

Seeds of Change eNewsletter #35, June 2003

100% Organic Seeds and Food

IN THIS ISSUE:

http://www.seedsofchange.com/cutting_edge/enewsletter.asp
(Please view the eNewsletter on the web to see photographs.)

- Dear Organic Gardeners
 - Farm Report: June 2003
 - Irrigation for the Garden
 - Water Conserving Tips for the Garden
 - Watering Products
 - Summer Seed Special
 - Water Wars
 - Field Report
 - Seeds for Afghanistan
-

DEAR ORGANIC GARDENERS,

http://www.seedsofchange.com/enewsletter/issue_35/dear_gardeners.asp

Nothing is more essential to life than water. Now that the heat of summer has arrived, gardeners everywhere are thinking about how best to provide their plants with just the right amount of this precious resource. This month, Steve Peters runs down some basics about irrigation, and we provide some useful tips on saving water in the garden. We also review Vandana Shiva's latest book, *Water Wars*, which lends a global perspective on this critical issue as does Jennifer Heath's fascinating account of traveling in Afghanistan to deliver seeds and help to restore water to drought stricken agricultural areas.

As the growing season gets into high gear, you can feel the excitement as Jordan Rainwater (Farm Report) and Micaela Colley (From the Field) witness the coming to life of hundreds of Seeds of Change seed varieties at our Research Farm and at the farms of our seed and trial growers.

We'd like you to feel the excitement of growing more varieties too. So to inspire you to maximize your garden's diversity this summer, we've included some ideas for succession and late-season planting. As an added incentive to keep on sowing, we've come up with a special offer on selected Seeds of Change varieties. Create your own collections, buy 10 packs or more and save 30% off our regular prices.

Finally, to keep your garden growing strong this year, we're happy to introduce Organic Gem, a unique, fish-based, liquid fertilizer in sizes from 1 pint to 5 gallons.

**To Summer's Bounty,
Scott Vlaun, Editor
editor@seedsofchange.com**

SUMMER SEED SPECIAL

Our Summer Seed Special makes it easy to keep your garden growing strong into the fall and throughout the year.
http://www.seedsofchange.com/enewsletter/issue_35/summer_special.asp

Every serious gardener knows that to maximize their garden's potential, they need to keep it fully planted throughout the growing season. To inspire you to keep your garden growing strong this year, we are pleased to announce our Summer Seed Special including many Seeds of Change varieties especially suited for mid- and late-season planting.

Why not follow that first round of arugula with some basil, summer squash, or snap beans? Or keep a flat full of lettuce or kale seedlings to pop in whenever a broccoli or head of bok choy is removed. Why leave those exhausted zucchini or bean plants out there when you could be sowing a crop of fall spinach, carrots, turnips, or rutabagas? The possibilities are

endless, as is the potential for a steady supply of fresh food, herbs, and flowers.

If you've got open ground, we've got the seeds you need. Got a lawn? Why not till it up and sow a bed of amaranths, mustards, and lettuce for fall salads. Put up a cloche, cold frame, or greenhouse and enjoy fresh greens right into the winter. Or sow some poppies or peas this fall for an early spring start. How about starting a perennial garden from seed? There's still time to get plants started for late summer or early fall transplanting.

Need more ideas? Check out the Succession Planting article and Tips for Starting a Perennial Garden in the Digging in the Dirt section of our website. Or, how about picking up a copy of John Jeavons' *The Sustainable Vegetable Garden*, or Sally Jean Cunningham's *Great Garden Companions*, for great ideas about how to maximize your garden's potential this year? Whatever you do, keep on sowing!

FARM REPORT: JUNE 2003

http://www.seedsofchange.com/enewsletter/issue_35/farm_report.asp

Long days and warm weather indicative of summer lead to intense productivity for both the plants and the people who tend them here at the Seeds of Change Research Farm. It is as if we all sense the narrow window of opportunity that nature allows us to complete an essential cycle. This time of year finds us in the middle of a data collection cycle for the hundreds of plant varieties grown here annually. As the enormous diversity of seeds sown in our greenhouses and fields fall from my fingers, I am continually reminded that seed is the foundation of what we do here.

