KALANI Sustainable Community Educational Programs

2013

HNCW Code: Hawaii-Nature-Culture-Wellness education since 1975: Our mission, heritage, lives, and future



Due to Kalani, the Puna district's largest private, 501(c)(3) nonprofit organization, 93,640 program participants in 2013 (an 58% increase of over 2012's 53,829) spent over $20M boosting the local economy ($5,247,877 at Kalani and an estimated $15,743,631 in nearby communities and Islands). That spending supported over 1000 staff, faculty, farmers, vendors, service providers and businesses in the local area. "Communities near Kalani have always understood its positive fiscal impact," says founder-director Richard Koob. "Kalani, the largest and most utilized educational retreat in the Hawaiian Islands, is vital to the well-being of our island and state communities and economies." The 2013 spending supports 51 FTE employment positions, 50 PTE employees and dozens of various contractors. Also in our operations are production of food and 50kws of solar energy, over 100 educational nature, culture and wellness events per year and more than 50 activities per week, plus many additional festivals and events. Kalani is proud that our Puna Music Festival boast being second only to Merrie Monarch as the largest multi-day festival on Hawai'i Island. Kalani also hosts one of the largest CERT (Community Emergency Response Team) programs on Hawai'i Island, and is viewed as the local source for community cooperative safety, supply and service provisions, consistent with the properties' 400-year-old heritage. In 2014, at the time of filing this report, Kalani has been recognized by several publications as one of the leading yoga and eco-conscious "green" social enterprise in Hawai`i and the U.S. We are currently in the process of establishing our Hawai'i Green Business Designation.

Community Programs. Annual progress reports (and the web site) focus on educational activities and retreat stewardship. Nearly all the **HNCW** listings in this report have an agricultural component, not just because of agricultural essence (as in huna healing, harvest dances and yoga—see http://www.sahajayoga.org.in/benefits-agricultural-benefits) but also because of the inclusion of on-going farming related activities (permaculture, active and passive agricultural education throughout the Campus, lauhala weaving, hula classes, horticulture and lapa'au treks, organic food prep, etc.) Note: this Program Report is followed by the Farm Report.

CODE	Activity Name	Dates: Jan-Dec 2012	Location	Audience	Participants	Faculty	Programs
CW	Introduction To Yoga	01/01/12 - 12/31/13	Kalani		15	2	1
HCW	Hawaii Massage School	01/01/13 - 12/31/13	Kalani		70	8	1
HNCW	Spa Member	01/01/13 - 12/31/14	Kalani		92	23	1
CW	Partner Acrobatic Flying Yoga Retreat	01/04/13 -	Kalani		6	2	1

CODE	Activity Name	Dates: Jan-Dec 2012	Location	Audience	Participants	Faculty	Programs
		01/09/13					
CW	Yoga In Paradise With Lynne Minton	01/05/13 - 01/12/13	Kalani		51	3	1
CW	Yoga In Paradise With Lynne Minton	01/13/13 - 01/20/13	Kalani		50	3	1
HNCW	Hartwick's Yoga In Hawaii January Term	01/13/13 - 02/01/13	Kalani		16	4	1
NCW	Singing With Courage	01/15/13 - 01/20/13	Kalani		16	2	1
CW	Forrest Yoga Retreat	01/20/13 - 01/26/13	Kalani		21	2	1
CW	Hoopdance Bootcamp In Paradise	01/20/13 - 01/27/13	Kalani		30	3	1
CW	Lynne's Silver Jubilee	01/20/13 - 01/27/13	Kalani		10	3	1
NCW	The Temple Of Shamanic Dream Healing	01/27/13 - 02/01/13	Kalani		18	2	1
HNCW	Couples In Paradise	01/27/13 - 02/03/13	Kalani		21	2	1
CW	Living A Course In Miracles	02/03/13 - 02/09/13	Kalani		14	3	1
HNCW	Sacred Lomi	02/03/13 - 02/10/13	Kalani		41	3	1
CW	Practical Yoga	02/10/13 - 02/15/13	Kalani		15	1	1
CW	Visionary Dance	02/15/13 - 02/19/13	Kalani		5	1	1
HNCW	Pono Arts	02/16/13 - 02/22/13	Kalani		8	1	1
HNCW	Big Island Poetry & Nature Adventure Retreat	02/17/13 - 02/23/13	Kalani		4	1	1
HNCW	Hawaii Heart Journey	02/21/13 - 02/22/13	Kalani		14	2	1
CW	Baptiste Yoga	02/23/13 - 03/02/13	Kalani		144	15	1
CW	Personalized Yoga Experience	03/03/13 - 03/08/13	Kalani		1	1	1
HNCW	Harry Jim Lomilomi Intensive	03/03/13 - 03/09/13	Kalani		17	3	1
HNCW	Tropical Dance Vacation	03/09/13 - 03/16/13	Kalani		76	4	1
HNCW	SEA - Spice	03/17/13 - 03/24/13	Kalani		30	4	1
CW	Spring Tuning	03/18/13 - 03/23/13	Kalani		20	1	1
HNCW	Red Road Art Festival	3/23/2013	Kalani	217	32	32	1
HNCW	Hawaii Full Moon Yoga - A Meditation &	03/23/13 -	Kalani		10	2	1

