

**SOUTH MAUI SUSTAINABILITY  
SCHOOL GARDEN GRANT**

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Thank you from the students and teachers of Kihei Elementary School!

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**FINAL REPORT – MAY 2010**

Prepared by Susan Wyche  
South Maui Sustainability  
May 8, 2010



*“After school let out we had a whole slew of kids (at least 20-30) rush up to us to see what we had in our harvest bowls. It was like we were giving out free candy and they ate almost everything we had left over from the previous class. I’ve started rolling up the kale and chard and calling them green tootsie rolls, then dipping them in ranch dressing. They seem to like things that sound familiar. I was impressed by the number of kids who were so enthusiastic about eating fresh vegetables and picking more to take home to their parents!”*

*--Kirk Michael Surry, SMS Volunteer*

**South Maui Sustainability Gardens, Contract # G2832**

**AMOUNT OF ORIGINAL GRANT: \$4700**

**AMOUNT OF EXTENSION GRANT: \$2,000**

**AMOUNT SPENT TO DATE: \$6,700 COMPLETE (May 2010)**

**HOURS CONTRIBUTED BY SMS VOLUNTEERS (to date): 1473**

**PURPOSE OF GRANT**

Our goal was to build three school gardens—at elementary and middle schools in the South Maui Area—to be used by students and teachers to learn how to grow their own food, eat a healthier diet that includes more fruits and vegetables, and understand the natural life processes that sustain and empower healthy, secure communities.

Goal: Teach future generations how to grow their own food and become more sustainable:

- √ Objective 1: Install and successfully maintain school gardens at 2 elementary schools and 1 middle school in South Maui.
- √ Objective 2: Work with teachers to integrate gardening activities into the required curriculum.

**NARRATIVE:**

We have successfully installed the nearly 10,000 square-foot garden at Kihei Elementary School, a three-bed garden at Lokelani Middle School, and renovated an older school garden at Kamali'i Elementary School. And we were successful in working with teachers to bring their students into the garden, integrating the required curriculum with garden activities.

In the last six months, over 540 students, representing 27 separate classes at every grade level, helped to plant and harvest from their new garden. In addition, several classes have worked in the garden: weeding, pruning, and collecting seeds and starts for the next garden. Teachers have taken their classes to the garden to work on art projects, write in journals, or perform real-world math problems. More importantly, the garden has become a link between the community volunteers, parents, teachers, and students, in a celebration of nutrition, health, and the joys of growing one's own food.



In the **first quarter** of this grant, SMS met with the teachers and principal of Kihei Elementary School, as well as representatives from Lokelani Middle and Kamali'i Elementary Schools. There was strong interest from Kihei Elementary School, with a large number of teachers wanting to participate, but few resources to contribute. Lokelani and Kamali'i had one or two teachers interested, and some access to resources of their own. SMS decided that the focus of its efforts should be primarily on Kihei Elementary School. However, SMS built and installed three beds and irrigation for the teacher at Lokelani and helped to renovate the existing beds at Kamali'i. We hope to do more with these schools in the future.

In the **second quarter** of this grant, SMS volunteer Susan Wyche designed the Kihei garden and irrigation system, received approval from Principal Shima to install it, and a small group of SMS volunteers began installation of Phase 1. SMS volunteer Emily Goss solicited donations from island vendors (see list in Budget), who generously provided free and discounted materials and services. It was impressive that everyone asked made a contribution of some kind.

In the **third quarter**, over 60 volunteers—made up of SMS members, community volunteers, and teachers and staff of Kihei Elementary School—worked over several weekends to build Phase 1. This included 7 beds, an experimental raised bed system, and an in-ground area for edible fruit trees, ground covers, and traditional Hawaiian plants. The area was covered with cardboard and mulch to keep maintenance low and improve the soil for future in-ground plantings. We also installed a donated tool shed, and a system of trellises. A few weeks later, over 500 students planted the garden with the help of their teachers and numerous SMS volunteers.

In the **fourth and final quarter**, approximately 20 volunteers successfully installed additional irrigation and spread 50 cubic yards of donated mulch, completing the full installation as planned. This area will be ready for in-ground planting next year. In March and April, nearly 500 students returned to the garden to enjoy their harvest (which are still continuing). These “Harvest Parties” involve a professional chef (Chef Nio Kindla), Master Gardener Kathy Becklin, and one or more other SMS volunteers. Students picked, washed, and helped prepare green beans, tomatoes, salad greens, and a variety of herbs. Comments from the students and teachers regarding these activities are provided below.