The flower garden is already full of blooming perennials, biennials, and reseeding and newly seeded annuals. As droves of pollinating insects visit the myriad flowers, an observant eye cannot help but notice how an assortment of flower shapes, colors, textures, canopies, and aromas fosters a diversity of fauna. It makes one feel so alive to walk the garden paths! This spring Purple Dame's Rocket, White Peshwar poppies, Bachelor Buttons, and Chinese pinks provided the earliest splash of color to the gardens. Today, flowering Lamb's Ear adds softness of color and texture. Belladonna delphinium serves as a dramatic backdrop for Blue Bell and Blue Spire larkspur, as well as Wild Purple and Foxy foxglove. Peach Leaf campanula is a stunning contrast of color to the surrounding Classic and Orange Zinger calendula. The Nemorosa and Victoria sage are especially attractive to the numerous species of bees inhabiting the farm. I particularly enjoy the soothing scent of 'Munstead' English Lavender, the grandeur of 'Yellow' and 'Olympic' Mullein, and the unique flavor of Beetberry in my salads.

The vegetable gardens are also progressing nicely. The first wave of lettuce trials are growing vigorously under the protection of shade cloth, an item which allows us to grow beautiful and tasty greens despite the intense sun and heat typical for this time of year in New Mexico. In addition to our tomato trials, in which we are analyzing over fifty varieties this year, we are growing Three Sisters tomatoes in our pollination tent, with the intention of collecting seed at the end of the growing season. Three Sisters, as described in our 2003 catalog, has been an ongoing breeding project aimed to create the "perfect" open-pollinated slicing tomato. This year we will make further selections, saving seeds only from plants exhibiting the desirable traits. Another breeding project underway at the farm this year is Purple Martian sweet corn, which is already knee high. The rest of the crops in the ground, such as squash, onions, sunflowers, okra, sesame, peppers, eggplant, leeks, radishes, chard, potatoes, and melons, simply mark the beginning of the vast array of vegetables that will fill our fields this summer and fall.

**Enjoy the bustling of the summer season,
Jordan Rainwater, Research Associate
and the entire staff at the Seeds of Change Research Farm**

IRRIGATION FOR THE GARDEN by Steve Peters

http://www.seedsofchange.com/enewsletter/issue_35/irrigation.asp

The primary objective of irrigation is to provide your plants with the right amount of water at the right times so that they can develop vigorous root systems, which are vital for plant health. A large root system allows a plant to utilize a greater volume of soil for extracting water and nutrients. It also provides a consistent supply of water, even during periods of drought. While too little water can seriously limit plant growth, or even kill the plant, too much water is unnecessarily wasteful, and can also impair growth. Successful watering requires knowledge of your soil type, of the temperature and

rainfall patterns in your area, and of the specific needs of your plants throughout their life cycle.

The ideal soil for most plants has good structure, meaning that the soil particles and organic matter are arranged so that they retain a reasonable amount of moisture, yet are fairly well drained. The air spaces between soil particles provide oxygen, which is essential for soil microorganisms and healthy root growth. If a soil is water logged, such that all the spaces between soil particles are filled with water, most plants (with the exception of water-loving plants such as rice) will become weak and may die if the soil remains saturated. On the other hand, soil that dries out quickly needs to be irrigated frequently to maintain healthy plants (with the exception of drought-tolerant species that prefer dry soils).

Amending your soil with mature high-quality compost, and growing and turning under soil-building cover crops, help achieve this balance between water retention and drainage. These are the most effective activities that the gardener can do for improving soil structure. Otherwise, the water retention/drainage balance is largely pre-determined by the texture of your soil. A heavy, clay soil should be irrigated less frequently because it retains water, whereas a light, sandy soil requires more frequent watering because it rapidly drains water.

