



# The Garden Companion

(Biointensive for Russia's newsletter)

Vol. 13

Fall 2010

## LOOKING BACK AND THEN FORWARD: WHERE HAVE WE BEEN, AND WHERE ARE WE GOING?

For those who may be new to our work, or in case you're not clear about how we came to be doing it and what we're actually accomplishing, here follows a brief summary.

Before the formation of BfR as a project in 1993, in fact as early as 1978, Director Carol Vesecky and associates in Language Specialists, her home-based microbusiness, began typesetting and editing foreign-language translations of Ecology Action's publications, beginning with *Biointensive Mini-Farming: a Rational Use of Man's Resources*. Notably, they edited and typeset the French and German translations of John Jeavons' *How to Grow More Vegetables...*, the bestselling primer on GROW BIOINTENSIVE Sustainable Mini-Farming (GB), in 1980 and 1983.

Carol's expertise in the Russian language and her involvement in the citizen diplomacy exchanges of the 1980s, in particular her helping to host a Russian publisher in 1986 during the Kids-to-Kids visit of computer youth from Novosibirsk, led to opportunities to publish a Russian translation of *How To Grow....* This happened in 1993 with financial support from the U.S. Peace Corps and publication in Moscow by a Russian who had interned in a program offered by the Center for Citizen Initiatives (CCI) in San Francisco. Even before that, at Stanford University in 1990, a workshop organized for ten visiting Russians had been held, co-sponsored by Ecology Action and CCI, with the USSR's Communist Party funding part of the cost.

But the real impetus for the project arose from the Russian book publication in 1993. The natural next step was for Carol, with Liza Loop's assistance, to found BfR and to provide a way for Americans to send the book (it was mailed from Moscow) to Russian friends made during the thrilling era of citizen diplomacy exchanges in the 1980s and early 1990s. Thus, 300 copies were sent to addresses all over the former Soviet republics, fulfilling Carol's desire to prolong the spirit of cooperation born during the exchanges, through collaboration in disseminating a gardening method that not only produces high yields of healthful produce, but also builds soil fertility.

Next came a period during which Russian teachers participated in Ecology Action's 3-Day Workshops on the GB method in Willits. From 1994 *continued on page 2*

## MESSAGE FROM THE DIRECTOR

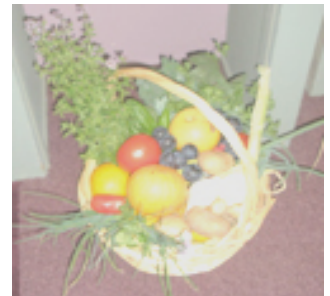
This has been another good year, with progress made broadening our SoCal network as well as in our translation and editing work. We attended the Eco-Farm Conference held at Asilomar, and the Russian Festival in San Francisco early in the year. Both the South Bay and West L.A. chapters of the California Rare Fruit Growers drove up here to the Ojai Valley to visit our Mulberry Haven orchard. Feel free to write for published descriptions of the orchard or for a small box of our carob pods (aka St. John's bread)!

Kody Ryan, our resident orchardist, presented a workshop on grafting mulberry trees in March, and we began selling grafted trees and cuttings. Our fundraisers also included Doris Williams (from Palo Alto) singing Celtic songs, a Eurasian lunch by Irina, and a cuttings workshop.

Igor Prokofyev was sponsored by Ecology Action to attend the Latin America Biointensive conference in May at Xochitla, Mexico. He was received warmly there, especially after presenting the Bryansk experiments in the radiation zone (see photo, upper left).

We continue to grow produce for weekly deliveries to a local food program at the St. Andrew's Episcopal Church garden; see right.

For progress made toward our publishing goals, see page 2.



*Carol Vesecky*

## SUPPORT NEEDED FOR TRANSLATION WORK

BfR's challenges, as currently defined, are to (1) raise funds sufficient to complete the editing and translation of several publications, then (2) move on to grantwriting for their printing and for further workshops in Russia. Several translations have been in process for years, so the time to approaching for them to be published: on paper, online, or both ways! We will search for a distributor, and envision printing more copies at the Educational Methods Center at Novo-Sinkovo for future workshops and trainings by our teacher network.

