and on the rare occasion when I'm not studying, I enjoy getting my hands dirty. I'm very open to learning new things. GROW BIOINTENSIVE interests me because it utilizes sustainability and maximizes efficiency.

As a person who enjoys cooking I believe it's important for everyone to understand that the majority of a meal's quality comes from quality ingredients, and that includes

where those ingredients come from.

My parents came from a developing nation and taught me the importance of not being wasteful. I believe that the Biointensive method is essential to addressing the problem of global food insecurity.



I hope to broaden my knowledge of sustainable practices so I can be part of the solution.

I would also like to learn about crop rotation, the treatment of pests and plant diseases using more sustainable methods, how to utilize zero-input agriculture, and how to retain soil nutrients thereby avoiding desertification.

*Compost is to the
soil as nutritious
food is to the body.*

—KU, Growing
Health, Rwanda

Biointensive for Russia Activities

This is an edited version of the report Carol Vesecky, Director of Biointensive for Russia (BfR), sent us.

Ludmila Zhirina's Teaching Tour of Three Northern Russian Regions

Following the print-on-demand publication of the Russian *How to Grow More Vegetables* 3rd ed., Dr. Ludmila Zhirina of the NGO VIOLA taught workshops in the fall of 2016 in St. Petersburg and its region, the Leningrad province. Among the participants was Irina Skiba, a farmer and teacher from the Yaroslavl region. Following the workshop, Irina worked with Ludmila to plan a teaching tour for the spring of 2017 to the Yaroslavl region and two others in Northwest Russia. BfR supported this effort by sending \$1200 to

Ludmila to assist with travel, visual aids, and books for workshops in the Yaroslavl region, Vologda, and Arkhangelsk regions. She



Ludmila teaches students in northern Russia Photo credits: BfR staff

accomplished an extraordinary amount in a short time, traveling nearly 2000 miles and holding more than 20 meetings and seminars. The trainings were held between May 15 and 23, in rural schools and on farms.

Ludmila also collaborated in collecting heirloom seed varieties, some of which were planted in Bryansk this summer. She was hosted by school principals, farmers, orchardists, and bee-keepers, who were all grateful for BfR support. Ludmila wrote, "I think they feel the Biointensive method will work well with their cold climate, short summers, and wet soil."

During the tour, Ludmila distributed the Russian *How to Grow More Vegetables* 3rd ed. to teachers in the north. Access to the electronic version was also shared and is available for a \$5 donation to EA growbiointensive.org/HTGMVRussian/index.html.

People in these groups want to try GB and hope we will visit them this autumn. Ludmila will continue to advise the groups via Skype.

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Changes at EA

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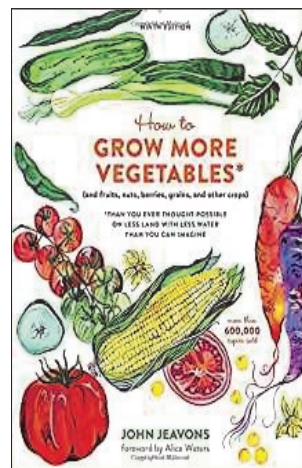
mon Ground Garden in Palo Alto, to which 3,000 pre-school, grade school, middle- and high-school students had access, and which developed a sixth grade online GB curriculum. We're grateful that the Palo Alto Christian Reformed Church, which has hosted Common Ground Garden for many years, will continue to use the area for gardening.

Bountiful Gardens mail-order service has also closed. BG was started 32 years ago to provide open-pollinated seeds, which had become almost non-existent, and to create a pattern for similar small local seed companies—hoping to eventually work itself out of a job. Now, with dozens of other quality seed companies available and local seed banks and seed libraries becoming common, we have been successful. As a result, BG's in-

come decreased significantly, and it closed at the end of 2017.

This has been a challenging time of transition for all of us, and yet we have been uplifted and our work reaffirmed by the number of people who continue to want to learn from us, as well as input from people we regard highly. Alice Waters, owner of Chez Panisse in Berkeley, and Jeff Stanford, proprietor of the Inn where VGfP is sited, both declared recently that with the world's current situation, GROW BIOINTENSIVE is needed now more than ever. And Mercedes Torres, director of the GB program in Ecuador since 2000, wrote, "The truth is, getting to know Biointensive has become a spiritual strength in my life that I didn't have before. . . . I use every minute I can to motivate new people in order to stimulate their human values and to share the life philosophy you share . . . that has stayed in my spirit as a wonderful gift."