#### **EVALUATION: TEACHER/STUDENT RESPONSE TO GARDEN**

- *Chef Nio, I loved your motto, “If in doubt, don’t open your mouth!”*
- *After I ate everything, I was hoping that I could eat more veggies for lunch.*
- *I enjoy when you let us taste the tomatoes. It was delicious. I don’t want to eat school lunches anymore.*
- *I wish I could come here every day and get some veggies that is good—I don’t like nasty stuff.*
- *That was my first time to eat a tomato.*
- *I am grateful that you guys made my classmates and I eat different kinds of fresh tomatoes like the yellow tomatoes, cherry tomatoes, red romas, and orange tomatoes—and that salsa was delicious.*
- *I want to be at the garden, every time I come from home.*



-- All comments from Mrs. Morey's 4<sup>th</sup> Grade Class

*That is a little bit of heaven!*

*--Comment overheard by a SMS volunteer, from a kid who ate a tomato off the vine*

At the conclusion of our first six months (the garden was installed in November), we distributed a survey to teachers at Kihei Elementary. Of the 28 teachers who participated in garden activities, 14 responded, or 50% (we anticipate more surveys to dribble in, but had to collect these under a timeline to finish this report). Of those 14,

- *92% said that they were "Very likely" to use the garden next year and the other 8% said they were "Somewhat likely"*
- *100% would like to have the garden available again next year, even if they might not use it themselves.*
- *100% rated their students "Very Interested" in garden activities.*
- *86% described their experience working with the garden volunteers as "Very good" (two surveys were blank)*

Teachers described the impact the garden had on their students (selected comments):

- *The garden has helped my students learn the parts of a plant, how plants grow, and how to take care of plants. It has supported our science standards and has given the children hands-on learning experiences that are SO extremely valuable!*
- *I did not think 5<sup>th</sup> graders would be interested in the garden. How wrong I was. They were so eager to go and do measurements and taste the different vegetables.*
- *They were very excited and greatly impacted by the garden. They seemed to remember concepts taught/covered in the garden better than those covered from a textbook.*
- *They all had a very positive experience with planting and harvesting. Many learned that they loved tomatoes. Several tried new flavors of 'greens' for the 1<sup>st</sup> time.*
- *My students had a positive experience with vegetables and many tried things they never had before. It was also a great chance to get out of the classroom and be hands-on. They are so excited when we go to the garden and are always observing the plants on their own time, like recess. They feel it is a part of them.*
- *They were very excited to plant and walk past as much as possible to see if their plants/vegetables were growing.*
- *It appears that the garden was the first exposure to vegetables that many Kindergarten students experienced.*
- *They became much more interested about learning science because of the hands-on planting, observing growth, and harvesting.*
- *We pass by (the garden) 4-5 times a day. The students were amazed by the fast growth of the plants, and the final product—the vegetables they tasted.*
- *They understand where healthy food comes from.*
- *There is a lot of "incidental learning" taking place in the garden.... Things that we didn't expect to learn about.*



Perhaps one of the things that we are proudest of is the change in the teachers themselves. At the beginning of the project, 75% of the teachers described themselves as having “little or no experience” with gardening. In our end-of-project survey, nearly the same number, 71%, said that the garden had changed their interest/experience/comfort with gardening (the other 25% considered themselves experienced gardeners, and explained that it hadn’t changed their experience because they were already avid or experienced gardeners). And here’s a sampling of their comments to explain changes by the less-experienced teachers:

- *Guilt has set in. I am trying to do more at home with gardening. Tomatoes, etc.*
- *I took a gardening course to learn more about it.*
- *I could see what’s possible in gardening due to the dedicated work of the volunteers.*
- *I like being a small part of the change the nation is trying to make by eating right.*

Finally, the only suggestion that the teachers made about the program is that they’d like even more help with their students in the garden. Most of the time, we were able to provide one or two volunteers, which is a minimum level of support, especially for younger classes where children need more close supervision. But for this program to continue to be successful, we agree with the teachers that the guiding and supporting role of the volunteers makes the garden an enjoyable, meaningful, and educational experience for all involved, and we hope to increase our volunteer corps in the months ahead.

