

The Bullock's Permaculture Homestead

Summer Newsletter 2008 (v. 6)



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News & Upcoming Events

- Upcoming Course Dates
 - Permaculture Teacher Training: August 10th – 17th
- Don't wait too long to sign-up, it's almost full!

Words from the Daver

It's just about summer here on Orcas and the strawberries are just around the corner. This is welcome news since our cache of preserves is just about finished! Luckily, it's raining today, so I can focus on writing this without feeling the pull of the garden.

Recently, I received an email from someone who had been checking out our website and exploring the Permaculture world. He asked a very intelligent question that made me sit down and think about Permaculture, first with a critical eye, and then with greater understanding.

Essentially, the inquirer pointed out that all of the Permaculture projects he had seen were very dependent upon oil particularly for what he termed "critical energy and life-support systems" including electricity, staple calories, and medical care. This had not gone unnoticed by me. He also pointed out that, in what he felt were the best Permaculture systems he had seen, considerable financial revenues were being derived from design courses paid from a conventional cash economy.

These issues prompted him to ask the following:

“...How can Permaculture be successfully advertised/practiced as a preferable lifestyle without recognition that contemporary standards of Permaculture living are likely to decline with increased oil scarcity following the oil production peak?”

As often happens with Permaculture questions the answer I provided required tackling several other issues that are often brought up when examining the viability of Permaculture. These issues include the definition of the word Permaculture, the definition of the term sustainability, and how Permaculture ethics, particularly the transitional ethic, and principles are applied.

Everyone may not see the answer to this question in the same light as me, but hopefully this response will inspire folks to digest some of the broader issues in our attempt to achieve sustainability.

Here is my response:

First, Permaculture is a design system...nothing more, nothing less. It provides a path that the Western mind can follow to better understand the landscape and make decisions about how to meet our needs within it. It can be applied on micro and macro scales. In my opinion, someone who is developing a piece of land, but hasn't gone through the process of Permaculture Design does not have a “Permaculture.” This does not mean that everyone with a good project, but not fervently following the words of Bill Mollison, is doing a bad job, but simply that they do not have a Permaculture. I'd suggest reading "Introduction to Permaculture" by Bill Mollison to become more familiar with Permaculture Design principles and methods to become more familiar with what this design system has to offer.

In general, these principles are hard to argue with and, notably, they don't specify how you produce your electricity, require petroleum-dependent staple crops, or tell you how you should handle your medical care. In fact, I think these principles are just plain old, good design criteria. They provide a framework for the practitioner to make their own decisions about how to create a sustainable system, aka a Permaculture (note that this does not imply that the practitioner in question has necessarily made good decisions).

Second, I believe that the term sustainability needs clarification (even though you didn't use this term in your email it is at the crux of the issue). 99% of the projects, places, and people that claim they are sustainable are simply saying, "I'm more sustainable than what we all see going on around us," thus looking at sustainability as a continuum/gradient where you can be "more" or "less" sustainable. The other view of sustainability is the "either you are or you aren't" mentality. I believe that, with the possible exception of some tribal people with minimal contact with the modern world, no one on earth fits this definition today. To be truly "sustainable" (i.e. able to continue doing everything you do exactly as you do it, perpetually) one must be very selective about making use of any resources that are not biological in nature. As biological systems are the only ones that operate in opposition to entropy, everything in a truly, 100% sustainable system will be based on living systems.

For example, any culture using metal is not sustainable by the strictest definition. Every time you swing a machete a few molecules of iron come off, which is why they get dull. These molecules are not returned to the earth as they were extracted. When extracted they were congregated together in veins of ore through igneous and metamorphic processes taking place over billions of years. They are, instead, scattered across the planet in infinitesimally small amounts bound for percolation into the groundwater or washing into the sea. I can't think of a "low-energy, sustainable" way of recovering these molecules and making another machete, therefore metal, as it is currently used, is inherently unsustainable.