The Ninth Edition of *How to Grow More Vegetables* Now Offered



We are pleased to announce that the new, fully updated and revised 9th edition of *How to Grow More Vegetables*, is now available. Unlock the hidden nu-

tritional potential lying dormant in spaces you might ordinarily consider too small to plant. Grow more food, flowers, beauty and life than you ever thought possible on less land than you can imagine!

BfR Activities

Continued from page 6

Funds were used to create five sets of posters to be used during Ludmila's workshops and later by four of the hosting organizations. These posters have become a useful resource and are being shared electronically with six more organizations.

"... they feel the Biointensive method will work well with their cold climate, short summers and wet soil ..."

For more information, visit BfR's Facebook page, [facebook.com/ BiointensiveForRussia/](https://www.facebook.com/BiointensiveForRussia/). Carol is

available for informational presentations to assist fundraising for Russian teachers and Ludmila's



Irina and teacher with cold frame.

continued teaching of GB in Russia. Also, if readers in cold climates would like to correspond with the new Biointensive gardeners in northern Russia, contact Carol at cbvesecky@gmail.com.

GROW BIOINTENSIVE Teaching Materials Now Available in French

GROW BIOINTENSIVE teaching videos are now available with French subtitles. Visit YouTube www.youtube.com/user/JohnJeavonsGrowBio/videos and click on any of the videos. At the lower right corner of the video screen click on the Settings icon. Click Subtitles, then click French. The subtitles should start as the video plays. To turn off subtitles, click the Settings icon again, click Subtitles, then click Off. The French *How to Grow More Vegetables* is now online at growbiointensive.org/HTGMVFrench.

Frequently Asked Questions

By Rachel Britten, Manager at EA's Mini-Farm at Golden Rule

What is your favorite garden tool?

Everyone has a favorite tool, but often the favorite is the one that's right for the specific job. Here are a few of our suggestions.

Weeding

The collinear hoe (and my personal favorite) was developed by famed intensive gardener Eliot Coleman. This tool is a sharp, small-headed hoe used while standing. This is a great change of pace from frequent bending. It is available with a 3.75 or 7-inch head so you can choose the tool that fits your plant spacing. I use the small head frequently as it allows for delicate and careful weeding. It is most effective when I use it as new weeds are just sprouting. I scrape the surface with the hoe, skip watering



The collinear hoe is used standing

Photo credits: EA at Golden Rule staff

for a day and am able to eliminate a majority of the oncoming weeds without impacting my transplant-crops.

Transplanting

Farm staff agrees it's best to match the size of the tool to the size of the roots you are transplanting.

Small thin roots transplant easily with a small thin trowel like a Hori-Hori—a Japanese farming tool that looks like a big knife. This tool



Left: A wide, angled trowel.

Right: Hori-Hori, a straight knife.

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Compost Crop Chart

	Legume – Fixes Nitrogen	Tolerates poor drainage	Germinates in cool soil	Cold-hardy to 25° F	Somewhat drought-tolerant	Good for heavy soil	Plant Spring, Fall, Either	Competes with weeds	Good for erosion control	Quick growth	Low growing-under 12"	Medium-13 to 36"	Tall-over 36"	Invasive	Suggested oz of seed per 1,000 sq ft
Alfalfa	★		★	★	★	S					★				0.85
Barley			★	★		E	★	★	★		★				24
Beans, Bell, Fava	★			★		F	★						★		172
Beans, Moth	★				★	S	★		★	★					9.50
Birdsfoot Trefoil	★	★	★	★	★	E	★	★	★	★			★		1.4-2.2
Buckwheat						S	★		★			★			26
Cardoon				★	★	E							★	★	0.40
Clover, Alsike	★	★		★		E		★			★				5.50
Clover, Berseem	★	★	★	★	★	E		★	★		★				1.50
Clover, Crimson	★			★		E	★	★	★		★				16-32
Clover, Red	★		★	★		E	★	★			★				0.80
Clover, White Dutch	★	★	★	★		E	★	★		★					0.30
Corn					★	S			★				★		9
Cowpeas	★				★	S	★		★		★				32-48
Fenugreek	★	★	★	★	★	E	★				★				16-32
Millet, Pearl		★			★	S	★	★	★				★		12-16
Mustard, Agricultural		★	★	★		E	★	★	★				★		8.50
Oats			★	★		E	★	★	★		★				12.50
Pea, Austrian Field	★		★	★		F	★		★		★				32-48
Phacelia, Bee's Friend				★		E	★	★	★		★				0.50
Radish, Fodder			★	★	★	E			★		★				15
Rye, Cereal		★	★	★	★	F	★	★	★				★		24
Sorghum					★	S	★	★	★				★		6.60
Sunflower					★	S							★		7.60
Sweetclover	★		★	★	★	S	★	★					★		0.30
Vetch, Hairy	★		★	★	★	F	★	★				★			55
Vetch, Woollypod (Lana)	★		★	★	★	F	★	★				★			55
Wheat			★	★	★	E	★	★	★		★				24

