The Garden Companion

Biointensive for Russia's newsletter

Vol. 15 **Fall 2016**

THIRD EDITION OF RUSSIAN TRANSLATION OF *HOW TO GROW MORE VEGETABLES* IS OUT!

BfR's colleagues Natalia Shidlovskaya, Vladimir Bolotnikov, Irina Kim, and Igor Prokofiev worked with me -— beginning in 2012 — to complete, more than a year ago, the translation, editing, and typesetting of the third edition of *Kak vyraschivat' bol'she ovoschei*, the Russian version of the eighth English edition. Then, in spring 2016, Ecology Action made the eBook available for purchase as a PDF on their web site at: http://growbiointensive.org/HTGMVRussian/index.html .

A donation of $5 or more is requested for downloading, as it would "help [Ecology Action] provide resources and publications like this to help grow a better world and end hunger and poverty." You may also become a member of Ecology Action; you'll be rewarded with three newsletters a year bearing stories of GROW BIOINTENSIVE gardens worldwide!

Next, we emailed BfR's colleagues in Eurasia who had devoted much time to teaching GROW BIOINTENSIVE Sustainable Mini-Farming (GB) about its publication, offering them the chance to download it for free at our invitation. We worried that political issues might affect the decision of whether or not to take advantage of this offer, but have not received reports from anyone thinking such thoughts.

Next on our agenda was its further publication as an eBook, and in paper, print-on-demand. We corresponded with electronic publishers in both Russia and the US, and finally chose one, Blurb.com in San Francisco, that was willing to help us publish a book in Russian cyrillic fonts. Unfortunately, their formats did not include the size (8 1/2"x11") in which Natalia had laid out the book in Adobe InDesign. Therefore, it was necessary to reduce the layout size to 8"x10". Tedious, time-consuming work (in the time we could find for it here at Mulberry Haven) downsizing the 40 pages of complex charts *continued on page 2*

What's Inside: ***Page***

- ***The NGO Green Planet in Kaliningrad*** 2
- ***PERESVET's Lead Reduction Experiment*** 3
- ***PERESVET's Harvest Festival in Bryansk and workshop in St. Petersburg*** 4
- ***Ecology Action's New Site, Energy in Food Preservation*** . 5
- ***The NGO VIOLA Is Back, Other Old Friends*** 6-8
- ***How You Can Help*** 7
- ***Events Calendar*** 8

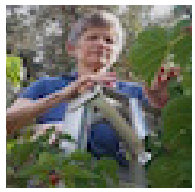
MESSAGE FROM THE DIRECTOR

Surprise! You're looking at the first issue of our newsletter since the winter of 2013. What took us so long? Well, it may have to do with challenges here, one of them being completing the editing and initial publication of the third Russian edition of *How to Grow More Vegetables*, which took precedence! (See article to left.) Its original publication in 1993 was the inspiration for BfR, and its re-issue is clearly needed for the continued success of promoting GROW BIOINTENSIVE Sustainable Mini-farming (GB) in Eurasia. But the editing of a 258-page book with new content and complex charts and illustrations does take time, as also does the choice of an electronic publisher and preparation of an eBook. But those challenges are easing now, so ... we're back!

We're truly excited about finally getting *Kak vyraschivat' bol'she ovoschei* ... published via print-on-demand (see left). Funded by your donations, we have been ordering copies from Blurb.com to be printed and mailed to our longtime partners (nine, thus far) in Russia, who are willing to share them with their teacher friends and acquaintances. We'll continue to send books to Russians and Central Asians in our network as donations come in, so do send us a check — $75 supports the purchase and mailing of three books from Blurb.com to one address in Russia.