This is where it gets a bit sci-fi. What if you used ivory, bone, chitin, or wood for your cutting tools instead? What if you bred animals and plants specifically to provide the materials you needed for your culture? All of these biotic materials will regenerate themselves in human time scales. Another way to think about this point from an agrarian perspective can be found in the statement, "horses make more horses, but tractors don't make more tractors".

So to bring it back to your question...I don't believe that it is remotely possible to achieve sustainability, whether talking about "critical energy" or "life-support systems," within the current economic, development, cultural, and political paradigms. I do, however, believe that the greatest motivator for humans (as they have shown many times) is disaster. In spite of what health officials and insurance companies may say, Western culture doesn't really seem to put much stock in preventative medicine. However, when people have no other choice they will turn to "more sustainable" practices because they will choose between that and death (and, unfortunately, some will make the wrong choice and suffer the consequences).

While I believe that sustainability isn't really a continuum, I definitely see practices as being better or worse reflected in how quickly doom will strike us. Note that when I say "doom" I don't refer to religious Armageddon, the prophecies of Nostradamus, or 2012 on the Mayan calendar...just the onset of really tough times for everyone due to economic, climatic, and food system destabilization/collapse. In my opinion, everything currently being marketed as green, environmental, sustainable, or ecological simply attempts to change the timeframe before those tough times strikes. Some changes would give us big time extensions (e.g. if people replaced their lawns with perennial food crops and focused on providing for their food needs at a community level). Other changes provide very little in the grand scheme of things. These are the ones we call "green washing."

As a Permaculturist, I believe that we work hard to increase that timeframe. By making changes that both extend our countdown to tough times and change our culture slowly, we allow for the transition to true sustainability to happen. The future where you raise selected Jackson's chameleons in order to harvest their horns for use as arrowheads is too far off for modern people to conceive. However, collecting energy directly from the sun using crystals or instantaneously finding the answers to all your questions through a practice called "Googling" was probably too far off for our great grandparents to conceive. Who knows where we'll be seven generations down the line? If Permaculturists continue to do their work the models will exist for the solutions to at least some of our problems in the future. It took generations to reach this level of unsustainability. It will take generations to get back to sustainable.

Here at the homestead we use gasoline, propane, small amounts of grid electricity, coal for blacksmithing, acetylene, concrete, cement, mortar, nails, shovels, plastic, and at least five hundred other completely unsustainable products (according to the strict definition). However, we are using these items to move in a different direction. In Permaculture we apply what we call the "transitional ethic," which basically states that you can't go from zero to sustainable in no time flat; especially not with the dominant paradigm demanding that you pay your taxes, don't negatively affect your neighbor's property values, and play by the rules. Therefore, we use unsustainable technologies and systems to try to set ourselves up for sustainability in the future. For instance, we use heavy machinery to create earthworks for ponds and swales, we use cardboard to help establish perennial, food production systems, and we use design courses to encourage more people to help us do the work that needs to be done so we can begin to "approach sustainability."



I really believe that those with a keen understanding of design principles and methods, a cultivated eye for reading landscapes, and practical experience living in a Permaculture will be better prepared to flourish during energy decent following the oil production peak. It isn't so much about our lifestyle now, but our preparedness for the not-so-optional lifestyle looming on the horizon. In fact, as a Permaculturist I seek to prosper both in the current paradigm and set myself up for success in next one as well. This means I may fly in an airplane to teach Permaculture and to create designs for far off clients. For those who use online "carbon footprint" tests to determine whether or not they are living sustainably I would appear to be in bed with OPEC, as would most Permaculture instructors I know. However, that's how I'm both making a living in the present and helping to insure that the Permaculture models and teachers of the future will exist. The transitional ethic comes into play here for sure.