Learning from the Winter Garden

By Jamie Chevalier

www.quailseeds.com/updates

Jamie Chevalier lives and gardens on a river in the Coast Range in Northern California. She has gardened professionally in Alaska and California, as well as living in a remote cabin and commercial fishing. She wrote the Bountiful Gardens catalog from 2009 to 2017, and now is proprietor of Quail Seeds.



Going out to harvest food in my garden this winter is more like foraging in the wild. But it has taught me more than my tidier garden did about what to grow in the cold winter greenhouse or garden.

The ideal winter garden has mature cabbages, kale, Brussels sprouts—all biennials that sprout in summer, and go to seed the next spring. They are renowned for winter hardiness. Well, I was too busy this summer to start any of those.

At the last minute, during the late-October rains, I broadcast seed into the light straw mulch on my beds. The seeds were a mix of leftovers and outdated seed that I had a lot of, so there were all kinds of things, including kale, carrots, turnips, cilantro and mustard. Oh, and the weeds—lots of those were already there, me being so busy and all. If you want to make it sound a lot more thought-out than it was, you could call it a "meadow garden."

The plants came in way too thickly. I went out knife in hand to harvest a couple of dinners, and to try and thin things out. There were surprises, starting with what was there and what wasn't.

The kale wasn't. Big kale plants from last summer were thriving, but what late-sown kale seedlings have survived are still just an inch high. The carrots didn't even sprout. Clearly, they need better conditions as babies than as adults. (And in fact the seeds of biennials like carrots and kale mature in June or so and fall onto warm ground.)

The champion fall-sprouters were (cultivated) cilantro and (wild) miner's lettuce. I've never had such great germination or such lush growth. The other things that did really, really well were mustard greens, amara, mizuna, bekana, tatsoi, and turnips. Plus wild dandelions, lettuce and chicory.

I realized that all the things that did well in this meadow garden are usually considered spring greens. And they're usually hard for me to grow—they bolt too fast. They bolt so readily because they're going to make seed that same year, in the fall. The seed will fall on cold ground. I had accidentally hit on the perfect strategy for late-planted winter crops, or for an unheated greenhouse all winter—plant spring greens.

Spring crops aren't usually recommended for winter because they are less hardy when full grown. But planted late by procrastinators like me, they're young and at their most hardy when the weather stops further growth. The plants are small, but they are so thick that there are still plenty.

I'm going to sprout some peas in a container and set it out. If you are willing to eat the growing tips in

salad instead of waiting for pods, a pea patch rounds out the meadow garden.

FAQ

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has sharp sides for easy entry into the soil and a flat blade that minimizes compaction when transplanting quickly. If you are dealing with broader, branching roots, my coworker, Justin, loves a hand trowel. This tool can remove as much soil from the transplanting hole as needed to clear the way for more-sizable roots to be transplanted straight, resulting in optimum plant growth and health. Garden manager, Jes, prefers the offset style of the handle because she feels it is easier on her wrist.

Harvesting

When it comes to harvesting it is hard to beat the serrated Japanese sickle. This is a go-to tool for all of our managers and staff. The serrated edge and curved blade make it ideal for cleanly cutting grains, like wheat and rye, at the base. Used to clear compost crops, this workhorse can cut through a lot of material without getting dull. I even use my sickle to cleanly harvest zucchini without damaging the plant.



Japanese sickles are very sharp.

