

## ***Spreading the Aloha***

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In Hawaii, we like to share our bounty with others. It's part of our DNA, and our evolution from the dawn of Hawaii as a home. First starting with the early Polynesians, it was a matter of survival to work together for the common good. Interdependence was a foregone conclusion because there were just a few of us in this new land.

Organizing chores for survival were the most important work each day, but gratitude for what you had and what you had accomplished was a vital part of this 'pono' (righteous) system. A large effort revolved around the growing and gathering of food, and tending the land.



Spear fishing along Molokai's coastal reefs - Kumu

The early sugar plantations, on the other hand, didn't encourage communication between ethnic groups to keep them in bondage, and to promote a 'divide and conquer' mentality, but these early immigrants soon realized it was critical for them to come together by sharing

food, creating a new universal language, and sharing their concerns.

There were many challenges to for these immigrants such as inequalities in pay and in how different ethnic groups were treated, with a lot of favoritism, nepotism, cronyism, and all the trappings of society that's continues today.

My great-grandfather, Jose Teves, arrived from Rabo de Pixie in the Azores to the Big Island in the late 1890's. He could read and write English, which was unheard of for these immigrants, and this served him well as he reached out to help others in need in this new home land. One thing that especially bothered him was why the plantation separated the ethnic groups into camps, and even gave them different jobs in this stratified, caste system of plantation agriculture.

A versatile, accomplished musician, he started writing poems and songs about these injustices at a time when activism would be squashed with swift plantation justice in Honoka'a, the first plantation town on the Hamakua coast of the Big Island, with a 'hanging or lynching reminiscent of the South. Organizing against the plantation was one of the most grievous sins an immigrant could commit.

Before long, my great-grandfather found himself out of a house and a job, and was forced to eek out a living where opportunities were limited. He tried starting a store, and was black-balled by the plantation where currency took the form of credit from the plantation.

He was fortunate to receive a 50-acre homestead in Ahualoa, just above Honoka'a, as part of the American Homestead Act, the inspiration behind the Hawaiian Homestead Act. Along with his wife Rosa, they built a home, lived off the land and raised 11 kids. I know they lived a hard life, especially by today's standards, but they persevered.

They planted food plants, some of which they brought from the Azores, including an orange and an apple that's still found in some our family's yards on the Big Island and named after our family. The climate was also great for growing food such as walking stick kale, coriander, pigeon peas, and pipinella or chayote.

On the edge of the forest over 5 miles above Honoka'a, transportation was limited to horseback and horse drawn carriage. Turkeys, pigs, and cattle abound on the edge of Parker Ranch land, where if you really got hungry and desperate, you could even shoot a cow. My grandfather Antone loved to hunt and ride horses, and passed this love to his children as well. George Frederick Hall, Sheriff of Honoka'a, had his sights on him since he had a reputation for hunting and poaching. The Teves name was already synonymous with activism and 'causing trouble' in the Honoka'a

plantation, and tenure in jail would not be a walk in the park.

In those days, the plantation controlled everything; justice, food, transportation, medical care, everything. I guess the situation got very tenuous for him to the point where he had to figure out something that would ensure his long-term freedom. So he married the sheriff's daughter! I wouldn't have come up with that strategy even if I tried.

Today is quite different from those days. We've secured more freedoms along the way by advocating for positive changes, but one thing hasn't changed. We continue to share our bounty with others, and nowhere is this more prevalent than on Molokai.

When we collect opihi and limu, or catch fish, and harvest taro, banana, papaya, or vegetables from our garden, we share with our immediate and extended family and friends. This is the Hawaiian way, and I use the word 'Hawaiian' loosely to include all those who live here and have embraced its lifestyle and customs.



Hawaiian Shrimp deep water harvest - Kaunakakai Wharf

But sometimes, spreading the Aloha can go a little too far. We like to share something special with others; an orchid plant, a special colored ti leaf, even a banana, guava, or special papaya seedling. But what we can't see can really hurt us and also our survival on these little islands. Like the banana root weevil on banana corms or Thrips palmi on orchid flowers or papaya ringspot on the papaya seedling.