Plants growing under hot, dry conditions lose more moisture into the air than those in cooler, more humid regions. A good rule of thumb is that in temperate, humid regions most vegetables need about 1 inch of water per week over the course of a growing season (either from natural rainfall or supplemental irrigation). In arid regions they need about 2 inches per week. As plants become older the amount of water should be increased because of larger leaf surfaces and root systems, which use progressively more water.

Cool season annual vegetables such as brassicas (broccoli, cabbage, etc.) and leafy greens typically root at shallower depths than warm-season annuals such as tomatoes and vine crops (squash, cucumber, melon, etc.) and perennial crops. Therefore, the deeper-rooted crops are watered less frequently, but more water is applied at each irrigation.

Many native plants in arid climates use very small amounts of water, so be sure not to over water in these instances. It is wise to seek advice from your local plant experts.

Regardless of plant type, more frequent watering is necessary in the early stages of growth to insure plant establishment. Once the plants are established, longer but less frequent watering encourages deeper root growth.

There are several methods of irrigating, each with particular advantages and disadvantages. In all cases it is best to avoid watering in the middle of the day to help conserve this vital resource.

Watering Can: The well-designed watering can is a great way to water a small garden. It puts the water right where you want it, thereby discouraging weed growth in the paths, and conserving a precious commodity. It is also a nice combination with a rain barrel and allows us a more intimate relationship with our plants.

Garden Hose: A quality garden hose fitted with a water breaker is a good method when the garden is too big to be handled with watering cans but you still want the intimacy and control of hand watering. Care must be taken though to prevent the hose from trampling over the plants. Carefully placed pieces of pipe or stakes at the ends of the rows can help alleviate this.

Overhead Sprinklers: Garden sprinklers attached to a hose take almost no time to set up but must be moved around if the garden is larger than the sprinkler can handle. These are good for small- to medium-sized gardens. For more time and expense, micro-misters can be hooked up to plastic irrigation lines and automated with a timer in larger gardens or in commercial production fields. The water spray from these misters is very effective for cooling off leaf surfaces of lettuce and other greens, peas and brassicas, which is important in hot, dry climates. For large operations, Rainbird sprinklers (drop latch) attached to aluminum pipe are cheaper and less time-consuming than micro-misters, but the large droplets they emit (much larger than the mister droplets) can cause crusting in some soils.

Drip Irrigation: A drip system requires extra time in the initial setup, but it is the most water-conserving technique, especially when combined with deep mulching. It directs water only to the plants you are intentionally growing and keeps unwanted weed growth to a minimum. In extremely arid climates, drip irrigation and deep mulching may be the only economically and environmentally feasible watering technique.

Flood Irrigation: This ancient method of watering is extremely effective for deep watering, and is especially useful for tall crops such as corn and sunflowers. This method does not require much hardware, except for a pump

and some pipe or, if you're lucky, gravity flow from a tank or a ditch. Flood irrigation does require a lot of water though, as well as labor to form the furrows and ridges. Flooding also can also promote the growth of noxious weeds such as wild bindweed.

The type of irrigation that you choose may, in part, be governed by the kinds of plants you are growing. Many plants prefer to be watered at the base of the plant (bottom watering), because watering their leaves encourages bacterial and fungal leaf diseases. This can be a problem particularly in humid climates. These crops include beans, cucumbers, eggplant, gourds, squash, melons, peppers, tomatoes, okra, onions, and potatoes. Corn is also best watered from below because it often gets too tall for most sprinklers to effectively water all the plants. As mentioned above, leafy greens, peas, and brassicas prefer overhead watering in arid, hot climates. However, in cooler, moister climates bottom watering may be better to minimize leaf diseases.

Most flowers, herbs, and vegetables (including carrots, beets, chard, radishes, turnips, leeks, rutabaga, and parsnips) can be overhead or bottom watered regardless of climatic conditions.