Brief descriptions of each book are given on page 2, along with the costs involved. We are fortunate now to have the translation services of one of our staunchest networking supporters: Volodya Shestakov, whom some of you may have met during his many visits to the U.S. with the Center for Citizen Initiatives. We are now ready to move ahead with our publishing program, so your financial support will be deeply appreciated!

### *What's Inside:*

- **Our publishing plan described . . . . . 2**
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**LOOKING BACK**, continued from page 1 to 2007, 14 more former Soviets journeyed to California for the experience, and most returned to teach in their localities. The first of these, Larissa Avrorina, worked with Carol to win and administer a ISAR/USAID cooperative grant that funded a major experiment, several well-attended workshops, and further publications at Ecodom in Novosibirsk, Siberia in 1995-1996. She taught a major workshop with Ecology Action's Carol Cox in 1997, and her husband Aleksandr Avrorin later taught workshops in the Altai region of Siberia and four regions of Western Russia.

Two participants from St. Petersburg, Albina Kochegina and Natasha Krestiankina, both returned to teach GB in the Young Naturalist after-school horticultural program for middle-schoolers for ten years. Between 1998 and 2002, Kochegina and Ivan Antiushin, respectively, made it possible for several workshops to be presented by U.S. teachers Patrick Williams, Albie Miles, and Steve Moore in the St. Petersburg area and at the Educational Methods Center (EMC) in Novo-Sin'kovo (near Moscow), on tours supported by USAID's Farmer-to-Farmer program and an Ecology Action grant. Vladimir Loginov founded his organization Eco-Inform to teach GB to older teens (along with various trades) in his town of Kurganinsk, near Krasnodar in Southern Russia. His series of lessons was also televised locally.

One of the Russian books found its way via Siberia to Chirchik, Uzbekistan, and was placed in the hands of Irina Kim, who immediately recognized the GB method as precisely the approach to mini-farming she had dreamed of teaching to high school students. She then gave up her pursuit of a PhD in soil chemistry and founded "Mini-Farmer" and "Eco-Club" programs in one of Chirchik's schools, teaching GB along with soil science and ecology. Her

students often assisted her on her several tours each year for ten years to 11 remote villages in the Nuratau Nature Reserve north of Samarkand, and the Brichmulla forestry region north of Tashkent.

A highlight of Irina's teaching work came when several of her students traveled to Nukus, Karakalpakstan, Uzbekistan for the Farmer-to-Farmer supported tri-lingual 5-Day workshop held there in 2002, presented by Daniel and Amber Vallotton from Las Cruces, NM. Dr. Bakhtiyar Jollibekov, a university teacher and researcher who attended that workshop, began experimenting with and teaching GB that year, and continues to this day.

Carol met Dr. Ludmila Zhirina, president of the NGO VIOLA, at the USAID/ISAR-supported EcoForum near Kiev in 1995. VIOLA is a nonprofit organization formed to search for ways to mitigate the suffering of the victims of the Chernobyl nuclear catastrophe in Russia's Bryansk *oblast'*. VIOLA's Albina Samsonova attended the 3-Day Workshop in Willits in 1996, returning to teach her colleagues. Then, Albie Miles accompanied Carol to Bryansk to teach a workshop in 1999. From then until 2009, VIOLA conducted workshops throughout the *oblast'*. Also, high school biology teachers and college-level agriculture professors began teaching GB as a unit in their classes.

Dr. Igor Prokofyev, serving as VIOLA's executive director, co-presented workshops with Ludmila, and attended two of Ecology Action's workshops in Willits, including the 5-day Teacher Workshop. Other very active VIOLA members were Oleg Zavarzin and Ludmila Kuznetsova, a K-12 school principal and high school teacher, respectively, in Bryansk and Natalya Koryagina, a school principal in the village of Domashovo. Ludmila, Oleg, and Natalya participated in *continued on page 4*

## OUR PUBLISHING PLAN DESCRIBED

The books, manuals, and experiment reports here described, once published, will empower beginning Russian-literate GB gardeners to grasp the method and its value to mankind more quickly, and experienced GB teachers to convey the concepts in more depth. Translation by Michael Chusid and others has been completed in most cases, and editing at BfR is being donated. Printing costs given below are based on quotes from the Educational Methods Center in Novo-Sin'kovo.