Mealy Bugs on Squash

This is where Aloha is not aloha, it's a liability that can cost us a farm or a

### Summer Lettuce

Lettuce is one of the oldest garden plants and is always the essence of a summer salad, but in Hawaii, finding high quality, home-grown lettuce during summer months can be a challenge due to extreme growing conditions.

Native to a large area from the Mediterranean to Siberia, there are between 50 and 75 lettuce species, and it was first cultivated by the Egyptians for oil from its seeds. There are several lettuce types, but the three most common include leaf, crisphead, and

lifestyle or our future, for that matter. I don't know if the Polynesians had a quarantine system, but most of the pests we deal with were brought to Hawaii over the last 200 or so years. Although we don't want to slight anyone by refusing a gift, we need to think about the possible impacts of taking that cute little plant home.

How do we assure that we're not bringing home a potential disaster? Some forms of plant propagating material may be safer to bring home than others, such as seeds, cuttings, or scion wood over whole mature plants, but with the impending threat of the small fire ant, we may have to 'nuke' everything we bring in. Surface sterilizing or quick-freezing propagation material must be one line of defense. WE play a big part in what ends up on our farms and homesteads, and we need to look at today and tomorrow, and down the road.

romaine. There are also leaf variations, one of which is oak leaf. These types can be crossed with each other to create an array of leaf types, shapes, and textures. Other types include oil seed and stem lettuce, also known as celtuce.

Often described as a low-nutrient vegetable, crisp-leaf lettuce is one of the richest vitamin sources of choline, as essential brain nutrient related to focus. Its Latin name *Lactuca* or *Lac* means 'milk' due to its characteristic milky sap. This milk is believed to contain sedatives, including Lithium, and some

cultures consume them at the end of the meal to make them sleepy.

Of the lettuce varieties, loose-leaf types are reputed to be the most nutritious since they receive more light and are often more fully pigmented with green, yellow, and red antioxidants. Lettuce is also a good source of Vitamin A and potassium.

Most lettuce evolved in areas with hot days and cool nights, described as a Mediterranean climate. The Hawaiian summer environment is more tropical, including hot, humid or arid days with warm nights. These conditions cause lettuce to essentially ‘hyperventilate’ and ‘stress out’, similar to an overheating automobile, resulting in bitter leaves, tip burn on edges of leaves, and bolting or early flowering.

Warm night conditions don’t allow plants to rest and recover from hot days, resulting in a breakdown of the plant’s internal system. Tip burn is caused by a combination of stress conditions resulting in a calcium deficiency causing tips of leaves to die, hence the name ‘tip-burn’ and is especially prevalent in crisp-head types, especially in the critical stage of forming a head.

There are strategies to minimize the stresses of summer, including planting in shady areas, installing a screen over plants, harvesting when young, and planting heat-tolerant varieties. Many lettuce varieties will purport to be heat-tolerant, but may not make the cut in Hawaii’s challenging tropical conditions.

Heat-tolerance implies that the variety can withstand early bolting and tipburn, and still have a good taste. Adequate water and essential nutrients are also important in keeping plants healthy and thriving. The most heat-tolerant types include oak leaf and also Batavian types. Also known as summer crisp or French crisp, Batavians are combinations of crisp head, leaf, and even some romaine blood in them.



Manoa X Leopard F2 lettuce – May 2014

Batavians are very heat-tolerant, large-framed, and well-flavored, and include Sierra, Nevada, Mottistone, Magenta, Concept, Cimarron, Muir, Cherokee, Tahoe, Teide and others. Other heat-tolerant lettuces include Rex, Ostinata, Jericho, Helvius, Salvius, Buttercrunch, and Tropicana.

Varieties developed in Hawaii over several decades were selected for lowland conditions, including Manoa and Anuenue. Other varieties developed in Hawaii including Kauwela, Laupili, and Kulanui.