## **NEXT STEPS**

Now that the majority of the garden is built, and the program has been deemed a success, our next step is to consider ways that it can be expanded, improved, and transitioned into a long-term sustainable program. Here is our initial list:

1. Curriculum support. SMS intends to increase collaboration with teachers during summer break to identify areas of the curriculum that could be enhanced by using the garden.
2. Garden coordinator. SMS would like to develop a paid garden coordinator position, to support school gardens at Kihei, Lokelani, and Kamali’i school gardens. This would need to be grant supported, at least initially.
3. Garden improvements. SMS would like to extend the design for the Kihei Elementary garden to include a fruit tree orchard, small water feature (to encourage birds and beneficial insects), and possibly add some outdoor cooking prep items.
4. Community partnerships. SMS would like to involve other groups (such as the after-school YMCA program) with the garden, among others, and also to find a way to get the produce grown in the garden into the school lunch meals.
5. Transition responsibility. Develop a plan to transition some garden maintenance to teachers, PTA, and groundskeepers.
6. Budget responsibility. Develop an annual garden maintenance budget that can be transferred (eventually) to the Kihei Elementary School as a permanent line item.



## **DISSEMINATION**

This garden has received exceptional coverage in the media, thanks to the hard work of SMS volunteers who made numerous connections and provided materials to a variety of media operations. In the first year, stories from and about the garden appeared in the following:

- Honolulu television news, KGMB-TV, Ch. 9 (by anchor Tannya Joaquin) – two stories, one in November 2009 and one in April 2010
- Hawaii Green Magazine (author SMS volunteer Kirk Michael Surry)
- Huffington Post (author Lorna Sass)
- Maui News
- Maui Weekly
- Akaku/Maui Tomorrow DVD (Directed by SMS volunteer Elizabeth Crow/Maury King, Maui Tomorrow project coordinator)
- Blogs: “Maui Green” by Kathy Becklin and Peter Liu
- Blogs: “Tannya’s Ad-Lib” by Tannya Joaquin

## **FOURTH QUARTER ACTIVITIES**

As this is also our fourth quarter report, here is a summation of our activities:

4<sup>TH</sup> QUARTER VOLUNTEER HOURS: 642.5

- Install additional irrigation: 20 hours (4 volunteers)
- Organized and prepared for three days of community garden building: 35 hours (5 volunteers)
- Installed Phase 2 of the garden: 180 hours (11 volunteers)
- Organized and ran Harvest Parties with teachers and students = 107 hours (9 volunteers)
- Held a variety of meetings and conducted ongoing communications to plan the garden installation, harvest parties, and other garden issues: 88 hours (5 volunteers)
- Maintained the garden after planting: 99.5 hours (3 volunteers)
- Provided ongoing media coverage for the garden installation and planting: 83 hours (4 volunteers)
- Preparation of survey, photos, and grant: 30 hours

In addition, Master Gardener Kathy Becklin logged 34.5 hours as part of her community commitment to CTAHR.

4<sup>th</sup> QUARTER TOTAL: 677 HOURS

PREVIOUS THREE QUARTERS: 796 HOURS

<b>TOTAL VOLUNTEER HOURS FOR PROJECT: 1473 HOURS</b>
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## **FINAL COMMENTS**



SMS would like to thank Maui County and SMS’s sponsoring agency, Tri-Isle RC&D, for their support on this important educational and sustainability project. Tri-Isle has provided us with the administrative oversight and support that we needed as a new organization to prepare and manage this grant-based project. Maui County provided us with a generous start to an ambitious project and took a risk that a brand new, all-volunteer organization could carry it through. We hope that we have proven good stewards of the funds.

We would also like to thank Principal Alvin Shima for giving us a garden location at the very heart of Kihei Elementary School, and supporting the program as it changed and expanded.

Finally, we want to thank the teachers and students at all three schools who have embarked on this adventure with us, and we hope that these efforts will encourage a new generation to understand, appreciate, and enjoy the role of plants, nutritious food, and hard work in creating a healthier world for all of us.