The experiment reports of Ecodom, Inc. in Novosibirsk (1995), and the NGOs VIOLA and PERESVET (2002-2010) contain data that help justify the amount of extra labor expended in double-digging GB beds initially. They also offer promise for reducing the cesium-137 in the vegetables grown in contaminated soils. (Cs<sup>137</sup> has a half-life of 30 years.) *Cost to post online: negligible (with volunteer labor)*

The Self-Teaching Course (see [www.growbiointensive.org/Self\\_Teaching.html](http://www.growbiointensive.org/Self_Teaching.html)) was developed by 3-year EA apprentice Margo Royer-Miller, has recently been posted online. It is an easy way to get started understanding GB, and we'd like to make it available to the Russian-literate world via our Russian Web site, [www.biointensive.newmail.ru](http://www.biointensive.newmail.ru). *Cost for text translation: \$245; cost for voice-overs for the videos: TBD. Cost for uploading to Russian Web site also TBD.*

The well-illustrated 28-page excerpt of the Basic-Level Biointensive Training Manual by Martinez and Torres will enhance a GB teacher's ability to convey the 8 fundamental concepts of the method. *Cost to print 200 copies: \$130*

The complete *Biointensive Sustainable Mini-Farming Method: Basic-Level Training Manual* (230 pp.) includes sections on all 8 components of GB, plus units on garden planning, resources, and record-keeping. Suggested pedagogical approaches are presented in an appendix. *Cost to translate the entire manual: \$187; to print 100 copies, \$648.*

*Future Fertility: Transforming Human Waste into Human Wealth*, by John Beeby, describes how our waste can SAFELY be used to fertilize our crops, via Purification, Production of Sufficient Humus, Return of Minerals, and Proper Nitrogen Application. *Cost to print 200 copies in Novo-Sin'kovo: \$600 or more*

*The Sustainable Vegetable Garden*, by Carol Cox, describes the GB method more concisely than does *How to Grow More Vegetables*, so is a smaller book and less expensive to purchase at \$12 instead of \$20. We plan to print more copies of its translation at the EMC for teachers and possibly for commercial distribution. *Cost to print 500 copies: \$1368*

*Test Your Soil With Plants*, by John Beeby, will empower gardeners without funds for expensive soil analysis to evaluate their soils and determine their fertility needs based on wild and cultivated plants growing in their gardens. *Cost to print 200 copies: about \$399.* (But this is for the future as much more editing is required.)

## 2010 BIOINTENSIVE EXPERIMENTS of the Grassroots Alliance PERESVET, an NGO in Bryansk, Russia

with financial support from Biointensive for Russia

by Igor Prokofyev

Radioactive contamination of food crops is a serious issue in the areas affected by the Chernobyl disaster. Scientists in Russia, Belarus, and Ukraine have conducted many studies that have determined that 80-90% of the radionuclides are to be found near the soil surface, at the same depths where plant roots are chiefly located.

The distribution of the radionuclides in the soil profile depends on the depth of soil loosening. The double-digging process reduces the concentration of radionuclides around the roots, so the plant takes less radioactive cesium up from the soil. Thus, double-digging reduces radioactive contamination of the harvest. To test the hypothesis that double-digging and other Biointensive practices might help reduce radioactive contamination of food crops, three experiments were performed in the radiation zone of the Bryansk *oblast'* during the summer growing season of 2010.

### Experiment 1. Influence of double-digging on radionuclide contamination of rye grain

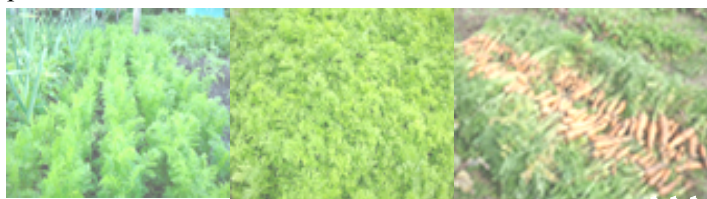
Two adjacent beds were prepared identically, except that the control bed was single-dug to a depth of 15-20 cm and the experimental bed was double-dug to a depth of 40-50 cm. Rye was planted in both beds. The beds were fertilized and tended in the same way. Our tests showed that the radioactive contamination of the rye grain harvested from the double-dug bed was 14% lower than that harvested from the control bed (50 Becquerels per kilogram compared to 58).