Heartfelt Thanks to Our Major Donors

Buddhist Global Relief



Ceres Trust



Conservation, Food
and Health Foundation



Edna C. Wardlaw
Charitable Fund



Warsh Mott Legacy



John and Betsy
Scarborough Fund

Estate of Del Anderson



Brian Barrett



David Bronner



Yvon Chouinard



Jan Elizabeth



Eddie Gelsman and
Wendy Mardigian



Irma and Thomas Giordano



Sandra Mardigian



Virginia Mudd
and Clifford Burke



Claire H. Russell

And many thanks to all
our partners who have
supported us in many
ways over the years.

Ecology Action's Annual Report for 2016

Message from the Director

Dear Friends,

“May you live in interesting times” has become a reality in the lives of people globally. Challenges to what we consider normal are bombarding us so rapidly it can feel like the very ground is being chipped away beneath us. At the same time, these challenges are igniting the spark that dwells in each of us, impelling millions of people worldwide to determine a more positive future for themselves and the Earth and to take actions that will manifest that future.

Although national and international events affect us, our home and community are where our heart is and where our actions can have a greater and more lasting impact. Here at Ecology Action we continually adjust our efforts—as circumstances change—to reach the largest number of people, to inspire them and provide the needed tools for cultivating their biologically intensive food-growing skills. To give them hope for their own future.

We are currently working on spreading the GB system as widely as possible through developing online training programs and improving available self-teaching tools. We are working towards having our 8-month internship completely online for people in other countries who have proven they are qualified candidates. These programs include the use of online videos from the Two-Week Farmers Course given by master teachers in 2014, as well as live online weekly mentoring by our staff trainers.

Because of the ongoing efforts of Juan Manuel Martinez, Director of ECOPOL, the GB method has established a promising foothold in Europe. For the third year Juan has taught workshops in Italy and Spain and in the process has found a new ally: Friends of the Earth-Spain. This organization is sponsoring not only GB workshops in Spain, but also in Honduras, El Salvador and Nicaragua—bringing ECOPOL's work full circle. Juan also helped initiate the Mexican Free Seeds Network this year, which includes scientists and activists who have been fighting the incursion of GMOs in Mexico!

In Kenya, G-BIACK is also working globally as well as locally. Co-Director Samuel Nderitu helped establish a 40-bed-unit garden in Ghana and, with his wife Peris, initiated a year-long residential jobs training program for poor and under-served young Kenyan women at G-BIACK. The couple is also working on a pilot program to establish 40 GB satellite farms in their region.

We each have a part to play—in tandem with many others—in changing our community and our world. It may be difficult to identify what that part is in the midst of constant chaotic challenges. But the Earth can offer a quiet place to offset challenges and mental clutter. We can find a comfortable spot outside; silently absorb the beauty until the quiet surrounds us inside and out; place our hands on the ground and feel the Earth's vibrant energy; feel our own answering energy and connect the two. We can remind ourselves: “Every journey begins with a single step.”

Best Wishes,

John Jeavons, Executive Director, Ecology Action



Biointensive Team Corner

Update on Matt Drewno

Victory Gardens for Peace Mini-Farm and Seed Bank Manager



I first got excited about agriculture when I came across the word permaculture about 14 years ago. It hit me at the right time. I was studying architecture in Rome, Italy, watching the sun rise and set on the beautiful ancient and modern city. For me it was poetic. I saw that man creates monuments to himself and in time it all falls, and Nature reclaims her raw materials: vines cover ruins, soft and gentle plants take back the stone that was once hers. I had visions of my own country in ruins. It was a very powerful experience and led me to ask some deeper questions and some playful ones.

As a result, I got into permaculture: care of the Earth, of the people and sharing in the abundance. I started working on organic farms, received a permaculture certificate, and explored *community*. I was (and still am) seeking the tools and experience to become self-sufficient and an asset to my community. I always look to

learn from the master! And so I ended up at EA in 2010 and was lucky enough to find a place at our demonstration, training and research garden at the Stanford Inn in Mendocino, California. For me, what we do is more than just double-digging and close plant spacing. It is a whole-systems approach: it is a real solution.

I manage the Victory Gardens for Peace Mini-Farm and Seed Bank on the Mendocino Coast. It's a beautiful site and a great demonstration garden of the Biointensive method. Our main research garden is over 8,000 sq ft and I also manage the gardens at the Stanford Inn, about 1/4 acre, also Bio-intensively done. It's a fine experience working with the soils, climate and plants here.