More screening of varieties in the dog days of our Hawaiian summer may reveal more heat-tolerant lettuce varieties for both home gardeners and commercial farmers. This can involve planting rows of lettuce varieties in the heat of summer, and selecting those that are the last to bolt or flower prematurely, and those without tip burn.

An email from Frank Morton, lettuce breeder of Wild Garden Seed in Philomath, Oregon explains the process of selecting heat-tolerant lettuce varieties for Hawaii. He explains, *“I think tipburn is going to be your boogeyman, so that will be the primary selection trait until you attain it. Of course, there is a huge genetic X environmental interaction in selecting for tipburn. This is a complex interpretation of resistance because you need to account for so many environmental factors. You definitely need a standard for comparison.”*

Frank is explaining that separating environmental influences from genetic influences when selecting plants for seed is important. One way of minimizing environmental influences is to grow these varieties in many different seasons to see if tipburn still shows up, then continue to refine your selections.

We export over 85% of the lettuce we consume, mostly from California and Arizona, and growing our own lettuce can insure freshness and high quality, and is the key to our food security.

## **New Hawaiian Homes Extension Agent on the Big Island**

We have a new Hawaiian Homes Extension on the Big Island! Her name is Kiersten Funakoshi. This position has been vacant for a few years now when DHHL cut back their farm education programs. Funding was released recently for two positions, one on the Big Island and the other on Molokai. The Molokai position is still going through review. The Hawaiian Homes Education Program is a joint project of DHHL and CTAHR was started in 1981.

Here's an introductory letter from Kiersten:

*Aloha! I am Kiersten Akahoshi. I am a new extension agent with the Cooperative Extension Service of the University of Hawai'i at Mānoa, College of Tropical Agriculture and Human Resources.*

*My responsibilities are to provide technical assistance to agricultural and pastoral Hawaiian Homelands lessees in Hawai'i county.*

*I was born and raised on the Big Island, and grew up mostly in Waimea (Kamuela) where I attended school until the 8<sup>th</sup> grade. I attended and graduated from Waiakea High School in Hilo and graduated from the University of Hawai'i at Hilo with Bachelors' Degrees in both business administration and tropical horticulture.*

*My family has been active with plants, mostly tropical fruits, from the time I was very young. I enjoy helping others and I really hope that I can make an impact in Hawai'i County. I look forward to overcoming challenges with everyone here.*

*Mahalo for the warm welcome!*

*Aloha,*

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### ***Letter to Sonny***

Below is a letter I wrote to a Hawaiian homesteader several years ago on another island. He was interested in farming, but for some reason he had a difficult time understanding what he needed to do in order to create a farm business, and also wasn't realistic about his goals. He was looking for solutions such as setting up a farm to teach others how to farm without having a basic knowledge of farming, or networking with others to get his farm started when he didn't have any production.

I really had to write everything down to help him understand without dampening his enthusiasm and spirit. I think it may help anyone who's interested in farming. There are many concepts to grasp,

including a few doses of reality along the way. Here it is:

*Dear Sonny,*

*I write this to you to help you focus and see the steps you need to take in order to create a farm business. In life, you need to crawl before you can walk. There's so much to know, and you cannot 'skip grades'; you have to start at kindergarten. You have to be diligent in learning all you can by studying, and you have to go at it with both eyes open. Most farmers in Hawaii farm part-time because they cannot earn enough money on their farm, and they also want to have medical coverage for their family. Part-time farming is also a growing trend in the nation.*

### ***Motivation***

*There are certain attributes that must be in place in order to be successful in farming. One is the willingness and motivation to farm and to overcome any adversity. We cannot supply this because it comes from deep within you. If you're easily discouraged, farming is not for you. This stick-to-it-ness is important especially when things don't go the way you expected. When the going gets rough, the tough get going. In farming, the real test when you fall down is how fast you get up and move forward.*

### ***Break It Down***

*Farming is hard work and there's a sequence to things. One thing I've learned is I try to focus on a few things at a time because if I try to see the whole picture, it becomes so overwhelming. Although it's important to know the big picture, if you break down tasks and responsibilities into bite-sized pieces, it's easier to comprehend and also to execute. When you complete the first task, you can go on to the next one, and before you know it, you just completed a major task. For me, I have to write it down and I have a sequence of things I need to get done.*