Finally, be sure not to wait until your plants are wilting before you irrigate. While they can recover, it certainly slows their overall growth and makes them more susceptible to insect and disease problems. The good-old time-honored method is to stick your finger down into the soil a few inches to see if there is adequate moisture. Paying attention is always the best medicine.

Steve Peters, Agricultural Planner at Seeds of Change

WATER CONSERVING TIPS THE GARDEN

http://www.seedsofchange.com/enewsletter/issue_35/conserving.asp

1. Mulch deeply with organic materials around established plants to preserve moisture, control weeds, and build soil.
2. A light layer of straw over newly planted seed beds will help retain moisture while still allowing light to penetrate.
3. Germinate seeds under a plank (seeds that don't need light to germ). Check every day and remove the plank at the first sign of sprouts.
4. Sow seeds densely so that young plants will shade the soil and choke out weeds. Thin as needed to produce mature plants.
5. Sow fast-growing cover crops like buckwheat or cowpeas where large plants such as squash or melons will later fill in. This helps control weeds, retains soil moisture, generates organic matter, and protects the soil from sun and erosion.
6. In the heat of summer, plant cool-weather plants like lettuce in the shade of sparsely planted sunflowers or other tall leafy plants.
7. Irrigate in the morning or evening to prevent excess evaporation.
8. Make the tops of your beds or hills slightly concave to prevent water from running off.
9. Use shade cloth, branches, bamboo, or other natural materials to shade crops and soil from intense sun.
10. Use a rain barrel or other containers to collect and store water from your roof.
11. Let chlorinated tap water "outgas" in a barrel or in buckets for a few days before using it in the garden.
12. Select drought tolerant varieties that will thrive in your area without supplemental irrigation.
13. Recycle gray water to your gardens and trees.
14. Build swales, or lay out your beds on the contour of the land, to prevent soil erosion and retain water allowing it

to soak into the soil.

15. Build a pond to store rainwater and to provide a microclimate for water-loving plants.

16. Learn more about swales, ponds, and water conservation in our selection of permaculture books by Bill Mollison.

Too much water?

1. Use swales and ponds to drain wet areas and to store water for when you need it.

2. In wet ground, raised beds will dry out sooner and allow you to plant two to three weeks earlier than a flat garden.

WATER WARS, PRIVATIZATION, POLLUTION, AND PROFIT

By Vandana Shiva, paperback, 156 pages

http://www.seedsofchange.com/enewsletter/issue_35/waterwars.asp

The right to fresh, clean water belongs to every being on this planet. It is part of our collective commons. Why then do millions of the world's people find themselves without adequate supplies of clean water for drinking and irrigation, and why are more and more people are forced to pay exorbitant prices for this precious commodity? These and more, are the questions that renowned physicist and environmental activist Vandana Shiva explores in her latest book, *Water Wars*.

In a wide-ranging examination of the world's most precious resource, *Water Wars* celebrates the spiritual role that water has played for cultures throughout history, especially in India where Shiva lives. At the same time Shiva warns us of the impending danger of privatization of water rights, citing one example in Bolivia, where after the public water supply was sold to a private interest, average water bills soared to one fifth of peoples income. After extensive protests the water supply was once again made public.

Shiva also takes us deep into an understanding of the water cycle, its effects on global climate, its sustainable use for agriculture, and the extent to which it affects every being on the planet.

Many violent political conflicts, considered to be ethnic or religious wars, Shiva points out, have actually revolved, at least in part, around access to water. Focusing on issues such as damming, aquaculture, deforestation, non-sustainable farming, and the international water trade, Shiva gets to the heart of how this growing water crisis has emerged, but she doesn't stop there.

Water Wars is ultimately a call for water democracy as a road to peace. Water, Vandana Shiva acknowledges, is nature's gift, is essential to life, and connects all life. Water for sustenance must be free for all people. It must be used sustainably, in both an ecological sense and a social sense, she implores. Intrinsically different from other resources, and knowing no political boundaries, water is a truly a commons that no one has the right to destroy or profit from. "The water cycle connects us all," states Shiva, "and from the water we can learn the path of peace and the way of freedom."