CODE	Activity Name	Dates: Jan-Dec 2012	Location	Audience	Participants	Faculty	Programs
	Rejuvenation Retreat	03/28/13					
CW	Leather & Leis	03/29/13 - 04/02/13	Kalani		96	6	1
HNCW	Japan Hula Association	04/02/13 - 04/07/13	Kalani		22	3	1
HNCW	Hula Heritage Festival 2013	04/02/13 - 04/08/13	Kalani		19	3	1
CW	Presence Of Body, Silence Of Mind	04/04/13 - 04/07/13	Kalani		7	2	1
HNCW	Pohai Ho'ola Healing Retreat	04/05/13 - 04/10/13	Kalani		5	1	1
CW	Intuitive Yoga And Meditation	04/08/13 - 04/13/13	Kalani		9	1	1
CW	Iva YTT (Eva)	04/10/13 - 05/07/13	Kalani		14	1	1
CW	Lotus Yoga	04/13/13 - 04/19/13	Kalani		10	1	1
HNCW	Wounded Warrior	04/14/13 - 04/19/13	Kalani		19	4	1
HNCW	Golden Week / Lei Day	04/20/13 - 05/04/13	Kalani		33	9	1
CW	Peak Beings Yoga Teacher Training	04/20/13 - 05/14/13	Kalani		15	1	1
CW	Yoga Spring Break: Celebrating Bliss	04/21/13 - 04/27/13	Kalani		9	1	1
HNCW	Hawaii Blue Hands Full Moon Rejuvenation	04/22/13 - 04/27/13	Kalani		4	1	1
CW	Pathways Institute	04/22/13 - 04/28/13	Kalani		24	2	1
HNCW	Hawaiian Lomi Lomi & Pohaku Wela Massage Intensive	04/28/13 - 05/08/13	Kalani		11	2	1
HNCW	Five Elements Retreat	05/04/13 - 05/12/13	Kalani		6	1	1
HNCW	Puna Music Festival	05/05/13 - 05/12/13	Kalani & all over Puna	6,642	226	147	1
CW	Yogaloft Retreat	05/10/13 - 05/12/13	Kalani		22	2	1
CW	Practical Yoga	05/12/13 - 05/17/13	Kalani		17	1	1
CW	Eddie Marashian Personal Retreat	05/15/13 - 05/21/13	Kalani		2	1	1
HNCW	Westminster College	05/19/13 - 05/22/13	Kalani		23	4	1
HNCW	Hawaii Yoga Escape	05/20/13 - 05/25/13	Kalani		10	2	1
HNCW	Westminster College	05/25/13 - 05/27/13	Kalani		22	4	1