We also fundraised via email for support for the low-cost printing, organized by PERESVET director Dr. Igor Prokofyev, of 200 copies of the book with a monochrome cover, which cost $800 in Bryansk. Most of these were distributed to teachers in that city and its *oblast'*, and at an Eco-Schools/Green Flag workshop in St. Petersburg (see page 4). At $400, Dr. Dmitry Filippenko of the Green Planet NGO in Kaliningrad (on the Baltic Sea) got 100 copies printed with color covers, in time to be distributed at two workshops he taught, one in Kaliningrad and another in the small town of Gusev. A loan made all this possible; your donations could help us pay it back. Please see more ideas for books and workshops you could help support on page 7.

We're thrilled to be working with gardeners in this region, where Russian air defense systems have been installed to counter NATO's military buildup in its Baltic neighbor states. After mastering the gardening know-how we're sharing with them, our Russian friends can then pass it on to their Polish and Latvian neighbors, offering an example of cooperation that our leaders would do well to emulate!



Carol Vesecky

A new partner for BfR, the NGO Green Planet in Kaliningrad!

After a years-long hiatus, we received a very welcome email last spring from BfR's former partner, Dr. Ludmila Zhirina of the NGO VIOLA in Bryansk. Some readers will remember that Ludmila and VIOLA actively collaborated with us from 1996 to 2010, presenting workshops, conducting experiments, and even leading an expedition to 23 villages in Ukraine and Russia to measure the radiation content of the vegetable harvest. See our Fall 2006 newsletter online, or write me for a paper copy, for the story.

Ludmila wrote me after a visit with longtime VIOLA member Albina Samsonova to Kaliningrad, the Russian "exclave" on the Baltic Sea (bordered by Lithuania, Belarus, and Poland). (Albina had also studied and taught GB.) The two organized the Climate and Energy section at an environmental forum there, working with Dr. Dmitry Filippenko. Dmitry directs the Green Planet NGO, which works regionally and internationally on biodiversity, climate and energy, waste, and agricultural issues.

Upon hearing about VIOLA's many successful GB trainings in the Bryansk and Orel *oblasts* from Ludmila and Albina, Dmitry expressed interest in learning and teaching the method in Kaliningrad and neighboring Poland, and wrote to me at Ludmila's suggestion. He sent this URL with photos of the forum: http://russia.spareworld.org/ eng/ news-events/events/2016-04-25-kaliningrad-hosted-2-days-ecological . Enjoy!

Dmitry mentioned that he and Green Planet have community resources such as parkland garden areas and links with schools, and would be happy to host a seminar visit with our participation.

I attached the eBook of the current third edition of *Kak vyraschivat' bol'she ovoschei* to an email to Dmitry and Ludmila and promised to provide print books for teacher seminars by summer's end. I also sent the link to the online course demonstrating the eight components of GB in English, Russian, and other languages — you'll find it in English at growbiointensive.org/SelfTeaching.html. For future teachers, I attached a 30-page manual in Russian, excerpted from a long manual now only in Spanish and English, written by GB teachers in Mexico and Ecuador.

I suggested that in summer 2016, they could learn from our books, the online course, and Ludmila's and Albina's lessons via skype, and double-dig some beds and plant them with their favorite crops. I suggested an informal experiment comparing crops grown in double-dug beds with the same crops grown in nearby control beds that were single-dug, to see if a difference in yields could be measured.

Dmitry agreed and wrote that in September, he would conduct seminars for teachers, and so he did — a large one in Kaliningrad and a smaller one in the remote town of Gusev. The teachers will incorporate GB in their course work during the coming year.

As related on page one, in June we published the Russian *How to Grow...* print-on-demand, so we were able to send him three copies in mid-August at a cost of $75 including postage. We are fundraising to present copies to teachers, so Dmitry's organization is an appropriate recipient. To make more books available for Dmitry's seminars at a lower cost per copy, we sent him funds for a monochrome printing, so that 100 books could be printed at a cost of $4 each. Miraculously, Dmitry's printer produced the covers in color! In any case, each workshop participant received a copy.