I believe that the work we do, and the work of Ecology Action, is important because it addresses so many issues: food security, local economies, exercise, nutrition and

education. It is therapeutic and stress-relieving; it is ecologically sound and encourages life to thrive in all forms and functions. Biointensive gardening is appropriate.

Editor's Note: We are pleased to announce that Matt is now an Advanced-Level Certified instructor of GB. Thank you for all your hard work!



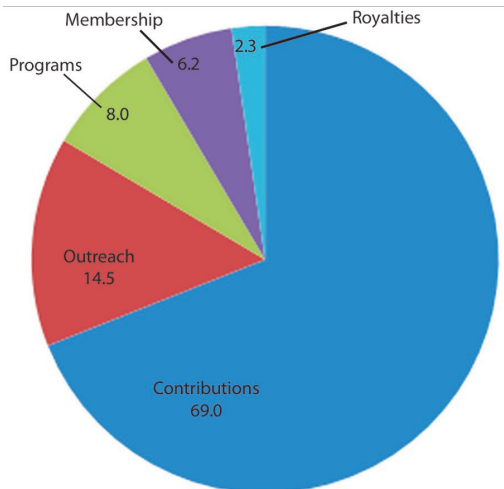
Photo credit: VGfP staff

EA's Annual Report 2016

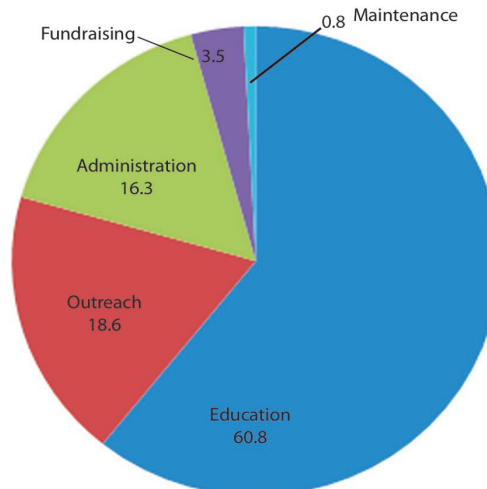
Continued from page 10

Income and Expenses for 2016

Total Income: \$653,530



Total Expense: \$764,595*



* Note: The shortfall was covered with income anticipated and received in early 2017.

Herbal Spotlight: Comfrey

By Rachel Laase, The Jeavons Center former Assistant Mini-Farm Manager and Student Herbalist



Photo credit: Rachel Laase

One of the compost crops we grow in our Biointensive gardens that also has health benefits is *Symphytum officinale*, most commonly known as comfrey. This beautiful plant, which has large green leaves and delightful purple bell-shaped flowers, provides us not only with biomass for the compost, but also with numerous healing benefits. Both the leaves and roots can be used for healing internal and external ailments.

Comfrey has several medicinal actions. It is known as a vulnerary and an astringent. These properties make it useful in healing minor injuries of the skin, where it works to increase cell production, causing wounds to heal over rapidly.

It can be used internally for stomach ulcers, where it will have the same effect, soothing and healing.

Comfrey is a demulcent, producing a mucilage that coats and soothes irritated tissues. It helps reduce inflammation, and at the same time lessens scarring. It also has astringent properties that can help control slow bleeding.

Comfrey can also be used as an expectorant and has a relaxing effect on the respiratory membranes making it useful for easing coughs, asthma, and bronchitis. The root can be made into a tea, but should only be used in small doses and for short periods of time. There is much controversy amongst herbalists whether comfrey should be used internally since it contains substances known to be toxic to humans.

However you choose to use it, comfrey is a wonderful plant to have growing in the garden. It re-

produces and spreads easily, so once you start growing it, you'll have it for many seasons to come!

How to Make a Comfrey Salve

Ingredients

- 1/2 c dried comfrey leaves
- 1/2 c dried plantain leaves
- 1 1/2 c olive oil
- 4 tsp beeswax
- Several layers of cheesecloth

Instructions

Start by making an infusion using the olive oil and dried herbs. Place the herbs and oil together in a crock pot and set on low for about 3 hours. Strain the hot oil through cheesecloth into a small glass jar.

Add the beeswax and stir until melted. Once the beeswax melts, cover and label the jar and store in a cool place. Keeps up to 12 months.

To use: Apply a small amount to the injured area and rub in gently. Can be repeated three times a day.

