

Recovery Through Aquaponics: *People, Purpose, and Possibilities*



Presented by Tiffany-Joy Kawaguchi, OTD/R
Chief of Psychosocial Rehabilitation
Hawaii State Hospital

Hawaii Aquaculture and Aquaponics Association
Windward Community College, Career and Community Education
College of Tropical Agriculture and Human Resources
Aquaponics in Hawaii Conference
May 25, 2013

Hawaii State Hospital

- Hawaii State Hospital is the only hospital in Hawaii dedicated solely to serving adults with serious and persistent mental illnesses (SPMI).
- The Hospital is fully accredited by the Joint Commission, and serves as an integral part of the continuum of mental health care statewide.
- The Hospital's mission is to provide safe, integrated, evidence-based psychiatric treatment and rehabilitation to individuals suffering from mental illness and co-occurring disorders; approximately 184 adults currently reside at the Hospital.



Severe and Persistent Mental Illness (SPMI)

- About one in five Americans experiences a mental disorder in the course of a year.
 - Notably, only one in four Americans receive mental health treatment.
- More than two million Americans experience chronic mental illness; SPMI is characterized by repeated episodes of institutionalization.
 - These individuals are highly vulnerable to stress, deficient in the basic coping skills required for everyday living, dependent on massive support from families or institution to survive, unable to maintain competitive employment, and usually unable to develop close interpersonal relationships.
- Persons with SPMI have diagnoses of schizophrenia, affective disorders, personality disorders, and other psychoses.

Elements of Recovery

- **DEVELOPING HOPE:** Sustained belief in self coupled with the willingness to persevere through uncertainty and setbacks.
- **SECURE BASE:** Appropriate housing, sufficient income, freedom from violence, and adequate access to healthcare.
- **SENSE OF SELF:** Experiences of interpersonal acceptance, mutuality, and a sense of social belonging.
- **SUPPORTIVE RELATIONSHIPS:** Friends, families, and community in addition to mental health professionals.
- **EMPOWERMENT AND SOCIAL INCLUSION:** Self control; developing confidence in decision-making and help-seeking.
- **COPING SKILLS:** Being an expert on “self”; identifying stressors and possible crisis points; understanding and develop personal ways of responding and coping
- **MEANING:** Recovering or developing a social or work role; may involve finding or developing a guiding philosophy, religion, or culture.

Recovery: A Process, A Way of Life

“Recovery does not refer to an end product or a result. It does not mean that one is being “cured.” In fact, recovery is marked by an ever deepening acceptance of our limitations . . . rather than being an occasion for despair, we find our personal limitations are the ground from which spring our own unique possibilities . . . *recovery is a process. It is a way of life.* It is an attitude and a way of approaching the day’s challenges.”

Patricia Deegan, Ph.D. (1994)



Recovery Through Aquaponics: People

“I fell in love with the aquaponics program instantly . . . hours seemed to pass quickly now that I had something to work on . . . this program has been a real blessing! Thank you to the many that have come to work alongside of us . . . I am so encouraged by your kindness and generosity . . .” – M



Recovery Through Aquaponics: People



“Don’t let something as little as money get in the way of something as promising as this.”

– Dr. Clyde Tamaru

Recovery Through Aquaponics: People

- The Hospital's Aquaponics Program was built in 2010 with help from various community members including the Windward Community College and the University of Hawaii, Waimanalo Feed Supply, A-1 Electricians, Department of Hawaiian Homestead Lands, and Cedar Church.
- Through the years, the Aquaponics Program has encountered a number of challenges with pH levels, pests, fish viruses, plumbing, equipment, and algae. Partners from the community have come willingly forward each time to collaborate and assist us through those challenges.
- New community partnerships were also forged through aquaponics. Our patients have been welcomed and embraced during reintroduction outings to Mari's Garden, Olomana Gardens, Waimanalo Feed Supply, and Windward Community College.



Recovery Through Aquaponics: Purpose

“I love to see my labor turn into fruits that everyone can enjoy.” – C

“I like my job with the worms and listening to my boss. I learn new skills through working hard and being busy.” – R

“Aquaponics is a great program . . . It gives us a chance to work with others, learn new things, and watch plants and fish grow. I like [aquaponics] because it gives me a reason to just ‘be’ . . .” –B

“Some of the best years of my life have been with this program.” – M



Recovery Through Aquaponics: Purpose

- Approximately 100 patients have engaged in the Aquaponics program since March 2010.
- Patient Responsibilities:
 - Plant and transplant seedlings
 - Prune and recycle vegetation (vermicast)
 - Measure plant/fish growth
 - Harvest, weigh, and package yield
 - Research new crops
 - Perform validation trials for CTAHR
 - Weigh fish food, feed fish
 - Clean tanks, pumps, pipes, gravel, etc.
 - Maintain written records
 - Provide customer service for on-campus open market sales
 - Trouble shoot



Recovery Through Aquaponics: Purpose

- Therapeutic outcomes include but are not limited to:
 - Enhanced mood.
 - Reduced arousal/agitation.
 - Improved concentration, task engagement, problem solving, and frustration tolerance.
 - Development of interpersonal skills and personal identity within a social group with similar interests and goals.
 - Increased physical activity and awareness of healthful eating.
- Expansion of program:
 - Cooking
 - Art (cards and t-shirts)
 - Construction of vermicast bins
 - Static hydroponic systems



Recovery Through Aquaponics: Purpose

- On campus open-market sales since May 2010 totaled approximately \$1800. Customers report that vegetables from the Aquaponics Program lasts two-weeks longer than the vegetables purchased from the grocery store!
- Since September 2010, the Aquaponics Program has provided over 800 pounds of vegetables and herbs to the Hospital's kitchen and patient care units. The Hospital's menu has expanded to include culturally diverse and healthful options like thai basil chicken and Japanese ozoni soup.
- Since March 2010, over 400 pounds of golden tilapia have been donated, sold, and served.



Recovery Through Aquaponics: Possibilities

“I like to work in the program . . . I have a chance to learn skills for working in the community. It could open doors for me someday in the field of aquaculture or even oceanography.” –J



Recovery Through Aquaponics: Possibilities



- Art, culinary skills, educational programs
- Community service, community support
- Employment
- Health
- Hope