Dmitry and I have emailed about the possibility of Steve Moore, the agroecology professor who taught our last major GB workshop in Russia in 2002, teaching a workshop to Kaliningrad in 2017. If his schedule permits, Steve could also present passive solar greenhouse design and/or Permaculture. Also, we'd love for Dmitry to attend Ecology Action's 3-day workshop in Willits in March. See page seven for ways you can help make this happen!

Ludmila and Dmitry both are active members of Friends of the Earth International, and Ludmila is now co-director of the Socioecological Union based in Moscow. They are therefore well placed to promote sales of our book internationally, as well as further trainings of GB.

-Carol Vesecky

Book, continued from page 1 in InDesign, and the cover also in PhotoShop, occupied many more months. (Downsizing the 40 pages of charts, for example, led to "overset text" challenges.) Fortunately, I had help from Shannon Joyner, Ecology Action's adept web master, and my web editor son Stephen Vesecky, or the book would be, well, still unpublishable.

At the time of this writing, Ecology Action is researching its e-publication policy for all the foreign-language translations of its books, so further posting of the eBook must wait. But we're delighted that we can now order print copies from Blurb.com's POD service. Soon, when a minor format problem is resolved, we'll offer the print Russian version for sale via the web, and the electronic one soon thereafter. We encourage donations (see page 7) to help us make them available to as many teachers in our Russian partners' networks as possible! ❧

The Grassroots Alliance PERESVET in Bryansk

EXPERIMENT REPORT : Effect of GB Double-digging and Composting in Reducing Lead Content in Soil and Vegetables

Conducted in 2013 and 2014 by Dr. Igor Prokofyev, Grassroots Alliance PERESVET, Bryansk, Russia

Introduction: Vegetables absorb lead from the soil, as well as from deposits on their parts exposed to air which has been polluted by environmental factors. The principal source of lead contamination in vegetables is the atmosphere, due to the use of alkyl-lead derivatives, such as anti-knock agents in liquid fuels such as gasoline. [Tetraethyl lead was banned in the US in the 1990s and in Russia in 2003, but remains in high concentrations in soils near roads in both countries. -cbv]

The objective of this research is to reveal the level of lead pollution in fresh vegetable samples from the Bryansk region and study the effect of GB practices (double-digging and composting) on reduction of lead content in soil and vegetables.

Method: Two dacha plots were chosen in the city of Bryansk. The soil type in the experiment area was sod-podzolic, with a humus content of about 2 percent. Composite samples of topsoil (0-10 cm) were collected from the same locations simultaneously with the vegetables. Analysis for the total concentration of lead in the samples was performed at the Soil Testing Laboratory of the Bryansk region. At both sites the maximum permissible lead concentration in soil (MPC, 35 mg/kg) permitted by the sanitary-epidemiological norms in Russia was exceeded. (The MPC for plants is 0.5 mg/kg (ppm) of dry weight.)

Two types of beds were laid out at each site. The first type of bed was Biointensive. Double-digging and composting, elements of GB minifarming, were done while the soil was being prepared. The compost had been prepared the previous year the Biointensive way. Compost was applied to the Biointensive beds at the rate of five 5-gallon buckets per 100 sq. ft.

The second type was conventional beds. They were prepared by the methods used by most gardeners in Russia: single-digging with application of complex fertilizers in amounts recommended by the manufacturer. The two types of beds were located close to each other to avoid major differences in the levels of lead contamination. Both types of beds received equal sun hours and were given the same amount of water.

Composite samples of vegetables were collected from two sampling sites in the city of Bryansk during two harvest periods, the summer and fall of 2013 and 2014. The crop samples were submitted to the Soil Testing Laboratory for analysis for lead content. The total lead concentration in both soil and plants was determined by atomic absorption spectroscopy.

Prior to analysis, the vegetables were washed in fresh running water to eliminate dust, dirt, and possible parasites or their eggs. The washed samples were placed on filter paper to eliminate excess moisture. Once dry, each 20-gram sample was weighed and oven-dried at a temperature below 800°C for 24-36 hours. One gram of soil from the dried sample was placed in a muffle furnace at 4500°C for 24-36 hours. The determinations were carried out on an atomic- absorption spectrophotometer.