Walking Meditation
The mind can go in a
thousand directions.
But on this beautiful
path, I walk in peace.
With each step,
a cool wind blows.
With each step,
a flower blooms.

—Thich Nhat Hanh

Tool Preserver

By Leslie Roberts, adapted from Ecology Action's Newsletter, August 2001.

This tool preserver is a great homemade liniment for every wooden-handled tool you use. Use sparingly, as a light coat goes a long way to keep the wood supple and protected.

Ingredients

1/2 c vegetable oil, any oil will work. I happened to have peanut oil on hand.

1 oz (28.5 grams) beeswax

Drops of essential oil of your choice, optional



Photo credits: Leslie Roberts

Instructions

If the beeswax is solid, shave or cut it into small pieces. The 1-oz packet I purchased at the natural foods grocery store came in small disks.



Place the beeswax in a small microwave-safe bowl

and heat on high at one-minute intervals, stirring after each minute until thoroughly melted. The bowl will become hot so handle carefully. Do not overheat or the melted wax will spatter inside the microwave. Add the vegetable oil and essential oil, if using. If the



wax solidifies slightly after adding the oils, reheat in the microwave to blend completely. Immediately pour into a clean glass jar and label. Store in a cool place.



To apply

Make sure the wood is clean and dry. Use your hand to spread a light coat over the wood. Let it soak in overnight. If the tool handle is especially weathered and the first application is completely absorbed, you can apply a second coat. Works well on wooden handles in the kitchen too!

Book Reviews

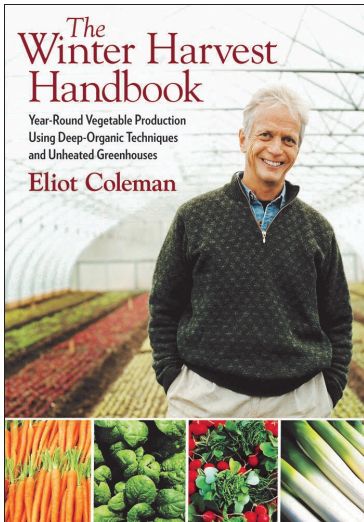


Photo credit: chelseagreen.com/the-winter-harvest-handbook

The Winter Harvest Handbook: Year-Round Vegetable Production Using Deep-Organic Techniques and Unheated Greenhouses

By Eliot Coleman
(Chelsea Green, 2009).
Review by Chelsea Green

With *The Winter Harvest Handbook*, anyone can have access to Eliot Coleman's hard-won experience. Gardeners and farmers can use the innovative, highly successful methods Coleman describes in this comprehensive handbook to raise crops throughout the coldest of winters.

Building on the techniques that hundreds of thousands of farmers and gardeners adopted from Coleman's previous books, *The New Organic Grower* and *Four-Season Harvest*, this book focuses on growing produce of unparalleled freshness and quality in customized unheated or, in some cases, minimally heated, movable plastic greenhouses.

Coleman offers clear, concise details on greenhouse construction

and maintenance, planting schedules, crop management, harvesting practices, and even marketing methods in this complete, meticulous, and illustrated guide. Readers will discover all the techniques that have proven to produce higher-quality crops on Coleman's own farm.

His painstaking research and experimentation with more than 30 different crops will be valuable to small farmers, homesteaders, and experienced home-gardeners who seek to expand their production seasons.

A passionate advocate for the revival of small-scale sustainable farming, Coleman provides a practical model for supplying fresh, locally grown produce during the winter season, even in climates where conventional wisdom says it "just can't be done."

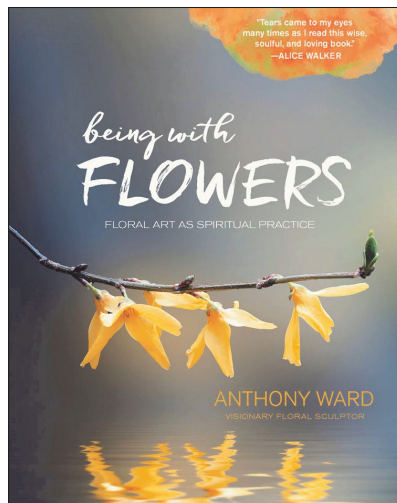


Photo credit: Amazon.com

Being with Flowers: Floral Art as Spiritual Practice

by Anthony Ward
(Quarry Books, 2017).
Review by Amazon

Learn to become one with nature and create beautiful flower arrangements with *Being with Flowers*.