Link to Amazon.com to buy this book here.

Scott Vlaun is the Editor of the Seeds of Change eNewsletter. If you have comments about the eNewsletter please send them to editor@seedsofchange.com.

SUMMER READING LIST

Looking for more inspiring reading this summer? Here are some of our favorite books from the last two years. Click on the links for full reviews. Happy reading!

Future of Life by E.O. Wilson

Gardening for the Future of the Earth by Howard-Yana Shapiro and John Harrison

Hope's Edge by Frances Moore Lappé and Anna Lappé

The Botany of Desire by Michael Pollan

This Organic Life by Jane Dye Gussow

FROM THE FIELD: ORGANIC ON-FARM TRIALS 2003

http://www.seedsofchange.com/enewsletter/issue_35/field_report.asp

I recently had the pleasure of walking a 10-acre lettuce field that was a diverse blanket of colors, textures, and shapes. I was struck once again by the limitless possibilities one species can offer. The field, in central Oregon, was lettuce grown for seed by our friend, plant breeder Frank Morton. Frank and I were accompanied by plant breeder and teacher, John Navazio, and by Seeds of Change editor and photographer Scott Vlaun.

As we walked and marveled at the various beauties, we each commented on our favorite varieties with their rich colors and sweet flavor. The discussion quickly turned to what traits are important to the market grower: “this one would hold up in a salad mix,” or “that one has the deep red color growers like, to contrast their standard greens.” Frank, who is currently working on developing disease resistance in lettuce, began pointing out “yes, that one is a beauty, but it doesn’t hold up well to downy mildew.” So begins the dance between beauty, flavor, strength, and marketability that drives a market grower’s variety selection. The challenge for plant breeders and seed suppliers is to understand the grower’s needs and then select or develop varieties with as many desired traits as possible. It is with this goal that we engage in on-farm trials with cooperating organic growers.

This year’s Seeds of Change trials are in full swing. The first round of lettuces and brassicas are being evaluated for vigor, beauty, flavor, and marketability. The first emergence of melons and squash is soon to follow. Working with organic market growers we have the opportunity not only to test our varieties on working farms, but to gain quality feedback from the growers as well. At the same time, the growers discover valuable traits and novel varieties.

From our trials with salad growers at Heirloom Organics and County Line Produce, we’re learning which of our varieties have what the baby salad industry calls “loft”, the shape and texture required to keep lettuce mix from going flat and breaking down quickly. We are also including our lettuce varieties in disease-screening trials with Frank Morton and at the Salinas USDA Extension Station in California, to identify their relative disease resistance.

This fall we look forward to tasting and evaluating our best melon varieties with growers and chefs in San Francisco at an open house hosted by Greenleaf Produce, a specialty distributor that buys from local farmers and caters to the local restaurant industry. Through working with Greenleaf, we are also learning what chefs are demanding. In a recent conversation with Tom Wiley of T&D Wiley, I asked why he plants 60 acres of Bloomsdale spinach every year when there are more productive varieties on the market. “Flavor,” he says. Bloomsdale has both the flavor and texture that chefs want. The super-savoyed leaves have a lot of surface area to hold dressing and stand up on a plate.

In addition to catering to chefs, growers cater to public market trends. For example several of our cooperating growers sell at the new Ferry Plaza Market on San Francisco’s waterfront, and will offer produce of our varieties. Local chefs along with a vegetable savvy public, shop at the Ferry Plaza Market with an eye for the unique and refined. Varied colors and textures—including yellow beets, white carrots, purple asparagus, and variegated chicories—draw in a crowd. Increasingly aware of the flavor of many heirlooms, and the importance of genetic preservation, progressive growers are offering such treasures as old world rapinis, varietal artichokes, and heirloom tomatoes. We look forward to gaining feedback on the market’s response to our specialty melons, heirloom tomatoes, and select lines of greens. Working with market growers and visiting Bay Area markets like Ferry Plaza keep us on the pulse of the organic gourmet.