However you slice it, Permaculture is the most promising way to approach our future that I have found (there may be something better, but I'm still waiting to discover it). People often ask me, "What change can we make with so much cultural momentum against us?" To me when it comes to a question of ethics on the magnitude of the sustainability issue our chance of success is not the issue. I ask what choice we have other than work toward sustainability? Quit? Self medicate with booze and TV? Go "postal" at the local fast food restaurant? Those are pretty universally regarded as bad choices. I think most people would enjoy life more if, instead, they chose to unravel the mysteries of growing killer peaches, built a slip-straw cabin, or cultivated medicinal herbs for their own health care. Regardless, it all begins with a quality plan and that's where Permaculture comes in.

Well, the rain seems to be letting up, so that's about all I've got for this episode. I hope everyone has a fun, abundant summer!

Dave

Rainbow Genetics: Permaculture, Plant Breeding, and Seed Saving by Sarah Sullivan

One early September morning a friend clambered into my garden in Hawaii, little brown bags and tea for two in hand. She had come to deliver the beautiful Quinoa seeds she had carefully hand selected on her farm: a colorful collection of small, humble seeds shamelessly named Brightest Brilliant Rainbow (*Chenopodium quinoa*.)



I planted them that summer and waited for the tiny monochromatic seeds to sprout wondering, “How could these be rainbow colored?” All of the seeds were the same muted beige.

Three months later a multihued swath of what the Inca people called the “mother of grains” swept across my garden: five-foot tall, proud, strikingly vibrant spikes colored green, white, hot pink, burgundy, orange, red, yellow, and dark purple. It seemed ironic that the rainbows that frequented our West-facing Kealakekua Permaculture homestead were now greeted by these brazen grains, a reflection of color waving back in the wind.

I saved these seeds each planting season for five years, carefully shepherding them to every farm I could, spreading the increasingly vigorous seeds both in cultivated, carefully tilled rows and broadcast into polycultures. Each time they persevered, lending color and charm with great generosity.

I controlled the urge to pick the leaves and harvest the grain for eating from the loveliest of plants, waiting until the seed heads would fall off easily (anywhere from 90-120 days after planting). I separated the best plants from the others, shaking their full heads over a bucket and drying them fully before planting them out again.

Each season the plants adapted a bit more to conditions in Hawaii. They grew more drought tolerant, they endured flooding, they spouted with more regularity and initial vigor, their stems and roots grew stronger and their heads bigger. The grains grew slightly softer and nuttier, and I believe that they picked up a more floral, tropical flavor than the seeds I originally grew. These natives of the Andean highlands literally took Hawaii in, adapting and changing to better suit her needs and theirs.

Seeds are intelligent. They are weather wise. They carefully monitor all of the vastly varied elements of their environment and they plan for a future. Plants care about the success and comfort of their offspring and they will do anything to regenerate; namely, sacrifice their own lives to reproduce. The seeds created contain information and magic locked in their DNA from all of the many generations that came before them.

The Incas coveted this particular grain (or grain-like seed) for good reason. Quinoa has as much protein as milk: 16-23%, more than any other grain. It is extremely high in Omega-3 fatty acids, and contains thiamin, folic acid, and vitamin C. The beautiful edible greens contain calcium and iron and can be eaten cooked or raw, adding their nutty heartiness and color to salads. Quinoa is hardy and drought tolerant. Once established it needs next to no care and prefers well drained, rich, sandy loam. Quinoa co-evolved with birds and other beings, developing a bitter seed coating containing saponins to keep pests and predators away.

No wonder the Incas offered this grain up to the sun in golden vases on Solstice!

We Permaculturists remember that the Green Revolution provoked a sea change in centuries-old farming practices worldwide. We hearken back to the days when ancient farming practices involved planting diverse polycrops of frequently rotated, native-adapted plants that evolved as local soil and environmental conditions changed.

And what about the seeds? Our traditional farming methods were based on diversified seed varieties like the rainbow quinoa. Varied crops were developed from the earliest days of human farming in order to prevent plant diseases, pest infestations, and soil degradation. We knew how to improve our crops year after year by saving seed. Our diets and gardens were varied and it's arguable that seed has allowed us to continue to survive. It has enabled us to bring plants with us all over the world, to prepare for each coming year, and to grow, store, and enjoy eating the prolific crops (particularly grains) that have allowed humans to be so very prolific.