CODE	Activity Name	Dates: Jan-Dec 2012	Location	Audience	Participants	Faculty	Programs
HNCW	Les Leventhal - Yoga In Paradise	06/01/13 - 06/08/13	Kalani		21	2	1
HNCW	Gilad's Fitness Adventure	06/08/13 - 06/15/13	Kalani		30	2	1
HNCW	Yoga And Fire Arts Retreat	06/08/13 - 06/15/13	Kalani		3	1	1
CW	Yoga Somatics	06/15/13 - 06/22/13	Kalani		9	1	1
HNCW	Fire Of The Goddess	06/16/13 - 06/22/13	Kalani		6	1	1
HNCW	Hawaii Summer Bliss	06/17/13 - 06/22/13	Kalani		19	1	1
HNCW	Gary Renard - Miracles In Paradise	06/22/13 - 06/27/13	Kalani		35	2	1
NCW	Manifest Your Destiny	06/22/13 - 06/29/13	Kalani		14	1	1
NCW	Aerial Dance And Technique With Wailana	06/27/13 - 07/01/13	Kalani		12	2	1
CW	Peak Beings Yoga Teacher Training	06/30/13 - 07/24/13	Kalani		23	1	1
HNCW	Anuenue Freedom Festival / Hawaii Island Pride	07/05/13 - 07/07/13	Kalani & Hilo	2,250	423	26	1
CW	Integrative Yoga Teacher Training	07/06/13 - 07/28/13	Kalani		32	2	1
CW	Anja's Yoga Retreat	07/14/13 - 07/20/13	Kalani		10	1	1
CW	Lotus Yoga Dallas	07/26/13 - 08/03/13	Kalani		14	1	1
CW	Yogaworks Teacher Training	08/03/13 - 09/02/13	Kalani		17	1	1
NCW	Presence Of Body, Silence Of Mind	08/08/13 - 08/11/13	Kalani		3	1	1
HNCW	Men's Nude Yoga Retreat	08/12/13 - 08/18/13	Kalani		13	3	1
HNCW	Oasis Voyages	08/21/13 - 08/23/13	Kalani		16	2	1
CW	Gena's Yoga Group	08/23/13 - 08/30/13	Kalani		21	1	1
HNCW	Hands On Retreat	08/28/13 - 09/02/13	Kalani		15	2	1
HNCW	Arturo Galvez	09/02/13 - 09/07/13	Kalani		9	1	1
CW	Mika's Retreat	09/05/13 - 09/09/13	Kalani		13	1	1
CW	Tantra Partner Yoga For Couples	09/06/13 - 09/09/13	Kalani		12	1	1
CW	Shouji's Yoga Group	09/07/13 -	Kalani		5	1	1

CODE	Activity Name	Dates: Jan-Dec 2012	Location	Audience	Participants	Faculty	Programs
		09/12/13					
HNCW	Taste Of Yoga	09/08/13 - 09/13/13	Kalani		4	1	1
NCW	Dreaming & Awakening	09/14/13 - 09/22/13	Kalani		33	2	1
HNCW	Puna Culinary Festival	09/15/13 - 09/21/13	Kalani	389	86	24	1
HNCW	Hawaii Full Moon Yoga - A Meditation & Rejuvenation Retreat	09/17/13 - 09/22/13	Kalani		9	2	1
HNCW	Call For Heroes	09/17/13 - 09/23/13	Kalani		9	2	1
CW	Living The Path Of Love	09/29/13 - 10/08/13	Kalani		17	3	1
CW	YogaLoft Retreat	10/04/13 - 10/06/13	Kalani		26	3	1
CW	Practical Yoga	10/06/13 - 10/11/13	Kalani		29	1	1
CW	Living The Path Of Love	10/09/13 - 10/14/13	Kalani		15	1	1
CW	Jesse & Friends	10/10/13 - 10/11/13	Kalani		5	1	1
HNCW	Tropical TEASE!	10/11/13 - 10/16/13	Kalani	248	14	8	1
HNCW	Awakening Retreat	10/14/13 - 10/20/13	Kalani		16	2	1
CW	YogAlign	10/14/13 - 10/20/13	Kalani		20	2	1
HNCW	Johnson Wedding	10/17/13 - 10/21/13	Kalani		34	8	1
CW	Restorative Exercise Institute	10/20/13 - 10/25/13	Kalani		34	2	1
HNCW	Ukulele Retreat	10/21/13 - 10/26/13	Kalani		49	4	1
CW	Peak Beings Yoga Teacher Training	10/27/13 - 11/20/13	Kalani		18	1	1
HNCW	Pele's Posse	10/28/13 - 11/03/13	Kalani		15	3	1
HNCW	Big Island Bikram Retreat	11/03/13 - 11/09/13	Kalani		17	2	1
CW	Toning The OM	11/03/13 - 11/09/13	Kalani		11	1	1
HNCW	Hawaii Yoga Festival	11/09/13 - 11/17/13	Kalani & Yoga Coast/Puna	3,352	3,352	46	1
CW	Yogacara Teacher Training	11/09/13 - 12/01/13	Kalani		14	1	1
CW	Lindsey O'Neill	11/21/13 - 11/26/13	Kalani		6	1	1