### Experiment 2. Dependence of contamination of harvest by radionuclides on soil characteristics, gardening method, and crop type

For the second experiment, we chose three gardens in the radioactively contaminated zone. The level of contamination was the same in all three gardens; however, the properties of the soil varied. Garden 1 had 7% clay, 1.1% humus, and 5.3 pH. Garden 2 had 15% clay, 1.7% humus, and 6.1 pH. Garden 3 had 21% clay, 2.7% humus, and 6.6 pH.

In each garden we grew the same crops in two types of growing beds: conventional (Control) beds and GB beds. The owners of these gardens had not previously practiced GB.

To prepare the GB beds, we used double-digging, compost, and close hexagonal spacing with equal distances between the plants. We spread 0.5 bucket of compost per square meter of bed, following the compost recipe from Booklet #32: (by volume) 2 buckets mature biomass, 2 buckets immature biomass, and 1/2 bucket soil. We also spread 25 grams of ash per square meter.



Carrot plants in rows

GB carrot bed

GB carrots!

In the control beds we planted in rows, the usual practice for many Russian gardeners. The distance between plants was similar to GB spacing; however, the distance between rows was 15% to 100% greater. We fertilized the control beds with 60 grams calcium nitrate, 20 grams double phosphate, and 25 grams of ash per square meter

We tested the radioactive cesium contamination in our harvest in the regional radiation laboratory. The results are summarized as follows:

Averaging all eight food crops in all three gardens, the GB method produced at least 10% lower radionuclide levels than did the conventional method. For oats, rye, tomato, and zucchini, the GB method produced a 30% to 41% decrease in radionuclide levels. Grain crops seem to be particularly prone to accumulating radionuclides, and the GB method seems to be particularly helpful in overcoming that tendency. Carrots showed the least improvement with the GB method, with only a 12% average drop in radionuclide levels. It should be noted, however, that carrots and tomatoes were only available for testing in two of the three gardens.

Because the soil characteristics varied in the three gardens, we were able to show that the higher the percentage of clay or humus in the soil, the lower the level of radioactive contamination in the food crops. Also, the closer to neutral the soil pH was, the lower the radioactive contamination level.

We conclude that soil with high clay content and humus content and nearly neutral pH is optimal for decreasing food crop contamination in the radioactive zone. We surmise that Cs<sup>137</sup> clings to particles of clay and humus, and neutral pH decreases its mobility.

The decreased Cs<sup>137</sup> contamination of a crop apparently caused by use of the GB method is most clearly shown in the case of oats. Over the three gardens, the average decrease was 41%.

### Experiment 3: Soil moisture

Our third experiment comparing GB with traditional gardening methods came about because summer this year was abnormally hot. We observed visually that the plants in the GB beds remained in good condition. Similar plants were slightly wilted in the control beds in the heat of the day. We checked soil moisture levels, and found that GB beds had 9-13% more moisture than the control beds. The compost in the GB beds helped them to retain water, and the close spacing of plants shaded the soil surface and reduced evaporation.

*Igor's original report including bar charts, graphs, and tables may be requested by writing to [cvesecky@igc.org](mailto:cvesecky@igc.org).*

### Radiation zone experimenters:

The experiment was conducted in three separate cities in the radiation zone. In **Novozybkov**, Nina Vraskaya, a retired nurse, gets about 85% of her food from her garden and hens. She has been practicing GB since she attended a workshop organized by Igor Prokofyev in Orel in 2009. Viktor Savateev in **Klintsy** also survives on a very small pension and must grow

*continued on page 4*

### Upcoming Events:

Jan. 11-14, Vist to Ojai of Olga Shestakova; Event TBA

Jan. 26 - 29, 2011, Eco-Farm Conference, Asilomar, Pacific Grove, CA; see [www.eco-farm.org](http://www.eco-farm.org)

Ecology Action 3-Day Workshops in GB Sustainable Mini-Farming in Willits: Mar 4-6 and Nov. 4-6, 2011. For Mini-Farm/Garden Tours, click on Events & Opportunities at [www.growbiointensive.org](http://www.growbiointensive.org).