SMS GARDEN COMMITTEE:

Susan Wyche

Kathy Becklin

Nio Kindla

Kirk Michael Surry

ATTACHMENTS:      BUDGET  
                             PROJECT PHOTOS  
                             SAMPLE MEDIA  
                             RESPONSE TO TEACHERS’ SURVEY



**COMPLETED BUDGET**

South Maui Sustainability School Garden Grant						
		Deposit	Payment	Balance	Status of payments	
Summary Balances >>>		\$6,700.00	\$6,700.00	\$0.00		
Date	Payee / Deposit	Deposit	Payment	Total		
<b>Original Maui County Grant</b>						
5/24/2009	Original Maui County Grant	\$4,700.00		\$4,700.00		
5/25/2009	Tri Isle - 10% of County School Garden Grant		\$470.00	\$4,230.00		
8/10/2009	Emily Goss, curricular materials		\$282.47	\$3,947.53	Reimbursed	
10/10/2009	Emily Goss, curricular materials		\$90.75	\$3,856.78	Reimbursed	
10/26/2009	Susan Wyche, Irrigation materials (ISI)		\$304.04	\$3,552.74	Reimbursed	
10/26/2009	Susan Wyche, Irrigation tool (Lowe's)		\$35.91	\$3,516.83	Reimbursed	
10/26/2009	Susan Wyche, Irrigation materials (Lowe's)		\$48.83	\$3,468.00	Reimbursed	
10/26/2009	Susan Wyche, Bed materials (Envirotech)		\$963.24	\$2,504.76	Reimbursed	
10/27/2009	Susan Wyche, Irrigation materials (Kihana Nisy)		\$431.24	\$2,073.52	Reimbursed	
10/28/2009	Susan Wyche, Irrigation Materials, ISI		\$16.53	\$2,056.99	Reimbursed	
10/28/2009	Susan Wyche, Irrigation Materials, ISI		\$8.34	\$2,048.65	Reimbursed	
10/27/2009	Susan Wyche, Irrigation Design/Install (Salomon)		\$500.00	\$1,548.65	Reimbursed	
10/27/2009	Susan Wyche, Irrigation (Allen's Plumbing)		\$156.25	\$1,392.40	Reimbursed	
11/2/2009	Susan Wyche, Soil (Maui Earth Compost) 16 yards		\$700.00	\$692.40	Reimbursed	
11/2/2009	Susan Wyche, Shipping of soil (Mark Winery)		\$165.00	\$527.40	Reimbursed	
11/2/2009	Susan Wyche, Poster boards (Office Max)		\$21.01	\$506.39	Reimbursed	
11/4/2009	Susan Wyche, Young Brothers shipping		\$165.52	\$340.87	Reimbursed	
11/9/2009	Susan Wyche, shipping rebate (envirotech)		(\$100.00)	\$440.87	Reimbursed in next purchase	
11/11/2009	Susan Wyche, shipping of mulch (Reliable Trucking)		\$165.00	\$275.87	Reimbursed	
12/20/2009	Nio Kindla, building materials		\$137.19	\$138.68	Reimbursed	
12/20/2009	Susan Wyche		\$38.00	\$100.68	Reimbursed	
12/29/2009	Emily Goss		\$77.20	\$23.48	Reimbursed	
<b>Extension Grant from Maui County</b>		<b>\$2,000.00</b>		\$2,023.48		
	Tri-Isle - 10% of County Grant		\$200.00	\$1,823.48	Admin Fee	
2/10/2010	Nio Kindla, garden tools and materials		\$272.40	\$1,551.08	Reimbursed	
2/26/2010	Wiki Gardens, Wikis		\$998.43	\$552.65	Paid direct to vendor	
2/26/2010	Susan Wyche, irrigation parts (ISI)		\$27.42	\$525.23	Reimbursed	
2/25/2010	Susan Wyche, Irrigation parts (ISI)		\$323.30	\$201.93	Reimbursed	
2/26/2010	Susan Wyche, Shipping (Young Brothers)		\$63.32	\$138.61	Reimbursed	
2/26/2010	Susan Wyche, Organic Reductions		\$150.00	(\$11.39)	Reimbursed, plus SMS general funds	
<b>Final Balance</b>				<b>\$0.00</b>		
<b>Donations/In-Kind</b>						
	Irrigation parts		\$850.00	(\$850.00)		
	Irrigation Labor		\$720.00	(\$1,570.00)		
	Bed materials (wattles, wikis, wood)		\$1,200.00	(\$2,770.00)		
	Soil and mulch		\$150.00	(\$2,920.00)		
	Tools (Ace, Sears, Delts)		\$350.00	(\$3,270.00)		
	Water		\$50.00	(\$3,320.00)		
	Tool Shed (Sears)		\$600.00	(\$3,920.00)		
	Misc. (gift certificate, Walmart)		\$100.00	(\$4,020.00)		
	Plants and starts (Pukalani)		\$131.10	(\$4,151.10)		
	Mulch (Organic Reductions)		\$1,350.00	(\$5,501.10)		
	Irrigation Parts (ISI) - wholesale prices for above		\$340.00	(\$5,841.10)		
	<b>Total Value of Donations/In-Kind (Est.)</b>			<b>\$5,841.10</b>		