CODE	Activity Name	Dates: Jan-Dec 2012	Location	Audience	Participants	Faculty	Programs
HNCW	Hawaii Thanksgiving Yoga Retreat	11/25/13 - 11/30/13	Kalani		5	2	1
HNCW	Artist-in-residence Program	12/01/04 - 12/01/18	Kalani		37	6	1
CW	Devorah's Yoga Group	12/01/13 - 12/07/13	Kalani		19	2	1
HNCW	Belly Dance Retreat With Zoe Jakes And Kami Liddle	12/01/13 - 12/09/13	Kalani		40	4	1
HNCW	Weekend Bellydance Retreat With Zoe And Kami	12/06/13 - 12/09/13	Kalani		24	2	1
HNCW	Ecstatic Dance And Movement Retreat	12/09/13 - 12/15/13	Kalani		142	12	1
HNCW	Men's Tropical Holiday 2013 - Week 1	12/20/13 - 12/26/13	Kalani		8	2	1
CW	Holiday Yoga Retreat	12/23/13 - 12/28/13	Kalani		29	2	1
CW	Iris Bentschik	12/26/12 - 01/04/13	Kalani		17	1	1
CW	Ning's Yoga	12/27/12 - 01/01/13	Kalani		20	1	1
HNCW	Men's Tropical Holiday 2012 - Week 2	12/27/12 - 01/02/13	Kalani		7	3	1
HNCW	Men's Tropical Holiday 2013 - Week 2	12/27/13 - 01/02/14	Kalani		4	3	1
HNCW	Body Electric	12/28/12 - 01/02/13	Kalani		10	2	1
CW	Ning's Yoga	12/28/13 - 01/02/14	Kalani		7	1	1
HNCW	Men's Nude Yoga New Years Retreat	12/28/13 - 01/03/14	Kalani		15	2	1
HNCW	Men's Nude Yoga New Years Retreat	12/29/12 - 01/04/13	Kalani		21	2	1
HNCW	Community athletic & theater arts activities & classes	205 held	KALANI	142	2,403	6	1
HNCW	Art shows&classes –JoyA, ArthurJ,TukoF, AubreyV…	154 held	KALANI+ AJ Studio	344	924	14	1
HNCW	Agriculture classes, walks & gathering plants fo crafts	63 held	KALANI		685	6	1
W	Wellness Demos-MCerraso,DAlbers,DSanders,JSam,Sjoy…	1439 held	KALANI		1,811	15	1
NC	Men's/Women's circles –John, Jacob, Shelly, Kay...	4 held	KALANI		93	7	1
NCW	Yoga, Meditation - Carolyn, Jared S, Will D, Annalisa…	1165 held	KALANI		9,320	18	1
NCW	Qigong, MartialArts,Watsu - SLynn,CLyman…	211 held	KALANI		1,233	8	1

CODE	Activity Name	Dates: Jan-Dec 2012	Location	Audience	Participants	Faculty	Programs
HNCW	*EMAX* Greenhouse classes&barn dances-Andy, Max..	72 held	KALANI		7,117	24	1
HNC	Hawaiian Language+Cultur classes e–Dottie,Kimo,Tu'u,Stewart,..	73 held	KALANI		708	7	1
HNC	Hawaiian ho'oponopono classes - Harry Jim	16 held	KALANI		1,632	2	1
HNC	Hawaiian Music ukulele&guitar classes - Sean,Andrew…	32 held	KALANI		158	4	1
HNC	Weaving & Lei Crafts -L Tu'a, D Kealoha-Kyser	78 held	KALANI		456	6	1
HNC	Kalani Honua e-newsletters, class catalogues, web visits	24 issues	KALANI	1,568,000	28,000	56	1
HNCW	Holoholo Nature-Culture Excursions - Shelly, Kimo,…	97 held	KALANI+ HVNP+…		331	6	1
HNCW	Hawaiian Hula Performances,Classes -Jonathan L, Richard K, Ehulani S,	69 held	KALANI	824	1,529	7	1
HNC	Art Exhibits - A Johnson, R Ruiz, R Koob, Joy, MManheim	3 held	KALANI	477	82	13	1
HNCW	ʻOhana Nights &Open Mic education-enrichment	62 held	KALANI	1,103	617	23	1
HNCW	Artist Residencies	12 held	KALANI	324	62	12	1
HNCW	Experience Kalani - nature, culture, wellness weeks	215 held	KALANI		1,898	23	1
HNCW	Ignite!	Year-Round	Kalani	600	96	96	1
			TOTAL AUDIENCE	**1,584,912**			
			TOTAL PARTICIPANTS		**65,640**		
			TOTAL FACULTY			**877**	
			TOTAL PROGRAMMING				**134**