During the Green Revolution the U.S. government subsidized farmers to grow vast tracts of single crops from uniformly produced seeds: essentially, we abandoned some very reliable Permaculture-y farming practices for what industry touted as progress (*Alex Roslin, April 17, 2008, The Georgia Straight*).

“The result of all this has been a tremendous loss of biodiversity. The UN’s Food and Agriculture Organization says 75 percent of crop varieties have disappeared since 1900. Nine-tenths of the world’s calories now come from twenty crop species, with four making up half of our total calories: rice, corn, wheat, and potatoes,” according to Mr. Roslin.

New crops are bred in labs by, developed mostly in order to maximize yield, not other characteristics such as nutritional value, beauty, or taste.

The loss of heirloom and landrace crop varieties over the last century is well documented. According to ETC Group, a Canadian organization that has been following the worldwide corporate concentration of seed ownership for decades, the top ten multinational seed firms control over half of the world's commercial seed sales.

With control of seeds in the hands of a few corporations focused on massive monocrops with high yields, the world's food supply is increasingly vulnerable to the whims of market maneuvers. Right now people are rioting around the world in response to major food shortages. This is largely due to a 65% jump in food prices because of rising fuel costs and epidemics of

disease as a result of poor farming practice and a lack of diversity in staple crops like rice in Vietnam. (Recent rice crop failures in Vietnam sharply cut supplies of rice to half of the world, further evidence of the precarious food situation we have created.)

The Corporate seed giants are capitalizing on this type of food crisis. Claire Cumming (author of a new book Uncertain Peril) stated that “The ETC Group says the biotech industry has begun patenting genes that give plants the ability to respond to drought, heat, cold, abiotic stress, and salt resistance, called ‘climate-ready’ genes. ETC analyzed 532 patent documents and found they do not just cover these traits, they assert broad ownership rights over the plant itself.” (See Mrs. Cumming’s great article titled, “There will be Drought,” linked below.)

As the Organic Seed Alliance illuminates, Corporations make decisions to support their bottom line and not to insure food security. “In addition to this loss in genetics there has been a concurrent loss in the base of knowledge and skills necessary to properly steward and improve plant genetics in an ecologically and ethically sound manner. Farmers, once the primary seed stewards around the globe, have rapidly been removed from the seed circle - no longer participating in plant breeding or conservation. Only a few generations ago, the practices of on-farm seed saving and basic crop improvement were not only common, but necessary. While university and private sector involvement in seed systems has provided much gain, it has also created a field of specialization that has left the farmer as an "end-user" of a product instead of an active participant in building and maintaining plant genetic health and diversity. The diversity of our domesticated plant genetics - flavor, color, abundance, nutrition - is a direct result of the relationship between farmers and their crops. The unhealthy trends in seed systems put us at risk of losing our seed heritage - and the skills necessary to conserve, reinvigorate and improve this heritage for future generations.”

And this trend may be most alarming-the rapidly increasing loss of the knowledge of seed saving and the process of improving seed previously passed down for millennia: the patience, gratitude and astute skills in observation that Permaculturists tout in our ethics and principles. Be still. Observe. Plan for the future and be prepared for disaster. Anticipate what might be needed, and stack the systems to provide abundance to endure through a variety of conditions.

Are we applying these principles through Permaculture as we generate, save, and share seed and plant material? Not enough as we could be. I have yet to meet a Permaculturist who saves all or even half of their seed. And yes, to support small, ethical, biodiverse seed companies is valiant: an important move away from perpetuating our reliance on large seed-company-conglomerations causing this genetic loss. But to help mitigate the disappearance of traditional, local seed saving, an ancient practice imperative to our existence, is essential. As Permaculturists we are responsible for prioritizing this simple act of saving seed on our land, in our courses as students and teachers, and in all the many forums through which we strive to create change.