**THE MAKING OF A SCHOOL GARDEN**  
*KIHEI ELEMENTARY SCHOOL – 2009/2010*



The garden site “before.” An unused space of lawn and palms.



Professional landscapers (Mark Waterbury pictured here) helped us install the irrigation system.



The garden was built in two phases. Over 60 volunteers spread over 86 cubic yards of mulch and cardboard, installed a tool shed, and built a variety of raised beds.



This is the garden at the end of Phase 1, ready for planting.



Over 500 students, from every grade level, participated in the planting.



Students worked together to plant and water the new starts and seeds.



Students used the garden for lessons in math, reading, and art. Here a student is working on a lesson in measurement for a math class.

Students also did some of the maintenance—pruning, weeding, and checking for pests.





Best of all, the garden became a place that students, teachers, and community volunteers could learn together. (Shown here is SMS volunteer Kirk Michael Surry with Sharon Castile's second-grade class).

And then, it was harvest time.

Again, over 500 students and their teachers came back to enjoy the fruits of their labor. The students harvested and washed the produce, under the guidance of Chef Nio Kindla, Master Gardener Kathy Becklin, and numerous other SMS volunteers.





The students agreed to try everything. And many even liked what they tasted.



And then they started the cycle over again, saving seeds and potting up new starts for next season's harvest.



## SAMPLES OF MEDIA COVERAGE

Source: Maui Time Weekly

### Plugs and Slugs South Maui Sustainability Grows the Future

by Jacob Shafer

December 03, 2009

[Plug] To Kihel Elementary School and South Maui Sustainability (SMS), for planting seeds. This month, students at the school are set to sow fruits and vegetables in the new 10,000-square-foot campus garden, designed and created by SMS volunteers. Hundreds of kids from all grade levels are participating in the project, which is funded by a County grant. SMS has also launched gardens at Lokelani Intermediate School and Kamali'i Elementary School, but this is the largest and most ambitious to date. As the need for local, sustainable agriculture comes into ever-sharper focus, it's encouraging to see Maui's keiki being actively engaged in, quite literally, growing their own future.

[Plug] To Ulupalakua Ranch, for protecting Maui's open spaces. Last week, the Erdman family, which owns the ranch, announced plans to give more than 11,000 acres on Haleakala's leeward slopes to the Maui Coastal Land Trust, effectively quashing future development. If you're passionate about preservation—no matter if that passion is motivated by environmentalism, the desire to protect sacred Native Hawaiian sites or simply an abiding love of the Valley Isle's singular beauty—this is very good news.

[Slug] To the American Family Association (AFA), for fighting an imaginary war. Maybe you've never heard of AFA; before this, we hadn't either. Apparently, it's an organization that feels strongly about the duty of corporate retailers to use the word "Christmas." Some, including various FOX news pundits, have suggested it's unfair to shove Christmas under the rug in the name of political correctness. But AFA takes the misplaced seasonal umbrage and cranks it up to "frothing." "Employees [at The Gap] may be permitted to use the term 'Christmas,' but it is not encouraged," sniffs a statement on the group's Web site calling for a boycott of the company. "This is a personal decision made by the individual employee. Gap, as a company, uses the term 'holiday.'" (Never mind those sweatshops—this is the real outrage!) AFA also chastises The Gap for, wait for it, singing about Christmas in one of its commercials. But, you see, the song also contains references to Kwanza, Hanukkah and "whatever holiday you wanukkah" (yeah, not much rhymes with Hanukkah). This, clearly, is "completely dismissive and disrespectful to those who celebrate the meaning and spirit of Christmas." OK, try this: walk into The Gap outlet at the Queen Kaahumanu Center and ask the girl behind the counter what she's doing to combat her employer's evil, secular anti-Christmas crusade. Then brace yourself for a big blank stare.