Organic consumers want the best. They expect exceptional flavor, beautiful food, and diversity in their diet. The organic grower is constantly challenged to meet this demand with novel varieties and the best selections, while maintaining an ever-increasing level of quality. Staying ahead of pests and weeds, while offering aesthetically pleasing produce starts with identifying the finest varieties that perform optimally in organic growing conditions.

We look forward to keeping you updated as this summer’s on-farm trials continue.

**From the field,
Micaela Colley, Seeds of Change Bulk Seed Field Rep**

WATERING PRODUCTS

Water Right This Summer With These Farm-Tested Watering Aids

http://www.seedsofchange.com/enewsletter/issue_35/products.asp

New! Organic Gem Fish Fertilizer

Native Americans first taught the English settlers how to grow healthier and more bountiful crops by placing fish under corn crops.

Organic Gem Liquid Fish Fertilizer transforms 70 trace minerals and micro nutrients into a form that can be easily assimilated through a plant's root system, while providing generous amounts of nitrogen and phosphorous. It also makes an excellent foliar feed. Due to its unique process, (unlike common fish emulsions) Organic Gem assimilates quickly and its odor dissipates rapidly in the field. Organic Gem is OMRI approved, making it suitable for all Organic applications and leaves your yard and garden safe for people and pets.

Earth Tone Rain Wands

Rust, pewter, earth green watering aids.

Especially equipped for Seeds of Change with Damm's patented full-flow aluminum water-breaker, our new Rain Wands come complete with a rugged, solid brass, leak-proof ball valve and comfortable rubber grip. This is the tool of choice for quickly, yet gently, putting a lot of water where you need it.

Ultimate Watering Can

A Classic Necessity For Every Garden

Ergonomic single-handle design and generous but gentle, 5" brass rose combine to make this the last watering can you will ever need. Crafted from beautiful and durable "hot dipped" galvanized steel. Made in France. Get one for each hand!

Drip Irrigation Kits

The Most Efficient Way to Save Our Precious Resource

Helping to conserve our most precious resource, drip irrigation saves up to 70% in water usage while delivering the water that plants need to thrive. Suburban gardeners find it an extremely cost-effective solution to high water bills. The preferred method for tomatoes, drip irrigation also cuts down on weeding by watering only where needed. Try out our drip irrigation kits and water wisely this year.

Electronic Watering Timer

Conserve Water and Save Time

No more programming! Contains 15 pre-programmed watering cycles, from 5 minutes every 6 hours to 120 minutes every week. You select the cycle by simply turning the rotary knob to any one of the 15 numbered notches. All programs available are summarized in diagram permanently printed inside the cover. One battery powers the unit for an entire season. Electronic components are perfectly sealed. Comes with hose connector and can be used without purchasing any other components.

Rain Gauge

Keep Track of Watering and Rainfall

Imperative for keeping track of rainfall patterns. Helps conserve water by taking the guess work out of overhead irrigation to prevent over-watering.

Quality Brass Watering Aids

Increase the efficiency of your watering systems with these solid brass fixtures. Guaranteed not to leak and built to endure the elements.

Thumb Valve

Easily control the flow of any of your watering devices with one hand. It's the perfect compliment to the Fog Nozzle. Die-cast zinc and brass.

Fog Nozzle

This nozzle provides a fine, one gallon per minute spray that is the perfect "mist" that seedlings need. Prevents "washing out" your seeds. This precision tool is crafted from solid brass and made to last a lifetime.

Quick Connect

Eliminates the hassles of hooking up your hoses and watering accessories. Buy one for each of your hoses.

Rugged Ball Valve

Adds precise control to any watering tool. Simply does not leak.

Brass "Y"

Doubles your options from a single faucet.

4 Way Splitter

Turns your faucet into a watering station. Allows multiple drip irrigation systems and a hose to be connected all at once.