We established five groups based on the edible parts:

Group 1: Roots and tubers (carrot, radish, potato)
Group 2: Bulbs (onion, garlic)
Group 3: Leaves and soft stalks (lettuce, parsley)
Group 4: Cabbages (various types)
Group 5: Fruits and similar garden produce (tomato, pepper, green bean)

The various anatomical parts are considered separately in some of these crops.

Table 1. Lead levels (mg/kg) in vegetable samples at fresh weight

Crop	*Conventional beds*	*GB beds*	*Difference by %*
Garlic	0.233	0.191	18
Onion	0.184	0.132	28
Cauliflower	0.312	0.292	6
Green beans	0.341	0.267	22
Lettuce	0.264	0.248	6
Potato pulp	0.285	0.248	13
Parsley	1.045	0.872	16
Green pepper	0.099	0.087	12
Leek leaves	0.430	0.369	14
Leek stalks	0.272	0.195	27
Leek roots	1.739	1.198	31
Radish leaves	0.595	0.534	10
Radish roots	0.326	0.269	18
Beet leaves	0.731	0.662	9
Beet roots	0.492	0.448	9
Cabbage	0.383	0.345	10
Tomato	0.178	0.144	19
Carrot	0.408	0.359	12

Experimental results: Our results emphasized the importance of the species in the accumulation of lead. Even within the same vegetable crop, differences were noted in the level of contamination in the various anatomical parts.

Of the five groups, the one presenting the highest levels of lead contamination was that of leaves and soft stems. This finding conforms with studies by scientists in other countries. The aerial vegetable *continued on page 7*

PERESVET'S 2016 EXPERIMENT (REPORT SOON)

Past research has suggested that the addition of zinc and selenium to soils can reduce the amount of the harmful lead and cadmium that would otherwise accumulate in vegetables. The addition of zinc and selenium to soils is also believed to increase the amount of magnesium, manganese, and other healthful mineral elements.

Some vegetables naturally accumulate more zinc and selenium in their tissues. If these are composted, and the resulting compost used in a GB bed, the crops should show a reduction in lead and cadmium compared to a control bed which receives compost made from plants that do not tend to accumulate zinc and selenium. A third GB bed will receive compost made from the same plants as the control, but with zinc and selenium added in mineral form to the compost pile. All three beds will have the same sun exposure, soil type, preparation, planting and care.

We hope to demonstrate that organic compost made from zinc- and selenium-rich vegetables is as effective as non-organic mineral supplements in reducing lead and cadmium in vegetable crops. If demonstrated, then such compost could be used to mitigate high lead levels wherever needed, such as along roadsides.

-Igor Prokofyev

HARVEST FESTIVAL IN BRYANSK SCHOOL

Igor writes:

Today was quite a day. We held a harvest festival in Oleg's school. It was a fun event. Many children brought cookies and cakes from home to treat their friends. The school may sell baked goods to students to raise money for class needs. Many children brought preserved vegetables, harvested from home gardens. Oleg's school is in the city center, so not all students have gardens. But the school teaches how to grow vegetables anyway, to make farming safer for the environment and human health.

Oleg and Natalya told the students, parents, and teachers about the new book by John Jeavons. Some teachers and parents asked us about the book and about the method. Of course, they all know that we are strong supporters of organic farming, but there are a lot of new people at the school

and in its neighborhood who want to learn more about the Biointensive method. I am sending you some pictures of this event. *-Igor*

ONE-DAY WORKSHOP IN ST. PETERSBURG AT ECO-SCHOOLS/GREEN FLAG* CONFERENCE

Natalya Koryagina and Svetlana Vaganova from Domashova, Bryansk oblast', presented GROW BIOINTENSIVE in St. Petersburg in September during the Eco-schools/Green Flag conference at which Natalya and Igor Prokofyev presented in 2011, when I was there to introduce them. The participants that year received remaining copies of the 1999 edition of the Russian translation, while this year they received the 2016 edition, just printed in Bryansk. Here is Igor's account:

Hello, Carol! Just yesterday I was able to meet with Svetlana and get her photos of the conference in St. Petersburg. I hasten to send pictures and tell about the conference.