Matthew Dillion from the Organic Seed Alliance and Trade Association says it best: “Organic agriculture as a whole will find even greater success as we develop truly organic cultivars – organic not just because the seed was produced on organic ground and sold by a company certified to handle organic inputs – but cultivars adapted for low inputs, that exhibit elasticity in the face of environmental extremes, enhance the health of local food systems by extending

seasons, increase crop quality (including processing), and that have improved nutritional content. Organic seed adds to the value of organic farming by focusing breeding and selection on traits that are economically and agronomically important to the organic grower and ultimately to the organic consumer, traits that are often neglected in conventional breeding programs.”

Not long ago I moved from Hawaii to Oregon, the origin of this most recently developed variety of brightest brilliant rainbow quinoa from the Willamette Valley, hand selected by seed enthusiast Frank Morton. Still, I decided to experiment with my Hawaii-grown quinoa seeds. This Spring I planted them up and, well, they seem confused: they are somewhat stunted by the rich, clay soil of Portland and they don't seem to know quite how to navigate the cold nights and abundance of rain. Perhaps I should have planted them later in the season. Perhaps I should have just gotten the Rainbow Quinoa at the store, carefully selected by Frank here in Oregon.

Still, I know the mother of grains will wow my neighbors and I, and I'll save the loveliest of plants and hope that the combination of Hawaii in their genes coupled with the Portland elements will create something new and interesting, a plant stronger or tastier over time that uses all of its intrinsic wisdom to recreate itself with my help, gracing our planet with something new.

Sources:

<http://albloggedup.blogspot.com/>

<http://www.etcgroup.org/en/>

<http://www.organicseedalliance.org/>

<http://osgata.wordpress.com/>

<http://www.beaconbroadside.com/broadside/2008/05/there-will-be-d.html#more>

Uncertain Peril, Claire Cummings.

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Buy your own Brilliant Brightest Rainbow Quinoa Seed at Wild Garden Seed.
(www.wildgardenseed.com)

*Sarah is a Permaculturist recently moved to Portland, OR. Previously, she dwelled in Hawaii where she grew a variety of crops, taught Permaculture, and served as a leader in the GMO-Free Hawaii movement.

Creating our Seed Bank: Youth Education in Permaculture by Jamie Mulligan-Smith

They are small. They are fragile. They are resilient. They hold within their heart the infinite potential of the universe. They are the promise of future life. They are seeds.

Permaculture offers the world hope of a better tomorrow...a tomorrow that takes into account the wisdom of indigenous cultures and ancient ecosystems...a tomorrow that dedicates itself to cooperative, holistic systems -- structures in which all elements aim to support and serve one another...a tomorrow that offers good food in consciously-designed, gorgeous locations wherein gathered communities of friends and family can feast to their hearts', and stomachs', content. Doesn't sound so bad, does it?



And so students and activists and farmers and teachers run around doing their best to get everybody on board the ark. Meanwhile, cage-reared Chicken Little stumbles on her own breast screaming, "The sky is falling!" And it is. But that's no reason to become entirely dismayed because we have solutions available to us...good ones.

And we have seeds. And our seeds hold the promise of even better solutions.

We live in an age when it is critical that we do our best to teach old dogs new tricks. But, to my thinking at least, it is even more imperative that we begin to teach new dogs new tricks. Permaculture (and any other sustainably-minded school of thought, for that matter) places its greatest chance of success with those who will carry it into the future we now struggle to ensure. Our kids, if inspired and encouraged in their youth to be earth-responsible, community-invested agents of change, are more likely to mature into earth-responsible, community-invested adults.

I originally came to my work with young people without any notion that I was embarking on a lifelong love affair. I showed up with interest and enthusiasm, true, but without any sense of the real weight of the work; that suddenly I would be simultaneously gifted and charged with the opportunity to exchange ideas, love, and trust with scores of young people whose future influence would bear directly on the fate of the planet.

Offering a "Youth Permaculture Camp" on the Bullock's Permaculture Homestead is, for me, a dream come true. Since my early 20's I have envisioned some sort of idyllic spot in nature where travelers from far and wide could gather and share, commune and inspire, celebrate and solve, create and seed. I just didn't know then what I know now...that the travelers I would most desire to host would be under the age of fifteen.