**EXPERIMENT**, *cont'd from p. 3* vegetables to survive. He owns a copy of the translation of *How to Grow More Vegetables*, and has been using GB since 2009. By participating in the experiment, he hopes to obtain less contaminated vegetables. In **Pogor**, Vlad Stolpnik, due to his small salary as a biology teacher and school principal, also must grow vegetables in his family garden plot. Concerned about his children's health, he has been practicing GB since 2008 to try to decrease the contamination in his harvest.

### NATALYA KORYAGINA IN DOMASHOVO

Some readers remember that Natalya directed an experiment in her school in the village of Domashovo that won awards in 2009 and was exhibited in Moscow. She writes that the younger children presented their GB produce in the "Young Naturalists 2010" regional exhibition this year. She is happy to have her work featured by BfR, as she hopes to inspire others internationally, and believes in "Peace throughout the world and friendship among the nations."

### MORE NEWS FROM "PERESVET" IN BRYANSK

Igor Prokofyev wrote that PERESVET has founded a youth group, whose leader **Alexander Gorbachev** is a graduate student at the university where Igor teaches ecology and biology. Alexander was able to attend the International Youth Conference on Biodiversity in Aichi [Japan] 2010 in August. Organized by the Japan's Ministry of the Environment, the conference was associated with the UN's general conference on the Convention on Biological Diversity held in Aichi in October. Alexander stayed in the home of a Japanese family and was interviewed on Russia's environmental problems by the local television station. On his return to Bryansk, he shared stories about Japan with PERESVET's members and friends, along with his photos.

**LOOKING BACK**, *cont'd from p. 2* the 5-Day Workshop presented by Steve Moore at the EMC in Novo-Sin'kovo in 2002. Oleg traveled to California for the 3-Day-Workshop in Willits in 2007, and Igor participated in the 6-Day conference and workshop hosted by Mexico's Ecopol and Ecuador's Adys at Xochitla, Mexico in May 2010. Igor and Oleg are pursuing Ecology Action GB teacher certification.

From 2002 to 2009, Ludmila Zhirina and Igor Prokofyev collaborated with other VIOLA members annually to conduct GB experiments within and outside of the Chernobyl radiation contamination zones of the Bryansk *oblast'*. These experiments showed not only the increase in yields from the GB sustainable mini-farming method, but also a decrease in the levels of radiation uptake in the vegetable harvest from contaminated soils. With support and collaboration from David Buckley, the influence of earthworms on radiation in soils was also tested, and presented at a major soils conference in Houston. In 2009, with assistance from Igor and Oleg Zavarzin, Natalya Koryagina and her students conducted an experiment on fertility (compost vs. chemical fertilizers) that won prizes and was exhibited in Moscow. The experiment reports may be viewed at <http://biointensiveforrussia.igc.org/staging/reports.html>.

Early this year, Igor Prokofyev founded a new non-profit, the Grassroots Alliance PERESVET. This group continued to work in GB, while Ludmila Zhirina and the NGO VIOLA now promote other types of organic farming, including on the national level. PERESVET performed the GB experiment reported on pages 2-4, has formed a youth alliance (see left), and sent Igor to Almaty, Kazakhstan for a Global Toxics-Free Future Forum in October. Natalya Koryagina and her Young Naturalists also continue to practice GB; see the Harvest Festival photo to right for the result!



**For more info, visit:** <http://biointensiveforrussia.igc.org>

**and on the GB method:** [www.growbiointensive.org](http://www.growbiointensive.org)

**or contact:** Carol Vesecky, BfR Director, 805 640-1897

[cvesecky@igc.org](mailto:cvesecky@igc.org)

Biointensive for Russia is a non-profit project fiscally supported by Ecology Action, a California 501(c)(3) organization. Its mission is to share information between the US and Eurasia on ecological lifestyles, in particular GROW BIOINTENSIVE Sustainable Mini-Farming. Carol Vesecky is Director and newsletter editor; our Advisory Board members are David Buckley, Sylvia Ehrhardt, Anya Kucharev, Larry Symonds, and Erin and Doug Wood. Our Web masters are Berta Pires, Tamara Kowalski, and Shoshana Billik. The mailing of this issue of *The Garden Companion* was made possible by member donations. Contributors, translators, and proofreaders include Igor Prokofyev, Barb Brown, and Noel Douglas-Roth. Do visit our Web site or write to Carol for info!

Biointensive for Russia  
913 Oso Rd  
Ojai, CA 93023