I received the 200 books from the printer before Natalia left for the conference, and spent all night binding the

book. Most of the books were taken by Natalya and Svetlana to the conference and handed out there. We also gave them the three books that you sent us, for the leaders of the Eco-Schools / Green Flag in Russia program. Natalia also organized a round table with the regional coordinators to discuss plans for cooperation. Tatiana, the program coordinator in Kaliningrad, asked them to come visit them in autumn or spring. I think that we can organize mutual teacher visits, between Bryansk and Kaliningrad. Natalia also received an invitation from Kazan, to conduct a practical workshop on Biointensive, also in the spring, in Kazan, at an environment fair.

I left some of the books in Bryansk. We will distribute them at our regional seminars. *-Igor*

*UK-based Eco-Schools "is an international award programme that guides schools on their sustainable journey, providing a simple framework to help make sustainability an integral part of school life. Eco-Schools can help enhance the curriculum and get the whole school united behind something important."
http://www.eco-schools.org.uk/aboutecoschools/theprogramme

News from our parent organization, Ecology Action

ECOLOGY ACTION'S NEW TEACHING SITE

In October 2015, Ecology Action completed the first phase of its new online sustainable food education platform, www.biointensive.net. It offers a delightful introduction to much information on the GROW BIOINTENSIVE method, in text, videos, and links to instructional materials on Ecology Action's main site, www.growbio intensive.org .

Each of the eight components is described in practice along with the principles behind it. Another link will take you to Margo Royer-Miller's *The Farmer's Mini-Handbook*, which gives the viewer the chance to move

between text and photos at his or her own pace. This online booklet is offered in [five] languages, including Russian! You can find it at *growbiointensive. org/ Self_Teaching.html* .

The site's creator, Ecology Action staffer Jason McNabb, suggests we spread this membership and awareness initiative by visiting the site and sharing and 'liking' it in as many ways as possible.

The website explains that the method takes into account the entire ecosystem and its sustainability. To that end, eight components make up a complete system: 1 Deep soil preparation, 2 Composting, 3 Close plant spacing, 4 Companion planting, 5 Carbon-efficient crops, 6 Calorie efficient crops, 7 Open pollinated seeds, and 8 A whole system .

GB's human impact and sustainability are discussed, as well as its impact on the ecosystem compared with traditional methods. Organic soil and soil building are proposed as an improvement over chemical inputs. These changes are predicted to result in long term improvements in both the diet and health of humans and the health of the planet. *-Martha Shaw*

ENERGY USE IN FOOD PRESERVATION

by Mary Zellachild, reprinted from Ecology Action's Garden Companion (enews), Summer 2016

As we all know, there are many methods of food preservation. But in these times of increasing public focus on the hidden costs of fossil fuels, and a search for alternative energy sources, a good question could be: "What method of food preservation takes the least amount of energy?" The following chart and information are from *Energy Use in Biointensive Food Production*, by Steve Moore.

"Consider that sweet corn contains 316 Cal/lb, green beans contain 158 Cal/lb, and garden peas contain 381 Cal/lb (Onstad, 1996). With these numbers in mind, look at the energy use totals for each preservation method in the table. It is clear that for all methods except fermentation, we use three to ten times more energy in preserving the food than we gain from eating the food itself. Remember that this simple comparison only focuses on preservation and doesn't account for the additional energy used in production, transportation, retailing, and final in-home preparation and storage of the food."