Agriculture/Permaculture/Horticulture Report: 2013

In recent years, the farming of the Kalani properties, combined with the Campus-wide educational programming, have been in concert within this single report in order to provide a complete picture of sustainable agriculture practices, which, by definition "integrates three main goals--environmental health, economic profitability, and social and economic equity.."

— See: http://www.sarep.ucdavis.edu/about-sarep/def

Please refer to these reports, including the following Land Use, Crop Use and Harvesting reports, to verify that agriculture is the essence and sustenance of Kalani's operations. This is not just true to 95% of the properties' acreage, but also very important for the over 200 farmers, fishermen and businesses that collaborate with Kalani. The agricultural products of the ʻāina — from the food eaten three times per day to the herbs tasted in plant treks, the noni used in wellness and the lauhala in weaving — not only make Kalani survive and thrive, they also are the main eco-tourism attraction and reason why people choose to come to Kalani/Hawaiʻi to attend a class that inspires them in a greater way than any similar class they could easily take in a nearby city. Kalani embraces and celebrates nature, culture and wellness education in an authentic Hawaiian heritage site and context.

County Research and Development, The Hawaiʻi Tourism Authority and various foundations including the Laura Jane Musser Foundation and the Kellogg Foundation, have recognized and supported agricultural education and sustainability at Kalani with grant awards for the Na Māla Kalani Cultural Gardens, Ānuenue Freedom Festival, Puna Music Festival, Puna Culinary Festival, Hawaiʻi Yoga Festival, Edible Landscape and Food Forest Gardening, as well as a year-long series: "Hawaiian Culture within Permaculture; The Modern Ahupuaʻa."

Land Use.

On the Kalani Honua 19.6 acres, the foundation stamp of each student hale is 2 ,000 sq.ft. x 4 hale = 8,000 sq.ft. Each faculty cottage is 625 sq.ft x 4 = 2,500 sq.ft. This total 10,500 sq.ft. is less than 1/4th of an acre and represents only 1% of land use. Even with these structures, much of this 10,500 sq.ft. is used for agriculture, since the 4 hale have classrooms used for learning about arts, wellness and sustainable agriculture. In 2013, Kalani Management Team implemented the "2 for 200 by 2020" plan, which focuses our efforts to produce two years of sustainability (food, water, energy, fuel, etc.) for 200 people by the year 2020. From this plan, a new rule erupted from within our community which dictated that anything that was planted from 2013 forward, had to produce; either flowers for beautification or food products for the kitchen. Hence, at least 95% of the property supports agriculture, which includes gardens, orchards, botanicals, pasture, forest preserve, and ag-related improvements (greenhouse/maintenance/photovoltaic/water-storage/office/information-center/roadways) all core to ag production/education. [Contrast with County approved ag-zoned subdivisions, where lots are often strip cleared, and built-to-boundaries leaving little prospect for agriculture].

On Kalani Kai's 94 acres the special use approval is for each retreat cluster/row to have a 3,000 sq.ft. foundation x 13 clusters = 39,000 sq.ft., or less than a one acre footprint, for the entire retreat development. That's 1% of land use. Hence, similar to 19 acre Kalani Honua, at least 95% of the Kai property supports agriculture, which includes nursery, gardens, orchards, botanicals, pasture, forest preserve, and improvements (greenhouse/maintenance/photovoltaic/water-storage/office/ information-center/roadways) —all core to ag production/education.

Product use:

essential sustenance for sustainable agrarian community.