### **Knowledge**

*After motivation, I stress knowledge because this is my background. Tutu Mary Pukui stressed that there are many schools in which to learn in. What this means is knowledge is all around you, from kupuna to even your kids, to friends, books, internet, mentors, neighboring farmers, even your land, and more. My homestead teaches me a lot. It's like a bank account; you gotta put in before you can take out. There's so much to know and you need to seek out this knowledge, because it will not always fall in your lap.*

*Knowledge comes in many forms and you can never have too much of it. I'm constantly seeking new knowledge, and it can be found in many places. Choosing a crop is a big decision, and you can only choose a crop if you have knowledge about farming and about this crop, and have assessed this crop in detail. This is an important early step. If I'm interested in a crop, I try to learn everything I can about it, and even grow it in my garden to learn more.*

*The more you know about the crop and how to grow it, the better able you are to succeed in producing the crop. We never try to tell people what crop to grow. The real choice lies with you, and you must spend the time, the due diligence, to research and investigate the crop you're interested in, compiling as much information as possible to make an informed decision. You have to answer a lot of questions, and the more questions you answer the better informed your ultimate decision will be, and the better chance of being successful at farming.*

### **More than Money**

*A big mistake many make is they think that money is their big limiting factor, and they go after loans and grants only to end up in the hole because they don't have a plan and they don't have a grounded knowledge of farming. There's a high rate of failure in agriculture so you have to go at it with both eyes open. To succeed in farming, you have*

*to be willing to do the same thing over and over again until you can do it in your sleep.*

*Don't get me wrong, the money part is important and in farming, you're always making economic decisions, but you have to seek the knowledge first. Learning by doing is the best way, with books and classes helping you to better understand what you're doing. And you have to enjoy what you do. In encourage many people to grow a garden or a small nursery area. From this, you can find some crops that people nearby might want to grow.*

### **Farming is a Business**

*Agriculture is highly competitive, and is a business. It needs to be run as one. You're constantly looking at ways to cut costs and increase profits. The business part can only come when you know each step in growing the crop. Otherwise, it's going to be impossible to develop a business plan.*

*You have to fill in every blank and you have to know what number goes in there. When someone is interested in growing a crop, I tell them to grow a row of the crop and collect all the information you can in order to come up with a plan such as how many pounds can a plant produce, pest problems, days to harvest, and what is the grade out.*

### **The Crop and the Market**

*What are the limiting factors to this crop? Does it only fruit once a year? What if the weather is bad when the flowers come out? Will it wipe out your crop until next year? What is the market price? If the weather is good, it's good for all the other growers of this crop in your area. If this is the case, there may be too much of this crop on the market at the same time, and the price will drop. Also, do you enjoy growing that crop and will it make you money? This is the million dollar question.*

*How much money will it produce? If I sell my carrots for 50 cents a pound, how many pounds do I have to harvest in order to gross \$50,000 (Answer: 100,000 pounds of*

Grade A carrots). Out of the gross, how much is the net? Maybe just 30 to 40% or \$30,000 to \$40,000. What does the market want and how much do they want.

Sometimes it's easier to push the pencil, than to push the hoe only to find you actually lost money on the crop.

The big question you have to ask yourself is 'where is my market?' Your market could be right in the neighborhood next to you. What do they want? What can you sell them every week? Maybe its nursery plants, or vegetable starters, or luau leaf, or fresh vegetables, or fresh lettuce. Once people eat fresh vegetables, many become hooked.

I like to find out what the market wants and how many pounds they can use each week, and work backwards from there. In this way, I'll know how much I need to plant in order to reach my market goal. Competitive advantage means "what advantages do I have over other farmers on other islands or even in my community that will allow me to succeed and be competitive in the marketplace?"

You may have special knowledge, or special weather, or a unique production system, or free water, or a large family, or a special variety of a crop. Some advantages are apparent now, and some will become apparent in the future. When I farmed on Oahu, we were able to deliver on demand whenever the stores wanted our crop, and we planted a large enough amount so we controlled the prices.