So now they come. We build compost piles. We inoculate straw with mushroom spores. We sharpen our senses. We tend to plants. We harvest from them, giving thanks. We sit at the table together with the blue sky over our heads and the green grass beneath our feet and we eat.

We play. Playing in Nature is, to my mind, the surest way to encourage a child to become an earth steward. We protect that which we love. And playing promotes loving connection. It promotes a sense of place, of belonging, of true appreciation. A child who has played in Nature -

who has come to know it and understand it on his or her own terms - marveling and wondering along the way - is, in my opinion, more apt to take a stand on Mother Nature's behalf when the sanctity of her health is threatened. Why? Because she has become more than an object at that point, more, even, than a Source. She has become a friend.

In Permaculture, education is par for the course. We attempt to explain its concepts to our friends, our parents, our colleagues at work, our lovers, sometimes even to a stranger we may sit next to on the bus. We design instructional courses, hoping to change the world one pair of hands at a time.

Our children are not too young to join the rising tide of problem solvers for a sane world. Unhindered by the limiting parameters of our current social mores, intellectual paradigms, political structures, and economic institutions, the expansive mindscapes of our youths' imaginations stand as ideal fertile ground from which to harvest ingenious notions of social, cultural, political, and economic reform. New dogs. New tricks.

Imagine young people engaged in experiential, inquiry-driven learning. Their toes and fingers get dirty, their taste buds leap, and their bodies relish in the rush of a physical task successfully completed in an atmosphere of fun and friends. Imagine them learning to embody an ethic of care, for self and others, and for the larger planet body that they learn to recognize as an extension of their own selves. Imagine them learning to embody an ethic of sharing, an ethic of keeping only what they truly need and benefitting others with the rest.

What kind of world might they imagine and create with these as their "givens"?

When they inherently know to design systems in which every element has many functions and all functions are supported by many elements, where interconnectedness is valued, diversity required for optimal operation, and energies are cycled and recycled for maximum use and effect -- what sorts of revolutionary new inventions, philosophies, and community infrastructure might they engineer?

Talk to your parents. Teach your friends. Provoke dialogue with your colleagues at work. But don't forget the children, whether they're yours or the children of others. Take the responsibility to communicate about these solutions for your own as more than a mission. Understand it as a responsibility that belongs to each of us. It does take a village to raise a child. This world is your village, and all of its children are in your charge. Whether you feed, shelter, and put them to bed every night, or whether you take the opportunity to make room for one young person on a subway seat next to you, every interaction that you have with a child contains the potential to forever alter that youth in ways that are, unfathomable. So, ensure that your contact is delivered with intention and blessing. Send that child into his or her future with the best that you have to offer. Talk to them using language and examples appropriate to their age and development, to be sure, but talk to them. Remember that they are ambassadors to a future world of which we might not be a part, and entrust them with the best of our imagining so that they might use that inspiration to conceive ever more evolved solutions of their own. They are our surest hope, our most valuable natural resource. They are our seeds.

*Jamie has been teaching Permaculture to both adults and children for several years (and in multiple languages). She currently resides here on Orcas Island and is the lead instructor for our Youth Permaculture Camp.

Contributions

We are always looking for good contributions for our newsletter. Here are a few guidelines:

- We prefer “how-to” articles, or articles of broad interest in the Permaculture community (e.g. how to make ice without electricity, a new design for a portable animal enclosure, new ideas about establishing a community Permaculture guild, etc.)
- We prefer not to have project updates, project promotions, or other things that are not of interest to a wide Permaculture audience.

• Target Release Dates

Spring – March 1

Summer – June 1

Autumn – September 1

Winter – December 1

Submissions Due

February 15

May 15

August 15

November 15

If you are thinking of writing an article, please contact Dave at info@permacultureportal.com to discuss your topic and get ideas.

Thanks!