Steve Moore, EA's colleague and Board member, has been researching energy use in food for many years, and wrote the Self-Teaching Mini-Series #37: *Energy Use in Biointensive Food Production* to share his research results. (Available at Bountiful Gardens.) His conclusion? Fermentation of food uses the least amount of energy. An excellent book to familiarize readers with the subject is *The Art of Fermentation*, by Sandor Ellix Katz. (See the EA book review here.)

John Jeavons adds: "1 tablespoon of sauerkraut can have as many probiotics as a bottle of probiotic tablets." John also mentioned careful canning in a solar oven as another low-energy food preservation method. ❧

Preservation Method	Processing Energy	Embodied Energy in Various Containers	Energy in Maintaining Storage	TOTAL
Canning	Commercial: 261 cal/lb Home: 344 cal/lb	Glass (16 oz): 1,023 cal Steel (16 oz): 1,006 cal	0	1267–1367 cal/lb
Freezing	825 cal/lb	Polyethylene Bag (16 oz): 254 cal	482 cal/lb 6 months	1561 cal/lb
Drying	1610 cal/lb	-	0	1610 cal/lb
Fermenting	17 cal/lb	34 cal/lb/use	0	51 cal/lb

The NGO VIOLA in Bryansk

The NGO VIOLA's work dates back to the late 1980s, following the Chernobyl nuclear accident whose effects the group worked to mitigate. Dr. Ludmila Zhirina was its founder and remains its president. VIOLA members work on diverse nonprofit ecological and environmental education projects, including agroecology.

Ludmila has also served for years as co-director of the Russian Socioecological Union, a coalition of environmental NGOs based in Moscow. In the past year, RSEU joined Friends of the Earth International. Ludmila directs the environmental education project on organic farming for RSEU, so she attends FOEI meetings on that topic. This year, such meetings and workshps have been held in the Netherlands and Sweden, where Ludmila and Dr. Dmitry Filippenko (see article on page two) announced the publication of the new Russian edition of *How to Grow More Vegetables*.

As part of her work promoting organic farming at RSEU and FOEI and with BfR's modest financial support, Ludmila presented Biointensive in theoretical and practical classes during every day of a 5-day workshop in St. Petersburg and Savostin, a village in the Leningrad region. In addition to Biointensive, Biodynamics and Permaculture were also presented. Ludmila writes, "The participants came from many regions of Russia, including Crimea, and Germany, asking many questions. They asked me to write and send them e-books on various topics, including a comparison of the Biointensive and Biodynamic methods, guidelines on Biointensive for teachers of extracurricular school programs, and detailed information, including drawings, on building birdhouses to attract birds which help fight harmful insects in the garden."

Updates from old friends in Russia

LARISSA AND ALEKSANDR AVRORIN

Longtime readers will remember our very first Ecology Action workshop participant (1994 and 1997) from Russia, Larissa Avrorina, and her husband Aleksandr (Sasha), a physicist.who attended a workshop in Willits in 1999. He also taught GB in Siberia (the Altai region) and and in the Moscow area, St. Petersburg, Maikop, and Rostov-on-Don in Western Russia.

Back then, both Larissa and Sasha were part of the management of Ecodom, an innovative group in Akademgorodok (Novosibirsk), Siberia that researched and promoted environmentally low-impact home designs in a country where people were eager to move from their urban apartments to live in single-family dwellings in suburban and rural areas. Ecology Action, BfR, and Ecodom received a cooperative grant from USAID, under which Larissa taught many workshops and conducted a gardening experiment comparing Biointensive with traditional methods; its report is still available from Bountiful Gardens.

Since physics was not well supported after the Soviet Union broke up and Sasha received no salary, Larissa took a job at Novosibirsk's support center for the nonprofit organizations that were being set up after government control of citizen initiatives was lifted. Then in 1999, she took a position in Moscow with the London-based Charities Aid Foundation, becoming director of its program to establish community foundations. To date, more than fifty foundations have been started all over Russia under her guidance.