Floral arrangements are so much more than a decoration. They provide a way to connect to nature and the world around us. Master floral sculptor, Anthony Ward, shows you how to work with flowers to bring more peace into your life. Including creative exercises, guided meditations, and step-by-step flower arrangements, *Being with Flowers* will show you how to appreciate the natural art of each flower to create the perfect arrangement.

How to Order Ecology Action Publications

Since Bountiful Gardens closed in 2017 we are no longer able to fill orders for our publications for the general public. However, we are working to make all our publications available in electronic format, and hope to have the bulk of our booklets and papers for sale online increasingly during 2018.

To view a list of all the Ecology Action publications, please visit growbiointensive.org/publications_main.html. Those listed with links are available through Amazon, or other retailers. Those without links are only available through Ecology Action for workshop participants or interns. We apologize for the inconvenience.



Photo credit: dhalanghall.blogspot.com

ECOLOGY ACTION'S GARDEN COMPANION

~ Published three times a year ~

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EA Events

❖ April 15

3-Day GROW BIOINTENSIVESM Basic-Level Teacher Certification Workshop application deadline.

❖ May 15

2- and 4-month Internships application deadline.

❖ May 18

Ecology Action GROW BIOINTENSIVESM Sustainable Mini-Farming Nine-Saturdays Course: Part 1 registration deadline. (Each part is complete in itself.)

❖ May 27

Victory Gardens for Peace Mini-Farm/Garden Tour, Mendocino, CA.

❖ June 2-July 25

Nine-Saturdays Course: Part 1 Intro to GB Skills begins.

❖ August 3

3-Day GROW BIOINTENSIVESM Basic-Level Teacher Certification Workshop, Willits, CA (tentative).

Continued on page 16

Support Ecology Action's Work

Since 1972, EA has been researching and demonstrating the growing edge of sustainable food raising and making this knowledge available to people everywhere.

It is your support dollars that enable this growth of knowledge and global outreach.

In addition to your project specific support, please consider increasing your general support so that we may continue to expand the availability of this fundamental knowledge to people everywhere—and grow a healthier, fairer, more hopeful tomorrow for us all.

YES, I would like to support Ecology Action's global outreach. Annual membership begins at the \$40 contribution level and includes Ecology Action's triannual Newsletter.

<input type="checkbox"/> Seed - \$40	<input type="checkbox"/> Garden - \$60	<input type="checkbox"/> Farm - \$100
<input type="checkbox"/> Community - \$250	<input type="checkbox"/> Village - \$500	<input type="checkbox"/> Town - \$1000
<input type="checkbox"/> Region - \$5,000	<input type="checkbox"/> World of Difference - \$10,000	<input type="checkbox"/> Other - \$_____

This is a membership renewal

For monthly and annual giving options or to contribute online, please visit: secure.growbiointensive.org.

Name: _____ Address: _____

City: _____ State: _____ Zip Code: _____


Email: _____ Payment Method: Check Credit Card

Visa MasterCard AmEx Discover # _____

Exp. Date: _____ Signature: _____

Bequests...Please contact Ecology Action's Director at 707-459-0150 for more information.

Ecology Action is a 501(c)(3) non-profit. All contributions are tax-deductible.



❖ August 10
**Nine-Saturdays Course:
 Part 2 registration deadline.**
 (Each part is complete
 in itself.)

❖ August 18-October 13
**Nine-Saturdays Course:
 Part 2 Planning and Design
 begins.**

❖ November 2-4
**3-Day GROW BIOINTENSIVESM
 Workshop**

*“Hope” is the thing
 with feathers
 That perches in
 the soul
 And sings the tune
 without the words
 And never stops—at
 all.*

—Emily Dickinson

Ecology Action Newsletters
 are available online at
[growbiointensive.org/
 newsletter/archive.html](http://growbiointensive.org/ newsletter/archive.html).

**Due to Common Ground
 Garden’s closure** we have had
 to cancel all their classes and
 events. We apologize for any
 inconvenience.

To view a complete list of GROW
 BIOINTENSIVE classes and
 upcoming activities visit
[growbiointensive.org/
 events_main.html](http://growbiointensive.org/ events_main.html)

Ecology Action

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44 Years.
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