SEEDS FOR AFGHANISTAN

By Jennifer Heath with photography by Sheryl Shapiro

http://www.seedsofchange.com/enewsletter/issue_35/afghanistan.asp

We're riding along the Shomali road north of Kabul, Afghanistan, with a van full of seeds and engineers.

This highway was once called "The Green Tunnel," there were so many trees lining it on both sides. In 1979, as Soviet tanks trudged toward Kabul, they knocked them down, every one, for fear of mujahidin snipers. This is farm country: vineyards and wheat and orchards or fruit trees for family use shading the fields from the hard arid summer sun. In the 1990s, the Taliban, mostly Pakistanis, with young fundamentalist-trained Afghans in tow, came up from the South to conquer Afghanistan and in the process ripped all the grapevines and small fruit trees out by the roots to send back to Peshawar. They burned the homes and villages nearest the Shomali road. We drive past stubs of scorched vines here and there that the Taliban missed, past ruins of mud-brick buildings that now look like rock formations in Moab.

There are few trees left in Afghanistan. War combined with abject poverty contributed to an almost absolute deforestation throughout the country. The capital city of Kabul, the prize for all the brutal factions fighting across twenty-three years of war--once pristine, clean, full of glorious pines and spruce--is today a dusty landfill, a dump with tall empty dried trunks, few gardens, and none of the exquisite flowers that Afghans love. There's not a shrub left in what was once a magical, fragrant Land of Lilacs.

As if this weren't enough, Afghanistan has suffered a five-year drought and the famine that goes with it. War is a major cause of environmental destruction, worldwide. In post-war Afghanistan, the water is polluted, the climate changed by the constant heat of bombs and fire, and animals die or flee. It was a joy, and a surprise, just to see doves and magpies, to realize they had somehow survived.

I am an American who grew up in Afghanistan. I've been involved with that country's fate, one way and another, for decades. When the United States began bombing the Taliban and al-Qaida in Afghanistan after the tragedy of September 11, 2001, I saw, as did many Afghans, the opportunity at last for reconstruction. I am by profession a writer, and by passion, a gardener and environmentalist. So it was natural for me to think immediately of Seeds for Afghanistan. I put a call out through the internet, to friends and family by e-mail, made flyers and distributed them everywhere, and alerted the newspapers to my project. I asked only this: bring me seeds-- vegetables and flowers, anything that will grow in Zone

4, and I will see to it the Afghans receive them.

Of course, I had no idea how, in fact, I would get the seeds to Afghanistan, but as a believer in the “if you build it, they will come,” theory of living, this seemed like the least of my worries.

Seeds for Afghanistan may have been the easiest campaign in the history of humanitarian efforts. People responded with astonishing generosity. It was not long before I was inundated. People dropped them anonymously by the hundreds in a milk box on my porch labeled “Seeds for Afghanistan.” Word got out far beyond my home in Boulder, Colorado, and schools, church groups, garden clubs, and individuals took up the cause, so that each day my mailbox was chock-a-block full of manila envelopes that vibrated like maracas as I carried them into the house. The internet and e-mail is a great blessing despite our society’s cyber-imbalance: someone knew someone who knew someone and eventually my e-plea reached Seeds of Change.

In no time, my living room, my dining room and my den were covered with seeds. I think about 10,000 of these came from Seeds of Change, and they were, of course, a dream-come-true, for they are risk-free. We don’t always know what seeds are treated with, but we knew that since they were organic, we could rely on Seeds of Change seed to be clean.

I spent hours sorting seeds. I tossed seeds that were inappropriate environmentally. No way, I told myself, do I want to go to Afghanistan and see a hillside covered with, say, kudzu, and my name all over it.

The first batches were sent through a group in Washington, D.C. called Kabultec and through a French outfit, Negar. But it wasn’t long before I was recruited to join a non-profit out of Washington, D.C. called Afghans4Tomorrow, and as members traveled to the country, they carried suitcases full of seeds and medicines. We acquired cargo containers for sending clothing, school supplies, furniture, computers, even copying machines, and, of course, more seeds. The idea was to distribute seeds by hand to the needy, to avoid any black marketeering.