Following is a 12/31/2013 update for the 3 collaborating educational farms (Kai-Honua-Mauka), managed by non-profit Kalani Honua, Inc., with agriculture utilizing over 95% of each parcel and the combined 120 acres:

Crop/Use	Land Area ongoing utilization (8/1/09) in acres
Papaya	3
Mango	2
Banana	3
Other orchard	10
(coco, avocado, citrus, guava, lychee, noni, mtn apple, kukui, hala, lilikoi, mulberry, fig..)	
Pasture, soil conservation	26
Aquaculture, Nursery, Greenhouse & Vegetable gardens	3
Mixed Botanicals	4
(includes items on "Flora and Fauna" self-guide given to visitors & students)	
Forest and heritage site preservation	62
Utilities+ farm roads	4
Retreat accommodations	*3
(within 14.9 acres on Kai and 14.6 acres on Honua), combined foundations upon completing approved build-out)	
Total	120 acres (*retreat structures=2.5%, agriculture=97.5%)

Kalani's intent is to expand the properties' organic production — a 1000 year tradition that since 1975 is being furthered with renewed stewardship. In just one year, with just one crop (basil), Kalani Permaculture department was able to save more than $7,000 and reinvest in propagation efforts and soil production – a crucial element to our future agricultural efforts. We have doubled our Volunteer Scholars who are here to assist with purely permaculture and agriculture proliferation.
Approved, permitted Farm dwellings provide residency for farm personnel, including farm managers, stewards and assistants. Planned increases in food, medicinal and botanical production require extensive farm help, provided in part with volunteer programs akin to Community Supported Agriculture and World Wide Opportunities on Organic Farms, which involve area and visiting volunteers, who benefit by learning sustainable agricultural, wellness and native practices and by being nurtured by the products of the ʻāina.
The number of person-hours per week required for the increased food, medicinal and botanical utilization of Kalani is:

Crop/Use:	Land Area utilization	Person-hours required per week	
Papaya	3	20	(planting, weeding, fertilizing, harvesting..)
Mango	2	20	(planting, weeding, fertilizing, harvesting..)
Banana	3	20	(planting, weeding, fertilizing, harvesting..)
Other orchard	10	40	(planting, weeding, fertilizing, harvesting..)
Pasture, soil conservation	24	20	(mowing, fencing, pig/pest control..)
Nursery/Greenhouse/Veggies	5 (includes new aquaponics)	50	(planting, weeding, fertilizing, harvesting..)
Mixed Botanicals	4	40	(planting, weeding, fertilizing, harvesting..)
Forest/heritage preservation	62	30	(planting natives, removal/control of aliens..)
Utilities+ farm roads	4	20	(weeding, improving, filling..)
Retreat units & peripheries	3	20	(planting, weeding, landscape maintenance..)
Total	120 acres	280	hours

Note: The hours that are required will increase to about 325 hours as nursery and crops being established grow into full production.

Harvest Value: (All current produce is consumed at Kalani or traded, not sold. Income is stated in market value, in US$)

Arugala	$329.34	Basil	$4,470.00
Beets	$3.38	Carrots	$6.00
chard/kale	$291.20	Chives	$2.24
Cilantro	$41.28	Cucumber	$7.10
Dill	$1.00	Eggplant	$5.25
Haw. Pepper	$125.43	Hibiscus	$4.22
Parsley	$84.00	Lettuce	$790.67
Mint	$41.40	Onion	$112.99
Oregano	$97.00	Red Onion	$8.69
Rosemary	$7.00	Squash/Gourd	$264.58
Taro	$10.73	Tomato	$52.87
Watercress	$546.48	Mixed Greens	$50.61
Abui	$3.65	Avocado	$1,860.10
Banana	$3,008.72	Breadfruit	$631.88
Cashew Fruit	$938.88	Mystery Cherry	$21.32
Figs	$34.62	Guava*	$959.10
Kambocka	$29.85	Kumquat	$16.02
Lemon0lime	$520.94	Lilikoi	$1,081.18
Mango	$270.00	Mt. Apple	$2,145.08
Mulberry	$16.02	Noni	$135.42
Oranges0tangerine	$28.31	Papaya	$3,525.84
Pineapple	$14.58	Soursop	$173.80
cherimoya	$10.66	Starfruit	$2,079.52

Total income from non-profit sustainable agriculture (Hawaii-Nature-Culture-Wellness) educational programs $5,247,877

Agricultural production increased dramatically in 2013, with highly efficient aquaponics and multiple planting beds producing significantly more vegetables than in 2012. Fruit harvesting totals also increased with the addition of new tec