Excerpt from: [www.mauitime.com/Articles-i-2009-12-03-71716.113117\\_South\\_Maui\\_Sustainability\\_Grows\\_the\\_Future.html](http://www.mauitime.com/Articles-i-2009-12-03-71716.113117_South_Maui_Sustainability_Grows_the_Future.html)

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 **Lorna Sass**  
Green Planet Garden Writer  
Posted: January 23, 2010 09:56 PM

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## Maui's Edible Garden for Children

What's Your Reaction: Inspiring | Enlightening | Infuriating | Scary | Helpful | Amazing | Innovative | Adorable

Read More: Alana Kaopuki , Alice Walters , Brooklyn Botanic Garden , Caitlin Flanagan , Corby Kummer , Edible Gardens , Edible Schoolyard , Edible Schoolyards , Emily Goss , Garden , Gene Weaver , Kathy Becklin , Kihei Elementary School , Kirk Surry , Lorna Sass , Lorna Sass At Large , Maui , Michael Steinman , Nio Kinda , S. Kihei Children's Edible Garden , School Lunch , Sharon Castle , South Maui Sustainability , Youtube , Green News

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A few days ago, the Sweetie and I visited a 10,000-foot edible schoolyard garden planted by and for elementary school children in S. Kihei, Maui.

What a joy to be surrounded by robust pole beans, herbs, and tomatoes all planted by second and third graders.

We met with three dedicated members of South Maui Sustainability who have volunteered specifically to make this schoolyard garden flourish. Afterwards we visited with three dedicated teachers who talked about how they are using the garden to educate the children not only about gardening, but about math, biology, and eating more vegetables.

Everything we saw and heard proved blatantly wrongheaded the argument put forth by Caitlin Flanagan in a recent issue of the *Atlantic Monthly* that learning to garden is a waste of time for children. (To access Corby Kummer's round-up of schoolyard gardeners rebuttals, click [here](#).)

In this first clip, (courtesy of the South Maui Sustainability group), you'll see how volunteers helped Kihei Elementary 2nd grade teacher Alana Kaopuki create the school garden. The video features one of Ms. Kaopuki's science classes as they plant and weed a garden bed with training provided by South Maui Sustainability member Blaze (Gene Weaver) and Emily Goss, the committee chair for school gardens and the inspiration behind this project.

**Kihei Elementary School Garden**



Excerpt from Lorna Sass's: [http://www.huffingtonpost.com/lorna-sass/mauis-edible-garden-for-c b 434405.html](http://www.huffingtonpost.com/lorna-sass/mauis-edible-garden-for-c-b-434405.html)





# Maui Green

Residents of Maui concerned about the Earth,  
our environment and our sustenance.

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## Harvest Day Party

By PETER LIU on APRIL 16, 2010



Earlier this week, South Maui Sustainability held a Harvest Day Party at their Kihel Elementary School Garden. Volunteers Chef Nio Kindla, Kathy Becklin, Susan Wyche and Stuart Karlan led Ms. Manglicmot's 19 eager kindergarten students around the garden and showed them how to harvest their own vegetables.



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- RT @andybeal: Hawaii to get Nissan Leaf early (because they're eco-friendly there and it's an island) - <http://gri.ms/KRyQ> about 4 hours ago
- Mauians and visitors, see you at tomorrow's #MauiTweetup UH Maui Pa'ina Food Court, Kahului 12-2pm <http://bit.ly/c46LN7> #fb about 12 hours ago

Excerpt from the Maui Green blog: <http://mauigreen.net/2010/04/16/harvest-day-party/>

04/15/2010

## Wiki Garden Success Story: Kihei Elementary

Six months ago, the Aloha Victory Gardens concept was born.



It's an idea my husband and I came up with after dabbling in our own organic garden. (Back story: He has a background in landscaping and contracting and I challenged him to come up with an easier way to garden. The result is The Wiki Garden.) "The Wiki Garden" launched the Aloha Victory Gardens community service project with two donations. The first went to the Institute for Human Services Women & Children's Shelter. [Here's a link to the kick-off story I did on the news.](#)

The second went to Kihei Elementary School on Maui. We installed the Wiki Garden on campus in November, as part of the South Maui Sustainability's edible garden. The students planted it around Thanksgiving. By January, they already started enjoying the fruits of their labor. Their Wiki Garden has been so successful, students have held many harvest parties to pick their vegetables and herbs. Their parties culminate with a taste test of the fresh produce grown on the grounds. They've had salsa and are thinking about doing a pizza garden next.