Within a few years, Sasha found employment again in physics in Moscow at the Institute for Nuclear Research of the Russian Academy of Sciences. He is on the team doing cutting-edge research on neutrinos at the Baikal Deep Underwater Neutrino Telescope in Siberia.

The Avrorins' son Dmitry has worked as a film director and producer, making Russian-language documentaries with topics including Wall Street, Silicon Valley, Atlantis, Baikonur, and his dad's neutrino research. His wife Daria Shembel teaches Russian literature at San Diego State University; they live in San Diego with their two children.

We feel fortunate to have been able to stay in touch with the Avrorins all these years. Sasha and Larissa fly to California at least annually to help care for their grandchildren. We were able to meet last year at my daughter Holly's floral studio in Los Angeles (see photo).

We're looking forward to more visits in future, in California, as well as in Russia!

ALBINA KOCHEGINA IN ST. PETERSBURG

Along with two other colleagues from St. Petersburg, Albina Kochegina participated in a 3-day GROW BIOINTENSIVE workshop in Willits in 1995. She and Natasha Krestiankina both returned to their home city to teach Biointensive for ten years in the Young Naturalists program (see the *Garden Companion* of Spring 2002 online). Albina partnered with retired agriculture professor Yury Soskov to conduct after-school lessons at a centrally located facility of the Center for Youth Creativity (former Young Pioneers) organization, the Living Earth Center.

Albina is a *kandidat nauk* (PhD) in pharmaceutical sciences, but her academic work has largely focused on agricultural and botanical topics. With her broad-based network of area researchers, she was able to coordinate hosting of BfR-sponsored workshops in the St. Petersburg area in 1998, 2001, and 2002. Since retiring from teaching middle-schoolers, she spent several years writing popular books on herbal and other alternative therapies, but is now back at the renowned Vavilov Institute of Plant Industry (which has the world's largest seed bank: see its fascinating history here: http://ecobooks.com/authors/vavilov.htm), researching and writing on botanical topics. The topic of her latest book (in Russian) is the genetic resources of *kochia prostrata* (also known as *bassia prostrata*), a Eurasian plant that has been "introduced to the United States as rangeland forage and for fire control." -*Wikipedia*.

After receiving the three copies I sent her, to date, of the new Russian translation, Albina wrote that she would present a copy to the director of her (Vavilov) institute, since organic farming is being studed there. Back in the spring she wrote about the lovely flowers at her dacha, and more recently about her berry harvest: blackcurrants, red currants, gooseberries, and raspberries. She is making jam and jelly, and also canning and drying her abundant apple harvest to share with those lacking orchards.

She writes, "How sad that we diligently destroy our planet with our chemicals, wars, GMOs, trash, and so much more, so that she must fight back with extreme heat and abnormal cold, just to show us how detestable we are!"

How *you* can help!

- Let your Russian-literate friends know of the opportunity to download the book from the home page at www.growbiointensive.org . (A $5 donation per book is requested.)
- Help us get a book into the hands of a Russian teacher. A $75 gift to BfR will cover 3 books and postage.
- We have the Russian edition of *How to Grow More Vegetables* here at BfR for sale at $20, plus postage. Write Carol for details. See www.bountifulgardens.org for GB books in English and other languages.
- Donate, or network with foundations to fund:
  $1000-$5000 for paper for a commercial printing by a publisher in Moscow or other Russian city (we're also in touch with publishers in Novosibirsk, St. Petersburg, and Volgograd)
  $4000 or thereabouts for a workshop visit to Willits by Dr. Dmitry Filippenko in March 2017
  $5000 for a workshop taught by our Russian partners in Russia, with regional participation, including transport and accommodations for participants
  $20,000 for a workshop taught by Steve Moore in Russia, with national participation,
- Write or call Carol to discuss any of the above!

2015 Experiment in Bryansk , continued from page 3

zones are the most important entry point for the metals. The next lower contamination level corresponds to the group of roots and tubers.