Within a year, A4T had identified a beautiful rural area called Farza, 60 kilometers north of Kabul, off the Shomali road, which was desperate indeed for seeds, but more desperate for water. We recruited volunteers from Engineers Without Borders-International and headed to Afghanistan, me for the first time in twenty-six years. Our duffels were overflowing with seeds, as well as medicines.

In Farza, we not only made plans to build a girl’s school, at the request of the residents, but the EWB-International team surveyed for well sites and considered how best to advise about water management. And here, we distributed most of our seeds, though in Kabul we gave out hundreds of flower seeds, for Afghans love flowers. Even the Afghan army features a gulkhana or flower house on each of its bases.

In Kabul, we also gave seeds to humanitarian Mary MacMakin’s PARSA (Physiotherapy and Rehabilitation Support for Afghanistan) for her Widows’ Gardens. Mary has been in Afghanistan since I was a teenager, so I was not only delighted to reconnect with her, but overjoyed when she asked me to help teach some of the widows, whose backgrounds were varied and did not include gardening, how to plant the seeds and care for them. The day spent with these women was one of the most satisfying of my life. Each of the twenty widows in the program has been given a small house and a yard where they grow vegetables and flowers for their own use, and to sell for a small income.

When the work at Farza and in Kabul was done, and the engineers safely returned to the States until July when they’ll return to Farza to begin the drilling, photographer and traveling pal Sheryl Shapiro and I headed north to Mazar-I-Sharif. As a child of the elite, I had never visited an Afghan farm, but now we found ourselves exploring a five-hundred-year-old homestead, where food is grown and cows, goats, sheep and chickens are raised for a family of at least fifteen.

While we tend toward “raised beds,” many Afghans use “lowered beds,” and an ancient, highly effective system of juiies or irrigation ditches, which are flooded once a week, or in drier times, once every two weeks. The yields are incredible and I wished I had a whole season to spend with these folk--and those in mountainous Farza to learn what these extraordinary gardeners know from thousands of years of practice.

There are always new ideas in organic gardening--or water management--that can be shared, but I have often felt that the West has little business presuming to “teach” Afghans how to farm, or herd sheep, or impose any sort of “progress” upon people whose knowledge has been refined and passed down through millennia.

What is needed in Afghanistan are resources to feed and empower Afghans in their efforts toward reconstruction and a lasting peace. We need to help provide the trees for reforestation. We need to provide medicines against dysentery and other diseases, and help them clean up the water poisoned by war. We must help the Afghans build schools--then let them

run the schools as they wish to--so they can educate their children, a dream every Afghan holds dear to her heart. We need to help Afghanistan enact environmental laws against the onslaught of opportunists who want oil and pipelines and mines and against those would turn small farms into agro-biz and against biopiracy such as we are now witnessing in India, among many other places.

And we need to continue sending seeds--good, clean and non-genetically modified. Peace begins one seed at a time.

Jennifer Heath is the founder of Seeds for Afghanistan in Boulder, Colorado. Seeds for Afghanistan has thus far sent more than 200,000 packs of vegetable and flower seeds to the Afghan people. Heath is the author of the novel *A House White With Sorrow: A Ballad for Afghanistan*, *The Echoing Green: The Garden in Myth and Memory* and forthcoming from Paulist Press in fall 2003, *The Scimitar and the Veil: Extraordinary Women of Islam*.

Sheryl Shapiro is a nationally and internationally published travel writer and photographer. Her work has appeared in *Practical Horseman* magazine, the *Melbourne Herald Sun*, and the *Brisbane Sunday Mail*, to name a few. She is an experienced Third-World traveler and teaches courses on lightweight travel. In recent months, she has been volunteering with *Afghans4Tomorrow*, and has garnered large donations from American corporations of medicines for clinics in Kabul and Farza, Afghanistan.

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