Excerpt from: <http://blogs.hawaiinewsnow.com/tannya/2010/04/wiki-garden-success-story-kihei-elementary.html>

## Garden Expansion

When the Kihel Elementary School science class, led by Alana Kaopuki and South Maui Sustainability (SMS) volunteers, decided to plant an edible garden last year, they had no idea of the community support, success and tasty produce that it would foster. Fast forward a growing season and school principal Alvin Shima has called for the expansion of the garden and the program to all Kihel Elementary students.



Third-grader Nico Manzano measures lettuce starts for science class. Photo: Courtesy South Maui Sustainability

Now, more than 500 students in 28 classrooms will learn to grow and harvest their own fruits and vegetable at the school's 10,000-square-foot garden. Designed and installed by SMS volunteers, the garden space and program now includes all grade levels. The community group obtained a grant funded by the County of Maui and continues to maintain the garden, where gardening activities have been integrated into the standard curriculum.

The success of the gardening program at Kihel Elementary has prompted SMS to start similar garden programs with the sixth-graders at Lokelani Intermediate School and 85 second- and


fourth-graders at Kamalii Elementary School.

With the fresh assortment of produce at these gardens—squash, taro, sweet potatoes, banana, papaya, cherry tomatoes, lettuce, kale, chard, eggplant, green beans, sunflowers, hot peppers, basil, cilantro, parsley, stevia, and nasturtiums—they'll be able to support their own farmers' market.

[southmauisustainability.wordpress.com](http://southmauisustainability.wordpress.com)

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Excerpt from: [http://greenmagazinehawaii.com/garden\\_expansion\\_v2-1.html](http://greenmagazinehawaii.com/garden_expansion_v2-1.html)



## Results of School Garden Survey (for Teachers)

This survey is a required part of the County Grant that South Maui Sustainability received to build the school garden for Kihei Elementary. Please fill it out (it should only take a few minutes) and return to the Main Office. When you return the survey, you will be entered to win your own **Kitchen Herb Container Garden**, planted and ready to grow!

N = 16

### 1. Did you use the school garden this year?

14 Yes    2 No

### 2. How likely are you to use the garden next year (even if you didn't this year)? (Circle one)

Very likely	Somewhat likely	Not likely
13	1	2 (one moving away)

For what grade level(s): K=7, 1<sup>st</sup>=0, 2<sup>nd</sup>=1, 3<sup>rd</sup>=2, 4<sup>th</sup>=2, 5<sup>th</sup>= 2 for a total of 14

### 3. If you have any interest in using the garden, what are some of the ways that you may want to use it? (Check as many as apply)

- 16 Planting, Harvesting
- 13 Hands-on gardening (weeding, light pruning, identifying bugs, etc.)
- 15 Math, Science, Nutrition related lessons/activities
- 12 Reading, Writing, Art lessons/activities
- \_\_\_ Other: \_\_\_\_\_

### 4. Whether or not you plan to use the garden, is it a resource that you would like to continue to have available?

16 Yes    0 No

If you did not use the garden this year, you have completed your part. Thank you for your time. And don't forget to register for the Kitchen Garden. Mahalo!

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If you did use the garden, please answer the questions on this and the backside of the survey as well:

N = 14

### 5. How did your class use the garden this year? (Check as many as apply)

- 14 Planting, Harvesting
- 10 Hands-on gardening (weeding, light pruning, identifying bugs, etc.)
- 10 Math, Science, Nutrition related lessons/activities
- 6 Reading, Writing, Art lessons/activities
- \_\_\_ Other: \_\_\_\_\_



**6. How would you rate your students' interest/engagement in garden activities? (Circle one)**

Very interested    Interested    Somewhat interested    Not very interested

14 = 100%

**7. What impact has the garden had on your students (based on your observations of them in the garden or things they may have said about the garden)?**