Soils can be regarded as a major sink of heavy metals originating from various types of anthropogenic pollution sources. Many investigations have found that agricultural soils contaminated by heavy metals lead to foliar damage and reduction in both growth rate and crop productivity; in addition, that heavy metals in soils are taken up by crops and affect human health. Furthermore, the application of organic fertilizers reduces the uptake of heavy metals by crops grown in polluted soils. Compost in Biointensive beds helps to reduce the contamination of soil with lead and to maintain health.

The use of the GB double-digging and composting techniques reduces lead by 6 to 31 percent. ❧

- -

| Here's my tax-deductible contribution to
| Ecology Action for a membership in Biointensive for Russia:
| ☐ $1000 Workshop Sponsor* ☐ $250 Supporter*
| ☐ $100 Contributor* ☐ $50 Donor ☐ $20 Member
| ☐ Other _____ (Check a box)
| *May receive the ☐ 3rd Russian or ☐ 8th English
| edition of *How to Grow More Vegetables* ....

| Name: _____
| Address: _____
| _____
| Ph/fax: _____
| E-mail _____

| Mail to: BfR, 913 Oso Rd., Ojai, CA 93023-9514
| For tax deductibility, be sure to make your check out
| to "Ecology Action"!

- -

Upcoming Events:

- For announcements of workshops and tours at Mulberry Haven and the Ojai Valley in 2017, please sign up for BfR's email posts by writing to <cbvesecky@gmail.com>
- Saturday a.m gardening classes at the Common Ground Center garden on Arastradero Rd. in Palo Alto: see http://commongroundgarden.org/?p=1335
- Eco-Farm Conference, January 25 - 28, 2017, Asilomar Conference Grounds, Pacific Grove, CA, https://eco-farm.org/conference. For workshop schedule see https://eco-farm.org/conference/2017/sessions. BfR may have a table in the Exhibitor Tent; see you there!
- GB Sustainable Mini-Farming Workshop, Willits, CA, March 4-6; see www.growbiointensive.org/workshop.html for details.

RUSSIAN FOLKLORE AT OJAI FUNDRAISER

Natalya Marchuk, founding director of SF Peninsula-based folklore group "Kedry," visited us at Mulberry Haven with her children Zoya and Demian for a July weekend. After a potluck meal featuring her delicious borscht, Natalya told folktales and sang songs from Russia's rich tradition. Spasibo, Natalya!

VLADIMIR LOGINOV IN KRASNODARSKY KRAI

For three months this summer, Volodya worked with Northern Caucasus Environmental Watch, monitoring rare birds in their habitat along Yasenskaya Spit, near the town of Primorsko-Akhtarsk on the Sea of Azov.

Joining Greenpeace Russia, they fought fires from Sept. 8-13 in birding locations. Team members came from cities as far away as Orenburg, Moscow, Novosibirsk, and Irkutsk. Volodya wrote that they learned "a simple way may of saving valuable territory from the fires, without using heavy machinery. But sttrangely, the local authorities did not allow us to do this work. My car, in which I was carrying equipment for the camp, was repeatedly stopped." *Read more about this unfortunate incident by googling "Greenpeace Kuban" -cbv*

For more information, contact Carol Vesecky,
Director 805 640-1897 cbvesecky@gmail.com
and visit: http://biointensiveforrussia.igc.org
or the Facebook pages Biointensive for Russia
and Биоинтенсивное земледелие

Biointensive for Russia is a non-profit project fiscally supported by Ecology Action, a California 501c3 organization. Its mission is to share information between the US and Eurasia on environmentally sound lifestyles, including 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 & Doug Wood. Our webmasters 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, editors, and proofreaders include Igor Prokofyev, Ludmila Zhirina, Martha Shaw, and Stephen Vesecky. Do visit our web site (to be updated soon) or write or call Carol for more stories!

Biointensive for Russia
913 Oso Road
Ojai, CA 93023-9514