You cannot do this on Molokai if you're selling your crop on Oahu. Again, you may have to discover all your advantages because they may not be apparent right now. You may have a market right in front of your eyes.

### **How Solid is Your Plan?**

In my job, I try to play the devil's advocate and question everything about the crop when farmers come to see me. In other

words, I try to discourage them in order to see how strong their plan or strategy really is. If you have a good plan, it should be able to weather all inquiries and questioning. By doing this, you make your plan stronger if you can handle criticism.

All kinds of things can go wrong, and a good farmer will be aware of what these are and have a solution in their back pocket. Anticipating these challenges is what separates one who's trying to figure out what's going on to one who knows what's going on and does something about it. This is the knowledge and experience part, and you can never have enough of this. I believe if you put enough positive energy into something, something positive will come out of it.

### **Important Concepts**

In farming, we have a law called the Law of the Minimum and this applies to all kinds of things. In plant nutrition, all you have to be is short in one nutrient and it will affect how big your plants grow. What you lack in knowledge will be your limiting factor. You constantly want to strengthen your weaknesses and not run away from them, whether it's weeding or bookkeeping or marketing. There are two important concepts in agriculture called the art and the science of agriculture. The science is the knowledge part, and the art is what you do with this knowledge. The art part involves innovation and new ideas, but starts with the knowledge.

Once you have the knowledge, you can start to tweak it with new ideas. Because labor is the biggest cost, innovation that cuts labor costs is a critical area. It may be an easier way to plant or harvest, or a new value-added product or even innovative packaging. This is where your ingenuity comes in; your creative juices go to work to create a product so unique that everyone wonders why they didn't come up with that one.

### **One Step at a Time**



*There are a lot of things that need to be done on your land right now that doesn't take a lot of money but a lot of sweat. There's a method to the madness and part of it getting to know your land and building a bond with it. After a while, it becomes a part of you. You have to get out there and do it, but you also have to constantly assess what you're doing all the time, and ideas will come to you.*

*Visit other farms and see what they're doing. Don't try to spend a lot of money right now. I farmed for over 20 years without a tractor because I designed it so I didn't have to spend a lot of money on equipment. But just because you have land doesn't mean you can and will succeed in farming. This is just one piece of the puzzle, and there are many more pieces.*

*What are some of the other pieces of the puzzle that need to be in place? You need to realize that you don't have all the answers, and you may have to find them out yourself. The key is to be realistic in your expectations, and continue to grow in knowledge so you can make informed decisions. We all have different skills and gifts, and in farming, we try to capitalize on them. And remember, one step at a time. In order to harvest, you have to plant first.*

### **My Advice**

*My advice to you is to grow a garden and expand the garden a little at a time. Expand by planting in phases, in rows or in blocks. When you have surplus food from your garden, make a little garden stand in front of your yard. You can start selling once a week, maybe Saturday morning, then expand to twice a week, maybe Wednesday afternoon, 5-6 pm as you harvest more and cannot hold until Saturday. By talking to your customers, they will tell you what they want to buy, and you can expand on these crops. You may not be able to grow one crop all year-long due to insect or disease build-up, but you might be able to move the crop around to other areas of your homestead. Soon you will have an*

*established clientele coming to you each week, and all you have to do is grow the crops they want. A garden stand is allowed on Hawaiian Home Lands if you're selling your own produce. Start small and grow your market, and make sure you have people willing to buy what you grow.*

*Aloha, Glenn*

### **Closing Remarks**

Well, that's it for this month. Summer is upon us and it's not a normal summer. The weather is a bit erratic, and this may be the sign of things to come. Adjusting to change is what separates us from the dinosaurs.

Continue to think outside the box. Take advantage of the long days to keep machinery and tools in good working order, and plan ahead. Prepare fields for the months ahead when the days start getting shorter.

Plan for tomorrow and the next day, and keep in touch with those around you. We need each other to survive in these islands in the middle of nowhere.

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