- *The garden has helped my students learn the parts of a plant, how plants grow, and how to take care of plants. It has supported our science standards and has given the children hands-on learning experiences that are SO extremely valuable!*
- *They understand the life cycle of a plant, because of the hands on experience.*
- *I did not think 5<sup>th</sup> graders would be interested in the garden. How wrong I was. They were so eager to go and do measurements and taste the different vegetables.*
- *They were very excited and greatly impacted by the garden. They seemd to remember concepts taught/covered in the garden better than those covered from a textbook.*
- *They all had a very positive experience with planting and harvesting. Many learned that they loved tomatoes. Several tried new flavors of 'greens' for the 1<sup>st</sup> time.*
- *My studens had a positive experience with vegetables and many tried things they never had before. It was also a great chance to get out of the classroom and be hands-on. They are so excited when we go to the garden and are always observing the plants on their own time, like recess. They feel it is a part of them.*
- *They were very excited to plant and walk past as much as possible to see if their plants/vegetables were growing.*
- *It appears that the garden was the first exposure to vegetables that many Kindergarten students experienced.*
- *They became much more interested about learning science because of the hands-on planting, observing growth, and harvesting.*
- *We pass by 4-5 times a day. The students were amazed by the fast growth of the plants, and the final product—the vegetables they tasted.*
- *They understand where healthy food comes from.*
- *My class loves the garden! Highlight was eating the produce!*
- *There is a lot of "incidental learning" taking place in the garden....Things that we didn't expect to learn about.*

**8. Has your own interest/experience/comfort with gardening changed because of your involvement in the school garden?**

10 Yes    2 No

Please explain:

Yes explanations:

- *I learn a lot about going green in the garden.*
- *I want to make homemade fresh veggie dressings to go with salads. Also to taste veggies I have never tried!*
- *Guilt has set in. I am trying to do more at home with gardening. Tomatoes, etc.*
- *I took a gardening course to learn more about it.*
- *I could see what's possible in gardening due to the dedicated work of the volunteers.*
- *I like being a small part of the change the nation is trying to make by eating right.*

No explanations:

- *Already an avid gardener!*
- *I have gardened a lot.*



**9. What aspects of the gardening would you like more help with next year?**

- 8 Gardening with students
- 4 Planning how to integrate garden activities into your curriculum, in general
- 4 Developing a specific lesson that could be taught in the garden
- 1 Other? (Please explain):
- 2 Blanks

- *It has been so nice to visit the garden when volunteers are here. They greatly enhance the students learning and provide excellent opportunities to learn more about and in the garden.*
- *I feel the numbers of children to manage at one time is detrimental for the experience. In a perfect world, we would break into smaller groups.*

**10. We had a number of volunteers working in the garden over the last year (both building and maintaining it as well as supporting class activities). How would you rate your overall experience with the volunteers? (Circle one)**

- |           |      |      |      |
|-----------|------|------|------|
| Very good | Good | Fair | Poor |
| 12        |      |      |      |
| 2 (Blank) |      |      |      |

- *I did not volunteer in the garden. Lacked the time and energy, to be honest.*

**11. Do you have any suggestions/advice for our volunteers for the future?**

- *Only many thanks for their hours of help in the garden.*
- *They were all very helpful and so involved with the students.*
- *Keep up the wonderful work you do. It is exciting for the kids and something they are proud of at our school.*
- *A quiet signal, or an attention grabber.*
- *Our class sizes are so big we probably need more help (volunteers) when we engage in garden activities.*
- *Please return and continue this wonderful program.*
- ☺
- *Please know how grateful we are for your time and energy!*

**12. What suggestions do you have for improving the garden, or activities, for the future?**

- *Just more help (adults) for garden activities.*
- *None. It's wonderful.*
- *I need to work on setting more scheduled times.*
- *For some of the newer teachers, it may be helpful to show them how gardening fits into our benchmarks (HCPSIII). I'll try to do this for my grade level.*
- *I would like to have my class grow corn at the beginning of the school year as it supports a story in reading about corn. First grade students could make observations and learn about corn first hand. I could let you know the date if space can be set aside.*
- *I would love to try and grow some things that I have grown in pots before i.e., wheat.*

**13. Is there anything else you'd like to add, comment on, or suggest?**

- *Again, thanks!*
- *Thank you. This has been a wonderful addition to our school and curriculum.*
- *Wow! I'm extremely impressed with the dedication of our gardeners. I especially appreciated their knowledge and desire to best fit our curriculum needs.*
- *Thank you for everything—planning, promoting, financing, hands-on labor, harvesting lessons...everything!*



- *I'm impressed with the dedication of the volunteers.*
- *Thank you for all your hard work! 😊*